

ATTACHMENT A

Proposed Findings of Fact, Conclusions of Law, and Recommendations

EERA Markup

**STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION**

In the Matter of the Applications of Byron Solar, LLC for a Certificate of Need, Site Permit, and Route Permit for the up to 200 MW Byron Solar Project and 345 kV Transmission Line in Olmsted and Dodge Counties, Minnesota

MPUC Docket Nos. IP-7041/GS-20-763, CN-20-764, and TL-20-765
OAH Docket No. 82-2500-38038

**BYRON SOLAR, LLC’S
PROPOSED FINDINGS OF FACT,
CONCLUSIONS OF LAW, AND
RECOMMENDATIONS**

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RECOMMENDATIONS**

This matter was assigned to Administrative Law Judge (“ALJ”) Barbara J. Case to conduct a public hearing on the Certificate of Need (MPUC Docket No. 20-764), Site Permit (MPUC Docket No. 20-763), and Route Permit (MPUC Docket No. 20-765) Applications of Byron Solar, LLC (“Byron Solar” or “Applicant”) for an up to 200 megawatt (“MW”) photovoltaic (“PV”) solar energy generating facility and associated **systems facilities** (“Solar Facility”) and the 345 kilovolt (“kV”) high voltage transmission line and associated facilities (“Transmission Line”) (together, the “Project”) in Olmsted and Dodge Counties, Minnesota. The Minnesota Public Utilities Commission (“MPUC” or “Commission”) also requested that the ALJ prepare findings of fact, conclusions of law and recommendation of a preferred site and route and permit conditions.

Joint public hearings on Byron Solar’s Certificate of Need Application (“CN Application”) and Joint Application for a Site Permit and Route Permit (“Joint SP/RP Application”) (together, “Applications”) for the Project were held on November 9, 2022 (in-person) and November 10, 2022 (remote-access - telephone and internet). The factual record remained open until November 29, 2022, for the receipt of written public comments.

Christina Brusven and Bridget Duffus, Fredrikson & Byron, P.A., 200 South Sixth Street, Suite 4000, Minneapolis, Minnesota 55402, and Scott Wentzell, Project Development Manager of EDF Renewables, Inc. (“EDFR”), 3600 American Blvd W., Suite 400, Bloomington, Minnesota 55431, appeared on behalf of Byron Solar.

Mike Kaluzniak, Minnesota Public Utilities Commission Staff, 121 Seventh Place East, Suite 350, St. Paul, MN 55101 appeared on behalf of the Commission.

Suzanne Steinhauer, Environmental Review Manager, 85 Seventh Place East, Suite 280, St. Paul, MN 55101 appeared on behalf of the Department of Commerce, Energy Environmental Review and Analysis (“EERA”).

Stephen Rakow, Analyst Coordinator, 85 Seventh Place East, Suite 500, St. Paul, MN 55101 appeared on behalf of the Minnesota Department of Commerce, Division of Energy Resources (“DER”).

STATEMENT OF ISSUES

Has Byron Solar satisfied the criteria established in Minn. Stat. Chapter 216B and Minn. R. Chapter 7849 for a Certificate of Need for the proposed Project?

Has Byron Solar satisfied the criteria set forth in Minn. Stat. Chapter 216E and Minn. R. Chapter 7850 for a Site Permit for the proposed Solar Facility?

Has Byron Solar satisfied the criteria established in Minn. Stat. Chapter 216E and Minn. R. Chapter 7850 for a Route Permit for the proposed Transmission Line?

SUMMARY OF RECOMMENDATIONS

The ALJ concludes that Byron Solar has satisfied the applicable legal requirements and, accordingly, recommends that the Commission GRANT Byron Solar a Certificate of Need, Site Permit, and Route Permit for the Project, subject to the conditions discussed below.

Based on the evidence in the hearing record, the ALJ makes the following:

FINDINGS OF FACT

I. APPLICANT

1. Byron Solar, LLC is an independent power producer (“IPP”) and wholly owned subsidiary of EDF Renewables, Inc (EDFR) EDFR is a utility-scale renewable energy developer headquartered in San Diego, California.¹

2. ~~EDFR is a market leading IPP and service provider that delivers grid-scale power, including wind, solar photovoltaic, and storage.~~ EDFR develops, builds, and operates clean energy power plants in more than 20 countries. EDFR has developed 16,000 MW in North America and has 11,000 MW currently under a long-term operations & maintenance contract.²

3. EDFR ~~has permitted over 1,200~~ owns and operates (through its subsidiaries) approximately 812 MW of large wind energy conversion systems in Minnesota, including the Fenton, Lakefield, Prairie Star, Red Pine, and Stoneray ~~Wapsipinicon, and Nobles~~ Wind Projects.³ In addition to its operating projects, the Commission issued a site permit to Louise Solar, LLC, and EDFR subsidiary, for an up to 50 MW solar energy generating system in Mower County in March 2022; after the issuance of the permit, the Louise Solar LLC was sold to National Grid. EDFR is also currently planning the Andyville Solar Project, an up to 200 MW PV solar energy generating system and accompanying 161 kV transmission line in Mower County, Minnesota through its subsidiary Andyville Solar Project, LLC; Louise Solar Project, an up to 50 MW PV

¹ Ex. 108 at 4 (Joint SP/RP Application) (eDocket Nos. [20218-177521-04](#), [20218-177521-03](#)).

² Ex. 108 at 4 (Joint SP/RP Application).

³ The Commission issued a site permit for the 50 MW Louise Solar Project in Mower County to Louise Solar, LLC on March 18, 2022. Since filing of the Applications, Louise Solar Project, LLC has subsequently been sold to National Grid Renewables Development, LLC. See In the Matter of the Applications of Louise Solar Project, LLC, for a Certificate of Need and Site Permit for the 50 MW Louise Solar Project in Mower County, Minnesota, MPUC Docket Nos. IP-7039/CN-20-646 and IP-7039/GS-20-647, Letter (April 19, 2022) (eDocket No. 20224-184918-02).

~~solar energy generating system and accompanying 161 kV transmission line in Mower County, Minnesota through its subsidiary Louise Solar Project, LLC; and Minnesota Solar, an up to 200 MW solar energy generating system in Lyon County, Minnesota.~~

II. APPLICATIONS AND RELATED PROCEDURAL BACKGROUND

4. On October 12, 2020, Byron Solar filed a request for approval of a Certificate of Need Notice Plan for the Transmission Line, detailing Byron Solar's plan to provide notice to landowners or others with property within or adjacent to the proposed Transmission Line corridor.⁴

5. Also on October 12, 2020, Byron Solar filed a Request for Exemption From Certain Application Content Requirements, requesting exemptions from certain certificate of need application content requirements.⁵

6. On October 22, 2020, the Commission issued a Notice of Comment Period on Request for Exemptions from Certain Certificate of Need Filing Requirements, which opened an initial written comment period until November 6, 2020, and a reply comment period until November 13, 2020.⁶

7. On November 3, 2020, the DER filed comments recommending that the Commission approve Byron Solar's proposed notice plan with the following modifications: (a) include notification to the City of Byron, Dodge County, and Olmsted County; (b) approve the implementation of the notice plan no more than 60 days and no less than two weeks prior to the filing of the CN Application; and (c) include notice in a newspaper of statewide circulation at the same time as other notice documents.⁷

8. On November 6, 2020, the DER filed comments recommending that the Commission approve the request for exemptions from certain certificate of need application content requirements, with modifications.⁸

9. On November 13, 2020, Byron Solar filed reply comments on the notice plan approval request, agreeing with the DER's recommendations that Byron Solar provide notice to the City of Byron, Dodge County, and Olmsted County and that implementation of the notice plan occur no more than 60 days and no less than two weeks prior to the filing of the CN Application, but disagreeing with the recommendation that the notice plan newspaper notice be published in a newspaper of statewide circulation.⁹

⁴ Ex. 100 (Certificate of Need Notice Plan Approval Request) (eDocket No. [202010-167235-02](#)).

⁵ Ex. 101 (Request for Exemption From Certain Application Content Requirements) (eDocket No. [202010-167232-02](#)).

⁶ Ex. 300 (Notice of Comment Period on Exemption Request) (eDocket No. [202010-167580-01](#)).

⁷ Ex. 400 (Comments – Notice Plan) (eDocket No. [202011-167992-01](#)).

⁸ Ex. 401 (Comments – Exemption Request) (eDocket No. [202011-168096-01](#)).

⁹ Ex. 102 (Reply Comments – Notice Plan) (eDocket No. [202011-168329-02](#)).

10. Also on November 13, 2020, Byron Solar filed reply comments on the exemption request, agreeing with the DER's recommendations and requesting that the Commission approve the data exemption requests as detailed in the DER's comments.¹⁰

11. On November 16, 2020, Byron Solar filed supplemental comments requesting that the Commission take notice of the more specific pricing estimate provided by the *Star Tribune* for placement of the notice plan.¹¹

12. On January 15, 2021, the Commission issued an Order approving the notice plan proposed by Byron Solar as modified in the DER's recommendations, subject to the following modifications: (a) the Commission approved the choice of newspaper as requested by Byron Solar in its November 13, 2020 reply comments, and (b) Byron Solar shall, in addition to Byron Solar's intent to mail notice to all mailing addresses within or adjacent to the proposed Transmission Line corridor, provide notice to all landowners within Section 36 of Mantorville Township, the Northwest quarter of Section 1 of Canisteo Township, and the Northwest quarter of Section 31 Kalmar Township in Olmsted County. The Order also approved Byron Solar's requested data exemptions with the modifications recommended by the DER, and granted variances to the 30-day requirement of Minn. R. 7829.2550, subp. 6, and the statewide circular publication requirement pursuant to Minn. R. 7829.2500, subp. 5 ("Exemption Order").¹²

13. On June 4, 2021, Byron Solar filed the notice of intent to submit a joint application for a site permit and route permit under the alternative permitting process of Minn. R. 7850.2800 to 7850.3900.¹³

14. On August 27, 2021, Byron Solar filed a CN Application.¹⁴

15. On August 30, 2021, Byron Solar filed a letter demonstrating its compliance with the requirements of the notice plan.¹⁵

16. On August 30, 2021, Byron Solar filed its Joint SP/RP Application.¹⁶

17. On September 8, 2021, the Commission issued a Notice of Comment Period on the CN Application and Joint SP/RP Application completeness, announcing it would accept written comments through September 24, 2021 and reply comments through October 1, 2021.¹⁷

¹⁰ Ex. 103 (Reply Comments – Exemption Request) (eDocket No. [202011-168327-01](#)).

¹¹ Ex. 104 (Supplemental Comments) (eDocket No. [202011-168343-01](#)).

¹² Ex. 301 (Order Approving Notice Plan, Approving Exemption Requests, and Granting Variances) (eDocket No. [20211-169865-01](#)).

¹³ Ex. 105 (Notice of Intent to Submit a Joint Application for a Site Permit and Route Permit Application under the Alternative Permitting Process) (eDocket Nos. [20216-174818-01](#), [20216-174818-02](#)).

¹⁴ Ex. 106 (CN Application).

¹⁵ Ex. 107 (Compliance Filing – Notice Plan Completeness) (eDocket Nos. [20218-177536-01](#), [20218-177542-01](#)).

¹⁶ See Ex. 108 (Joint SP/RP Application).

¹⁷ Ex. 302 (Notice of Comment Period on Application Completeness) (eDocket Nos. [20219-177775-01](#), [20219-177775-02](#), [20219-177775-03](#)).

18. On September 9, 2021, the DER filed comments recommending that the Commission determine that Byron Solar's CN Application is substantially complete and that the Commission evaluate the CN Application using the Commission's informal comment process.¹⁸

19. On September 22, 2021, Byron Solar filed confirmation that it had complied with the notice requirements of Minn. R. 7829.2500 and 7850.2100 and provided direct mail notice and newspaper publication relating to the filing of the Applications.¹⁹

20. On September 24, 2021, the EERA filed comments and recommendations recommending that the Commission accept the Joint SP/RP Application as substantially complete but require Byron Solar to amend or provide an addendum to Appendix F clarifying the landowners for the Solar Facility and the Transmission Line; not appoint an advisory task force ("ATF"); process the Joint SP/RP Application jointly with the CN Application, including joint environmental review; and request a full ALJ report with recommendations for the Project's public hearing.²⁰

21. Also on September 24, 2021, public comments were filed by LIUNA Minnesota & North Dakota,²¹ and the Dodge County Board of Commissioners.²²

22. On October 1, 2021, the EERA filed reply comments and recommendations, recommending that the Commission authorize the EERA to establish an ATF for the Joint SP/RP Application.²³

23. Also on October 1, 2021, Byron Solar filed reply comments on the completeness of its CN Application and Joint SP/RP Application in response to the comments filed during the comment period.²⁴

24. On October 15, 2021, the EERA filed a modified schedule concept taking into account the establishment of an ATF.²⁵

¹⁸ Ex. 402 (Comments – Completeness of Certificate of Need Application) (eDocket No. [20219-177805-01](#)).

¹⁹ Ex. 109 (Compliance Filing – Confirmation of Notice) (eDocket Nos. [20219-178171-01](#), [20219-178171-02](#), [20219-178171-03](#)).

²⁰ Ex. 200 (Comments on Application Acceptance) (eDocket Nos. [20219-178233-01](#), [20219-178233-02](#), [20219-178233-03](#)).

²¹ LIUNA Minnesota & North Dakota Comments (September 24, 2021) (eDocket Nos. [20219-178257-02](#), [20219-178257-03](#), [20219-178257-01](#)).

²² Dodge County Board of Commissioners Comments (September 24, 2021) (eDocket Nos. [20219-178239-02](#), [20219-178239-01](#), [20219-178239-03](#)).

²³ Ex. 201 (Reply Comments and Recommendations on Application Completeness) (eDocket Nos. [202110-178426-01](#), [202110-178426-02](#), [202110-178426-02](#)).

²⁴ Ex. 110 (Reply Comments and Attachment 1) (eDocket Nos. [202110-178438-01](#), [202110-178438-02](#), [202110-178438-03](#), [202110-178438-04](#), [202110-178438-05](#), [202110-178438-06](#), [202110-178438-07](#), [202110-178438-08](#), [202110-178438-09](#)).

²⁵ Ex. 202 (Comments – Revised Schedule Concept with ATF) (eDocket Nos. [202110-178858-01](#), [202110-178858-02](#), [202110-178858-03](#)).

25. On October 27, 2021, the EERA filed comments clarifying its recommendations on the establishment of an ATF and charge to the ATF and to clarify the role of the ATF.²⁶

26. October 28, 2021, Byron Solar filed reply comments providing the additional land ownership information requested by the EERA.²⁷

27. On November 15, 2021, the EERA filed an order establishing an ATF to assist in identifying impacts and mitigation measures to be evaluated in the environmental assessment to be prepared by the EERA for the proposed Project and specifying the charge to the ATF charge.²⁸

28. On November 17, 2021, the Commission issued an Order Accepting Applications, Setting Review Procedures, Authorizing Task Force, and Granting Variances which: accepted the CN Application as substantially complete; authorized review of the CN Application using the informal review process under Minn. R. 7829.1200; accepted the Joint SP/RP Application as complete and authorized review under the alternative permitting process under Minn. Stat. § 216E.04 and Minn. R. 7850.2800 to 7850.3900; approved joint public meetings, joint comment periods, joint public hearings, and combined environmental review of the Applications to the extent practical; requested that the EERA prepare an Environmental Assessment (“EA”) in lieu of an environmental report pursuant to Minn. R. 7849.1900; authorized the establishment of an ATF and approved the EERA’s proposed structure and charge based on the charge and order filed by the EERA, with the addition of also soliciting the City of Byron for possible members; requested that an ALJ from the Office of Administrative Hearings (“OAH”) preside over a summary proceeding and prepare findings of fact, conclusions of law, and recommendation; granted a variance to Minn. R. 7849.0200, subp. 5, and extended the 30-day timeline; directed Byron Solar to file updates on the Midcontinent Independent System Operator (“MISO”) interconnection process at various points during the proceeding; and addressed various other administrative matters.²⁹

29. On January 4, 2022, the Commission and EERA issued a Notice of Public Information and Environmental Review Scoping Meeting, scheduling meetings on January 25, 2022 (in-person) and January 26, 2022 (via remote access) and announcing that written comments would be accepted through February 15, 2022. The notice requested comments on issues and facts that should be considered in the development of the EA. The notice was mailed to landowners and local units of government located within and adjacent to the Project.³⁰

30. On January 5, 2022, Byron Solar filed a letter documenting that it had: provided a copy of the Applications for public review to the Rochester Public Library and the Kasson Public Library; provided a copy of the Applications to the Dodge County Environmental Services Offices,

²⁶ Ex. 203 (Comments on Advisory Task Force Charge) (eDocket Nos. [202110-179212-01](#), [202110-179212-02](#), [202110-179212-03](#)).

²⁷ Ex. 111 (Reply Comments – Additional Comments) (eDocket Nos. [202110-179255-01](#), [202110-179255-02](#), [202110-179255-03](#)).

²⁸ Ex. 204 (ATF Establishment, Charge, and Order) (eDocket Nos. [202111-179816-01](#), [202111-179816-02](#) (GS), [202111-179816-03](#)).

²⁹ Ex. 303 (Order Accepting Applications, Setting Review Procedures, Authorizing Task Force, and Granting Variances) (eDocket Nos. [202111-179920-01](#), [202111-179920-02](#), [202111-179920-03](#)).

³⁰ Ex. 304 (Notice of Public Information and Environmental Review Scoping Meeting) (eDocket Nos. [20221-181191-02](#), [20221-181191-03](#), [20221-181191-01](#)).

the Planning and Zoning Department for the City of Kasson and the Planning and Zoning Department for the City of Byron; and provided a copy of the Applications to the township boards of Kalmar, Canisteo, and Mantorville, in accordance with the Commission's Order Accepting Applications, Setting Review Procedures, Authorizing Task Force, and Granting Variances issued on November 17, 2021.³¹

31. On January 5, 2022, Byron Solar filed a letter providing a status update on the MISO interconnection process.³²

32. On January 6 and 8, 2022, notice of the public information and environmental review scoping meeting was published in the *Dodge County Independent* and *Rochester Post Bulletin*, respectively.³³

33. On January 25, 2022, Commission and EERA staff held a public meeting in-person to provide the public with information about the Project and to solicit comments on the scope of the EA.³⁴

34. On January 26, 2022, Commission and EERA staff held a public meeting via remote-access to provide the public with information about the Project and to solicit comments on the scope of the EA.³⁵

35. During the comment period ending February 15, 2022, written comments were submitted by the Minnesota Department of Natural Resources ("MDNR"),³⁶ Minnesota Pollution Control Agency ("MPCA"),³⁷ Minnesota Department of Transportation ("MnDOT"),³⁸ International Union of Operating Engineers, Local 49 ("IUOE"),³⁹ North Central States Regional Council of Carpenters ("NCSRC"),⁴⁰ and six members of the public.⁴¹

³¹ Ex. 112 (Compliance Filing – Order Compliance) (eDocket Nos. [20221-181267-01](#), [20221-181267-02](#), [20221-181267-03](#)).

³² Ex. 113 (Compliance Filing – MISO Update) (eDocket Nos. [20221-181266-03](#), [20221-181266-01](#), [20221-181266-02](#)).

³³ Ex. 116 (Compliance Filing – Notice of Information and Environmental Scoping Meeting) (eDocket Nos. [20223-183926-03](#), [20223-183926-02](#), [20223-183926-01](#)).

³⁴ See generally January 25, 2022 Public Information and Environmental Assessment Scoping Meeting Transcript.

³⁵ See generally January 26, 2022 Public Information and Environmental Assessment Scoping Meeting Transcript.

³⁶ Ex. 206 (Public Comments on the Scope of the Environmental Assessment) (MDNR Comments) (eDocket No. [20222-182832-01](#)).

³⁷ Ex. 206 (Public Comments on the Scope of the Environmental Assessment) (MPCA Scoping Comments on Byron Solar Project) (eDocket Nos. [20222-182944-02](#), [20222-182944-03](#), [20222-182944-01](#)).

³⁸ Ex. 206 (Public Comments on the Scope of the Environmental Assessment) (MnDOT Comments) (eDocket No. [20222-182835-01](#)).

³⁹ Ex. 206 (Public Comments on the Scope of the Environmental Assessment) (IUOE Comments) (eDocket Nos. [20222-182738-01](#), [20222-182737-01](#), [20222-182739-01](#)).

⁴⁰ Ex. 206 (Public Comments on the Scope of the Environmental Assessment) (NCSRC Comments) (eDocket No. [20222-182943-02](#)).

⁴¹ See Ex. 206 (Public Comments on the Scope of the Environmental Assessment) (eDocket Nos. [20222-182943-03](#), [20222-182957-02](#), [20222-182558-04](#), [20222-182558-01](#), [20222-182943-02](#), [20222-182957-03](#), [20222-](#)

36. On February 15, 2022, Byron Solar filed scoping comments in response to questions or issues raised during the public information and scoping meetings and the ATF meetings. Byron Solar also filed corrected/updated Maps 1-15 to the Joint SP/RP Application, which reflected a correction to the Project Area and a minor change to a collection line route.⁴²

37. On March 4, 2022, the EERA filed the ATF Report.⁴³

38. On March 9, 2022, Byron Solar filed reply comments in response to comments submitted during the EA scoping comment period and items raised in the ATF Report.⁴⁴

39. On March 18, 2022, the EERA filed comments and recommendations on scoping alternatives, addressing the EA scoping process, the siting and routing alternatives proposed during the scoping process, and the alternatives which the EERA recommends for inclusion in the scope of the EA. The EERA did not recommend evaluation of additional site alternatives in the EA, but did recommend evaluation of one route alternative in the EA.⁴⁵

40. Between March 18 and May 6, 2022, comments were filed by four members of the public.⁴⁶

41. On March 18, 2022, the EERA filed the Scoping Survey Report.⁴⁷

42. On May 2, 2022, the ALJ issued the first prehearing order scheduling a prehearing conference for May 20, 2022.⁴⁸

43. On May 23, 2022, the EERA filed the Environmental Assessment Scoping Decision (“EASD”), which set forth the matters proposed to be addressed in the EA and identified certain issues outside the scope of the EA. No site or system alternatives or boundary adjustments were recommended for study, but one route alternative was recommended for study; accordingly,

[182832-01](#), [20222-182835-01](#), [20222-182558-06](#), [20222-182558-03](#), [20222-182558-02](#), [20222-182558-05](#), [20222-182836-01](#), [20222-182833-01](#), [20222-182957-01](#), [20222-182943-01](#), [20223-183637-01](#)).

⁴² Ex. 114 (Scoping Comments) (eDocket Nos. [20222-182826-03](#), [20222-182826-01](#), [20222-182826-02](#)); Scoping Comments – Corrected/Updated Site Maps 1-15 (February 15, 2022) (eDocket Nos. [20222-182826-06](#), [20222-182826-04](#), [20222-182826-05](#), [20222-182826-09](#), [20222-182826-07](#), [20222-182826-08](#), [20222-182826-12](#), [20222-182826-10](#), [20222-182826-11](#)).

⁴³ Ex. 207 (ATF Report) (eDocket Nos. [20223-183423-01](#), [20223-183423-02](#), [20223-183423-03](#)).

⁴⁴ Ex. 115 (Reply Comments) (eDocket Nos. [20223-183634-03](#), [20223-183634-02](#), [20223-183634-01](#)).

⁴⁵ Ex. 208 (Comments and Recommendations on Scoping Alternatives) (eDocket Nos. [20223-183952-02](#), [20223-183952-01](#), [20223-183952-03](#)).

⁴⁶ Ward Comments (March 18, 2022) (eDocket Nos. [20223-183948-02](#), [20223-183948-01](#), [20223-183948-03](#)); Mock Comments (March 18, 2022) (eDocket Nos. [20223-183950-02](#), [20223-183950-01](#), [20223-183950-03](#)); Overland Comments (March 18, 2022) (eDocket Nos. [20224-185037-02](#), [20224-185037-01](#), [20224-185037-03](#)); Neil Witzel Comments (April 26, 2022) (eDocket Nos. [20224-185129-01](#), [20224-185128-01](#), [20224-185130-01](#)); Neil Witzel Comments (May 6, 2022) (eDocket Nos. [20225-185588-03](#), [20225-185588-02](#), [20225-185588-01](#)).

⁴⁷ EERA Scoring Survey Report (March 18, 2022) (eDocket Nos. [20223-183943-03](#), [20223-183943-02](#), [20223-183943-01](#)).

⁴⁸ OAH First Prehearing Order (May 2, 2022) (eDocket Nos. [20225-185468-02](#), [20225-185468-01](#), [20225-185468-03](#)).

no site alternative other than the site location proposed by Byron Solar but one route alternative would be considered in the EA.⁴⁹

44. On May 23, 2022, the EERA issued the Notice of EASD.⁵⁰ The Notice of EASD was published in the *EQB Monitor*.⁵¹

45. On May 24, 2022, the EERA filed a letter it had sent to landowners along the route alternative with the EASD.⁵²

46. On May 26, 2022, the Commission issued a Notice of Comment Period requesting comments on whether the Commission should issue a certificate of need for the Project, which opened an initial written comment period until June 16, 2022 and a reply comment period until June 23, 2022.⁵³

47. On June 15, 2022, the DER filed comments on the merits of the CN Application.⁵⁴

48. On June 15, 2022, the ALJ issued the second prehearing order setting the schedule for these proceedings.⁵⁵

49. During the initial comment period ending June 16, 2022, comments were filed by the IUOE and NCSRC,⁵⁶ and LIUNA Minnesota and North Dakota (“LIUNA”) in support of the Project.⁵⁷ The DER filed comments recommending that the Commission issue a certificate of need for the Project upon finding that the impacts documented in the EA prepared for the Project are acceptable.⁵⁸

50. On June 23, 2022, Byron Solar filed reply comments responding to the comments submitted by LIUNA, IUOE and NCSRC, and the DER regarding Byron Solar’s CN Application.⁵⁹

51. On September 22, 2022, the EERA issued the EA for the Project.⁶⁰

⁴⁹ Ex. 209 (EASD) (eDocket Nos. [20225-186000-01](#), [20225-186000-02](#), [20225-186000-03](#)).

⁵⁰ Ex. 210 (Notice of Environmental Assessment Scoping Decision) (eDocket Nos. [20225-186010-01](#), [20225-186010-02](#), [20225-186010-03](#)).

⁵¹ Ex. 214 (EQB Monitor Notice of EASD) (eDocket Nos. [202210-189686-01](#), [202210-189686-02](#), [202210-189686-03](#)).

⁵² Ex. 211 (Letter to Landowners Along Route Alternative) (eDocket Nos. [20225-186034-02](#), [20225-186034-01](#), [20225-186034-03](#)).

⁵³ Ex. 305 (Notice of Comment Period) (eDocket Nos. [20225-186130-02](#), [20225-186109-01](#), [20225-186130-01](#)).

⁵⁴ Ex. 403 (DER Comments – Merits of CN Application) (eDocket No. [20226-186639-01](#)).

⁵⁵ Second Prehearing Order (June 15, 2022) (eDocket Nos. [20226-186691-02](#), [20226-186691-03](#), [20226-186691-01](#)).

⁵⁶ IUOE and NCSRC (June 15, 2022) (eDocket Nos. [20226-186644-01](#), [20226-186607-01](#), [20222-182737-01](#), [20222-182739-01](#)).

⁵⁷ LIUNA Comments (June 16, 2022) (eDocket No. [20226-186725-01](#)).

⁵⁸ Ex. 403 (DER Comments – Merits of CN Application).

⁵⁹ Ex. 117 (Reply Comments) (eDocket No. [20226-186857-01](#)).

⁶⁰ Ex. 212 (EA) (eDocket Nos. [20229-189238-01](#), [20229-189238-02](#), [20229-189238-03](#)), and (EA Appendices) (eDocket Nos. [20229-189238-04](#), [20229-189238-05](#), [20229-189238-06](#), [20229-189238-07](#), [20229-](#)

52. On October 3, 2022, the Commission and EERA issued a Notice of EA Availability, Public Hearings, and Comment Period, notifying the public of the October 18, 2022 in-person public hearing and the October 19, 2022 remote-access public hearing, and initiating a public comment period ending November 8, 2022.⁶¹

53. On October 11, 2022, Notice of EA Availability, Public Hearings, and Public Comment Period was published in the *EQB Monitor*.⁶²

54. On October 4, 2022, Byron Solar filed a letter providing a status update on the MISO interconnection process.⁶³

55. On October 11, 2022, Byron Solar filed the Direct Testimony of Scott Wentzell.⁶⁴

56. On October 17, 2022, the Commission filed a Notice of Cancellation of Public Hearings, notifying the public that the October 18 and 19, 2022 public hearings had been canceled and would be rescheduled, and that the written comment period would be extended to at least 10 days after the rescheduled public hearings.⁶⁵

57. On October 24, 2022, the Commission and EERA issued a Notice of EA Availability, Public Hearings, and Comment Period, notifying the public of the rescheduled November 9, 2022 in-person public hearing and the November 10, 2022 remote-access public hearing, and initiating a public comment period ending November 29, 2022.⁶⁶

58. On October 22 and 27, 2022, the Notice of EA Availability, Public Hearings and Comment Period was published in the *Rochester Post Bulletin* and the *Dodge County Independent*, respectively.⁶⁷

[189238-09](#), [20229-189238-08](#), [20229-189238-10](#), [20229-189238-11](#), [20229-189238-12](#), [20229-189238-13](#), [20229-189238-14](#), [20229-189238-15](#), [20229-189238-16](#), [20229-189238-17](#), [20229-189238-18](#), [20229-189238-19](#), [20229-189238-20](#), [20229-189238-21](#)).

⁶¹ Ex. 306 (Notice of EA Availability, Public Hearings, and Comment Period) (eDocket Nos. [202210-189464-03](#), [202210-189464-02](#), [202210-189464-01](#)); Ex. 213 (Notice of EA Availability, Public Hearing, and Comment Period) (eDocket Nos. [202210-189464-03](#), [202210-189464-02](#), [202210-189464-01](#)).

⁶² Ex. 215 (EQB Monitor Notice of EA Availability, Hearing, and Public Comment Period) (eDocket Nos. [202210-189679-02](#), [202210-189679-01](#), [202210-189679-03](#)).

⁶³ Ex. 118 (Compliance Filing – Letter Regarding MISO Update) (eDocket Nos. [202210-189528-03](#), [202210-189528-01](#), [202210-189528-02](#)).

⁶⁴ Ex. 119 (Direct Testimony of Scott Wentzell) (eDocket Nos. [202210-189689-04](#), [202210-189689-05](#), [202210-189689-06](#)).

⁶⁵ Notice of Cancellation of Public Hearings, To Be Rescheduled (October 17, 2022) (eDocket Nos. [202210-189860-03](#), [202210-189860-02](#), [202210-189860-01](#)).

⁶⁶ Ex. 307 (Notice of EA Availability, Public Hearings, and Comment Period) (eDocket Nos. [202210-190078-03](#), [202210-190078-02](#), [202210-190078-01](#)).

⁶⁷ Affidavits of Publication – *Dodge County Independent* (November 21, 2022) (eDocket No. [202211-190795-01](#)) and Affidavit of Publication – *Rochester Post Bulletin* (November 21, 2022) (eDocket No. [202211-190795-02](#)).

59. On October 28, 2022, the ALJ issued the third prehearing order setting the schedule for these proceedings.⁶⁸

60. On November 9 and 10, 2022, the ALJ presided over joint public hearings on the CN Application and Joint SP/RP Application for the Project in-person and via remote-access, respectively. Commission staff, EERA staff, and representatives from Byron Solar were present. Ten members of the public spoke during the November 9, 2022 public hearing (in-person). During the remote-access public hearing held on November 10, 2022, two members of the public spoke.⁶⁹

61. During the comment period ending November 29, 2022, written comments were filed by EERA staff,⁷⁰ MDNR,⁷¹ MnDOT,⁷² the interagency Vegetation Management Planning Work Group (“VMPWG”),⁷³ Dodge County,⁷⁴ IUOE and NCSRC,⁷⁵ the Minnesota Land & Liberty Coalition,⁷⁶ one member of the public,⁷⁷ and Byron Solar.⁷⁸

62. On December 9, 2022, Byron Solar submitted reply comments and cumulative redlines of the Draft Site Permit (“DSP”) and Draft Route Permit (“DRP”) showing Byron Solar’s and EERA staff’s cumulative proposed changes to the DSP filed as Attachment C to the EA and to the DRP filed as Attachment D to the EA.⁷⁹

III. SOLAR FACILITY

A. Solar Facility Description

63. The proposed Solar Facility is an up to 200 MW PV solar energy generating facility and associated systems in the townships of Mantorville and Canisteo in Dodge County, Minnesota.⁸⁰

64. The components of the Solar Facility include PV solar panels and racking, inverters, security fencing, access roads, a Project substation, operations and maintenance (“O&M”) facility, underground electrical collection system, electrical cables, conduit, switchgear, step up transformers, supervisory control and data acquisition (“SCADA”) systems, metering equipment, several weather stations, stormwater ponds, and a temporary laydown yard.⁸¹

⁶⁸ Third Prehearing Order (October 28, 2022) (eDocket Nos. [202210-190220-02](#), [202210-190220-03](#), [202210-190220-01](#)).

⁶⁹ See November 9, 2022 and November 10, 2022 Public Hearing Transcripts.

⁷⁰ EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

⁷¹ MDNR Comments (November 23, 2022) (eDocket No. [202211-190858-01](#)).

⁷² MnDOT Comments (eDocket No. [202211-190937-02](#)).

⁷³ VMPWG Comments (November 23, 2022) (eDocket No. [202211-190868-01](#)).

⁷⁴ Dodge County Comments (November 28, 2022) (eDocket No. [202211-190887-01](#)).

⁷⁵ IUOE and NCSRC Comments (November 29, 2022) (eDocket No. [202211-190968-01](#)).

⁷⁶ Minnesota Land & Liberty Coalition Comments (October 11, 2022) (eDocket No. [202210-189671-03](#)).

⁷⁷ Public Comment (December 1, 2022) (eDocket No. [202212-191017-02](#)).

⁷⁸ Byron Solar Comments and Table 1 (November 29, 2022) (eDocket No. [202211-190965-02](#)).

⁷⁹ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

⁸⁰ Ex. 108 at 1 (Joint SP/RP Application).

⁸¹ Ex. 108 at 26-29, 32 (Joint SP/RP Application).

65. The panels will be installed on a tracking rack system, generally aligned in rows north and south with the PV panels facing east toward the rising sun in the morning, parallel to the ground during mid-day, and then west toward the setting sun in the afternoon. The panels are rotated by a small motor connected to the tracking rack system to slowly track with the sun throughout the day. When the sun is directly overhead, the PV panels will be at a zero degree angle (level to the ground) and four to six feet off the ground. The tracker rows will follow the sun from approximately 60 degrees east to 60 degrees west through the course of the day. At 60 degrees (tilted to the highest position), the edge of the panels will be a maximum of 15 feet off the ground and a minimum of two to three feet, pending final design. The tracking rack system allows the Project to optimize the angle of the panels in relation to the sun throughout the day, thereby maximizing production of electricity and the capacity value of the Project. To the extent practical, the racking system foundations will be a driven pier and will not require concrete, although some concrete foundations may be required depending upon site specific soil conditions and geotechnical analysis.⁸²

66. The solar panels deliver DC power to the inverters through cabling that will typically be located in an underground trench or ploughed in place (at least four feet deep and two to four feet wide). The depth to cables may be deeper for installation under existing utilities or other features requiring avoidance. The specific electrical collection technology used will be site-specific depending on geotechnical analysis, constructability, and availability of materials. Final engineering and procurement will help determine the construction method for the electrical collection system.⁸³ Underground cabling will be installed in accordance with the Agricultural Impact Mitigation Plan (“AIMP”).⁸⁴ At some locations the underground collectors will be installed with horizontal directional drilling under roadways.⁸⁵

67. Energy from the solar panels is directed through an underground electrical collection system to inverters where the power is converted from DC to AC power. The power is then transmitted to two medium power transformers located at the proposed Project substation which will step-up the power from 34.5 kV to 345 kV. Byron Solar’s proposed Transmission Line (described below) will connect the Solar Facility via the Project substation to the electric grid.⁸⁶

68. The Project substation will be located outside the fenced solar arrays and is estimated to occupy 6.8 acres of agricultural land. The Project substation will include two 34.5 kV/345 kV step-up transformers, a 345 kV circuit breaker, relay and protective equipment, SCADA equipment, telecommunication equipment, and metering equipment.⁸⁷ The substation will be fenced with either a six-foot chain-link fence with top guard angled out and upward at 45 degrees with three to four strands of smooth wire (no barbs), or an eight-foot chain link fence for security and safety purposes.⁸⁸ The location of the Project substation is dependent upon the route selected. For Byron Solar’s proposed Transmission Line route (the “Blue Route”), the substation will be located in Section 35 of Mantorville Township, in the northeastern portion of the Solar

⁸² Ex. 108 at 27 (Joint SP/RP Application).

⁸³ Ex. 108 at 28 (Joint SP/RP Application).

⁸⁴ Ex. 108 at 28 (Joint SP/RP Application); Ex. 212 at 23 (EA).

⁸⁵ Ex. 212 at 24 (EA).

⁸⁶ Ex. 108 at 1, 29 (Joint SP/RP Application).

⁸⁷ Ex. 108 at 1, 29 (Joint SP/RP Application); Ex. 212 at 22 (EA).

⁸⁸ Ex. 108 at 1, 29 (Joint SP/RP Application).

Facility, approximately one-half mile south of U.S. Highway 14 near 640th St/265th Ave in Dodge County. For the one alternative route studied by the EA (the “Red Route”), the substation will be located in Section 13 of Canisteo Township in the southeast portion of the Solar Facility.⁸⁹

69. The Project will use a SCADA system to control and monitor the Project. The SCADA communications systems provides status views of electrical and mechanical data, operation and fault status, meteorological data, and grid station data.⁹⁰

70. Byron Solar considered the Dodge County setbacks when designing the Solar Facility and Transmission Line; however, land constraints such as transmission line easements, wetlands, trees, and others make it difficult for arrays to be sited further away from road rights-of-way, side/rear property lines of lands not included as part of the Solar Facility, and dwellings not owned by an owner/benefactor of Solar Facility. Byron Solar is committed to working with Dodge and Olmsted counties to meet setback requirements where feasible.⁹¹

71. Byron Solar is actively marketing the Project to a number of potential off-takers and may sell the power in the form of a Power Purchase Agreement (“PPA”), or the Project could be owned directly by a utility.⁹²

72. The Solar Facility is estimated to cost about \$252.8 million. The amount is an engineering estimate and expected to reflect actual Solar Facility costs within approximately 20 percent. Operating costs are estimated to be approximately \$3.2 million dollars on an annual basis, including labor, materials, and property taxes. The total installed capital costs for the Project (~~using the Blue Route~~) are estimated to be approximately \$256 to \$258.9 million, with Project costs depending on variables including, but not limited to, construction costs, the route selected, taxes, tariffs, and panel selection, along with associated electrical and communication systems, and access roads.⁹³

B. Site Location and Characteristics

73. The Solar Facility is sited in Mantorville and Canisteo Townships in Dodge County in southeastern Minnesota.⁹⁴

74. Combined, the Solar Facility and Transmission Line encompass 1,847.97 acres of private land under lease by Byron Solar (the “Project Area”).^{95, 96}

⁸⁹ Ex. 212 at 22 (EA).

⁹⁰ Ex. 108 at 40 (Joint SP/RP Application).

⁹¹ Ex. 108 at 34 (Joint SP/RP Application).

⁹² Ex. 106 at 12 (CN Application).

⁹³ Ex. 106 at 33-34 (CN Application); Ex. 212 at 32 (EA).

⁹⁴ Ex. 108 at 12 (Joint SP/RP Application).

⁹⁵ Ex. 119 at 2 (Direct Testimony of Scott Wentzell).

⁹⁶ Note that the EA used different terms/definitions than the Applications when referring to the Project. Specifically, the EA used the terms “land control area” (defined as “the area for which an applicant is assumed to have site control through ownership, a lease agreement, or an easement. For this document, it applies to both the area for the [S]olar [F]acility and the final ROW for the [T]ransmission [L]ine. The term is used to bound a review area and should not be understood to imply the applicant has secured or will definitely secure the land.”), “local vicinity” (defined as “1,600 feet from the land control area and collection line corridor”), and “project area” (defined as one

75. Byron Solar has 100 percent land control for the Solar Facility. The Solar Facility is situated on approximately 1,801 acres of predominantly agricultural land and refers to all land within the Solar Facility boundary under agreement with a landowner. The Applicant estimates that approximately 1,552.6 acres is necessary to accommodate the final design of the Solar Facility (the “Preliminary Development Area”). The “Preliminary Development Area” refers to portions of the Project Area hosting solar equipment (1,552.6 acres), generally defined as the area within the Solar Facility that is hosting solar equipment and will be surrounded by a fence. The Preliminary Development Area includes access roads (including those extending beyond the Solar Facility boundary), buried electrical collection lines, inverters, an O&M facility, Project substation, stormwater basins, and a temporary laydown yard. The remaining 248.4 acres are not hosting solar equipment and allow for planned buffers and flexibility in overall design.⁹⁷ An additional 1,227 acres beyond the Solar Facility boundary has also been secured through easements and lease agreements. In total, the Applicant has secured 3,028 acres of lease agreements and easements, which is referred to as the Land Control Area.⁹⁸

76. The Project is located in a rural, agricultural area.⁹⁹ The populations of Dodge and Olmsted Counties in 2019 were estimated to be 20,669 and 154,809 persons, respectively.¹⁰⁰

C. Solar Resource Considerations

77. Based on the National Renewable Energy Laboratory’s Direct Normal Solar Resource of Minnesota, predicted annual average daily total solar resource near the Project are between 4.1 and 4.5 kilowatt hours per square meter per day.¹⁰¹

78. The Project is anticipated to have a net capacity factor of between approximately 24 percent and 25 percent, with projected average output of approximately 435,000 MWh annually of reliable, deliverable on-peak energy.¹⁰²

IV. TRANSMISSION LINE

A. Transmission Line Description

mile from the land control area and collection line corridor”). The Applications used the terms “Development Area” (defined as the “Approximate 1,552.6 acre area where the Applicant proposes to build the Solar Facility”), “Land Control Area” (defined as “Parcels that have lease agreements with the Applicant and may extend beyond the Solar Facility boundary”), “Project Area” (as updated by Byron Solar, defined as the 1,847.97 acres of land that includes the Solar Facility and Transmission Line Right-of-Way), and “Transmission Line Right-of-Way” (defined as the 52.7 acres of right-of-way required for the Blue Route). For purposes of these Findings of Fact, Conclusions of Law, and Recommendations, references from the EA to the “land control area” have been replaced with the term “Land Control Area” (with the meaning designated in the Applications). References from the EA to “project area” have been replaced with “EA Project Area”.

⁹⁷ See Ex. 119 at 2 (Direct Testimony of Scott Wentzell) and Ex. 108 at 12 (Joint SP/RP Application).

⁹⁸ Ex. 108 at 12 (Joint SP/RP Application).

⁹⁹ Ex. 108 at 51 (Joint SP/RP Application).

¹⁰⁰ Ex. 108 at 71-73 (Joint SP/RP Application).

¹⁰¹ Ex. 108 at 18 (Joint SP/RP Application).

¹⁰² Ex. 106 at 34 (CN Application).

79. Byron Solar’s proposed Solar Facility will connect to the grid via Byron Solar’s proposed 345 kV Transmission Line.¹⁰³

80. The Blue Route would be located within Mantorville Township in Dodge County, and Kalmar Township in Olmsted County, Minnesota.¹⁰⁴ The Blue Route would begin at Byron Solar’s proposed Project substation location and extend generally north and east for approximately three miles to connect to the point of interconnection (“POI”), the existing Southern Minnesota Municipal Power Agency (“SMMPA”) Byron Substation in Olmsted County.¹⁰⁵

81. The EA also studied the one alternative route (the Red Route) and associated alternative substation location.¹⁰⁶

82. Byron Solar determined that 345 kV was the appropriate voltage to meet Project needs by reducing line losses and interconnecting at the voltage of the POI.¹⁰⁷

B. Routes Evaluated

83. The EA includes an analysis of the following route alternatives (and associated substation locations) for the Project:

(a) Byron Solar’s proposed route (Blue Route) and associated Project substation location; and

(b) Red Route and associated alternative Project substation location.

1. Blue Route

84. The Blue Route was proposed by Byron Solar in its Joint SP/RP Application. The Blue Route is approximately three miles long and begins at the proposed Project substation located in the northern portion of the Solar Facility just south of U.S. Highway 14 near 640th St/265th Ave in Dodge County. From the proposed Project substation, the Blue Route then travels north crossing U.S. Highway 14 and then through agricultural fields for about 0.6 miles, crosses County Road 34 and then turns east for approximately one mile along a railroad (which also parallels an existing 161 kV transmission line for the same length), turning north along a section line for approximately 0.25 miles, before turning east for approximately one mile. The last 0.25 miles into the existing Byron Substation is shared with the Red Route and runs east before turning south to enter the existing SMMPA Byron Substation from the north.¹⁰⁸

85. The Blue Route follows section lines and a railroad for most of its length. The Blue Route crosses the east and west bound lanes of U.S. Highway 14; three existing electrical

¹⁰³ Ex. 108 at 15 (Joint SP/RP Application).

¹⁰⁴ Ex. 108 at 12 (Joint SP/RP Application).

¹⁰⁵ Ex. 108 at 1, 24 (Joint SP/RP Application); Ex. 212 at 26 (EA).

¹⁰⁶ Ex. 212 at 26 (EA).

¹⁰⁷ Ex. 106 at 22 (CN Application).

¹⁰⁸ Ex. 212 at 22, 26 (EA); Ex. 108 at 24 (Joint SP/RP Application).

distribution lines; four existing transmission lines; three local roads; Cascade Creek, and the Canadian Pacific Railway.¹⁰⁹

86. In developing the Blue Route, Byron Solar evaluated and rejected three alternate route segments.¹¹⁰

87. The Blue Route represents Byron Solar's effort to identify a route that best meets the Commission's routing criteria, avoids or minimizes impacts on residences, the environment, and other sensitive resources, and for which Byron Solar has voluntary easements.¹¹¹

2. Red Route

88. The Red Route is approximately 4.5 miles long and was proposed by a citizen during the scoping comment period. The Red Route begins at the alternative substation location in Section 13 of Canisteo Township, traveling east for approximately 0.4 miles, before turning north for approximately three miles along a section line to parallel an existing 345 kV transmission line towards the existing Byron Substation, then jogging northwest just south of US Highway 14 for approximately 0.25 miles before proceeding north for approximately 0.6 miles to join with the last 0.25 miles of the Blue Route to enter the existing Byron Substation from the north.¹¹²

89. The Red Route crosses five existing transmission lines, seven local roads, an unnamed creek, Cascade Creek, the east and west bound lanes of U.S. Highway 14, and the Canadian and Pacific Railway.¹¹³

C. **Transmission Line Structure Types and Spans**

90. The Transmission Line will be single-circuit. Byron Solar proposes using weathering steel monopoles (poles or structures) that generally range in height from 90 feet to 170 feet tall. Approximately 24 structures will be installed to facilitate the connection between the Project substation and the existing Byron Substation. Of these 24 structures, two shorter structures will be used within the Project substation and existing Byron Substation to tie-in to the larger structures.¹¹⁴ There will be a single collector pole structure within the Project substation and at least one deadend pole structure used to enter the existing Byron Substation.¹¹⁵

91. Byron Solar will use three types of structures: tangent, small angle, and deadend: (a) tangent - for in-line (straight) segments; (b) small angle - to be used in locations where the alignment slightly shifts direction; and (c) deadend - to be used within the Project substation, at 90 degree turns, and as the Transmission Line approaches and enters the existing Byron Substation.¹¹⁶

¹⁰⁹ Ex. 212 at 22, 26 (EA).

¹¹⁰ Ex. 108 at 25-26 (Joint SP/RP Application).

¹¹¹ Ex. 212 at 26 (EA); *see also* Ex. 119 at 5 (Direct Testimony of Scott Wentzell).

¹¹² Ex. 212 at 26 (EA).

¹¹³ Ex. 212 at 26 (EA).

¹¹⁴ Ex. 212 at 28 (EA) and Ex. 108 at 29-30 (Joint SP/RP Application).

¹¹⁵ Ex. 212 at 28 (EA).

¹¹⁶ Ex. 212 at 28 (EA) and Ex. 108 at 30 (Joint SP/RP Application).

92. Structures will be spaced approximately 232 to 974 feet apart.¹¹⁷

93. Transmission line structures are generally designed for installation at existing grades. Sites with more than ten percent slope will have working areas graded level or fill brought in for working pads.¹¹⁸

94. Foundations for the pole structures will be directed embedments and drilled piers. The single circuit tangent structures or non-containment structures will be backfilled with concrete slurry and all other structures will use drilled piers.¹¹⁹ Deadend poles will be installed on drilled piers and drilled pier foundations will be designed as reinforced concrete piers. All reinforced piers will have a minimum projection of one foot of concrete above ground, and the minimum reveal used for design will be 1.5 feet to account for the anchor bolt projection. Drilled pier foundations may vary from approximately three to six feet in diameter and 20 to 30 feet or more in depth, depending on soil conditions. Steel reinforcing bars and anchor bolts are installed in the drilled holes prior to concrete placement. After the concrete foundation is set, the pole is bolted to the foundation.¹²⁰ Tangent and angle structures will be direct embedded and backfilled with an approved concrete slurry. Direct embedding involves digging a hole for each pole, filling it partially with crushed rock, and then setting the pole on top of the rock base. The area around the pole is then backfilled with crushed rock and/or soil once the pole is set. Any excess soil from the excavation will be spread and leveled near the structure or removed from the site, if requested by the property owner or regulatory agency.¹²¹

D. Transmission Line Conductors

95. The conductor is a two-bundled 795 kcmil 26/7 ACSR “Drake” with a single 48 fiber OPGW (DNO-10926) and an additional 3/8-inch EHS 7-strand steel OHGW for additional shielding.¹²²

E. Transmission Line Route Widths

96. For the Blue Route, Byron Solar proposes a route width of 150 feet (75 feet on each side of the proposed Transmission Line route centerline) for the entire route.¹²³ For the Red Route, the EERA evaluated a 450-foot route width in the EA.¹²⁴

F. Transmission Line Right-of-Way

97. A 150-foot right-of-way is necessary for the Transmission Line.

98. Byron Solar has acquired a 150-foot-wide permanent right-of-way (75 feet on both sides of the transmission line centerline) along the Blue Route. The total Blue Route right-of-way

¹¹⁷ Ex. 212 at 28 (EA) and Ex. 108 at 30 (Joint SP/RP Application).

¹¹⁸ Ex. 108 at 43 (Joint SP/RP Application).

¹¹⁹ Ex. 108 at 43 (Joint SP/RP Application).

¹²⁰ Ex. 108 at 43 (Joint SP/RP Application); Ex. 212 at 29-30 (EA).

¹²¹ Ex. 108 at 43-44 (Joint SP/RP Application).

¹²² Ex. 108 at 31 (Joint SP/RP Application); Ex. 212 at 28 (EA).

¹²³ Ex. 108 at 23 (Joint SP/RP Application).

¹²⁴ November 10, 2022, Public Hearing Transcript at 29.

is 52.7 acres. Byron Solar has secured 100 percent of the total necessary private easements from landowners for the 52.7 acres of right-of-way required for the Blue Route.¹²⁵ Byron Solar has not acquired right-of-way for the Red Route.

99. The right-of-way along the Blue Route will share existing transmission and railroad rights-of-way for about one mile, reducing the overall width of the easement required from the private landowners.¹²⁶

100. Transmission Line structures would be placed roughly in the center of the right-of-way, with 75 feet of right-of-way on each side of the centerline.¹²⁷

G. Project Substation

101. The location of the Project substation is dependent upon the route selected.¹²⁸

102. Byron Solar's preferred location for the Project substation, associated with the Blue Route, is located in Section 35 of Mantorville Township, in the northeastern portion of the Solar Facility, approximately one-half mile south of U.S. Highway 14 near 640th St/265th Ave in Dodge County.¹²⁹ Byron Solar maintains an option to purchase four to six acres of land where the proposed Project substation will be built.¹³⁰

103. For the Red Route, the substation will be located in Section 13 of Canisteo Township in the southeast portion of the Solar Facility.¹³¹

H. Transmission Line Costs

104. The total estimated cost of the Transmission Line along the Blue Route is approximately \$3.2 million. Final costs will depend on a variety of factors, including the approved route, costs of materials, and labor.¹³²

105. The total estimated cost of the Transmission Line along the Red Route would be approximately \$6.1 million.¹³³

V. PROJECT SCHEDULE

106. Byron Solar plans to commence construction in the Third or Fourth Quarter of 2024, with an in-service date in the Fourth Quarter of 2025.¹³⁴

¹²⁵ Ex. 108 at 1, 24 (Joint SP/RP Application) and Ex. 212 at 29 (EA).

¹²⁶ Ex. 212 at 29 (EA).

¹²⁷ Ex. 108 at 24 (Joint SP/RP Application).

¹²⁸ Ex. 212 at 22 (EA).

¹²⁹ Ex. 212 at 22 (EA).

¹³⁰ Ex. 119 at 5 (Direct Testimony of Scott Wentzell).

¹³¹ Ex. 212 at 22 (EA).

¹³² Ex. 106 at 33-34 (CN Application); Ex. 212 at 32 (EA).

¹³³ Ex. 212 at 32 (EA).

¹³⁴ Ex. 119 at 4 (Direct Testimony of Scott Wentzell).

VI. SUMMARY OF PUBLIC COMMENTS

107. During the public information and environmental review scoping meeting (in-person) on January 25, 2022, 13 people provided comments. In addition to general statements of support for or in opposition to the proposed Project, commenters identified a range of potential impacts, potential benefits, and potential mitigation strategies related to the proposed Project. Comments addressed benefits to the local economy, use of farmland for power generation, local land use regulations, stormwater runoff, drain tile and drainage, visual impacts, the availability and suitability of other site or transmission alternatives, impacts to property values, the impacts to wildlife, potential impacts to groundwater from construction activity near karst features, potential impacts to the local agricultural economy, and decommissioning requirements.¹³⁵

108. During the public information and environmental review scoping meeting (remote-access) on January 26, 2022, three people provided comments in support of the Project and the benefits it will bring to the local economy, including construction jobs and local spending.¹³⁶

109. During the comment period ending February 15, 2022, written comments were submitted by the MnDOT,¹³⁷ MDNR,¹³⁸ MPCA,¹³⁹ IUOE,¹⁴⁰ NCSRC,¹⁴¹ and six members of the public.¹⁴²

110. The MnDOT filed comments stating that Byron Solar should continue consultation with the MnDOT to evaluate the Project and obtain any necessary permits and leases. The MnDOT also noted that any MnDOT permits applied for as a part of the Project will not be issued until the Commission has issued an approved site permit. The MnDOT stated that it expects Byron Solar to coordinate closely with District 6 staff regarding the 345 kV crossing of US 14. The MnDOT also noted that Dodge County's long-range plans for an interchange at US Hwy 14 and Dodge CSAH 15 have been thoroughly reviewed in connection with the Project by Dodge County staff and confirmed as not presenting an issue. The MnDOT noted that the "Applicant has stated their commitment to working with MnDOT and Dodge County should the funding, planning and construction of this interchange move forward in the future." The MnDOT also stated that Byron Solar will need to coordinate with the MnDOT when it plans to haul oversize loads to the proposed

¹³⁵ See generally January 25, 2022 Public Information and Environmental Review Scoping Meeting Transcript.

¹³⁶ See generally January 26, 2022 Public Information and Environmental Review Scoping Meeting Transcript.

¹³⁷ Ex. 206 at MnDOT Comments (Public Comments on the Scope of the Environmental Assessment) (eDocket No. [20222-182835-01](#)).

¹³⁸ Ex. 206 at MDNR Comments (Public Comments on the Scope of the Environmental Assessment) (eDocket No. [20222-182832-01](#)).

¹³⁹ Ex. 206 at MPCA Comments (Public Comments on the Scope of the Environmental Assessment) (eDocket Nos. [20222-182944-02](#), [20222-182944-03](#), [20222-182944-01](#)).

¹⁴⁰ Ex. 206 at IUOE Comments (Public Comments on the Scope of the Environmental Assessment) (eDocket Nos. [20222-182738-01](#), [20222-182737-01](#), [20222-182739-01](#)).

¹⁴¹ Ex. 206 at NCSRC Comments (Public Comments on the Scope of the Environmental Assessment) (eDocket No. [20222-182943-02](#)).

¹⁴² See Ex. 206 (Public Comments on the Scope of the Environmental Assessment) (eDocket Nos. [20222-182943-03](#), [20222-182957-02](#), [20222-182558-04](#), [20222-182558-01](#), [20222-182943-02](#), [20222-182957-03](#), [20222-182832-01](#), [20222-182835-01](#), [20222-182558-06](#), [20222-182558-03](#), [20222-182558-02](#), [20222-182558-05](#), [20222-182836-01](#), [20222-182833-01](#), [20222-182957-01](#), [20222-182943-01](#), [20223-183637-01](#)).

site, because the MnDOT’s highway construction activities could impact Project construction. The MnDOT encouraged early coordination with MnDOT staff.¹⁴³

111. The MDNR offered comments on the following topics: avian flight diverters, Snowmobile Trail 302, the loggerhead shrike, wildlife friendly erosion control, karst features, and erosion management. The MDNR recommended that the EA discuss a number of mitigation strategies to minimize potential impacts to wildlife, recreation resources, and groundwater; specifically, the MDNR recommended that the EA clarify whether there would be changes to the drainage system within the solar site, discuss the use of avian flight diverters to avoid avian collisions with the proposed Transmission Line, address continued coordination with the MDNR on changes to Snowmobile Trail 302, address the timing of tree and shrub removal to avoid impacts to the loggerhead shrike, erosion and sediment control measures, address the use of wildlife friendly erosion control, and address avoidance of impacts to groundwater from construction in areas with karst features.¹⁴⁴

112. The MPCA stated that it did not have any comments but that it is the “responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions.”¹⁴⁵

113. IUOE commented in support of the Project, stating that the Project “will further Minnesota’s goals of increasing renewable energy output,” create construction jobs in the region, and provide significant economic benefits to the area. IUOE went on to say that they have had numerous good experiences working on projects with EDFR and are confident that this Project will prioritize use of local labor as one of its development priorities.¹⁴⁶

114. NCSRC commented in support of the Project, stating that the Project has the potential to provide significant local benefits to construction workers and their families in Dodge County and the surrounding areas and would create significant revenue for local governments in the form of taxes. They also stated that “the Project will help contribute towards Minnesota’s goal of reducing greenhouse gas emissions within the energy sector, along with ensuring that Minnesota’s energy system remains reliable and affordable for ratepayers.”¹⁴⁷

115. By February 18, 2022, EERA staff filed written comments that had been submitted by members of the public. The comments included a broad range of topics, including: erosion, surface water runoff, impacts to drainage, impacts from the conversion of agricultural land, changes in land cover, potential impacts to the local agricultural economy, setbacks and other local land use regulations, coordination with local governments, and consideration of alternatives. Several commenters made general comments that the proposed project would be better suited to

¹⁴³ Ex. 206 at MnDOT Comments (Public Comments on the Scope of the EA) (eDocket No. [20222-182835-01](#)).

¹⁴⁴ Ex. 206 at MDNR Comments (Public Comments on the Scope of the EA) (eDocket No. [20222-182832-01](#)).

¹⁴⁵ Ex. 206 at MPCA Comments (Public Comments on the Scope of the EA) (eDocket No. [20222-182944-03](#)).

¹⁴⁶ Ex. 206 at IUOE Comments (Public Comments on the Scope of the Environmental Assessment) (eDocket Nos. [20222-182738-01](#), [20222-182737-01](#), [20222-182739-01](#)).

¹⁴⁷ Ex. 206 at NCSRC Comments (Public Comments on the Scope of the EA) (eDocket No. [20222-182943-02](#)).

another place without specifying an alternate location. Two site alternatives and one route alternative were proposed for evaluation in the EA.¹⁴⁸

116. Between March 18 and May 6, 2022, four additional public comments were filed. These comments discussed vegetative screening, conversion of agricultural land, road use and dust control during construction, glare, and the proposed alternatives.¹⁴⁹

117. On February 15, 2022, Byron Solar submitted comments in response to questions or issues raised during the public information and scoping meetings and the ATF meetings.¹⁵⁰ On March 9, 2022, Byron Solar submitted reply comments in response to comments submitted during the EA scoping comment period.¹⁵¹

118. During the public hearing (in-person) on November 9, 2022, ten people provided comments. In addition to general statements of support for or opposition to the proposed Project, commenters identified a range of potential impacts, potential benefits, and potential mitigation strategies related to the proposed Project. Comments addressed economic benefits such as jobs, tax revenue, local spending, and providing a diverse source of income for landowners, impacts to the local agricultural economy, conversion of farmland, local land use regulations, potential human and environmental impacts, visual impacts, impacts to surface water and drainage, restoration following decommissioning, construction noise, coordination with local governments, fencing, weed management, and the availability and suitability of the Red Route.¹⁵²

119. During the public hearing (remote-access) on November 10, 2022, two people provided comments. The commenters identified a range of potential impacts from water overflow, use of farmland for power generation, stormwater runoff, state and local land use regulations, the availability and suitability of other site or transmission alternatives, impacts to property values, potential impacts to the local traffic due to project construction, and complaint procedures.¹⁵³

120. During the written comment period ending November 29, 2022, written comments were filed by EERA staff, MDNR, MnDOT, the interagency VMPWG, Dodge County, IUOE and NCSRC, the Minnesota Land & Liberty Coalition, one member of the public, and Byron Solar.¹⁵⁴

¹⁴⁸ See Ex. 206 (Public Comments on the Scope of the EA).

¹⁴⁹ Mock Comments (March 18, 2022) (eDocket No. [20223-183950-01](#)); Ward Comments (March 18, 2022) (eDocket No. [20223-183948-01](#)); Witzel Comments (April 26, 2022) (eDocket No. [20224-185128-01](#)); Witzel Comments (May 6, 2022) (eDocket No. [20225-185588-02](#)).

¹⁵⁰ Ex. 114 (Byron Solar Scoping Comments).

¹⁵¹ Ex. 115 (Byron Solar Reply Comments).

¹⁵² See generally November 9, 2022 Public Hearing Transcript.

¹⁵³ See generally November 10, 2022 Public Hearing Transcript.

¹⁵⁴ EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)); MDNR Comments (November 23, 2022) (eDocket No. [202211-190858-01](#)); MnDOT Comments (eDocket No. [202211-190937-02](#)); VMPWG Comments (November 23, 2022) (eDocket No. [202211-190868-01](#)); Dodge County Comments (November 28, 2022) (eDocket No. [202211-190887-01](#)); IUOE and NCSRC Comments (November 29, 2022) (eDocket No. [202211-190968-01](#)); Minnesota Land & Liberty Coalition Comments (October 11, 2022) (eDocket No. [202210-189671-03](#)); Public Comment (December 1, 2022) (eDocket No. [202212-191017-02](#)); Byron Solar Comments and Table 1 (November 29, 2022) (eDocket No. [202211-190965-02](#)).

121. EERA staff submitted comments on the draft decommissioning plan and proposed site and route permit conditions for the Project. EERA staff recommended various modifications to the draft decommissioning plan. EERA staff also summarized the changes to the sample site and route permits that were reflected in the DSP and DRP included with the EA, and proposed additional changes to certain permit conditions that were not otherwise reflected in the EA.¹⁵⁵

122. The MDNR commented on the following topics: Snowmobile Trail 302, facility lighting, dust control, the loggerhead shrike, wildlife-friendly erosion control, and avian flight diverters. The MDNR stated it supported the following conditions as written in the DSP and DRP: DSP Section 5.2 and DRP Section 6.4 (Wildlife-Friendly Erosion Control); DSP Section 5.4 and DRP Section 6.6 (Loggerhead Shrike); and DRP Section 5.3.15 (Avian Protection). The MDNR also recommended adding special conditions to the DSP. The MDNR recommended adding a special condition related to Snowmobile Trail 302 – specifically, requiring the permittee to coordinate with Kasson-Mantorville Trails. Concerning facility lighting, the MDNR recommended adding a special condition related to lighting of the operations and maintenance facility and Project substation – specifically, requiring the use of shielded and downward facing lighting and lighting that minimizes blue hue. Concerning dust control, The MDNR recommended adding a special condition requiring the permittee to utilize non-chloride products for onsite dust control during construction.¹⁵⁶

123. The MnDOT submitted comments stating it has no preference on which route is chosen for the Project, but advising Byron Solar to be aware of the MnDOT’s varying right-of-way widths within the two proposed crossings so that it can avoid placing poles across US Highway 14 that obstruct the sight distance of at-grade crossings in the area, regardless of the route chosen.¹⁵⁷

124. The EERA submitted comments on behalf of the interagency VMPWG concerning Byron Solar’s VMP. The VMPWG’s comments discussed various components related to the VMP, including management objectives and units, seed mixes, herbicide and weed control, and the Habitat Friendly Solar Program. The VMPWG stated that it is committed to working with the permittee to ensure that site restoration is successful and meets the objectives laid out in the VMP. The EERA recommended that Byron Solar work with the VMPWG to develop a plan that is achievable and that potentially meets Habitat Friendly Solar standard. The VMPWG stated it will provide additional review and recommendations to the Commission as part of the EERA’s preconstruction compliance review.¹⁵⁸

125. Lauren Cornelius, Director of Environmental Services in Dodge County, submitted comments on behalf of Dodge County. Dodge County’s comments discussed prime farmland, compliance with the Dodge County Zoning Ordinance performance standards for solar energy farms (40 kW or greater) and transmission lines, surface water and potential impacts thereto,

¹⁵⁵ EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)); Byron Solar Comments (November 29, 2022) (eDocket No. [202211-190965-02](#)).

¹⁵⁶ MDNR Comments (November 23, 2022) (eDocket No. [202211-190858-01](#)).

¹⁵⁷ MnDOT Comments (November 29, 2022) (eDocket No. [202211-190937-02](#)).

¹⁵⁸ VMPWG Comments (November 23, 2022) (eDocket No. [202211-190868-01](#)).

compliance with the Minnesota noise standards, proximity to road right-of-way, and contact personnel for the Project during the construction, life and decommissioning of the Project.¹⁵⁹

126. IUOE and NCSRC submitted comments in support of the Project, stating the Project would provide significant economic benefits and create construction jobs in the region.¹⁶⁰

127. Minnesota Land & Liberty Coalition submitted comments in support for the Project, stating that the Project is “vital to securing Minnesota’s energy future and [...] protects landowner rights,” and that the Project as proposed by Byron Solar will create local construction jobs, stimulate the local economy during construction, provide additional streams of income to landowners, and strengthen Minnesota’s energy grid.¹⁶¹

128. John Wagner submitted written comments discussing several topics, including climate change, noise from the substation and construction, impact on property values, local wildlife, dust, and light reflection.¹⁶²

129. On November 29, 2022, Byron Solar submitted comments in response to questions or issues raised during the public hearings.¹⁶³ On December 9, 2022, Byron Solar submitted comments in response to the written comments submitted during the comment period through November 29, 2022. Byron Solar addressed EERA staff’s and the MDNR’s proposed modifications to the DSP and DRP, and provided cumulative redlines of the DSP and DRP showing Byron Solar’s and EERA staff’s cumulative proposed changes to the DSP filed as Attachment C to the EA and to the DRP filed as Attachment D to the EA.¹⁶⁴

CERTIFICATE OF NEED

I. CERTIFICATE OF NEED CRITERIA

130. Pursuant to Minn. Stat. § 216B.243, all “large energy facilities” must receive a certificate of need from the Commission prior to construction.¹⁶⁵ A “large energy facility” is defined, in relevant part, as “any electric power generating plant or combination of plants at a single site with a combined capacity of 50,000 kilowatts or more and transmission lines directly associated with the plant that are necessary to interconnect the plant to the transmission system”, and “any high-voltage transmission line with a capacity of 200 kilovolts or more and greater than 1,500 feet in length.”¹⁶⁶

¹⁵⁹ Dodge County Comments (November 23, 2022) (eDocket No. [202211-190887-01](#)).

¹⁶⁰ IUOE and NCSRC Comments (November 29, 2022) (eDocket No. [202211-190968-01](#)).

¹⁶¹ Minnesota Land & Liberty Coalition (October 10, 2022) (eDocket No. [202210-189671-03](#)).

¹⁶² John Wagner Comments (December 1, 2022) (eDocket No. [202212-191017-01](#)).

¹⁶³ Byron Solar Comments (November 29, 2022) (eDocket No. [202211-190965-02](#)).

¹⁶⁴ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

¹⁶⁵ See also Minn. R. 7849.0030 (requiring a certificate of need for “large electric generating facilities” as defined in Minn. R. 7849.0010, subp. 13).

¹⁶⁶ Minn. Stat. § 216B.2421, subd. 2(1) and (2).

131. The proposed Project qualifies as a “large energy facility” as defined by Minn. Stat. § 216B.2421, subd 2(1), and a “large electric generating facility” as defined by Minn. R. 7849.0010, subp. 13. Accordingly, the Project requires a certificate of need from the Commission.

132. Minn. Stat. § 216B.243 and Minn. R. Chapter 7849 set forth the criteria for issuance of a certificate of need.

133. The Commission considers whether the applicant has shown that “demand for electricity cannot be met more cost effectively through energy conservation and load-management measures” or has “justified its need.” Minn. Stat. § 216B.243, subdivision 3, in relevant part, provides for consideration of the following factors in assessing need:

- (1) the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based;
- (2) the effect of existing or possible energy conservation programs under sections 216C.05 to 216C.30 and this section or other federal or state legislation on long-term energy demand;
- (3) the relationship of the proposed facility to overall state energy needs, as described in the most recent state energy policy and conservation report prepared under section 216C.18, or, in the case of a high-voltage transmission line, the relationship of the proposed line to regional energy needs, as presented in the transmission plan submitted under section 216B.2425;
- (4) promotional activities that may have given rise to the demand for this facility;
- (5) benefits of this facility, including its uses to protect or enhance environmental quality, and to increase reliability of energy supply in Minnesota and the region;
- (6) possible alternatives for satisfying the energy demand or transmission needs including but not limited to potential for increased efficiency and upgrading of existing energy generation and transmission facilities, load-management programs, and distributed generation;
- (7) the policies, rules, and regulations of other state and federal agencies and local governments;
- (8) any feasible combination of energy conservation improvements, required under section 216B.241, that can (i) replace part or all of the energy to be provided by the proposed facility, and (ii) compete with it economically;
- (9) with respect to a high-voltage transmission line, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota;

(10) whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691 and 216B.2425, subdivision 7, and have filed or will file by a date certain an application for certificate of need under this section or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities or upgrades identified under section 216B.2425, subdivision 7;

(11) ***

(12) ***

134. The Commission has established criteria to assess the need for a large energy generating facility in Minn. R. 7849.0120:

A certificate of need must be granted to the applicant on determining that:

A. the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states, considering:

(1) the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility;

(2) the effects of the applicant's existing or expected conservation programs and state and federal conservation programs;

(3) the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974;

(4) the ability of current facilities and planned facilities not requiring certificates of need to meet the future demand; and

(5) the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources;

B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record, considering:

(1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;

(2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives;

(3) the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and

(4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives;

C. by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health, considering:

(1) the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs;

(2) the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility;

(3) the effects of the proposed facility, or a suitable modification thereof, in inducing future development; and

(4) the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality; and

D. the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

135. The factors listed under each of the criteria set forth in Minn. R. 7849.0120 must be evaluated to the extent that the Commission considers them applicable and pertinent to a proposed facility.¹⁶⁷

136. Minnesota rules further require an application to explain the relationship of the proposed facility to each of three “socioeconomic considerations:” socially beneficial uses of the output of the facility, including its uses to protect or enhance environmental quality; promotional activities that may have given rise to the demand for the facility; and the effects of the facility in inducing future development.¹⁶⁸

137. As the Applicant, Byron Solar bears the burden of demonstrating the need for the Project,¹⁶⁹ with the specific burden being proof by a preponderance of the evidence.¹⁷⁰

¹⁶⁷ Minn. R. 7849.0100.

¹⁶⁸ Minn. R. 7849.0240, subp. 2.

¹⁶⁹ See Minn. Stat. § 216B.243, subd. 3.

¹⁷⁰ See Minn. R. 1400.7300, subp. 5.

II. APPLICATION OF CERTIFICATE OF NEED CRITERIA TO THE PROPOSED PROJECT

A. The Probable Result of Denial Would be an Adverse Effect Upon the Future Adequacy, Reliability, or Efficiency of Energy Supply to the Applicant, to the Applicant's Customers, or to the People of Minnesota and Neighboring States, Considering Minn. R. 7849.0120(A)(1)-(5). Minn. R. 7849.0120(A)

138. The first of the four criteria established by the Commission for the granting of a certificate of need calls for an examination of whether “the probable result of denial would adversely affect the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant’s customers, or to the people of Minnesota and neighboring states.”¹⁷¹ To do so it considers multiple factors, including the forecasted need, available energy resources, and the advantages and disadvantages of utilizing alternative resources.¹⁷²

139. The forecast of need does not focus merely on immediate needs. Where there is a “reasonably predicted demand” and the Project is the most efficient way to meet it, Minn. R. 7849.0120(A) is met.¹⁷³

140. As an IPP, Byron Solar does not sell power directly to end-use (or retail) customers, but instead will sell power, or the Project, to utilities or make the energy available to wholesale power customers via the regional transmission system.¹⁷⁴ Because Byron Solar has applied to interconnect the Project to the MISO regional transmission system, it can serve customers not just in Minnesota but also in the surrounding states.¹⁷⁵

141. The Project will provide up to 200 MW of nameplate capacity to meet the electricity needs of Minnesota and the region. Denying the CN Application would result in the loss of a significant amount of electricity needed to satisfy state and regional demand, and would deny utilities and other customers the opportunity to purchase clean, low-cost energy that will count toward satisfying renewable and/or other clean energy standards and goals. There is a significant body of state legislative policy requiring utilities to obtain a certain percentage of their total energy resources from renewable energy, which supports the need for reliable, efficient renewable resources, like the solar energy produced by the Project. Likewise, the generation fleet in the MISO region is in transition, and MISO is engaged in active analysis and planning to enable the transition to lower carbon resources. The Project is only one part of the transition to less carbon intensive energy, and this shift to new generation technology will continue, even absent the Project. The

¹⁷¹ Minn. R. 7849.0120(A).

¹⁷² *In re Northern States Power Co.*, No. A10-397, 2010 WL 4608342, at *4-5 (Minn. App. Nov. 16, 2010); see also *In re Great River Energy*, Nos. A09-1646, A09-1652, No. 2010 WL 2266138, at *3-4 (June 8, 2010) (affirming grant of certificate, even when evidence showed general decreases in energy needs over the next decade because, among other things, “forecasts were only one of the factors the MPUC considered in its decision to grant the certificates of need.”).

¹⁷³ *In re Northern States Power Co.*, No. A10-397, 2010 WL 4608342, at *4-5 (Minn. App. Nov. 16, 2010).

¹⁷⁴ Ex. 106 at 12, 36 (CN Application).

¹⁷⁵ Ex. 106 at 20 (CN Application).

Project has been designed to efficiently utilize this solar resource while minimizing potential human and environmental impacts.¹⁷⁶

142. Solar is one of the lowest cost forms of power and the costs of energy and capacity of utility scale solar are on par with those of gas peaking and combined cycle.¹⁷⁷ The large size of the Project also provides significant economies of scale with a competitive cost per MW of energy offered.¹⁷⁸

1. Accuracy of the Applicant's Forecast of Demand for the Type of Energy That Would be Supplied by the Proposed Facility

143. Minn. R. 7849.0120(A)(1) requires consideration of “the accuracy of the applicant’s forecast of demand for the type of energy that would be supplied by the proposed facility” when determining if denial of a Certificate of Need application would have an adverse effect.

144. This sub-factor relates to Minn. Stat. § 216B.243, subd. 3(1), which requires the Commission, in assessing need, to consider “the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based.”

145. Because Byron Solar is an IPP and does not have a utility “system” as defined in Minn. R. 7849.0010, subp. 29, Byron Solar requested an exemption from the forecast data requirements in Minn. R. 7849.0270 and instead offered to provide data regarding the regional demand, consumption, and capacity data from credible sources to demonstrate the need for the independently produced renewable energy that will be generated by the Project.¹⁷⁹

146. With the support from the DER, the Commission granted this exemption (as modified by the DER) and use of alternative data for demonstrating demand for the energy supplied by the Project.¹⁸⁰

147. Minnesota and states around the region continue to pursue renewable energy goals and standards that must be satisfied. Pursuant to Minn. Stat. § 216B.1691, utilities in Minnesota are required to provide 25 percent of their total retail electric sales from eligible renewable resources by 2025. Minnesota’s Legislature has declared that the energy goal of the state is to have ten percent of the retail electric sales in Minnesota be generated by solar energy by 2030.¹⁸¹ Other policies and goals target reductions in greenhouse gas emissions, which also promote increasing use of renewable energy.¹⁸² Jurisdictions surrounding Minnesota also have renewable policies. For

¹⁷⁶ See Ex. 106 at 12-16, 20-21 (CN Application).

¹⁷⁷ Ex. 106 at 16 (CN Application).

¹⁷⁸ Ex. 106 at 33-34 (CN Application).

¹⁷⁹ Ex. 101 (Request for Exemption From Certain Application Content Requirements).

¹⁸⁰ Ex. 301 (Order Approving Notice Plan, Approving Exemption Requests, and Granting Variances). The Commission adopted the DER’s recommendation that if a PPA is executed prior to application submittal or during the pendency of the CN proceeding, the exemption should be conditioned upon Byron providing equivalent data from any purchaser(s) of the output. Ex. 301 at 6 (Order Approving Notice Plan, Approving Exemption Requests, and Granting Variances).

¹⁸¹ Ex. 106 at 14-15 (CN Application).

¹⁸² See, e.g., Minn. Stat. §§ 216H.02 and 216C.05.

example, the North Dakota legislature codified the national “25 by ‘25” initiative, with the stated goal that, “not later than January 1, 2025, the agricultural, forestry, and working land of the United States should provide from renewable resources not less than twenty-five percent of the total energy consumed in the United States[.]”¹⁸³ Under current state policies, the total United States renewable portfolio standard demand will increase from 310 terawatt hours (“TWh”) in 2019 to 600 TWh in 2030. Given existing renewable energy capacity, an additional 270 TWh increase in renewable resources will be required to meet demand through 2030. Additionally, several states have set greenhouse gas emission targets. In addition, the regional transmission grid is being expanded to deliver renewable energy generation in a cost-effective manner.¹⁸⁴

148. Governor Walz announced a set of policy proposals that are designed to lead Minnesota to 100 percent clean energy in Minnesota’s electricity sector by 2040. Given that just over 25 percent of Minnesota’s electric generation came from clean energy at the time of Governor Walz’s announcement, Minnesota will need additional renewable generation like that provided by the Project to meet this goal. President Biden issued Executive Order 14008 (“Tackling the Climate Crisis at Home and Abroad”) promoting renewable energy development – in addition to directing the United States on a path to achieve “net-zero emissions, economy-wide, by no later than 2050,” it sets out to attain “a carbon pollution-free electricity sector no later than 2035.”¹⁸⁵

149. Because Byron Solar is an IPP that plans to sell energy, capacity and renewable energy credits, either bundled or unbundled, produced by the Project to one or more electric utilities and/or commercial customers, traditional utilities are potential customers.¹⁸⁶ The Commission has indicated that the demonstration of corporate demand and internal utility goals is sufficient evidence to demonstrate need under Minn. R. 7849.0120.¹⁸⁷

150. Analyzing this requirement, the DER concluded that Byron Solar has met this factor. Relying on the Commission’s September 23, 2021 Order Granting Certificate of Need and Issuing Site Permit and Route Permit (“Plum Creek Order”) in Docket Nos. IP6697/CN-18-699, IP6697/WS18-700, and IP6697/TL-18-701, the DER explained that the Commission previously found that there is no requirement that an applicant “present a PPA, IRP, biennial transmission project report, or any other specific data to demonstrate demand. The Legislature contemplated that IPPs would construct such projects and did not require them to enter into power purchase agreements before obtaining a certificate of need. Rather, the Commission may evaluate demand using any data it finds persuasive, on a case-by-case basis.”¹⁸⁸ In the Plum Creek Order, the Commission concluded that the applicant had “showed that utilities and commercial and industrial customers have reported strong clean energy goals above and beyond Renewable Energy Standard (“RES”) requirements, and additional renewable energy sources will be needed to meet that

¹⁸³ See Ex. 106 at 15 (CN Application) and N.D.C.C. § 17-01-01. As used in this initiative, low-emission technology includes, among others, solar. N.D.C.C. § 17-01-01.

¹⁸⁴ Ex. 106 at 15-16 (CN Application).

¹⁸⁵ Ex. 106 at 14 (CN Application).

¹⁸⁶ Ex. 106 at 12 (CN Application).

¹⁸⁷ Ex. 403 at 4-5 (DER Comments – Merits of CN Application) (citing MPUC Docket No. IP-6997/CN-18-699).

¹⁸⁸ Ex. 403 at 4 (DER Comments – Merits of CN Application); see also *In the Matter of Applications of Plum Creek Wind Farm, LLC for a Certificate of Need, Site Permit, and Route Permit for an up to 414 MW Large Wind Energy Conversion System and 345 kV Transmission Line in Cottonwood, Murray, and Redwood Counties*, Docket No. IP-6997/CN-18-699.

demand. Furthermore, utilities plan to retire coal-based generating units across the region in the coming years, and renewable energy sources are expected to fill some of the resulting capacity needs. These established goals and plans are strong evidence of a utility's intention for future energy development and can be used to demonstrate demand, especially when consistent with stated public policy goals.”¹⁸⁹

151. DER noted that, as in the Plum Creek Order, Byron Solar was granted an exemption to Minn. R. 7849.0270, which requires an applicant to provide information regarding its system peak demand and annual energy consumption. Instead, in the CN Application, Byron Solar cited several sources that create a need for the Project. First, Byron Solar cited the integrated resource plans (“IRPs”), renewable energy goals, and carbon dioxide emissions reduction goals of Xcel Energy, Otter Tail Power Company, Minnesota Power, and SMMPA, and a compliance filing of the Minnesota Transmission Owners (“MTO”), all of which demonstrate that utilities will seek additional renewable generation resources in the next several years.¹⁹⁰ Second, Byron Solar stated that retirements of coal-based generating units are expected across the MISO region, and renewable generation resources are expected to fill the resulting capacity needs.¹⁹¹ Byron Solar also cited to Minn. Stat. §§ 216C.05 and 216H.02 as supporting the need for renewable energy. Byron Solar further cited to corporations turning to renewable energy to save money and meet sustainability goals. Commercial and industrial customers either purchase renewable energy directly or obtain renewable benefits and cost savings through financially settled contracts (also known as virtual power purchase agreements).¹⁹²

152. DER found that, as in the Plum Creek Order, the proposed plans of Otter Tail Power Company, Minnesota Power, Xcel Energy, and the MTO utilities the regional trend towards retirement of coal units, and, in addition, the existence of a market for projects being sold directly to commercial and industrial consumers all indicate a market exists for new renewable energy. Therefore, the DER concluded that Byron Solar's forecast of the need for the renewable energy expected to be produced by the Project is reasonable.¹⁹³

153. Given the demand for renewable energy, a market exists for independently produced electricity generated from solar and other renewables, including the 200 MW to be generated by the Project.¹⁹⁴

154. Given the undisputed accuracy of the demand data provided, Byron Solar has satisfied Minn. R. 7849.0120(A)(1).

2. Effects of the Applicant's Existing or Expected Conservation Programs

155. Minn. R. 7849.0120(A)(2) requires consideration of “the effects of the applicant's existing or expected conservation programs and state and federal conservation programs.”

¹⁸⁹ Ex. 403 at 4-5 (DER Comments – Merits of CN Application).

¹⁹⁰ See Ex. 403 at 5 (DER Comments – Merits of CN Application) and Ex. 106 at 12-13 (CN Application).

¹⁹¹ Ex. 403 at 5 (DER Comments – Merits of CN Application).

¹⁹² Ex. 106 at 13-14, 16 (CN Application).

¹⁹³ Ex. 403 at 5 (DER Comments – Merits of CN Application).

¹⁹⁴ Ex. 106 at 17 (CN Application).

156. This sub-factor relates to Minn. Stat. § 216B.243, subd. 3, which states that “no proposed large energy facility shall be certified for construction unless the applicant can show that demand for electricity cannot be met more cost effectively through energy conservation and load management.”

157. Similarly, Minn. Stat. § 216B.243, subd. 3(2) requires that the Commission consider the effect of existing or possible energy conservation programs under Sections 216C.05 to 216C.30 and this section or other federal or state legislation on long-term energy demand.

158. Also, Minn. Stat. § 216B.243, subd. 3(8) provides that the Commission, in assessing need, shall consider any feasible combination of energy conservation improvements, required under section 216B.241, that can . . . (i) replace part or all of the energy to be provided by the proposed facility, and (ii) compete with it economically.

159. Likewise, Minn. R. 7849.0290 provides additional details on the information the applicant is to include on conservation programs.

160. Byron Solar is not a utility and does not have a system or retail customers to implement conservation projects.¹⁹⁵ In its January 15, 2021 Order, the Commission granted Byron Solar an exemption from these requirements.¹⁹⁶ Thus, the Applicant does not need to satisfy Minn. R. 7849.0120(A)(2), Minn. R. 7849.0290, and Minn. Stat. § 216B.243, subd. 3, 3(2), and 3(8).

161. Further, the DER concluded that it is unlikely that the regional needs for solar energy at the scale indicated by Byron Solar could be met through conservation programs.¹⁹⁷

3. Effects of Promotional Practices of the Applicant That May Have Given Rise to the Increase in the Energy Demand

162. Minn. R. 7849.0120(A)(3) requires consideration of the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974.

163. This sub-factor relates to Minn. Stat. § 216B.243, subd. 3(4), which requires the Commission, in assessing need, to consider “promotional activities that may have given rise to the demand for this facility.”

164. Applicant did not engage in promotional activities to give rise to the Project.¹⁹⁸ In its January 15, 2021 Order, the Commission granted Byron Solar an exemption from these requirements.¹⁹⁹ Thus, the Applicant does not need to satisfy Minn. R. 7849.0120(A)(3), Minn. R. 7849.0290, and Minn. Stat. § 216B.243, subd. 3(4).

¹⁹⁵ Ex. 106 at 42 (CN Application).

¹⁹⁶ Ex. 301 (Order Approving Notice Plan, Approving Exemption Requests, and Granting Variances).

¹⁹⁷ Ex. 403 at 9 (DER Comments – Merits of CN Application).

¹⁹⁸ Ex. 106 at 18-19 (CN Application); Ex. 403 at 15 (DER Comments – Merits of CN Application).

¹⁹⁹ Ex. 301 (Order Approving Notice Plan, Approving Exemption Requests, and Granting Variances).

4. The Ability of Current Facilities and Planned Facilities Not Requiring a Certificate of Need to Meet the Future Demand

165. Minn. R. 7849.0120(A)(4) requires consideration of “the ability of current facilities and planned facilities not requiring Certificates of Need to meet the future demand.”

166. This sub-factor relates, in part, to Minn. Stat. § 216B.243, subd. 3(6), which requires the Commission, in assessing need, to consider “possible alternatives for satisfying the energy demand or transmission needs including but not limited to potential for increased efficiency and upgrading of existing energy generation and transmission facilities, load-management programs, and distributed generation.”

167. Minn. R. 7849.0340 requires data for the alternative of “no facility,” including a discussion of the impact of this alternative on the applicant’s generation and transmission facilities, system and operations. As an independent power producer (“IPP”), Applicant does not have a system, nor does it have other generation or transmission facilities in Minnesota.²⁰⁰ The Commission granted Applicant an exemption from Minn. R. 7849.0340.²⁰¹

168. Further, existing facilities and other non-build alternatives are not available to meet future demand. The Project is designed to increase the amount of energy available for purchase on the wholesale market that will satisfy clean energy standards. Not building the facility would result in no increase in renewable energy and, in turn, no opportunity for utilities to purchase the Project’s output to satisfy clean energy standards and goals.²⁰²

169. The primary alternatives to the proposed Project are purchases from renewable facilities outside Minnesota or construction of renewable facilities in Minnesota that are small enough not to require certificates of need (less than 50 MW). As an IPP, Byron Solar is a producer or seller, rather than purchaser, of electric generation. A renewable facility of less than 50 MW would not contribute as substantial an amount of renewable energy towards the Minnesota RES or towards a utility’s need for additional solar resources and would not benefit as much from economies of scale as the proposed Project. In addition, as an IPP Byron Solar has the incentive to site generation in an economically efficient manner inside or outside Minnesota. Further, the DER noted that any party wishing to do so may propose an alternative to the proposed Project, but no party has filed such a proposal in this proceeding. The DER concluded that current and planned facilities not requiring a CN have not been demonstrated to be more reasonable than the proposed Project, and the record supports this conclusion.²⁰³

170. The Applicant has satisfied Minn. R. 7849.0120(A)(4).

5. The Effect of the Proposed Facility, or a Suitable Modification Thereof, in Making Efficient Use of Resources

²⁰⁰ Ex. 106 at 39 (CN Application).

²⁰¹ Ex. 301 (Order Approving Notice Plan, Approving Exemption Requests, and Granting Variances).

²⁰² Ex. 106 at 36-39 (CN Application).

²⁰³ Ex. 403 at 10 (DER Comments – Merits of CN Application).

171. Minn. R. 7849.0120(A)(5) requires consideration of “the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources.”

172. The area in which the Project is proposed has a strong solar resource. The Project layout has been designed to efficiently utilize this solar resource while minimizing potential human and environmental impacts.²⁰⁴ The Project is estimated to have a net capacity factor of between approximately 24 and 25 percent based on its planned design.²⁰⁵

173. No fuel will be burned in the production of energy at the Project, and solar is a highly efficient and cost-effective recourse for the generation of energy.²⁰⁶ Byron Solar is sized to take advantage of economies of scale associated with a commercial solar project. At 200 MW, the Project is cost competitive on a per MW basis and is well positioned to meet the needs of a load serving utility or a commercial and industrial (“C&I”) customer.²⁰⁷

174. The Transmission Line also meets the criteria in this rule as, if the Transmission Line is not built, the generation from the Solar Facility has no outlet, and the Project would not be constructed as proposed.

6. Conclusion Regarding Minn. R. 7849.0120(A)

175. The Commission must consider the effects of a denial of the certification of need on the applicant, its customers, and the people of Minnesota and neighboring states. The record demonstrates there are adverse effects of denying a permit to the Project, including the risk that wholesale customers across the MISO market—including utilities and C&I customers—will be deprived of clean, efficient, and cost-efficient energy that can also be used to meet current and future renewable energy obligations, and the loss of local economic benefits.²⁰⁸

176. Furthermore, looking at the specific factors delineated above, Byron Solar has demonstrated that there is a reasonably predicted need for low-cost renewable energy, both in the short and long-term, in Minnesota and in neighboring states, and for utility and non-utility customers. The DER agrees, that due its size, the Project is an efficient and cost-effective resource to meet those energy demands.²⁰⁹

177. As discussed above, Byron Solar has satisfied each of the five sub-factors of Minn. R. 7849.0120(A).

B. A More Reasonable and Prudent Alternative to the Proposed Facility Has Not Been Demonstrated by a Preponderance of the Evidence on the Record. Minn. R. 7849.0120(B)

²⁰⁴ Ex. 108 at 21 (Joint SP/RP Application).

²⁰⁵ Ex. 106 at 34 (CN Application).

²⁰⁶ Ex. 106 at 16, 43 (CN Application).

²⁰⁷ Ex. 106 at 33-34, 36, 39-40 (CN Application).

²⁰⁸ See, e.g., Ex. 106 at 20-21, 36-39 (CN Application).

²⁰⁹ Ex. 403 at 10-11 (DER Comments – Merits of CN Application).

178. Minn. R. 7849.0120(B) requires that “a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record.”

179. This factor relates to Minn. Stat. § 216B.243, subd. 3(6), which requires the Commission, in assessing need, to consider “possible alternatives for satisfying the energy demand or transmission needs including but not limited to potential for increased efficiency and upgrading of existing energy generation and transmission facilities, load-management programs, and distributed generation.”

180. The Applicant’s burden of proof is met by providing evidence establishing the needs and showing that the proposed Project is a reasonable and prudent way to satisfy the articulated needs.

181. In the CN Application, Byron Solar analyzed, among others, upgrades to existing resources, new transmission, wind power, hydroelectric power, biomass, and emerging technologies. Byron Solar concluded that the Project is the best alternative for meeting the renewable energy needs in Minnesota and the region in the near term. All other potential alternatives reviewed by Byron Solar fall short in one or more categories. Moreover, as an IPP, Byron Solar will compete with alternative sources of energy to secure a purchase agreement or sell its power on the wholesale market.²¹⁰ The CN Application also reflects an analysis of consideration of alternatives to the Transmission Line, and the record reflects no more reasonable and prudent alternative to the Transmission Line.²¹¹

182. Consistent with state requirements, Byron Solar analyzed multiple alternatives, as did the EA. No reasonable and prudent alternative was proposed or demonstrated.

1. Appropriateness of the Size, Type, and Timing of the Proposed Facility Compared to Those of Reasonable Alternatives

183. Minn. R. 7849.0120(B)(1) requires consideration of “the appropriateness of the size, type, and timing of the proposed facilities relative to reasonable alternatives.” With respect to renewable energy projects, the Commission has concluded that the proper inquiry in evaluating the size of the Project is the appropriateness of the size of the Project to the overall state and regional need for renewable energy.

184. Size. Regarding size of the Solar Facility Project (up to 200 MW), the DER noted that, although collective information submitted by the utilities subject to the Minnesota RES indicates that there is sufficient energy in aggregate to meet the RES and Solar Energy Standard (“SES”), this does not consider the potential need for additional renewable resources from individual utilities with insufficient energy to meet RES. Additional renewable energy may also be required as power purchase agreements involving renewable resources expire. Additionally, utilities in neighboring states may have a need for renewable energy. Furthermore, the Project is sized to take advantage of economies of scale while also making efficient use of existing

²¹⁰ Ex. 106 at 39 (CN Application).

²¹¹ Ex. 106 at 39 (CN Application).

transmission capacity. Thus, the DER concluded that the proposed Project's size is not excessive and therefore is reasonable, and the record supports this conclusion.²¹²

185. Type. The Commission's Exemption Order granted Byron Solar an exemption to Minn. R. 7849.0250 (B)(1) – (3) and (5) and a partial exemption to data requirement (4), to the extent that the Rule requires discussion of non-renewable alternatives. As the goal of the Project is to provide renewable energy that will help utilities satisfy Minnesota's RES or SES and other clean energy standards and goals, information regarding nonrenewable alternatives would be irrelevant. Thus, the DER concluded that given these factors, along with the preference for renewable resources in Minnesota Statutes, the proposed Project's type is reasonable.²¹³

186. Timing. The timing of the Project generally coincides or precedes the anticipated need for solar additions of multiple utilities in their IRPs as discussed in the forecast section above. As the DER noted, the proposed Project is timed so as to be available to meet the IRP needs. The DER explained that: there will likely not be a one-to-one match between certificate of need applications based on the regional need for renewable generation and Minnesota utilities' RES compliance level; additional renewable resources may be needed for certain Minnesota utilities to meet future RES requirements due to capacity expirations; and capacity additions are typically added in "chunks" due to the benefits of economies of scale. In summary, the DER concluded that the timing of the Project is reasonable, and the record supports this conclusion.²¹⁴

187. As summarized above, the record reflects that Byron Solar has appropriately considered the size, type, and timing of the Project compared to those of the reasonable alternatives and found that the Project is superior in all respects. Thus, Byron Solar has satisfied Minn. R. 7849.0120(B)(1).

2. The Cost of the Proposed Facility and the Cost of the Energy to be Supplied by the Proposed Facility Compared to the Costs of Reasonable Alternatives and the Cost of Energy That Would be Supplied by Reasonable Alternatives

188. Minn. R. 7849.0120(B)(2) requires consideration of "the cost of the proposed facility and the cost of the energy to be supplied by the proposed facility as compared to the costs of the reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives."

189. In the Exemption Order, the Commission granted Byron Solar an exemption from providing a description of alternatives that could provide electric power at the asserted level of need (Minn. R. 7849.0250(C)), and only details regarding renewable alternatives need were required, including an estimate of the proposed Project's effect on wholesale rates in Minnesota or the region.²¹⁵

²¹² Ex. 403 at 7 (DER Comments – Merits of CN Application).

²¹³ Ex. 403 at 8 (DER Comments – Merits of CN Application).

²¹⁴ Ex. 403 at 8 (DER Comments – Merits of CN Application).

²¹⁵ Ex. 403 at 10 (DER Comments – Merits of CN Application).

190. Byron Solar intends to sell the power produced from the proposed Project to a potential buyer, one possibly being a utility within Minnesota.²¹⁶ As the DER noted, in the event a PPA is reached with a Minnesota utility, the Commission will have the opportunity to review the terms and costs associated with the PPA in its own proceeding, and the DER would perform a cost analysis. The CN Application also included a discussion of alternatives to the proposed Project, including, but not limited to hydroelectric power, biomass, wind, and emerging technologies. Byron Solar concluded that solar energy resources are cost effective when compared with other renewable resources, and the DER concluded that the data provided by Byron Solar is reasonable and demonstrates solar energy's cost advantages and disadvantages relative to other new, renewable sources, and the record supports this conclusion.²¹⁷

191. Further, because the Project would not be subject to fluctuations in fuel costs, the Project could help stabilize or lower electricity prices in the state and region. The DER concluded that the cost of the Project and the cost of energy to be supplied by the proposed Project is reasonable compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives, and the record supports this conclusion.²¹⁸ Further, as an IPP, Byron Solar, rather than the State or its ratepayers, bears the risk of not securing a PPA or otherwise not selling the Project's output.²¹⁹

192. Thus, Byron Solar has satisfied Minn. R. 7849.0120(B)(2).

3. The Effects of the Proposed Facility Upon the Natural and Socioeconomic Environments Compared to the Effects of Reasonable Alternatives

193. Minn. R. 7849.0120(B)(3) requires consideration of "the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives."

194. Byron Solar submitted information showing minimal impacts on socioeconomic resources.²²⁰ EERA staff prepared an EA for the Project that considers the natural and socioeconomic effects of the Project, which found that socioeconomic impacts of the Project are anticipated to be positive.²²¹ The socioeconomic impacts associated with the Project will be positive. Wages will be paid and expenditures will be made to local businesses and landowners during the Project's construction and operation. The construction and operation of the Project will increase Dodge and Olmsted Counties' tax bases. In addition, lease and purchase payments to landowners will offset potential financial losses associated with removing a portion of their land from agricultural production. Project construction will not negatively impact leading industries within the EA Project Area.²²² There is no indication that any minority or low-income population

²¹⁶ Ex. 106 at 12 (CN Application).

²¹⁷ Ex. 403 at 10-11 (DER Comments – Merits of CN Application).

²¹⁸ Ex. 403 at 11 (DER Comments – Merits of CN Application).

²¹⁹ Ex. 106 at 22-23 (CN Application).

²²⁰ See Ex. 106 at 23-25 (CN Application).

²²¹ Ex. 212 at 65 (EA).

²²² See Ex. 106 at 23-25 (CN Application); see also Ex. 212 at 63, 118 (EA).

is concentrated in any one area of the Project.²²³ Only approximately 1,552.6 acres of agricultural land would be permanently impacted by construction and installation of the proposed Project.²²⁴

195. Byron Solar also demonstrated that the Project would impose minimal environmental impacts, especially as compared to a fossil-fuel based facility. The Project will not release carbon dioxide, sulfur dioxide, nitrogen oxides, mercury, or particulate matter. It will not require water for power generation and will not discharge wastewater containing any heat or chemicals during operation. It will produce energy without the extraction, processing, transportation, or combustion of fossil fuels. The Project has been designed to minimize environmental impacts.²²⁵

196. The EA states that the Project would create human and environmental impacts similar to or less than other large solar and renewable projects located in Minnesota.²²⁶ The EA also states that the Transmission Line would create human and environmental impacts similar to those of a 161 kV line.²²⁷ Overall, the EERA did not find any significant environmental impacts as a result of the Project.

197. As an emission-free fuel, solar does not result in releases of carbon dioxide, nitrogen oxides, etc. Therefore, the DER concluded that this sub-criterion has been met.²²⁸

198. The EA and the CN Application contain analysis concerning the human and environmental effects of the Project and demonstrate that the Project compares favorably with other alternatives in the record with respect to this factor.²²⁹

199. Thus, Byron Solar has satisfied Minn. R. 7849.0120(B)(3).

4. The Expected Reliability of the Proposed Facility Compared to the Expected Reliability of Reasonable Alternatives

200. Minn. R. 7849.0120(B)(4) requires consideration of “the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives.”

201. This sub-factor relates, in part, to Minn. Stat. § 216B.243, subd. 3(9), which requires consideration of “the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota.”

²²³ Ex. 108 at 72 (Joint SP/RP Application); Ex. 212 at 64 (EA).

²²⁴ Ex. 106 at 17 (CN Application) and Ex. 212 at 65 (EA).

²²⁵ Ex. 106 at 23 (CN Application); *see also* Ex. 212 at 58 (EA).

²²⁶ *See, e.g.*, Ex. 212 at 109 (EA).

²²⁷ Ex. 212 at 120 (EA).

²²⁸ Ex. 403 at 11 (DER Comments – Merits of CN Application).

²²⁹ *See* Ex. 106 at 23-25 (CN Application) and Ex. 212 at 63-65 (EA).

202. Solar is a proven and reliable resource. Byron Solar estimates that the Project facilities will be available approximately 99 percent of the year, which is consistent with industry standards.²³⁰

203. Thus, Byron Solar has satisfied Minn. R. 7849.0120(B)(4).

5. Conclusion Regarding Minn. R. 7849.0120(B)

204. As discussed above, Byron Solar has satisfied each of the four sub-factors of Minn. R. 7849.0120(B).

205. No other party submitted a more reasonable and prudent alternative to the proposed Project that satisfies the requirements of Minn. R. 7849.0110 and 7849.0120.

C. By a Preponderance of Evidence on the Record, the Proposed Facility, or a Suitable Modification of the Facility, Will Provide Benefits to Society in a Manner Compatible With Protecting the Natural and Socioeconomic Environments, Including Human Health. Minn. R. 7849.0120(C)

206. Minn. R. 7849.0120(C) requires that “by a preponderance of evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health.”

207. Applying the factors set forth in Minn. R. 7849.0120(C), the energy produced by the Project will provide significant, numerous, and varied societal benefits, with minimal negative impacts.²³¹

1. The Relationship of the Proposed Facility, or Suitable Modification Thereof, to Overall State Energy Needs

208. Minn. R. 7849.0120(C)(1) requires consideration of “the relationship of the Project, or a suitable modification thereof, to overall state energy needs.”

209. A review of the most recently filed integrated resource plans indicates that Minnesotans are expected to have little change in their electricity requirements. However, all three utilities are proposing retirements of large baseload coal units. As a result, over time these and other utilities are planning on adding solar generating capacity. As the DER noted, the proposed Project could help Minnesota meet its energy needs while supporting the state’s renewable energy and greenhouse gas emissions-reduction goals (see Minn. Stat. §§ 216B.1691 and 216H.02). The DER concluded that the proposed Project fits the state’s overall energy needs, and the record supports this conclusion.²³²

²³⁰ Ex. 106 at 41 (CN Application).

²³¹ Ex. 106 at 23 (CN Application).

²³² Ex. 403 at 6 (DER Comments – Merits of CN Application); *see also* Ex. 106 at 12-17 (CN Application).

210. As set forth above, states, utilities, and commercial and industrial customers continue to require renewable energy to meet renewable and other clean energy standards, their own clean energy goals, as well as consumer demand.²³³

2. The Effects of the Proposed Facility, or a Suitable Modification Thereof, Upon the Natural and Socioeconomic Environments Compared to the Effects of Not Building the Facility

211. Minn. R. 7849.0120(C)(2) requires consideration of “the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility.”

212. While not building the Project would avoid some human and environmental impacts, not building the Project would also not provide an additional source of tax revenues to the county, an increase in the income stream to residents and businesses, or an increase in the amount of low-cost, clean, reliable renewable energy available to state or regional utilities and their customers. Not building the facility would result in no increase in renewable energy and, in turn, no opportunity for utilities to purchase the Project’s output to satisfy clean energy standards.²³⁴

3. The Effects of the Proposed Facility, or a Suitable Modification Thereof, in Inducing Future Development

213. Minn. R. 7849.0120(C)(3) requires consideration of “the effects of the proposed facility, or a suitable modification thereof, in inducing future development.”

214. The Project is not expected to directly affect development in Dodge or Olmsted Counties or hinder future development that can otherwise occur in surrounding agricultural areas. The Project is designed to be socioeconomically beneficial to landowners, local governments, and communities. Landowner compensation is established by voluntary leases or purchase agreements between the landowner and Byron Solar for Byron Solar’s lease or purchase of the land. Solar energy infrastructure will also provide an additional source of revenue to the townships and county in which the Project is sited. The Project is anticipated to provide annual production tax revenues to Dodge County of approximately \$400,000 to \$450,000 and to Canisteo Township of approximately \$100,000 to \$125,000 over the life of the Project. The Project is expected to generate over \$15.6 million in local tax revenues over the life of the Project. In addition, annual lease payments to landowners will exceed \$1 million in the first year and will increase every year with scheduled increments. This equates to about \$65 million paid to landowners over the lifespan of the Project. Lease and purchase payments paid to the landowners will offset potential financial losses associated with removing a portion of their land from agricultural production.²³⁵ At the same time, the increase in renewable energy will also help to lessen wholesale energy market volatility.²³⁶ The Project will also provide significant income opportunities for local residents through the creation of temporary construction and permanent O&M positions. The Project is

²³³ See Ex. 106 at 12-17 (CN Application).

²³⁴ See Ex. 106 at 23-25, 39 (CN Application) and Ex. 212 at 118 (EA).

²³⁵ Ex. 212 at 64-65 (EA); Ex. 106 at 19 (CN Application).

²³⁶ Ex. 106 at 19-20 (CN Application).

anticipated to support 293 jobs during the construction and installation phases and up to five indirect and four direct, full-time permanent skilled jobs during the operations phase.²³⁷

4. The Socially Beneficial Uses of the Output of the Proposed Facility, or a Suitable Modification Thereof, Including Its Uses to Protect or Enhance Environmental Quality

215. Minn. R. 7849.0120(C)(4) requires consideration of “the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality.”

216. This sub-factor relates to Minn. Stat. § 216B.243, subd. 3(5), which, in relevant part, requires the Commission to consider “the benefits of this facility, including its uses to protect or enhance environmental quality....”

217. The record demonstrates that energy produced by the Project will provide significant, numerous, and varied societal benefits, as discussed previously herein, including: renewable energy with minimal environmental impact; enhancement of regional and national energy security and reliability; supplementary source of income for landowners; and an additional source of revenue to local governments.

218. Thus, Byron Solar has satisfied Minn. R. 7849.0120(C)(4).

D. The Record Does Not Demonstrate That the Design, Construction, or Operation of the Proposed Facility, or a Suitable Modification of the Facility, Will Fail to Comply With Relevant Policies, Rules, and Regulations of Other State and Federal Agencies and Local Governments. Minn. R. 7849.0120(D)

219. Minn. R. 7849.0120(D) requires that “the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.”

220. This factor relates to Minn. Stat. § 216B.243, subd. 3(7), which requires the Commission, in assessing need, to consider “the policies, rules, and regulations of other state and federal agencies and local governments.”

221. The Project will meet or exceed the requirements of all applicable federal, state, and local environmental laws and regulations. Byron Solar provided a table listing the potential permits and approvals needed for the Project. Byron Solar states that it will secure all necessary permits and authorizations prior to commencing construction on the portions of the Project requiring such approvals.²³⁸

222. The DER indicated that it has no reason to believe that Byron Solar will fail to comply with the requirements of the listed federal, state, and local governmental agencies. The

²³⁷ Ex. 106 at 18-19, 25 (CN Application).

²³⁸ Ex. 106 at 29, 72-75 (CN Application).

DER concluded that the record does not demonstrate that the design, construction, or operation of the Project, or a suitable modification of the facilities, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments, and the record supports this conclusion.²³⁹

223. Based on the foregoing, Byron Solar has satisfied Minn. R. 7849.0120(D).

E. Conclusion on Minn. R. 7849.0120 Criteria

224. As discussed in detail above, Byron Solar has satisfied each of the relevant factors and sub-factors set forth in Minn. R. 7849.0120(A) through (D) necessary to determine that a certificate of need must be granted.

SITE PERMIT

I. SITE PERMIT CRITERIA

225. Large electric power generating plants (“LEPGP”) are governed by Minn. Stat. Chapter 216E and Minn. R. Chapter 7850. Minn. Stat. § 216E.01, subd. 5, defines a “large electric power generating plant” as “electric power generating equipment and associated facilities designed for or capable of operation at a capacity of 50,000 kilowatts or more.”

226. On October 12, 2020, Byron Solar submitted information to the EERA requesting a size determination for the Project. On October ~~10~~ 20, 2020, the EERA informed Byron Solar that, based on the information provided, the Project is subject to the Commission’s siting authority under Minn. Stat. Chapter 216E. Therefore, a site permit is required prior to construction of the Project.²⁴⁰

227. An LEPPG powered by solar energy is eligible for the alternative permitting process authorized by Minn. Stat. § 216E.04. Byron Solar filed the SP Application under the process established by the Commission in Minn. R. 7850.2800-7850.3900.²⁴¹

228. Under Minn. Stat. § 216E.04, for an LEPPG permitted under the alternative permitting process, the EERA prepares for the Commission an environmental assessment 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 Solar Facility.

II. APPLICATION OF SITING CRITERIA TO THE PROPOSED SOLAR FACILITY

A. -Human Settlement

²³⁹ Ex. 403 at 14-15 (DER Comments – Merits of CN Application).

²⁴⁰ Ex. 108 at 11 (Joint SP/RP Application).

²⁴¹ Ex. 105 (Notice of Intent to Submit a Joint Application for a Site Permit and Route Permit Application under the Alternative Permitting Process) and Ex. 108 at 11 (Joint SP/RP Application).

229. The Solar Facility is located in a rural area in southeastern Minnesota.²⁴²

1. Displacement

230. The construction of the Solar Facility will not displace residences, businesses, or structures.²⁴³

2. Zoning and Land Use

231. The Solar Facility is located within Dodge County's Agricultural District. The Dodge County Zoning Ordinance states that solar farms (exceeding 40 kW nameplate capacity) are allowed in the Agricultural District upon approval of a conditional use permit.²⁴⁴ Additionally, after the Project's useful life, the affected parcels be restored to agricultural or other planned land uses.²⁴⁵

232. The Dodge County Zoning Ordinance contains setback and other design factors for solar energy systems that are not otherwise subject to siting and oversight by the State of Minnesota under the Minnesota Power Plant Siting Act (Minn. Stat. Chapter 216E). Pursuant to Minn. Stat. § 216E.10, subd. 1, the Site Permit from the Commission is the only site approvals required for construction of the Project. A Site Permit supersedes and preempts all zoning, building, or land use rules, regulations, or ordinances put in place by regional, county, local and special purpose governments, although the review by the Commission will take local land use into consideration.²⁴⁶

233. Byron Solar considered the Dodge County setbacks when designing the Solar Facility; however, land constraints such as transmission line easements, wetlands, trees, and others make it difficult for arrays to be sited further away from road rights-of-way, side/rear property lines of lands not included as part of the Solar Facility, and dwellings not owned by an owner/benefactor of Solar Facility. Byron Solar is committed to meeting Dodge County setback requirements where feasible.²⁴⁷ Byron Solar also provided record evidence that it considered other design factors in the Dodge County Zoning Ordinance, and many of those factors are addressed through Byron Solar's proposed design and/or the DSP.²⁴⁸

234. The land cover within the Solar Facility site is dominated by cultivated agriculture, with scattered areas of pasture and developed areas around farmsteads. The majority of land use in the Solar Facility boundary is cultivated cropland, approximately 1,741 acres (97 percent); followed by developed (all categories), approximately 24 acres (1.4 percent); hay/pasture, approximately 14.3 acres (0.8 percent); herbaceous, approximately 13.5 acres (0.8 percent); and deciduous forest, approximately 2.0 acres (0.1 percent).²⁴⁹ Constructing the Solar Facility will

²⁴² Ex. 212 at 46 (EA).

²⁴³ Ex. 212 at 103 (EA) and Ex. 108 at 57 (Joint SP/RP Application).

²⁴⁴ See Ex. 108 at 82-83 (Joint SP/RP Application) and Ex. 212 at 52-53 (EA).

²⁴⁵ Ex. 108 at 82, 86 (Joint SP/RP Application).

²⁴⁶ Ex. 108 at 82-83 (Joint SP/RP Application).

²⁴⁷ Ex. 108 at 34 (Joint SP/RP Application) and Byron Solar Comments and Table 1 (November 29, 2022) (eDocket No. [202211-190965-02](#)).

²⁴⁸ Byron Solar Comments and Table 1 (November 29, 2022) (eDocket No. [202211-190965-02](#)).

²⁴⁹ Ex. 212 at 92 (EA).

change land use from agricultural to solar energy production for at least 30 years. The area could then be restored to agricultural use or other planned land uses by implementing appropriate restoration activities.²⁵⁰

235. Development of the Solar Facility would result in the change of land use from a generally agricultural use to a solar energy use for at least the life of the Project. The conversion of agricultural land to the Solar Facility will have a relatively minimal impact on the rural character of the surrounding area or Dodge County.²⁵¹ Of the 281,600 acres in Dodge County, the majority is classified as agricultural land. If the Project is constructed, approximately 1,550 acres will be removed from agricultural production. The removal of approximately 0.06 percent of the approximately 248,036 acres of farmland in Dodge and Olmsted counties is unlikely to have a significant impact. Adverse impacts associated with the loss of agricultural land and agricultural production will be mitigated through lease payments to landowners.²⁵²

236. The Project has been designed in compliance with the goals and policies of the Dodge County Comprehensive Plan, specifically protecting the environment, preserving agricultural land, promoting compatible development and uses to prevent land use conflicts, and protecting groundwater. The goals and policies of the Dodge County Comprehensive Plan are exercised through Dodge County's zoning power, and the Project meets the Agricultural zoning district goals to retain, conserve, and enhance agricultural land in Dodge County and to protect this land from scattered residential development.²⁵³

237. Normal agricultural activities can continue within portions of the **Project Solar Facility** not converted to solar panels, access roads, and fencing. Upon decommissioning and removal of the **Project Solar Facility**, the affected parcels may be returned to the existing agricultural use or transitioned to other planned land uses. The Project will not preclude current or planned land use on adjacent parcels.²⁵⁴

238. The EA discusses minimizing impacts to land use and zoning through preservation of agricultural land. As discussed in the EA, the DSP contains several conditions that address preservation of agricultural land. For example, Section 4.3.17 requires the permittee to prepare a vegetation management plan ("VMP") to prevent soil erosion and invest in soil health by establishing a plan to protect soil resources by ensuring perennial cover; Section 4.3.18 requires the permittee to prepare an AIMP that details methods to minimize soil compaction, preserve topsoil, and establish and maintain appropriate vegetation to ensure the Project is designed, constructed, operated and ultimately restored in a manner that would preserve soils to allow for the land to be returned to agricultural use; and Section 9.1 requires the permittee to develop a decommissioning plan focused on returning the site to agricultural use at the end of the Project's

²⁵⁰ Ex. 212 at 51-53 (EA).

²⁵¹ Ex. 212 at 53 (EA); Ex. 108 at 85 (Joint SP/RP Application).

²⁵² Ex. 212 at 65 (EA), Ex. 119 at 9-11 (Direct Testimony of Scott Wentzell), and Ex. 108 at 85 (Joint SP/RP Application).

²⁵³ Ex. 108 at 84 (Joint SP/RP Application).

²⁵⁴ Ex. 212 at 51 (EA); Ex. 108 at 86 (Joint SP/RP Application).

useful life. As noted in the EA, Byron Solar has already submitted a draft VMP, draft AIMP, and draft decommissioning plan as part of its application.²⁵⁵

3. Noise

239. Byron Solar analyzed noise impacts in the Applications. During construction of the Solar Facility, noise will be emitted by the construction vehicles and equipment onsite. Byron Solar anticipates impact driving of the pilings to be the most significant source of construction noise. These noise impacts will be temporary and Byron Solar will limit construction and maintenance activities to daytime hours **to the extent practicable**. The Project **is expected to** comply with the Minnesota noise standards.²⁵⁶

240. Noise levels during operation of the Solar Facility are anticipated to be negligible.²⁵⁷

241. The DSP requires a permittee to comply with applicable noise standards.²⁵⁸

4. Property Values

242. Because property values are influenced by a complex interaction between factors specific to each individual piece of real estate as well as local and national market conditions, the effect of one particular project on the value of one particular property is difficult to determine. Large electric generation facilities have the potential to impact property values, but the type and extent of impacts, if any, depend upon the location of the facilities and existing land uses in the area.²⁵⁹

243. The EA concluded that based on analysis of other utility-scale solar projects, significant negative impacts to property values in the local vicinity are not anticipated.²⁶⁰

5. Socioeconomics

244. The Project will result in both short- and long-term benefits to the local economy. Socioeconomic impacts are anticipated to be positive.²⁶¹

245. The Project is designed to be socioeconomically beneficial to participating landowners, local governments, and communities. Byron Solar anticipates the Project will provide annual protection tax revenues to Dodge County of approximately \$400,000 to \$450,000, and Canisteo Township will receive approximately \$100,000 to \$125,000 annual township production

²⁵⁵ See Ex. 212 at 53-54 (EA).

²⁵⁶ Ex. 108 at 59 (Joint SP/RP Application); Ex. 212 at 55-56 (EA).

²⁵⁷ Ex. 212 at 57 (EA); Ex. 108 at 59-60 (Joint SP/RP Application).

²⁵⁸ Ex. 212 at 57 (EA).

²⁵⁹ Ex. 212 at 57-58 (EA).

²⁶⁰ Ex. 212 at 57 (EA).

²⁶¹ Ex. 212 at 64-65 (EA) and Ex. 108 at 70-71 (Joint SP/RP Application).

tax revenue over the life of the Project. The Project is expected to generate about \$15.6 million in local tax revenues over a 30-year period.²⁶²

246. The Project is expected to support approximately 293 temporary jobs during the construction and installation phases, and up to 4 full time permanent skilled jobs during the operations phase. Indirect economic benefits will occur from additional local spending on goods and services and local sales tax.²⁶³ Construction of the Project is also anticipated to result in increased expenditures for materials, food, lodging, and fuel at local businesses during construction.²⁶⁴

247. The Project will also contribute to the local economy through land lease payments to participating landowners and direct/indirect purchases of goods and services. Landowner compensation is established by voluntary lease, purchase, or easement agreements between the landowners and Byron Solar's lease or purchase of the land.²⁶⁵ Annual lease payments to landowners will exceed \$1 million in the first year and will increase every year with scheduled increments. This equates to about \$65 million paid to landowners over the lifespan of the Project. Landowners will be reimbursed for any additional tax burden resulting from the new land use classification.²⁶⁶ Adverse impacts associated with the loss of agricultural land and agricultural production will be mitigated through lease and purchase payments to landowners.²⁶⁷

248. Impacts to communities of environmental justice concern are not anticipated to occur as a result of the Solar Facility.²⁶⁸

249. The record demonstrates that the Project will result in both short- and long-term benefits to the local economy.²⁶⁹ Additionally, Section 8.5 of the DSP requires quarterly reports concerning efforts to hire Minnesota workers. Section 9 addresses Project decommissioning, specifically requiring the permittee to file a decommissioning plan with the Commission prior to operation; establishing the permittee as the responsible party for carrying out decommissioning tasks, and sets out minimum standards for restoration and timelines; and addresses abandoned solar installations.

6. Aesthetic Impacts

250. The existing landscape in the EA Project Area is rural and agricultural consisting of flat to gently rolling row crop fields of corn and soybeans.²⁷⁰

251. There are no residences or businesses within the Project Area; however, there are 17 residences and several agricultural buildings on parcels adjacent to the Solar Facility. Most of these farmsteads are at least partially surrounded by woodlands or shelterbelts, **which fractionally**

²⁶² Ex. 212 at 64-65 (EA) and Ex. 108 at 70-71 (Joint SP/RP Application).

²⁶³ Ex. 212 at 65 (EA) and Ex. 108 at 71 (Joint SP/RP Application).

²⁶⁴ Ex. 212 at 64 (EA).

²⁶⁵ Ex. 108 at 75 (Joint SP/RP Application).

²⁶⁶ Ex. 108 at 70-71 (Joint SP/RP Application); *see also* Ex. 212 at 64-65 (EA).

²⁶⁷ Ex. 212 at 65 (EA) and Ex. 108 at 75 (Joint SP/RP Application).

²⁶⁸ *See* Ex. 212 at 65-67 (EA).

²⁶⁹ *See* Ex. 212 at 64-65 (EA) and Ex. 108 at 75-76 (Joint SP/RP Application).

²⁷⁰ Ex. 212 at 48 (EA).

prevent uninterrupted views of the surrounding landscape. The existing built environment includes roads, a railroad, transmission and distribution lines, the existing Byron Substation, small solar facilities, and wind turbines. There are several transmission lines within or adjacent to the Project Area that interrupt natural agricultural views. At least six transmission lines extend south of the existing Byron Substation and one additional line extends to the north. Transmission line easements between the cities of Byron and Kasson house several of the identified transmission lines, several others travel alongside U.S. Highway 14. Views in the area are naturally interrupted by U.S. Highway 14 immediately north of the Solar Facility, and other county and township roadways.²⁷¹

252. Locations where visual impacts may potentially be the greatest are adjacent to residences and along public roadways and trails. The solar arrays will be visible from adjacent roadways, parcels, and snowmobile trail, but given their relative low profile, and the fact they will be fenced for security, they will not be visible from significant distances.²⁷²

253. Byron Solar has considered the existing landscape and screening (e.g., vegetation) when siting the Project. Byron Solar also completed a glare analysis.²⁷³ Because of the materials used, glare and reflection should be minimal; PV panels reflect approximately three percent of the incoming sunlight when the panels are directly facing the sun.²⁷⁴

254. Operational lighting will be installed at the substation, O&M facility, and at gates and various locations along the fence line for safety and security. Lighting will be motion-activated and down lit to minimize impacts and effects. Impacts to light-sensitive land uses are not anticipated given the rural location coupled with minimal required lighting for operations.²⁷⁵

255. The EA discusses mitigation/minimization measures for visual impacts, such as through shielding the facilities from view by terrain or vegetation. Site-specific landscaping plans can minimize visual impacts to adjacent land uses and homes through vegetation screening, berms, or fencing. Byron Solar has completed visual simulations and renderings to evaluate potential visual impacts. Byron Solar has coordinated with adjacent landowners and has proposed a conceptual screening plan ~~that addresses to address~~ potential visual impact concerns.²⁷⁶ Byron Solar has committed to planting visual screening around portions of the Solar Facility. Specifically, Byron Solar has stated it will work with landowners with residences within 500 feet of a solar array that has direct line of sight to that solar array to incorporate vegetative buffering.²⁷⁷ This is consistent ~~the with Byron Solar's revisions to EERA staff's~~ proposed special condition requiring the permittee to develop a Visual Screening Plan.²⁷⁸

²⁷¹ See Ex. 212 at 48 (EA) and Ex. 108 at 63-66 (Joint SP/RP Application).

²⁷² Ex. 108 at 66 (Joint SP/RP Application) and Ex. 212 at 49 (EA).

²⁷³ Ex. 212 at 49 (EA) and Ex. 212 at 5 (EA - Appendix F) (eDocket Nos. [20229-189238-20](#), [20229-189238-19](#), [20229-189238-21](#)); Ex. 119 at 9 (Direct Testimony of Scott Wentzell).

²⁷⁴ See Ex. 212 at 49 (EA).

²⁷⁵ Ex. 212 at 49 (EA).

²⁷⁶ See Ex. 212 at 49-50 (EA), Ex. 108 at 63-70, [Appendix L](#) (Joint SP/RP Application), and Byron Solar Comments and Table 1 (November 29, 2022) (eDocket No. [202211-190965-02](#)).

²⁷⁷ November 10, 2022, Public Hearing Transcript at 21-22.

²⁷⁸ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

256. Visual impacts from the Solar Facility and associated facilities are expected to be minimal. ~~to most people who pass through the EA Project Area but are anticipated to be moderate to significant to those that live in the EA Project Area. Potential visual impacts are unavoidable but can be mitigated~~²⁷⁹ The record demonstrates that Byron Solar has taken steps to avoid and minimize visual impacts. Further, Section 4.3.8 of the DSP requires permittee to consider input pertaining to visual impacts from landowners and the local unit of government.

7. Public Service and Infrastructure

257. The Solar Facility is located in a rural area in southeastern Minnesota. Access to the Solar Facility will be via existing state, county, and township roads. With the limited possible exception of minor field access or driveway changes depending on final design, no changes to existing roadways are planned. ~~The major roadway in the area is U.S. Highway 14, which bisects the Project and borders the northern perimeter of the Solar Facility. Other roads surrounding the Project are county and township roads.~~ With the exception of U.S. Highway 14, roads that surround the Project are county or township roads. The Solar Facility is bordered on the north by U.S. Highway 14, on the south by County Road 6 (670th Street), and by County Road 15 (270th Ave) and 280th Avenue to the east. Agricultural fields border the Solar Facility to the west.²⁸⁰

258. The Project Area is not serviced by city water supply or sanitary sewer and residents in the Project Area have private wells for domestic water needs and private septic systems of drain fields for domestic wastewater. There are nine domestic wells or boreholes within the Solar Facility boundary; six of these records are sealed boreholes and three are listed as active domestic wells. There are electric distribution lines throughout the Project Area. No natural gas or hazardous liquid pipelines were identified in the Project Area. There are several high voltage transmission lines that run to and from the existing Byron Substation.²⁸¹

259. During construction, temporary impacts are anticipated on some public roads. During construction, workers and trucks delivering construction material and equipment will use the existing state, county, and township road system to access the Solar Facility. Construction activities will increase the amount of traffic using local roadways, and while such increased traffic may be perceptible to area residents, the slight increase in volume is not expected to affect traffic function. Slow-moving construction vehicles may also cause delays on smaller roads, similar to the impact of farm equipment during planting or harvest. However, these delays should be minimal for the relatively short construction delivery period. Overweight or oversized loads are not anticipated. Potential impacts associated with construction are anticipated to be short-term, intermittent, and localized. No impacts to roads are anticipated during operation of the Solar Facility; negligible traffic increases would occur for maintenance.²⁸²

260. There will be several access points to the Solar Facility. New driveway access from existing public roads will be required at each of the five locked access gates at 270th Avenue, 650th Street, 655th Street, 660th Street, and 120th Avenue. If the Blue Route is selected, the new driveway to the Project substation will likely be near the intersection of 265th Avenue and 640th Street. If the

²⁷⁹ ~~Ex. 212 at 47-50 and~~ Ex. 108 at 66 (Joint SP/RP Application).

²⁸⁰ Ex. 108 at 49 (Joint SP/RP Application); *see also* Ex. 212 at 60 (EA).

²⁸¹ Ex. 212 at 60 (EA).

²⁸² Ex. 212 at 59, 61 (EA).

Red Route is selected, the new driveway is anticipated to be off of County Road 8/County Road 25 (the county line between Dodge and Olmsted counties).²⁸³

261. Byron Solar will coordinate with Gopher State One Call before and during construction to avoid impacts to underground utilities. Byron Solar will also conduct an American Land Title Association survey to identify the locations of underground utilities. Final design will minimize and avoid impacts to underground and overhead utilities; if conflicts are unavoidable Byron Solar will coordinate with the utility to develop an approach to protect the utility. Underground utilities will be marked prior to construction start.²⁸⁴

262. Limited, temporary impacts to electric utility service may occur during interconnection to the existing Byron Substation. The timing and duration of any service interruptions would be determined and communicated by the interconnecting utility (SMMPA). These outages are anticipated to be of short duration and closely coordinated with utilities and landowners.²⁸⁵

263. Byron Solar will likely install a well and septic system at the O&M facility.²⁸⁶ Impacts to water (wells and septic systems) are not expected to occur.²⁸⁷

264. Interference with communications infrastructure is not anticipated. Additionally, Section 4.3.24 of the DSP requires the permittee to take whatever action is feasible to restore or provide equivalent reception should interference occur to “radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices” as a result of the Project.²⁸⁸

265. The nearest Federal Aviation Administration (“FAA”) registered airport to the Solar Facility is the Dodge Center Municipal Airport, located approximately 5.2 miles west of the Solar Facility south of U.S. Highway 14 in Dodge Center, Minnesota. The Solar Facility will not impact air safety.²⁸⁹

266. The record demonstrates that construction and operation of the Project is expected to have a minimal effect on existing public services and infrastructure in the area.²⁹⁰

267. Section 4.3.22 of the DSP addresses roads and requires the permittee to inform road authorities of roads that will be used during construction and acquire necessary permits and approvals for oversize and overweight loads. Section 4.3.5 of the DSP also requires the permittee to minimize disruption to public services and public utilities and to restore service promptly if disrupted by the permittee.

²⁸³ Ex. 212 at 61 (EA).

²⁸⁴ Ex. 108 at 81 (Joint SP/RP Application).

²⁸⁵ Ex. 108 at 82 (Joint SP/RP Application).

²⁸⁶ Ex. 212 at 61 (EA).

²⁸⁷ Ex. 212 at 59 (EA).

²⁸⁸ Ex. 212 at 103 (EA).

²⁸⁹ Ex. 212 at 60-61 (EA).

²⁹⁰ See Ex. 212 at 6 (EA).

8. Cultural Values

268. The ~~Project~~ Solar Facility contributes to the growth of renewable energy and is likely to strengthen and reinforce this value, especially in an area that already has wind farms and community solar generating facilities. Development of the Project will change the character of the area and potentially change residents' sense of place. There are tradeoffs for rural communities between renewable energy projects and retaining the rural character of the EA Project Area. Construction and operation of the Project is not anticipated to impact or alter the work and leisure pursuits of residents in the EA Project Area in such a way as to impact the underlying culture of the area.²⁹¹

9. Recreational Resources

269. There are limited specifically designated recreational resources in the EA Project Area.²⁹²

270. According to the MDNR Recreational Compass, there are no state forests, national forests, national wildlife refuges, lakes with public access, state water trails, Aquatic Management Areas, state parks, or migratory waterfowl feeding and resting areas in within close proximity to the Project boundaries. Additionally, there are no state-owned Off-Highway Vehicle trails and no MDNR Scientific and Natural Areas (“SNAs”) identified within one mile of the Solar Facility boundary.²⁹³

271. Public conservation and recreation lands include lands administered by federal, state, or local agencies, or conservation easements. There are no public conservation lands within or within one mile of the Project Area.²⁹⁴ Five Wildlife Management Areas (“WMA”) are located outside of the Project Area, but within five miles of the Project (Tri-Cooperative WMA, South Fork Zumbro River WMA, Pheasants Forever WMA, Bud Jensen WMA, and Vernon WMA). Lions Park is located approximately 1.6 miles northwest of the Solar Facility.²⁹⁵

272. Snowmobile Trail 302, a Grant-In-Aid snowmobile trail managed by Kasson-Mantorville Trails, crosses the proposed Solar Facility site. Construction of the Solar Facility will require Snowmobile Trail 302 to be re-routed outside the fenced area of the Solar Facility. Byron Solar is coordinating with the local snowmobile association to relocate Snowmobile Trail 302 outside of the Solar Facility.²⁹⁶ The PV panels will be visible to users of the re-located snowmobile trail, but their presence is not anticipated to significantly impact users of the trail.²⁹⁷ There are no other designated public (federal, state, or local) recreational lands within the Project Area boundaries.²⁹⁸ Based on the MDNR’s recommendation, Byron Solar has proposed a special

²⁹¹ Ex. 212 at 50-51 (EA).

²⁹² Ex. 212 at 59 (EA).

²⁹³ Ex. 108 at 77-78 (Joint SP/RP Application).

²⁹⁴ Ex. 108 at 127 (Joint SP/RP Application).

²⁹⁵ Ex. 212 at 59 (EA).

²⁹⁶ Ex. 212 at 59 (EA); *see also* Ex. 119 at 10 (Direct Testimony of Scott Wentzell).

²⁹⁷ Ex. 212 at 59 (EA).

²⁹⁸ Ex. 108 at 77 (Joint SP/RP Application).

condition requiring the permittee to coordinate with Kasson-Mantorville Trails on the relocation of Snowmobile Trail 302 relocation.²⁹⁹

273. No significant impacts to recreational opportunities are anticipated.³⁰⁰

B. Public Health and Safety

274. The term EMF refers to electric and magnetic fields that are present around any electrical device. Electric fields arise from the voltage or electrical charges and magnetic fields arise from the flow of electricity or current that travels along transmission lines, power collection lines, substation transformers, house wiring, and electrical appliances. Electrical lines in the United States have a frequency of 60 cycles per second or 60 hertz, which is extremely low frequency EMF (“ELF-EMF”).³⁰¹

275. The primary sources of EMF from the Solar Facility will be from the solar arrays, buried electrical collection lines, and the transformers installed at each inverter. The EMF generated by solar arrays is at the level generally experienced near common household appliances. Measured magnetic fields at utility-scale PV projects drop to very low levels of 0.5 milliGauss or less at distances of 150 feet from inverters. Potential impacts are anticipated to be negligible and are not expected to negatively affect human health. Impacts will be long-term and localized but can be minimized.³⁰² Based on the most current research on electromagnetic fields, and the distance between the Project facilities and residences, the Project will have no impact to public health and safety due to EMF or magnetic fields.³⁰³

276. 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.³⁰⁴ Construction and operation of the Solar Facility will have minimal impacts on the security and safety of the local population. The solar arrays, Project substation, and O&M facility will be fenced and accessible only by authorized personnel. Additionally, As required by Section 8.10 of the DSP, Byron Solar will have Emergency Response Plans in the event there are any public safety or health emergencies during construction or operation.³⁰⁵

277. No significant impacts to public safety are expected to result from construction and operation of the Project.³⁰⁶ Further, the DSP contains conditions to address public health and safety. For example, Section 4.3.29 requires the permittee to take several public safety measures, including landowner educational materials, appropriate signs and gates, etc.; Section 8.10 requires permittees file an emergency response plan with the Commission and local first responders prior

²⁹⁹ See MDNR Comments (November 23, 2022) (eDocket No. [202211-190858-01](#)) and Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

³⁰⁰ Ex. 212 at 58 (EA).

³⁰¹ Ex. 212 at 67 (EA).

³⁰² Ex. 212 at 70 (EA) and Ex. 108 at 55 (Joint SP/RP Application).

³⁰³ See Ex. 212 at 70 (EA) and Ex. 108 at 55 (Joint SP/RP Application).

³⁰⁴ Ex. 212 at 74 (EA).

³⁰⁵ Ex. 108 at 52 (Joint SP/RP Application).

³⁰⁶ See Ex. 212 at 73-74 (EA).

to operation; and Section 8.11 requires disclosure of extraordinary events, such as fires, ~~ete~~ solar panel collapse, acts of sabotage, collector or feeder line failure, and injuries.³⁰⁷

C. Land-based Economies

1. Agriculture

278. The majority of land use in the Solar Facility boundary is cultivated cropland, approximately 1,741 acres (97 percent); followed by developed (all categories), approximately 24 acres (1.4 percent); hay/pasture, approximately 14.3 acres (0.8 percent); herbaceous, approximately 13.5 acres (0.8 percent); and deciduous forest, approximately 2.0 acres (0.1 percent).³⁰⁸

279. If the Project is constructed, approximately 1,550 acres will be removed from agricultural production. Some members of the public commented regarding the potential negative impacts to the local agricultural industry.³⁰⁹ The removal of cultivated land may result in an incremental decrease to agricultural-related businesses, such as farm dealerships, seed dealers, and dealers of agricultural inputs such as fertilizer and pesticides, in the area. However, the EA concluded that the removal of approximately 0.06 percent of the approximately 248,036 acres of farmland in Dodge and Olmsted counties is unlikely to have a significant impact. Adverse impacts associated with the loss of agricultural land and agricultural production will be mitigated through lease payments to landowners.³¹⁰ The land could be returned to agricultural uses other planned land uses after the Project is decommissioned and the site is restored.³¹¹

280. Normal agricultural activities can continue within portions of the Project Solar Facility not converted to solar panels, access roads, and fencing. Further, Byron Solar will coordinate fencing and screening plans to minimize impacts to neighboring farm operations.³¹² Upon decommissioning and removal of the Project Solar Facility, the affected parcels may be returned to the existing agricultural use or transitioned to other planned land uses. The Project will not preclude current or planned land use on adjacent parcels.³¹³

281. Lease and purchase payments paid to the landowners will offset potential financial losses associated with removing a portion of their land from agricultural production.³¹⁴

282. The presence of the Solar Facility will not result in a significant impact to land-based economies in the Solar Facility vicinity, as impacts to approximately 1,550 acres of

³⁰⁷ Ex. 212 at 74 (EA).

³⁰⁸ Ex. 212 at 92 (EA).

³⁰⁹ See, e.g., November 9, 2022 Public Hearing Transcript at 31-32, 34-36.

³¹⁰ Ex. 212 at 65 (EA), Ex. 119 at 8 (Direct Testimony of Scott Wentzell), and Ex. 108 at 85 (Joint SP/RP Application).

³¹¹ Ex. 212 at 51-53 (EA).

³¹² See Byron Solar Comments and Table 1 (November 29, 2022) (eDocket No. [202211-190965-02](#)).

³¹³ Ex. 212 at 51 (EA); Ex. 108 at 86 (Joint SP/RP Application).

³¹⁴ Ex. 108 at 76 (Joint SP/RP Application); see also Ex. 212 at 64-65 (EA).

agricultural land within the Solar Facility footprint would reduce the amount of agricultural land in Dodge County by less than one percent.³¹⁵

283. The DSP has several permit conditions related to the preservation of agricultural land. For example, Section 4.3.17 requires the applicant to prepare a VMP to prevent soil erosion and invests in soil health by establishing a plan to protect soil resources by ensuring perennial cover. Additionally, Section 4.3.18 requires the applicant to prepare an AIMP that details methods to minimize soil compaction, preserve topsoil, and establish and maintain appropriate vegetation to ensure the Project is designed, constructed, operated and ultimately restored in a manner that would preserve soils to allow for the land to be returned to agricultural use.³¹⁶

a) *Prime Farmland*

284. Prime Farmland as defined by Federal regulation at 7 C.F.R. 657.5(a)(1) “is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses.”³¹⁷

285. Minn. R. 7850.4400, subp. 4 states that no large electric power generating plant (including a solar energy generating system) site may be permitted where the developed portion of the plant site includes more than 0.5 acres of prime farmland per MW of net generating capacity, unless there is no feasible and prudent alternative.

286. Given the up to 200 MW net generating capacity of the Solar Facility, the prime farmland exclusion rule would allow the use of up to 100 acres of prime farmland unless there is no feasible and prudent alternative.³¹⁸

287. Approximately 91 percent of the soils in Dodge County and 60.9 percent of the soils in Olmsted County are classified as prime farmland or prime farmland if drained.³¹⁹

288. Approximately 1,079.8 acres of prime farmland and 420.8 acres of prime farmland if drained are located within the Development Area.³²⁰ These acreages of prime farmland would

³¹⁵ Ex. 212 at 65 (EA), Ex. 119 at 9 (Direct Testimony of Scott Wentzell), and Ex. 108 at 85 (Joint SP/RP Application).

³¹⁶ See Ex. 212 at 53-54 (EA).

³¹⁷ Ex. 212 at 75 (EA).

³¹⁸ Ex. 108 at 17 (Joint SP/RP Application).

³¹⁹ Ex. 212 at 75 (EA).

³²⁰ Ex. 108 at 108-109 (Joint SP/RP Application). Note that the Table 17 (Solar Facility – Prime Farmland) in the EA states that it shows “prime farmland classifications within the project boundary” (“project boundary” is not defined) and states that 1,214.9 acres of prime farmland and 508.8 acres of prime farmland if drained are located within the “project boundary”. The EA also states that the “project is anticipated to impact about 1550 acres of prime farmland or prime farmland if drained.” Ex. 212 at 77 (EA). However, as shown in the Joint SP/RP Application, approximately 1,256 acres of prime farmland and 523 acres of prime farmland if drained are located within the Project Area. Ex. 108 at 17 (Joint SP/RP Application). Further, as shown in Table 27 of the Joint SP/RP Application, there are 1,079.8 acres of prime farmland and 420.8 acres of prime farmland if drained in the Development Area, and these acres would be taken out of production for the life of the Project but would not be permanently removed. See Ex. 108 at 13, 108-109 (Joint SP/RP Application).

be ~~temporarily~~ taken out of agricultural production for the operating life of the Project Solar Facility but would not be permanently removed.³²¹

289. The productive farmland taken out of production for the life of the Project Solar Facility would result in a negligible loss of farmland in Dodge ~~and Olmsted counties~~ County.³²²

290. Byron Solar explored Dodge County for a solar project based on the high solar resource in the southeastern portion of Minnesota and lower expected interconnection costs and transmission congestion.³²³

291. An assessment of the availability of feasible and prudent alternatives is an important component in the Commission’s review of the project. EERA and the Minnesota Department of Agriculture jointly developed a guidance document, *Solar Energy Production and Prime Farmland: Guidance for Evaluating Prudent and Feasible Alternatives* to assist developers when evaluating potential solar sites relative to the feasible and prudent language in the rule.³²⁴ Since the state of Minnesota has mandates to both advance solar energy production and protect prime farmland, and due to the inherent difficulties in avoiding prime farmland, the guidance document is meant to assist developers in defining feasible and prudent in relation to siting alternatives, and to encourage them to build a record early in the site selection process showing whether or not an exception to the prime farmland exclusion is warranted. Consistent with the guidance, Byron Solar conducted a screening analysis to assess whether the Project meets the “feasible and prudent alternative” threshold. The analysis looked at factors such as high solar resource areas, interconnect locations with sufficient capacity, and open farmland, focusing on the southern portion of the state. Within this area, Byron Solar screened for substations and transmission lines with available capacity, leading to a relatively narrow subset of possible POIs with low or no network upgrade requirements. Financial constraints further focused on potential locations within five miles of the identified POIs which had to meet the following criteria: cleared and otherwise undeveloped, not currently encumbered by other easements (wind farms, etc.), contained minimal wetlands, streams, transmission lines, pipelines, roads, or other obstacles that would limit the buildable land or lead to irregularly shaped development areas. Once potential sites were identified, Byron Solar approached landowners for voluntary leases and easements. The Project site was chosen over others for its proximity to the POI, supportive landowners, and no competition with other potential renewable energy projects (i.e., available land not currently participating in other renewable energy projects). Byron Solar identified the existing Byron Substation as having available capacity and low interconnection costs.³²⁵

292. Byron Solar completed a Geographic Information System (“GIS”) evaluation of regional prime farmland and farmland of statewide importance to a distance of approximately 10 miles surrounding the existing Byron Substation to address Minn. R. 7850.4400, subp. 4 prime farmland limitations. The selected distance was determined based on transmission line costs and losses, and a reasonable geographic scope for the alternatives analysis. Moving further away from

³²¹ Ex. 108 at 108 (Joint SP/RP Application).

³²² Ex. 212 at 76 (EA).

³²³ Ex. 108 at 18 (Joint SP/RP Application).

³²⁴ Commerce, MDA, 2020. *Solar Energy Production and Prime Farmland: Guidance for Evaluating Prudent and Feasible Alternatives*. <https://apps.commerce.state.mn.us/eera/web/doc/13929>

³²⁵ Ex. 108 at 16-17 (Joint SP/RP Application) and Ex. 212 at 77-78 (EA).

the POI would not result in less impact to prime farmland. In the case of this Project, where the POI is reasonably close to the proposed Solar Facility, increasing the distance would ultimately result in longer transmission, an enlargement of the Project's overall footprint, a corresponding increase in prime farmland impact, and increase in Project cost. Prime farmland, and its sub-categories, are mapped throughout Dodge County except along larger waterway drainages and wetlands. Accordingly, there is no reasonably sized area in Dodge County, or within 10 miles of the existing Byron Substation that could facilitate solar development of approximately 1,552.6 contiguous acres not defined as prime farmland.³²⁶

293. Avoidance of other prohibited areas played a significant role in influencing site selection. The Project is situated between the cities of Kasson to the west, and Byron to the east. Byron Solar took care to ensure the Project was sited outside of potential future expansion areas for both of these cities, and on parcels owned by willing landowners. Site selection was limited to available land not under lease with other renewable energy projects in the area. Additionally, Byron Solar avoided known physical and environmental constraints that may prohibit or make solar development more challenging.³²⁷

294. Two alternatives to Byron Solar's proposed site were presented during public comments on scoping of the EA, but were not chosen for evaluation in the EA because neither of the proposed site alternatives mitigate potential impacts and may create additional impacts and shift the impacts to other areas with a different group of landowners and neighbors.³²⁸ The ATF Report did not identify any site alternatives that should be evaluated in the EA.³²⁹

295. Byron Solar has incorporated design options to minimize impacts on soil and prime farmland.³³⁰ In addition, Byron Solar will continue to develop its VMP in consultation with the MDNR and other state agencies to guide site preparation, installation of prescribed seed mixes, and management of invasive species and noxious weeds. Byron Solar has also developed an AIMP.³³¹

296. **There is no feasible and prudent alternative available to Byron Solar to construct the Project and not impact prime farmland.** The record demonstrates that Byron Solar evaluated a variety of factors, including cost and non-cost factors, but was unable to locate a feasible and prudent alternative for the site. On this record, there is no feasible and prudent alternative within a reasonable geographic area available to construct the Solar Facility and not impact prime farmland. This conclusion is based in part of consideration of non-economic factors including but not limited to the quality of the solar resource, proximity to existing transmission infrastructure, positive environmental impacts, and furtherance of the State's renewable energy goals. A finding that there is no feasible and prudent alternative to avoidance of prime farmland for the Solar Facility is consistent with past Commission decisions for large solar generating systems sited in

³²⁶ Ex. 108 at 20 (Joint SP/RP Application).

³²⁷ Ex. 108 at 21 (Joint SP/RP Application).

³²⁸ Ex. 209 at 6 (EASD).

³²⁹ Ex. 209 at 3 (EASD).

³³⁰ See Ex. 108 at 21 (Joint SP/RP Application).

³³¹ Ex. 108 at 22 (Joint SP/RP Application).

prime farmland due to the fact that other areas in southern Minnesota also contain similar amounts of prime farmland as the proposed site.³³²

297. The DSP contains multiple sections addressing soil and agricultural related issues associated with the Project.

2. Forestry, Mining, and Tourism

298. There are no resources within the EA Project Area considered to be forestry resources for commercial use.³³³ There are no active forestry operations, including commercial timber harvest, woodlots, or other forestry resources within the Land Control Area, so no impacts would occur.³³⁴

299. There are no mining operations within the EA Project Area, so impacts from the Project would not occur.³³⁵

300. The Project Solar Facility would have a negligible impact on tourism in Dodge and Olmsted counties.³³⁶

D. **Archaeological and Historic Resources**

301. No previously recorded archaeological or historic sites will be directly impacted by the proposed Project Solar Facility. In May 2020 and updated in November 2020, a review of records was conducted through a request for data from the Minnesota State Historic Preservation Office (“SHPO”) and a review of the online Portal maintained by the Minnesota Office of the State Archaeologist for the Project Area and a 1-mile buffer. No evidence of previous cultural resources surveys was obtained during the review. A Phase I archaeological survey of the Project Area was completed in October and November 2020 and May 2021. One previously unrecorded archaeological site was identified but not considered significant and avoidance was not recommended. The SHPO concurred with the finding that the isolated find is not eligible for listing in the National Register of Historic Places (“NRHP”).³³⁷

³³² See Ex. 108 at 21-22 (Joint SP/RP Application); see also *In the Matter of the Site Permit Application for the 100 MW Aurora Distributed Solar Energy Project at Multiple Facilities in Minnesota*, MPUC Docket No. E-6928/GS-14-515, Order Issuing Site Permit, As Amended (June 30, 2015) (eDocket No. [20156-111966-01](#)); *In the Matter of the Application of Marshall Solar, LLC for a Site Permit for the Marshall Solar Energy Project and Associated Facilities in Lyon County*, MPUC Docket No. IP-6964/GS-14-1052, Order Issuing Site Permit (May 5, 2016) (eDocket No. [20165-121073-01](#)); *In the Matter of the Application of Elk Creek Solar, LLC for a Site Permit for the up to 80- Megawatt Elk Creek Solar Project in Rock County, Minnesota*, MPUC Docket No. IP-7009/GS-19-495, Order Adopting Findings of Fact, Conclusions of Law, and Recommendations, Granting Certificate of Need, and Issuing Site Permit (December 31, 2020) (eDocket No. [202012-169454-02](#)).

³³³ Ex. 108 at 93 (Joint SP/RP Application).

³³⁴ Ex. 212 at 104 (EA).

³³⁵ Ex. 212 at 104 (EA) and Ex. 108 at 95 (Joint SP/RP Application).

³³⁶ Ex. 212 at 104 (EA).

³³⁷ Ex. 212 at 79 (EA) and Ex. 108 at 96-97 (Joint SP/RP Application).

302. Byron Solar also reached out to the eleven Minnesota Tribal Nations' Tribal Historic Preservation Officers and the Minnesota Indian Affairs Council for additional information or comment on the Project.³³⁸

303. Prior to construction, Byron Solar will prepare an Unanticipated Discoveries Plan outlining steps to be taken if previously unrecorded cultural resources or human remains are encountered during construction.³³⁹

304. No previously recorded archaeological or historic sites will be directly impacted by the proposed Project. Impacts to archaeological and historic resources are not expected.³⁴⁰

305. The record demonstrates that the Project Solar Facility will not cause adverse impacts to archaeological and historic resources. Further, Section 4.3.23 of the DSP addresses archeological and historic resources and requires the permittee to make every effort to avoid impacts to archaeological and historic resources when constructing the Project Solar Facility. Because impacts to archeological and historic resources are not anticipated, additional mitigation is not proposed.³⁴¹

E. Natural Environmental

1. Wildlife

306. Wildlife utilizing the Land Control Area are common species associated with disturbed habitats and are accustomed to human activities (e.g., agricultural activities and road traffic) occurring in the area. Mammals, reptiles, amphibians, and insects are present. These species include white-tailed deer, red fox, striped skunk, raccoon, Virginia opossum, coyote, garter snake, and a variety of insects including native bees, butterflies, and moths. Due to the lack of water resources in the vicinity, waterfowl and shorebirds are not common in the area.³⁴²

307. There are no MDNR WMAs, Aquatic Management Areas, Sites of Biodiversity Significance, or Scientific and Natural Areas, or U.S. Fish and Wildlife Service ("USFWS") Waterfowl Production Areas within the Project Area.³⁴³

308. The Solar Facility will be enclosed by a fence, restricting ingress and egress of larger wildlife. Byron Solar proposes to install either a 6-foot chain-link fence with top guard angled out and upward at 45 degrees with 3-4 strands of smooth wire (no barbs), or 8-foot chain link for security and safety purposes. Barbed wire will not be used around the perimeter of the Project. Byron Solar's proposed fencing was designed in accordance with the MDNR's current guidance (MNDR's 2016 Guidance for Commercial Solar Projects) and ~~appropriately~~ balances visual impacts to neighboring properties with wildlife impacts. The fencing proposed by Byron Solar is ~~appropriately~~ protective of wildlife, including deer, and supported by the record.³⁴⁴ ~~Byron~~

³³⁸ Ex. 212 at 79 (EA).

³³⁹ Ex. 212 at 79 (EA).

³⁴⁰ Ex. 212 at 79 (EA).

³⁴¹ Ex. 212 at 79 (EA).

³⁴² Ex. 212 at 94 (EA).

³⁴³ Ex. 212 at 96 (EA).

³⁴⁴ Ex. 108 at 132 (Joint SP/RP Application).

~~Solar's proposed changes to~~ Section 4.3.31 of the DSP ~~regarding security fencing are consistent with the Commission's approach in recent dockets and also provide for a flexible approach that~~ requires Byron Solar to continue working with the MDNR and the EERA to design a fence that suits the needs of the Project while affording due consideration to agency recommendations.³⁴⁵

309. Given the agricultural nature of the Project Area, impacts to the current wildlife inhabiting the area are expected to be minimal. Impacts to wildlife are anticipated to be minimal. Population level impacts are not anticipated.³⁴⁶

310. The Solar Facility will not contribute to significant habitat loss or degradation or create new habitat edge effects. Following construction, the non-impervious portions of the Solar Facility will be seeded with native grassland habitat, providing stable, year-round herbaceous cover that will likely benefit many wildlife species.³⁴⁷

311. The record demonstrates that Byron Solar has taken steps to avoid and minimize impacts to wildlife. Further, the DSP contains general conditions that adequately protect wildlife. For example, Section 4.3.16 requires use of “site restoration and management practices that provide for native perennial vegetation and foraging habitat beneficial to gamebirds, songbirds, and pollinators”; Section 4.3.31 requires the permittee to coordinate with the MDNR to ensure that the fence used in the Project minimizes impacts to wildlife; Section 5.2 is a special condition that requires use of wildlife-friendly erosion control; and Section 8.12 requires permittees to report “any wildlife injuries and fatalities” to the Commission on a quarterly basis.

2. Vegetation

312. The majority of the land within the Project Area is cultivated agricultural land.³⁴⁸

313. There is no MDNR-mapped native prairie within the Solar Facility. There are no records of native prairie or native plant communities within with the Solar Facility.³⁴⁹

314. Conversion of existing vegetation will be limited as most of the land within the anticipated Development Areas is currently tilled on an annual basis for row crops. The Solar Facility will convert currently cultivated cropland, within the fence line, to open herbaceous cover under and around the PV panels. The O&M facility, Project substation, inverter skids, and access roads will be converted to developed land and impervious surfaces. Native seed mixes developed in cooperation with the MDNR will be used at the Solar Facility. Once established, vegetation would most likely be maintained by mowing, although grazing may also be used. Byron Solar has designed the Project to avoid tree clearing to the greatest extent practicable.³⁵⁰

315. Byron Solar has developed a draft VMP and will adopt and follow all measures in the VMP through construction and operation of the Project. The VMP describes how the Project

~~³⁴⁵ See Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. 202212-191223-01); Ex. 119 at 14-15 (Direct Testimony of Scott Wentzell).~~

³⁴⁶ See Ex. 212 at 94-96 (EA).

³⁴⁷ Ex. 212 at 96 (EA) and Ex. 108 at 118 (Joint SP/RP Application).

³⁴⁸ Ex. 212 at 92 (EA).

³⁴⁹ Ex. 108 at 126 (Joint SP/RP Application).

³⁵⁰ Ex. 108 at 116 (Joint SP/RP Application).

Area will be revegetated, maintained, and monitored over the life of the Project.³⁵¹ Additionally, Byron Solar developed an ~~an~~ draft AIMP that details methods to minimize soil compaction, preserve topsoil, and establish and maintain appropriate vegetation to ensure the Project is designed, constructed, operated and ultimately restored in a manner that would preserve soils to allow for the land to be returned to agricultural use.³⁵²

316. The record demonstrates that overall, the Project will result in a net improvement to vegetative cover in the ~~Project Area~~ Solar Facility because of revegetation efforts in former agricultural areas and the significant decrease in the use of herbicides and pesticides typical of agricultural practices through implementation of the Project AIMP and VMP plans, as well as the stormwater pollution prevention plan (“SWPPP”). To mitigate potential impacts to vegetation, Byron Solar anticipates site restoration, seeding, establishing, maintaining and monitoring disturbed areas and areas below the arrays in accordance with the AIMP and VMP plans. After construction, the Solar Facility will be graded to natural contours (as possible) and soils will be de-compacted. Disturbed areas will be reseeded with seed mixes in accordance with the VMP and SWPPP. Erosion control measures will be used until seeded vegetation has established – e.g., silt fences, hydro-mulch, sediment control logs. Additionally, a cover crop will be planted to prevent erosion during the time it takes for native seeds / vegetation to establish. Once established, vegetation would most likely be maintained by mowing. Control of invasive and noxious weeds will be ongoing during the operation of the Project.³⁵³

317. The record demonstrates that Byron Solar has taken steps to avoid and minimize impacts to vegetation. Further, the DSP contains adequate conditions to monitor and mitigate the ~~Project Solar Facility~~'s potential impacts on vegetation. For example, Section 4.3.17 requires the permittee to develop a VMP, Section 4.3.18 requires the permittee to develop an AIMP, Section 4.3.19 addresses pesticide use, Section 4.3.20 requires the permittee to employ best management practices to avoid the potential introduction and spread of invasive species on lands disturbed by Project construction, and Section 4.3.21 requires the permittee to take all reasonable precautions against the spread of noxious weeds during all phases of construction.

3. Soils

318. Construction of the Solar Facility will disturb approximately 1,550 acres. Of this, about 997 acres will be graded, which consists of cutting and filling earth in targeted areas to provide a level and stable base for the Project substation, O&M building, access roads, and spot grading at select solar array and inverter skid locations. Primary impacts to soils include compaction from construction equipment, soil profile mixing during grading and pole auguring, rutting from tire traffic, drainage interruptions, and soil erosion. Impacts to soils are likely to be greatest with the below-ground electrical collection system.³⁵⁴

319. Soil cover and management at the Solar Facility will change from cultivated cropland to a mixture of pervious areas with native groundcover plantings and approximately 233 acres of impervious surfaces. Once permanent vegetation is properly established, stormwater

³⁵¹ Ex. 212 at 24 (EA) and Ex. 108 at 116 (Joint SP/RP Application).

³⁵² Ex. 212 at 94 (EA).

³⁵³ Ex. 108 at 22-23, 38-39, 110 (Joint SP/RP Application) and Ex. 212 at 24, 94 (EA).

³⁵⁴ Ex. 212 at 87 (EA).

management, as well as general soil health, might improve due to use of native plants. Because the soil at the Solar Facility would be covered with native perennial vegetation for the operating life of the Project, soil health would likely improve over the operating life of the Project.³⁵⁵

320. During operation of the Solar Facility, ongoing soil compaction could occur from the use of access roads. This impact is expected to be negligible and confined to the roadbed. Over the life of the Project, the Project is expected to reduce the potential for erosion by establishing permanent vegetation, in contrast to the amount of exposed soils common to row cropping. Potential erosion will be further minimized by dressing access roads with gravel and installing culverts under access roads where necessary to redirect concentrated runoff.³⁵⁶ Additionally, preliminary Project design includes the installation of approximately 38 stormwater ponds to manage stormwater runoff to nearby surface areas.³⁵⁷ Additionally, Byron Solar will work with participating landowners to identify and avoid existing drain tile currently functioning to drain hydric soil areas. Drainage will be augmented by additional drain tile, as needed, in areas of known hydric soils to ensure proper drainage is maintained in the post-construction condition.³⁵⁸

321. Byron Solar has developed an draft AIMP for the Project Solar Facility that details methods to minimize soil compaction, preserve topsoil, and establish and maintain appropriate vegetation to ensure the Project is designed, constructed, operated, and ultimately restored in a manner that would preserve soils to allow for the land to be returned to agricultural use. The Project Solar Facility's AIMP specifically addresses construction in the type of soil conditions present in the Project Area. Byron Solar will follow the best management practices ("BMPs") set forth in the AIMP during construction and operation, including erosion and sediment control measures. Additionally, Byron Solar's VMP lists BMPs, that while directly related to vegetation, will stabilize soils.³⁵⁹

322. Byron Solar will employ numerous BMPs and mitigation measures to avoid and minimize soil impacts, as described in the EA.³⁶⁰ Impacts to soils would be temporary and minor and mitigated through the proper use and installation of BMPs such as using soil ripping equipment to decompact soils following construction, separating and stockpiling topsoil for later spreading and seeding to prevent topsoil mixing with subsoils, halting construction during wet weather conditions to prevent soil rutting from equipment tires, and avoiding and repairing drain tiles to maintain proper site drainage. Additionally, Byron Solar will obtain a National Pollutant Discharge Elimination System/State Disposal System ("NPDES/SDS") Construction Stormwater General Permit to discharge stormwater from construction facilities from the MPCA. Byron Solar will also develop a SWPPP that complies with MPCA rules and guidelines. Implementation of the protocols outlined in the SWPPP will minimize the potential for soil erosion during construction.³⁶¹

323. The record demonstrates that Byron Solar has taken steps to avoid and minimize impacts to soils. Further, the DSP contains adequate conditions to minimize and mitigate the

³⁵⁵ Ex. 212 at 87-88 (EA).

³⁵⁶ Ex. 108 at 106 (Joint SP/RP Application).

³⁵⁷ Ex. 212 at 24, 89-90 (EA).

³⁵⁸ Ex. 108 at 107 (Joint SP/RP Application).

³⁵⁹ Ex. 108 at 22-23 (Joint SP/RP Application).

³⁶⁰ See Ex. 212 at 90 (EA).

³⁶¹ Ex. 108 at 106-107, 110 (Joint SP/RP Application).

~~Project Solar Facility~~'s potential impacts on soils. For example: Section 4.3.9 requires protection and segregation of topsoil; Section 4.3.10 requires the permittee to implement measures to minimize soil compaction; Section 4.3.11 requires the permittee to implement erosion prevention and sediment control practices recommended by the MPCA Construction Stormwater Program and, if needed, obtain a NPDES/SDS Construction Stormwater Permit; Section 4.3.15 requires the permittee to minimize tree removal; Section 4.3.16 requires the permittee to implement site restoration and management practices that provide for native perennial vegetation and beneficial foraging habitat and that improve soil water retention and reduce storm water runoff and erosion; Section 4.3.17 requires the permittee to develop a VMP; and Section 4.3.18 requires the permittee to develop an AIMP.

4. Geologic and Groundwater Resources

324. Byron Solar completed a Geotechnical Engineering Report for the Project in March 2021. Byron Solar will carefully consider foundation design with the identified potential for shallow bedrock and isolated obstacles to exist in the Solar Facility. Impacts to geologic resources would be limited to installation of racking system foundations using predrilling techniques. In areas of shallow bedrock, the racking system may require concrete foundations (instead of driven piers) depending upon site specific soil conditions and geotechnical analysis.³⁶²

325. The Solar Facility will create approximately 232.8 acres of impervious surface. Surface water that flows onto or falls on the impervious surfaces will flow into vegetated areas and stormwater basins before infiltrating into the groundwater.³⁶³

326. The stormwater management system has been designed in accordance with MPCA stormwater management for solar projects guidance, and in compliance with the NPDES/SDS Construction Stormwater General Permit.³⁶⁴

327. The Project is located in the Karst Groundwater Province, in which groundwater is typically derived from bedrock aquifers below the glacial sediment cover. Groundwater is generally readily available, but water quality is susceptible to pollution from surface activity due to karst and bedrock propensity to be near the surface generally causing rapid vertical transmission of water. The geotechnical report and MDNR karst database identified three sinkholes in the southeastern portion of the Solar Facility site, but did not identify significant depressions. No additional sensitive geologic features (e.g., shallow limestone formations of unconfined or shallow aquifers) in the vicinity of the Project were identified.³⁶⁵

328. The EA discusses mitigation measures related to the presence of karst in the Project Area, including following BMPs for construction in karst areas and stormwater management and avoiding construction activity and placement of Project infrastructure within at least 150 feet of documented active karst features.³⁶⁶ Byron Solar has committed to avoiding construction activity and locating of Project facilities within a 100-150-foot buffer around karst features. The Project as

³⁶² Ex. 108 at 100 (Joint SP/RP Application) and Ex. 212 at 82 (EA).

³⁶³ Ex. 212 at 88 (EA).

³⁶⁴ Ex. 108 at 107 (Joint SP/RP Application).

³⁶⁵ Ex. 212 at 82 (EA).

³⁶⁶ Ex. 212 at 85 (EA).

proposed by Byron Solar complies with the 150-foot buffer around active karst features.³⁶⁷ Additionally, consistent with the recommendations of the geotechnical report, Byron Solar will use multiple smaller stormwater ponds rather than a centralized pond.³⁶⁸

329. The water source for the O&M facility will either be a municipal water source or a new private water well. Temporary dewatering may be required during construction.³⁶⁹

330. The Minnesota Department of Health's Minnesota Well Index identifies nine domestic wells or boreholes within the Solar Facility boundary; six of these records are sealed boreholes and three are listed as active domestic wells.³⁷⁰ Any unidentified wells within the anticipated Development Area will be capped and abandoned in place according to Minnesota Department of Health's requirements.³⁷¹

331. Impacts to groundwater resources are not anticipated as there are no US Environmental Protection Agency-designated sole source aquifers, Minnesota Department of Health Wellhead protection Areas, or Special Well and Boring Construction Areas within the Project Area.³⁷²

332. The record demonstrates that Byron Solar has taken steps to avoid and minimize impacts to geologic and groundwater resources. Further, the DSP contains adequate conditions to minimize and mitigate the Project's potential impacts on geologic and groundwater resources. Section 5.1 of the DSP precludes construction activity or placement of Project infrastructure within 150 feet of active karst features and requires the permittee to file a geotechnical investigation with recommendations for project design and construction.

5. Surface Water and Wetlands

333. The Solar Facility is located completely outside of mapped Federal Emergency Management Agency (FEMA) flood zones. The Solar Facility will not significantly impact FEMA-mapped floodplains and no mitigation is proposed.³⁷³

334. The Project Solar Facility is designed to avoid direct impacts to surface waters by avoiding placement of Project Solar Facility components such as access roads, solar arrays, inverters, or transmission structures in surface waters.³⁷⁴

³⁶⁷ Ex. 119 at 11 (Direct Testimony of Scott Wentzell).

³⁶⁸ Ex. 212 at 85 (EA).

³⁶⁹ Ex. 212 at 84 (EA) and Ex. 108 at 103 (Joint SP/RP Application).

³⁷⁰ Ex. 212 at 83 (EA) and Ex. 108 at 100 (Joint SP/RP Application).

³⁷¹ Ex. 108 at 103 (Joint SP/RP Application) and Ex. 212 at 84 (EA).

³⁷² See Ex. 212 at 83 (EA) and Ex. 108 at 101-103 (Joint SP/RP Application).

³⁷³ Ex. 212 at 105 (EA).

³⁷⁴ Ex. 212 at 89 (EA).

335. Desktop and field delineations of wetlands have been conducted for the Solar Facility.³⁷⁵ The preliminary site layout for the Solar Facility avoids locating solar arrays and associated facilities in wetlands.³⁷⁶

336. Overall, and due to the establishment of perennial vegetation at the Solar Facility, the Project is expected to have a long-term positive impact on water quality.³⁷⁷

337. The stormwater management system has been designed in accordance with MPCA stormwater management for solar projects guidance, and in compliance with the NPDES/SDS Construction Stormwater General Permit.³⁷⁸

338. The record demonstrates that Byron Solar has taken steps to avoid and minimize impacts to surface waters and wetlands. Further, the DSP contains adequate conditions to minimize and mitigate potential impacts to surface water and wetlands. Section 4.3.11 requires reasonable measures to minimize erosion and sedimentation during construction. Section 4.3.13 of the DSP addresses impacts to wetlands and other water resources.

6. Air and Water Emissions

339. Temporary short-term air quality impacts would occur during the construction phase of the Project Solar Facility. Minimal intermittent air emissions during the construction phase of the Project Solar Facility may occur as a result of vehicle exhaust from the construction equipment and from vehicles traveling to and from facility locations as well as fugitive dust emissions due to travel on unpaved roads, grading, and excavation.³⁷⁹ BMPs will be used during construction and operation of the Project Solar Facility to minimize dust emissions, if needed. Emission from construction vehicles will be minimized by keeping construction equipment in a good working order.³⁸⁰ The AIMP and VMP identify construction best management practices related to soils and vegetation that will help to mitigate against fugitive dust emissions.³⁸¹

340. Once operational, the Project Solar Facility will not generate criteria pollutants or carbon dioxide.³⁸² Overall, the Project Solar Facility is expected to have a long-term positive impact on water quality.³⁸³

7. Solid and Hazardous Wastes

341. The MPCA regulates generation, handling, and storage of hazardous wastes.

342. The Project Solar Facility is not expected to generate significant quantities of solid waste during operation. The Project Solar Facility may occasionally require use of certain

³⁷⁵ Ex. 108 at 111 (Joint SP/RP Application).

³⁷⁶ Ex. 212 at 91 (EA).

³⁷⁷ Ex. 212 at 89 (EA).

³⁷⁸ Ex. 108 at 107 (Joint SP/RP Application).

³⁷⁹ See Ex. 212 at 81 (EA).

³⁸⁰ Ex. 108 at 99 (Joint SP/RP Application).

³⁸¹ Ex. 212 at 81 (EA).

³⁸² Ex. 212 at 80 (EA) and Ex. 108 at 99 (Joint SP/RP Application).

³⁸³ Ex. 212 at 89 (EA).

petroleum products such as gear box oil, hydraulic fluid, and gear grease. These materials will be recycled or otherwise stored and disposed of in accordance with applicable State and Federal regulations. These materials will also be stored, recycled, and/or disposed of in accordance with applicable local, state, and federal regulations.³⁸⁴

343. The Project Solar Facility will not require the use or storage of large quantities of hazardous materials that might otherwise have the potential to spill or leak into area groundwater. A Spill Prevention, Control, and Countermeasures Plan will be required for the main industry-standard power transformers located in the Project substation. The transformers will be properly contained per United States Environmental Protection Agency requirements.³⁸⁵

344. No wastewater discharges will occur as a result of the construction or operation of the Project Solar Facility except for domestic-type sewage discharges of Project personnel. Temporary sanitary facilities will be provided during construction, which will be installed in accordance with applicable regulations. Temporary dewatering may be required during construction for electrical trenches. Water may be used during construction to provide dust control and water for concrete mixes, if applicable, and other construction purposes. If temporary dewatering is required during construction activities, discharge of dewatering fluid will be conducted under the NPDES permit program and addressed by the Project's SWPPP as required.³⁸⁶

345. Section 4.3.26 of the DSP requires that all waste and scrap that is the product of construction shall be removed from the site and all premises on which construction activities were conducted and properly disposed of upon completion of each task. In addition, Section 4.3.27 of the DSP requires the permittee to take all appropriate precautions against pollution of the environment and makes the permittee responsible for compliance with all laws applicable to the generation, storage, transportation, clean up, and disposal of all wastes generated during construction and restoration of the site.

F. Rare and Unique Natural Resources

346. Byron Solar reviewed the USFWS Information for Planning and Conservation ("IPaC") database for the potential occurrence of federally-listed species, candidate species, or designated critical habitat that may occur within or near the Project Area. Byron Solar also submitted a formal MDNR's Natural Heritage Information System request, and the MDNR reviewed the Project for documented occurrences of federally- or state-listed species, state Species of Concern, and rare habitats.³⁸⁷

347. No rare plant or animal communities have been identified within the Project boundary.³⁸⁸

³⁸⁴ Ex. 108 at 67 (Joint SP/RP Application).

³⁸⁵ Ex. 108 at 103 (Joint SP/RP Application).

³⁸⁶ Ex. 106 at 67 (CN Application).

³⁸⁷ Ex. 108 at 119 (Joint SP/RP Application).

³⁸⁸ Ex. 212 at 97 (EA).

348. According to the USFWS IPaC, three federally-listed species may occur within or near the Project Area: the federally-threatened northern long-eared bat (“NLEB”),³⁸⁹ Leedy’s roseroot, and prairie bush-clover.³⁹⁰ There are no documented occurrences of NLEB within or near the EA Project Area.³⁹¹

349. According to the MDNR and USFWS, there are no known NLEB hibernacula or roost trees in Dodge or Olmsted counties; however, the NLEB may still occur within or near the Project Area. The Project layout has been designed to avoid the removal of trees during Project construction. Any tree clearing that might be required would be accomplished outside of the NLEB pup-rearing season. Therefore, the Project is not anticipated to impact NLEB.³⁹² There are no records of prairie bush clover or the required habitat within the EA Project Area and the probability of species occurrence within the EA Project Area is considered to be low due to the heavy agricultural use.³⁹³ There are no records of Leedy’s roseroot or the required habitat within the EA Project Area and the probability of the species occurring within the EA Project Area is considered low due to the relatively flat topography and heavy agricultural use.³⁹⁴

350. The state-listed endangered loggerhead shrike has been documented within one mile of the Solar Facility.³⁹⁵ No impacts to any Minnesota state endangered, threatened, or special concern species are anticipated throughout construction or operation of the Project. Although limited potentially suitable habitat for loggerhead shrike is present within the Project Area, no tree clearing is proposed; if any is required, it will take place outside of the breeding season to avoid any potential take.³⁹⁶

351. The DSP includes special conditions that adequately address the NLEB and the loggerhead shrike.

III. SITE PERMIT CONDITIONS

352. The DSP includes a number of proposed permit conditions, many of which have been discussed above. The conditions apply to site preparation, construction, cleanup, restoration, operation, maintenance, abandonment, decommissioning, and other aspects of the Project.

353. Many of the conditions contained in the DSP were established as part of the site permit proceedings of other solar projects permitted by the Commission. Comments received by the Commission have been considered in development of the DSP for this Project.

354. On November 29, 2022, EERA staff submitted comments with markups showing changes to the sample site permit reflected in the DSP that was filed with the EA. In the comments,

³⁸⁹ On November 30, 2022, the USFWS published the final rule in the Federal Register reclassifying the NLEB as endangered under the Endangered Species Act. The rule becomes effective 60 days after publication, on January 30, 2023.

³⁹⁰ Ex. 108 at 120 (Joint SP/RP Application).

³⁹¹ Ex. 212 at 98 (EA).

³⁹² Ex. 108 at 121-122 (Joint SP/RP Application) and Ex. 212 at 97-98 (EA).

³⁹³ Ex. 212 at 98 (EA).

³⁹⁴ Ex. 212 at 98 (EA).

³⁹⁵ Ex. 212 at 98-99 (EA).

³⁹⁶ Ex. 108 at 125 (Joint SP/RP Application).

EERA staff explained the changes to the sample site permit. The majority of these changes were already incorporated into the DSP filed with the EA. EERA staff also proposed a number of additional conditions or amendments to the DSP that were not otherwise reflected in the EA.³⁹⁷ In comments dated December 9, 2022, Byron Solar largely agreed with EERA staff's recommendations, except as noted below.³⁹⁸ In comments dated December 23, 2022, EERA responded to Byron Solar's comments, agreeing with some of its recommendations and disagreeing with others as noted below.³⁹⁹

355. In its November 23, 2022, comments, the MDNR stated it supports the following special conditions as written in the DSP: Section 5.2 (Wildlife-Friendly Erosion Control) and Section 5.4 (Loggerhead Shrike). The MDNR also recommended adding several special conditions to the DSP, discussed below.⁴⁰⁰

356. Section 2.2 of the DSP pertains to Project ownership. EERA staff proposed changes to DSP Section 2.2 from the sample site permit. Byron Solar recommended changes to Section 2.2 to exclude transfers to entities affiliated with the Permittee (here, Byron Solar), because upstream changes to affiliated entities are fairly commonplace and they have no practical impact on the operations of a project, including project contacts or compliance with existing permit obligations. Byron Solar proposed the following revisions to Section 2.2 of the DSP:⁴⁰¹

2.2 Project Ownership

The Permittee shall identify the Project's ownership structure including any parent entity, majority or controlling interest to the Commission at least 14 days prior to the pre-construction meeting.

In the event of an ownership change to a non-affiliated entity, such as the sale of a parent entity, majority or controlling interest, the Permittee shall identify the new Project's ownership structure, provide the name and contact information for the site manager, as described in Section 4.3.2, and either a current version with e-docket reference, or a revised version of the following to the Commission:

- (a) vegetation management plan, as described in Section 4.3.17;
- (b) complaint procedures, as described in Section 7 and Attachment 1;
- (c) emergency response plan, as described in Section 8.10; and
- (d) decommissioning plan, as described in Section 9.

Also, in the event of an ownership change, the Permittee must provide the Commission with a certification that it has read,

³⁹⁷ EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

³⁹⁸ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

³⁹⁹ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

⁴⁰⁰ MDNR Comments at 2 (November 23, 2022) (eDocket No. [202211-190858-01](#)).

⁴⁰¹ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

understands and is able to comply with the plans and procedures it filed and all conditions of this permit.

EERA disagreed that Byron Solar’s proposed modification is compatible with the intent of the proposed permit condition, noting that the permit condition provides examples of the types of ownership changes that would require further information.⁴⁰² EERA proposed that the permit condition remain as proposed by EERA in its November 29, 2022, comments.

2.2 Project Ownership

The Permittee shall identify the Project’s ownership structure including any parent entity, majority or controlling interest to the Commission at least 14 days prior to the pre-construction meeting.

In the event of an ownership change, such as the sale of a parent entity, majority or controlling interest, the Permittee shall identify the new Project’s ownership structure, provide the name and contact information for the site manager, as described in Section 4.3.2, and either a current version with e-docket reference, or a revised version of the following to the Commission:

(a) vegetation management plan, as described in Section 4.3.17;

(b) complaint procedures, as described in Section 7 and Attachment 1;

(c) emergency response plan, as described in Section 8.10; and

(d) decommissioning plan, as described in Section 9.

Also, in the event of an ownership change, the Permittee must provide the Commission with a certification that it has read, understands and is able to comply with the plans and procedures it filed and all conditions of this permit.

357. Section 4.3.8 of the DSP requires in part that the permittee consider input pertaining to visual impacts from landowners and land management agencies. Byron Solar and EERA staff agreed that the term “land management agencies” is vague and should be deleted from the condition.⁴⁰³ In its November 29, 2022 comments, EERA staff proposed additional revisions which still require the permittee to consider input on visual impacts from local jurisdictions but provide more clarity as to the local authority to be consulted.⁴⁰⁴ Byron Solar agreed with EERA staff’s proposed changes, but suggests that the condition be further revised to include a reference to the visual screening plan special condition, as the visual screening plan will be developed as a result of Byron Solar’s efforts to consider input pertaining to visual impacts from landowners and the local unit of government. Byron Solar proposed the following revisions to Section 4.3.8: ⁴⁰⁵

⁴⁰² EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

⁴⁰³ See EERA Staff Comments (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)) and Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. _____).

⁴⁰⁴ EERA Staff Comments (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

⁴⁰⁵ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

4.3.8 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners ~~and land management agencies~~ and the local unit of government having direct zoning authority over the area in which the Project is located when developing the Visual Screening Plan required in Section 5.5. The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Project during construction and operation.

In response to Byron Solar's proposed modification, EERA noted that the permit condition is intended as a general permit condition that would require any permittee to consider input from local governments on aesthetic impacts, regardless of whether the project has a Visual Screening Plan. EERA also noted that many local units of government have zoning regulations that address visual impacts and that the reference to the special condition requiring a Visual Screening Plan is inconsistent with the standard permit condition. EERA further noted that the condition requires that a permittee considers input from local units of government but need not fully incorporate the local standards.⁴⁰⁶ EERA recommended that the permit condition does not refer to any special condition, and remain as proposed by EERA in its November 29, 2022, comments.

4.3.8 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners and the local unit of government having direct zoning authority over the area in which the Project is located. The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Project during construction and operation.

358. Section 4.3.10 of the DSP addresses soil compaction. EERA staff proposed changes to DSP Section 4.3.10 from the sample site permit.⁴⁰⁷ Byron Solar proposed deleting the final phrase of the condition (following the semicolon), as it no longer makes sense given the changes from the sample site permit language. Byron Solar proposed the following revisions to Section 4.3.10.⁴⁰⁸

4.3.10 Soil Compaction

The Permittee shall implement measures to minimize soil compaction of all lands utilized for Project construction and travelled on by cranes, heavy equipment, and heavy trucks; ~~even when soil compaction minimization measures are used.~~

EERA agreed with the proposed modification.⁴⁰⁹

⁴⁰⁶ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

⁴⁰⁷ EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

⁴⁰⁸ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

⁴⁰⁹ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

359. Section 4.3.16 of the DSP pertains to beneficial habitat. EERA staff proposed changes to DSP Section 4.3.16 from the sample site permit.⁴¹⁰ Byron Solar proposes deleting the reporting requirement in the last sentence because the condition *encourages* but does not require compliance with the standards for Minnesota's Habitat Friendly Solar Program. Byron Solar proposed the following revisions to Section 4.3.16:⁴¹¹

4.3.16 Beneficial Habitat

The Permittee shall implement site restoration and management practices that provide for native perennial vegetation and foraging habitat beneficial to gamebirds, songbirds, and pollinators; and that improve soil water retention and reduce storm water runoff and erosion. To ensure continued management and recognition of beneficial habitat, the Permittee is encouraged to meet the standards for Minnesota's Habitat Friendly Solar Program by submitting project plans, seed mixes, a completed project planning assessment form, and any other applicable documentation used to meet the standard to the Board of Water and Soil Resources (BWSR). ~~The Permittee shall file documents required to be filed with BWSR for meeting and maintaining Habitat Friendly Solar Certification with the Commission.~~

In response to Byron Solar's proposed modification, EERA agreed with Byron Solar's that the permit condition encourages but does not require compliance with the Habitat Friendly Solar Program. EERA noted that the intent of the reporting element is to have the documents on file if the Permittee seeks Habitat Friendly Solar Certification. EERA proposed the following revisions to Section 4.3.16. to clarify the filing requirement.⁴¹²

4.3.16 Beneficial Habitat

The Permittee shall implement site restoration and management practices that provide for native perennial vegetation and foraging habitat beneficial to gamebirds, songbirds, and pollinators; and that improve soil water retention and reduce storm water runoff and erosion. To ensure continued management and recognition of beneficial habitat, the Permittee is encouraged to meet the standards for Minnesota's Habitat Friendly Solar Program by submitting project plans, seed mixes, a completed project planning assessment form, and any other applicable documentation used to meet the standard to the Board of Water and Soil Resources (BWSR). If the Permittee chooses to participate in the Minnesota's Habitat Friendly Solar Program, it ~~The Permittee~~ shall file documents required to be filed with BWSR for meeting and maintaining Habitat Friendly Solar Certification with the Commission.

360. Section 4.3.31 of the DSP addresses security fencing for the Solar Facility. Byron Solar proposed revisions to the DSP filed with the EA to make the condition consistent with the Commission's approach in recent dockets and to provide for a flexible approach that requires Byron Solar to continue working with the MDNR and the EERA to design a fence that meets the

⁴¹⁰ EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

⁴¹¹ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

⁴¹² [EERA Staff Reply Comments and Attachments \(December 23, 2022\) \(eDocket No. _____\)](#)

needs of the Project while affording due consideration to agency recommendations.⁴¹³ In comments filed November 29, 2022, EERA staff supported Byron Solar's request for clarity and generally agreed with Byron Solar on the matter, but recommended removing the specific reference to the MDNR's 2016 guidance.⁴¹⁴ Although the MDNR is in the process of updating its guidance, the MDNR has been updating its fencing guidance since at least June 2021 and such updated guidance has not been finalized or issued, nor is there any indication of when it will be finalized. Further, although the Project is not anticipated to commence construction until 2024, final design of the Project, including the security fence, will be completed far in advance of commencement of construction. Byron Solar's proposed fencing was designed in accordance with the MDNR's 2016 Guidance for Commercial Solar Projects, which is the only guidance currently in effect and reflected in this record. Subjecting the Project to unknown, new, and late design requirements creates unreasonable regulatory uncertainty. Accordingly, Byron Solar proposed revising EERA staff's proposed language to include the reference to the MDNR's 2016 Commercial Solar Siting Guidance. Byron Solar proposed the following revisions to Section 4.3.31:⁴¹⁵

4.3.31 Security Fence

The Permittee shall design the security fence surrounding the solar energy generating system to minimize the visual impact of the Project. ~~While maintaining compliance with the National Electric Safety Code, the Permittee shall develop a final fence plan for the specific site that is within the parameters laid out in the 2016 Commercial Solar Siting Guidance and is done in coordination~~ coordinate with EERA and the DNR, to further refine the appropriate fence design, identify ways to preclude wildlife entanglement in the security fence, and to ensure adequate deer escape technology. The final fence plan Permittee shall be submitted ~~the results of the coordination~~ to the Commission as part of the site plan pursuant to Section 8.3.

In response to Byron Solar's proposed modification, EERA acknowledged Byron Solar's concern with potential uncertainty, but notes that, given the anticipated delay in construction of the Solar Facility and the fact that the project is not fully designed, it does not support a including a reference to DNR's 2016 guidance.⁴¹⁶ EERA proposed that the permit condition remain as proposed by EERA in its November 29, 2022, comments.

4.3.31 Security Fencing

The Permittee shall design the security fence surrounding the solar energy generating system to minimize the visual impact of the Project while maintaining compliance with the National Electric Safety Code. The Permittee shall develop a final fence plan for the site that is consistent with DNR guidance for commercial solar facilities and is done in coordination with EERA and the DNR. The final fence plan shall be submitted to the Commission as part of the site plan pursuant to Section 8.3.

⁴¹³ Ex. 119 at 14-15 (Direct Testimony of Scott Wentzell).

⁴¹⁴ EERA Staff Comments (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

⁴¹⁵ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

⁴¹⁶ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

361. Section 4.4 of the DSP pertains to feeder lines. EERA staff proposed changes to DSP Section 4.4 from the sample site permit.⁴¹⁷ Byron Solar proposed a minor clarifying because the new language in the first sentence appears to require use of a hybrid electrical collection system of aboveground and belowground conductors, while the second sentence acknowledges that a permittee *may* use overhead or underground feeder lines. Byron Solar proposed the following a minor clarifying revision to Section 4.4:⁴¹⁸

4.4 Feeder Lines

The Permittee ~~may~~ ~~must~~ use a hybrid electrical collection system of aboveground and belowground conductors to balance direct and indirect aesthetic impacts, electrical interference potential, bird collisions and electrocution, and soil impacts.

The Permittee may use overhead or underground feeder lines that carry power from an internal project interconnection point to the project substation or interconnection point on the electrical grid. The Permittee shall place overhead and underground feeder lines that parallel public roads within the public right-of-way or on private land immediately adjacent to the road. The Permittee shall obtain approval from the landowner or government unit responsible for the affected right-of-way.

The Permittee shall locate feeder lines in such a manner as to minimize interference with agricultural operations including, but not limited, to existing drainage patterns, drain tile, future tiling plans, and ditches. The Permittee shall place safety shields on all guy wires associated with overhead feeder lines. The Permittee shall submit the engineering drawings of all collector and feeder lines with the site plan pursuant to Section 8.3.

EERA agreed with the proposed modification.⁴¹⁹

362. EERA staff proposed a new special condition to the DSP, Section 5.5, regarding a visual screening plan.⁴²⁰ Byron Solar agreed that it is reasonable to include the screening plan on the site plan under Section 8.3 of the DSP. However, Byron Solar proposed revisions to special condition Section 5.5. Byron Solar proposed revisions to separate the visual screening plan from the VMP and associated VMPWG. As Byron Solar noted, it has already developed a screening plan in coordination with neighboring landowners which is designed to allow Byron Solar to work with neighboring landowners to implement screening that is specific to the particular landowner.

⁴¹⁷ EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

⁴¹⁸ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

⁴¹⁹ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

⁴²⁰ EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

Byron Solar also proposed deleting the language stating that the visual screening plan must address local ordinances and setbacks, since the site permit preempts all local ordinances, and this language seems to suggest compliance with such ordinances. Byron Solar proposed following revisions to special condition Section 5.5:⁴²¹

5.5 Visual Screening Plan

~~As part of the VMP required under Section 4.3.17 of this permit, the~~
The Permittee shall develop a site-specific Visual Screening Plan. The Visual Screening Plan shall be designed and managed to mitigate visual impacts to adjacent residences ~~and address local government ordinances and setbacks.~~

The Permittee shall file documentation of coordination between landowners within 500 feet of the site boundary and Dodge County Office of Environmental Services at least 14 days prior to the pre-construction meeting ~~with its VMP submittal~~. The Permittee shall provide a copy of the Visual Screening Plan to all landowners within 500 feet of the site boundary and Dodge County Environmental Services and shall file with the Commission an affidavit of its distribution of the Visual Screening Plan to landowners within 500 feet of the site boundary and Dodge County Environmental Services at least 14 days prior to the pre-construction meeting ~~with its VMP submittal~~. The location of trees and shrubs included in the Screening Plan shall be included in the Site Plan filed under Section 8.3.

~~The Visual Screening Plan shall be developed in accordance with the Department of Commerce Guidance for Developing a Vegetation Establishment and Management Plan for Solar Facilities and shall include:~~

- ~~a) management objectives for the screening of nearby residences;~~
- ~~b) a description of planned restoration and vegetation management activities at the screening locations, including how the screening locations will be prepared, timing of activities, how planting will occur, the types of tree and shrub species to be used, plans for watering and other maintenance;~~
- ~~c) a description of how the screening will be monitored and evaluated to meet management objectives;~~
- ~~d) a description of the management tools used to maintain screening vegetation (e.g., mowing, spot spraying, hand removal, etc.); including the timing and frequency of maintenance activities;~~
- ~~e) identification of the third party (e.g., consultant, contractor, site manager, etc.) contracted for restoration, monitoring, and long-term vegetation management of the screening;~~

⁴²¹ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

- ~~f) identification of on-site noxious weeds and invasive species (native and non-native) and the monitoring and management practices to be utilized; and~~
- ~~g) a marked-up copy of the site plan showing how the location of the tree and shrub species.~~

In response to Byron Solar's proposed modification, EERA agreed to Byron Solar's request that the Visual Screening Plan be separate from the VMP. EERA recommended that the Visual Screening Plan be required to include information on the objective of the screening and how the trees and shrubs will be established and maintained in addition to the location of the plantings⁴²² EERA proposed the following revisions to Section 5.5 of the site permit

5.5 Visual Screening Plan

The Permittee shall develop a site-specific Visual Screening Plan. The Visual Screening Plan shall be designed and managed to mitigate visual impacts to adjacent residences and consider local government ordinances and setbacks.

At least 14 days prior to the pre-construction meeting the Permittee shall file:

- a) the Visual Screening Plan
- b) documentation of coordination between landowners within 500 feet of the site boundary and Dodge County Office of Environmental Services, and
- c) an affidavit of its distribution of the Visual Screening Plan to landowners within 500 feet of the site boundary and Dodge County Environmental Services

The Permittee shall work with landowners and use the Department of Commerce Guidance for Developing a Vegetation Establishment and Management Plan for Solar Facilities to develop the Visual Screening Plan. At minimum the Visual Screening Plan shall include:

- a) management objectives for the screening of nearby residences;
- b) a description of planned restoration and vegetation management activities at the screening locations, including how the screening locations will be prepared, timing of activities, how planting will occur, the types of tree and shrub species to be used, plans for watering and other maintenance;
- c) a description of how the screening will be monitored and evaluated to meet management objectives;
- d) a marked-up copy of the site plan showing the location of the tree and shrub species.

⁴²² EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

363. On November 23, 2022, the MDNR recommended adding a special condition related to Snowmobile Trail 302 – specifically, requiring the permittee to coordinate with Kasson-Mantorville Trails. The MDNR provided an example condition from a recent docket.⁴²³ Byron Solar proposed modifying the MDNR’s suggested language slightly to require documentation of efforts to reroute the snowmobile (rather than the location of the trail) in case the location is still being finalized. Byron Solar proposed adding a special condition with the following language based on the example provided by the MDNR:⁴²⁴

5.6 Snowmobile Trail

The Permittee shall coordinate with local snowmobile trail association to reroute Snowmobile Trail 302. At least 14 days prior to the preconstruction meeting, the Permittee shall provide the Commission with documentation identifying efforts to reroute the snowmobile trail.

EERA agreed with the proposed modification.⁴²⁵

364. On November 23, 2022, the MDNR recommended adding a special condition related to lighting of the O&M facility and Project substation. The MDNR provided an example condition from a recent docket.⁴²⁶ Byron Solar proposed adding a special condition with the following language based on the example provided by the MDNR:⁴²⁷

5.7 Facility Lighting

The Permittee must use shielded and downward facing lighting and LED lighting that minimizes blue hue at the project substation and operations and maintenance facility. Downward facing lighting must be clearly visible on the site plan submitted for the project.

EERA agreed with the proposed modification.⁴²⁸

365. On November 23, 2022, the MDNR recommended adding a special condition related to use of chemicals for dust control.⁴²⁹ Byron Solar stated it has no objection to adding a special condition with the language proposed by the MDNR:⁴³⁰

5.8 Dust Control

The Permittee shall utilize non-chloride products for onsite dust control during construction.

⁴²³ MDNR Comments at 1 (November 23, 2022) (eDocket No. [202211-190858-01](#)).

⁴²⁴ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

⁴²⁵ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

⁴²⁶ MDNR Comments at 1-2 (November 23, 2022) (eDocket No. [202211-190858-01](#)).

⁴²⁷ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

⁴²⁸ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

⁴²⁹ MDNR Comments at 2 (November 23, 2022) (eDocket No. [202211-190858-01](#)).

⁴³⁰ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

EERA agreed with the proposed modification.⁴³¹

366. Section 8.3 of the DSP pertains to the site plan that must be filed prior to commencement of construction. EERA staff proposed changes to DSP Section 8.3 from the sample site permit, including removing the 30-day timeframe for the Commission’s review of the site plan and effectively leaving that review period open-ended.⁴³² Byron Solar proposed to add back in the previous 30-day timeframe for site plan review, noting that certainty, or at least reasonable guidance on timing, is critical for a project’s construction. Byron Solar proposed following revisions to Section 8.3:⁴³³

8.3 Site Plan

At least 30 days prior to the pre-construction meeting, the Permittee shall file with the Commission, and provide the Department of Commerce, and the County(s) where the Project is located with a site plan that includes specifications and drawings for site preparation and grading; specifications and locations of the solar energy generating system and associated facilities; and procedures for cleanup and restoration. The documentation shall include maps depicting the Project Boundary, solar energy generating system and associated facilities layout in relation to that approved by this permit.

The Permittee may not commence construction until 30 days has expired or until the Commission has notified the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes to its site plan or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

In response to Byron Solar’s proposed modification, EERA acknowledged Byron Solar’s concern with potential uncertainty, but noted that Byron Solar’s proposed modification may not provide sufficient opportunity to review all the preconstruction filings and does not clearly provide the opportunity for the Commission to notify the Permittee of a deficiency in filings. EERA recommended that the permit condition remain as proposed by EERA in its November 29, 2022, comments.

8.3 Site Plan

⁴³¹ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

⁴³² EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

⁴³³ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

At least 30 days prior to the pre-construction meeting, the Permittee shall file with the Commission, and provide the Department of Commerce, and the County(s) where the Project is located with a site plan that includes specifications and drawings for site preparation and grading; specifications and locations of the solar energy generating system and associated facilities; and procedures for cleanup and restoration. The documentation shall include maps depicting the Project Boundary, solar energy generating system and associated facilities layout in relation to that approved by this permit.

The Permittee may not commence construction until the Commission has notified the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes to its site plan or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

367. Section 8.4 of the DSP requires the permittee to file monthly status reports. EERA staff proposed changes to DSP Section 8.4 from the sample site permit, including requiring status reports to be submitted beginning with the issuance of the permit instead of submittal of the site plan.⁴³⁴ Byron Solar proposed revisions to Section 8.4 to require status reports beginning with the pre-construction meeting, which is consistent of the purpose of this condition to “describe construction activities and process.” Byron Solar proposed following revisions to Section 8.4:⁴³⁵

8.4 Status Reports

The Permittee shall file monthly status reports on progress regarding site construction with the Commission. Reports shall begin with the pre-construction meeting issuance of this permit and continue until completion of restoration. Reports shall describe construction activities and progress, and activities undertaken in compliance with this permit. Reports shall include text and photographs.

EERA agreed with Byron Solar’s recommendation that monthly construction status reports should begin with the pre-construction meeting. However, EERA also argued that periodic status updates are reasonable between the issuance of the permit and the anticipated commencement of construction in late 2024.⁴³⁶ EERA recommended that Section 8.4 of the DSP be revised to require

⁴³⁴ EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

⁴³⁵ Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. [202212-191223-01](#)).

⁴³⁶ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

updates every six months if construction does not commence within six months of the permit issuance.

8.4 Status Reports

The Permittee shall file monthly status reports on progress regarding site construction with the Commission. Construction status reports shall begin with the pre-construction meeting and continue until completion of restoration. Construction status reports shall describe construction activities and progress, and activities undertaken in compliance with this permit. Reports shall include text and photographs.

If the Permittee does not commence construction of the Project within six months of the permit issuance, the Permittee shall file status reports on the anticipated timing of construction every six months beginning with the issuance of this permit until the pre-construction meeting. The status updates shall include information on the Project's Midcontinent Independent System Operator (MISO) interconnection process.

368. Section 9.2 of the DSP pertains to final site restoration. Byron Solar proposed the following revisions to Section 9.2 of the DSP to eliminate confusion and acknowledge that decommissioning and restoration measures are governed by the most recently filed and accepted decommissioning plan.⁴³⁷ In its November 29, 2022 comments, EERA staff stated that it supports Byron Solar's proposed changes to this condition.⁴³⁸ The proposed changes to Section 9.2, proposed by Byron Solar and supported by EERA staff, are as follows:

9.2 Final Site Restoration

Upon termination of operation of the Project, the Permittee shall have the obligation to dismantle and remove from the site all solar panels, mounting steel posts and beams, inverters, transformers, overhead and underground cables and lines, foundations, buildings, and ancillary equipment in accordance with the most recently filed and accepted decommissioning plan. To the extent feasible, the Permittee shall restore and reclaim the site to pre-Project conditions. Landowners may require the site be returned to agricultural production or may retain restored prairie vegetation, or other land uses as agreed to between the landowner and the Permittee. All access roads shall be removed unless written approval is given by the affected landowner requesting that one or more roads, or portions thereof, be retained. All such agreements between the Permittee and the affected landowner shall be submitted to the Commission prior to commencing restoration activities.

⁴³⁷ Ex. 119 at 15 (Direct Testimony of Scott Wentzell).

⁴³⁸ EERA Staff Comments (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

The Permittee shall restore the site in accordance with the requirements of this condition and file a notification of final restoration completion to the Commission within 18 months of termination of operation of the Project.

EERA agreed with the proposed modification.⁴³⁹

369. The ALJ recommends granting a Site Permit for the Solar Facility with the conditions discussed above.

ROUTE PERMIT

IV. ROUTE PERMIT CRITERIA

370. The Power Plant Siting Act (“PPSA”), Minn. Stat. Chapter 216E, requires that route 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.”⁴⁴⁰

371. Under the PPSA, the Commission and the ALJ 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 generating plants and high-voltage Transmission Lines 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;

⁴³⁹ EERA Staff Reply Comments and Attachments (December 23, 2022) (eDocket No. _____)

⁴⁴⁰ Minn. Stat. § 216E.03, subd. 7.

- (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 subdivision 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 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; and
- (12) when appropriate, consideration of problems raised by other state and federal agencies and local entities.⁴⁴¹

372. Also, Minn. Stat. § 216E.03, subd. 7(e), provides that the Commission “must make specific findings that it has considered locating a route for a high-voltage transmission line on an existing high-voltage transmission route and the use of parallel existing highway right-of-way and, to the extent those are not used for the route, the [C]ommission must state the reasons.”

373. In addition to the PPSA, the Commission and the ALJ are governed by Minn. R. 7850.4100, which mandates consideration of the following factors when determining whether to issue a route permit for a high-voltage transmission line:

- 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;

⁴⁴¹ Minn. Stat. § 216E.03, subd. 7.

- 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;
- 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.⁴⁴²

374. There is sufficient evidence on the record for the ALJ to assess the routes on the record using the criteria and factors set out above.

V. APPLICATION OF ROUTE PERMIT CRITERIA TO THE PROPOSED TRANSMISSION LINE

A. Human Settlement

1. Displacement

375. No displacement is anticipated to occur as a result of the Transmission Line.⁴⁴³

2. Noise

⁴⁴² Minn. R. 7850.4100.

⁴⁴³ Ex. 212 at 53 (EA).

376. Noise from the Transmission Line is not expected to be perceptible.⁴⁴⁴

377. Section 5.3.5 of the DRP requires that “construction and maintenance activities shall be limited to daytime working hours to the extent practicable to ensure nighttime noise level standards will not be exceeded.” During operations, Byron Solar is required to adhere to the MPCA noise standards, and no additional mitigation was proposed in the EA because significant impacts are not anticipated.⁴⁴⁵

3. Aesthetics

378. The existing landscape in the EA Project Area is rural and agricultural consisting of flat to gently rolling row crop fields of corn and soybeans. The built environment includes roads, a railroad, transmission and distribution lines, the existing Byron Substation, small solar facilities, and wind turbines.⁴⁴⁶ There are several existing transmission lines within or adjacent to the Project Area.⁴⁴⁷

379. The ~~Project’s transmission line~~ Transmission Line structures and conductors would create aesthetic impacts that are anticipated to be minimal to moderate. The Transmission Line will alter the current landscape through construction of steel poles of 90 to 170 feet tall.⁴⁴⁸

380. The Blue Route would be approximately ~~three~~ 2.8 miles long, whereas the Red Route would be approximately 4.5 miles long.⁴⁴⁹

381. Changes to the existing viewsheds from the Transmission Line are expected to be minimal given its short length and proximity to the existing Byron Substation and other existing transmission lines.⁴⁵⁰

382. ~~The Red Route is located closer to the nearest residence (250 feet).~~ There are no homes closer than 200 feet from either transmission alignment. On the Blue Route there two homes approximately 280 feet and 380 feet from the anticipated alignment. There are two homes and two businesses within 400 of the Red Route alignment: the homes are about 250 feet and 350 feet from the proposed alignment and the businesses are both approximately 240 feet.⁴⁵¹

~~383. Byron Solar has minimized aesthetic impacts by choosing the Blue Route where a transmission line is most harmonious with the landscape, such as along roads and field edges. The record demonstrates that the Blue Route is designed to avoid or minimize impacts on residences and visual impacts.~~⁴⁵²

⁴⁴⁴ Ex. 212 at 57 (EA).

⁴⁴⁵ Ex. 212 at 55, 57 (EA).

⁴⁴⁶ Ex. 212 at 48 (EA).

⁴⁴⁷ Ex. 108 at 63 (Joint SP/RP Application).

⁴⁴⁸ Ex. 108 at 70 (Joint SP/RP Application) and Ex. 212 at 15 (EA).

⁴⁴⁹ Ex. 212 at 4 (EA).

⁴⁵⁰ Ex. 212 at 5-6 (EA).

⁴⁵¹ Ex. 212 at 48 (EA).

⁴⁵² Ex. 108 at 70 (Joint SP/RP Application).

4. Cultural Values

384. ~~The Project contributes to the growth of renewable energy and is likely to strengthen and reinforce this value, especially in an area that already has wind farms and community solar generating facilities.~~⁴⁵³

385. Construction and operation of the Project Transmission Line is not anticipated to impact or alter the work and leisure pursuits of residents in the EA Project Area in such a way as to impact the underlying culture of the area. No impacts to cultural values are anticipated because of the Transmission Line.⁴⁵⁴

5. Recreation

386. There are limited specifically designated recreational resources in the EA Project Area. There are no state forests, national forests, national wildlife refuges, lakes with public access, state water trails, Aquatic Management Areas, state parks, or migratory waterfowl feeding and resting areas in within close proximity to the Project boundaries. Additionally, there are no state-owned Off-Highway Vehicle trails and no MDNR SNAs identified within one mile of the Blue Route right-of-way.⁴⁵⁵ There are no biking or walking trails or WMAs within the EA Project Area.⁴⁵⁶

387. The Transmission Line will be visible to users of re-located Snowmobile Trail 302, but its presence is not anticipated to significantly impact users of the trail.⁴⁵⁷

388. ~~The Blue Route does not~~ Neither the Blue Route nor the Red Route cross any recreational facilities; therefore, no impacts on public use of recreational facilities are anticipated.⁴⁵⁸ Because few recreational resources exist in the EA Project Area, potential impacts to these resources are anticipated to be minimal and temporary.⁴⁵⁹ Impacts to recreation areas would mostly be related to Transmission Line construction, and will be minimal, temporary, and isolated to specific areas throughout the right-of-way.⁴⁶⁰

389. Introduction of an aesthetic change to the predominantly agrarian landscape in the EA Project Area could impact public enjoyment of nearby recreation opportunities. ~~Byron Solar has minimized impacts to recreational opportunities by siting the Blue Route to avoid these areas. Neither Route directly impacts recreational opportunities.~~⁴⁶¹

6. Public Services and Infrastructure

⁴⁵³ Ex. 212 at 50-51 (EA).

⁴⁵⁴ Ex. 212 at 50-51 (EA).

⁴⁵⁵ Ex. 108 at 78 (Joint SP/RP Application).

⁴⁵⁶ Ex. 212 at 59 (EA).

⁴⁵⁷ Ex. 212 at 59 (EA).

⁴⁵⁸ Ex. 108 at 79 (Joint SP/RP Application).

⁴⁵⁹ Ex. 212 at 58 (EA).

⁴⁶⁰ Ex. 108 at 79-80 (Joint SP/RP Application).

⁴⁶¹ Ex. 108 at 79-80 (Joint SP/RP Application).

390. Transmission line projects have the potential to impact public services during both construction and operation.⁴⁶²

391. The Blue Route will run parallel to the two existing transmission lines near the existing Byron Substation, and will cross the transmission lines northwest of the intersection of County Road 34 and County Road 15.⁴⁶³ The Red Route will run parallel to Xcel Energy's existing 345 kV and 161 kV transmission lines for approximately three miles of its length and will parallel two existing transmission lines near the existing Byron Substation and will cross five existing transmission lines.⁴⁶⁴

392. Temporary road or lane closures may be required during the construction of the Transmission Line to ensure safety of the construction crews and the traveling public. Any road closures or restrictions are typically related to the stringing and tensioning of the conductor and, depending upon the location, would be expected to last from minutes to hours. No impacts to roads are anticipated during the operation; negligible traffic increases would occur for maintenance.⁴⁶⁵

393. If the Blue Route is selected, the new driveway to the Project substation will likely be near the intersection of 265th Avenue and 640th Street. If the Red Route is selected, the new driveway is anticipated to be off of CR 8/CR 25 (the county line between Dodge and Olmsted counties).⁴⁶⁶

394. No natural gas or hazardous liquid pipelines were identified in the EA Project Area.⁴⁶⁷ ~~The Blue Route does not~~ Neither route crosses any pipelines.⁴⁶⁸

395. Both routes would cross the Canadian Pacific Railway and the Blue Route would parallel the railroad for approximately one mile.⁴⁶⁹ Byron Solar will coordinate with the railroad to schedule electrical conductor stringing over the railroad to ensure safety of construction personnel and the continued safe operation of rail operations.⁴⁷⁰

396. Significant impacts on radio, television, cellular phones, or GPS systems are not anticipated from construction or operation of the ~~Blue Route~~. Transmission Line.⁴⁷¹

397. No long-term impacts to utilities will occur as a result of the Transmission Line. Limited, temporary impacts to service may occur during interconnection of the Transmission Line at the existing Byron Substation. These outages are anticipated to be of short duration and closely coordinated with utilities and landowners. Any outage would be coordinated with the

⁴⁶² Ex. 212 at 60-61 (EA).

⁴⁶³ Ex. 108 at 82 (Joint SP/RP Application).

⁴⁶⁴ Ex. 212, at 26 (EA)

⁴⁶⁵ Ex. 212 at 61 (EA).

⁴⁶⁶ Ex. 212 at 61 (EA).

⁴⁶⁷ Ex. 212 at 60 (EA).

⁴⁶⁸ Ex. 108 at 82 (Joint SP/RP Application).

⁴⁶⁹ Ex. 212 at 61 (EA).

⁴⁷⁰ Ex. 108 at 89 (Joint SP/RP Application) and Ex. 212 at 63 (EA).

⁴⁷¹ Ex. 108 at 62 (Joint SP/RP Application); Ex. 212 at 103 (EA).

interconnecting utility and communicated to electric customers in the EA Project Area.⁴⁷² No permanent impacts to public services are anticipated.⁴⁷³

398. No permanent impacts to public services are anticipated; therefore, no permanent mitigation measures are proposed. No impacts to emergency services are anticipated as a result of the Project.⁴⁷⁴

399. The nearest FAA registered airport to the Project is the Dodge Center Municipal Airport, located approximately 5.2 miles west of the Solar Facility south of U.S. Highway 14 in Dodge Center, Minnesota. Byron Solar used the FAA's Obstruction Evaluation/Airport Airspace Analysis Notice Criteria Tool for the Blue Route. Structures ranging in height from 20 to 151 feet were filed. The response from the FAA's screening tool indicates that at least one of the proposed structures is in proximity to a navigation facility and may impact the assurance of navigation signal reception. Byron Solar will work with FAA staff regarding the issue and intends to file additional documentation in accordance with CFR Title 14 and Notice Criteria Tool recommendations.⁴⁷⁵ Because the FAA Obstruction evaluation requires some detail in engineering, it has not been done for the Red Route.⁴⁷⁶

400. Byron Solar will coordinate with Gopher State One Call before and during construction to fully understand infrastructure, utility locations and safety concerns and to avoid possible structural conflicts.⁴⁷⁷

401. The record demonstrates that impacts of the Transmission Line on public services and infrastructure are anticipated to be minimal.⁴⁷⁸ Likewise, Section 5.3.3 of the DRP requires a permittee to minimize disruptions to public services and public utilities.

7. Zoning and Land Use

402. Both the Blue Route and the Red Route are located primarily on agricultural fields.⁴⁷⁹ Land cover types within the Blue Route are approximately 93.9 percent cultivated croplands, 4.5 percent developed areas (open space, low intensity, and medium intensity), and 1.6 percent hay/pasture.⁴⁸⁰ Land cover types within the Red Route right-of-way are approximately 86.7~~2~~ percent cultivated croplands, 4.9~~2~~ percent developed areas (open space, low intensity, and medium intensity), 3.7~~7~~ 8 percent hay/pasture, 3.7 percent emergent herbaceous wetlands, with the remaining comprising of deciduous forest and herbaceous.⁴⁸¹

403. Construction and operation of the Transmission Line is not expected to have a significant impact on land use within Dodge and Olmsted Counties. Existing land uses along the

⁴⁷² Ex. 212 at 61 (EA).

⁴⁷³ Ex. 108 at 82 (Joint SP/RP Application).

⁴⁷⁴ Ex. 108 at 81-82 (Joint SP/RP Application).

⁴⁷⁵ Ex. 108 at 90 (Joint SP/RP Application) and Ex. 212 at 60-62 (EA).

⁴⁷⁶ Ex. 212 at 62 (EA).

⁴⁷⁷ Ex. 108 at 81 (Joint SP/RP Application).

⁴⁷⁸ Ex. 212 at 59 (EA).

⁴⁷⁹ Ex. 212 at 93 (EA).

⁴⁸⁰ Ex. 212 at 92 (EA).

⁴⁸¹ Ex. 212 at 92 (EA).

Blue Route Transmission Line will experience minimal, short-term impacts during the period of construction. When the Transmission Line construction is complete, Byron Solar will restore the workspaces and land uses will be allowed to continue as before.⁴⁸²

404. Byron Solar sited the Transmission Line along the Blue Route to be co-located with existing transmission and railroad rights-of-way for about one mile of its length to minimize impacts to non-developed areas and reduce the overall width of the easement required from the private landowners.⁴⁸³ The Blue Route follows existing rights-of-way for approximately 35 percent of its length.⁴⁸⁴ The Red Route follows existing rights of way for approximately 72 percent of its length.⁴⁸⁵

405. The Red Route crosses two undeveloped parcels near the exiting Byron Substation. Depending upon the alignment within these currently undeveloped parcels, the presence of a transmission right-of-way may make the parcels more difficult to develop.⁴⁸⁶

406. The Blue Route has been designed in compliance with the goals and policies of the Dodge County Comprehensive Plan, specifically protecting the environment, preserving agricultural land, promoting compatible development and uses to prevent land use conflicts, and protecting groundwater. The Project meets the Agricultural zoning district goals to retain, conserve, and enhance agricultural land in Dodge County and to protect this land from scattered residential development. The Blue Route is Both routes are compatible with the Olmsted County General Land Use Plan and is-consistent with the land use and development policies of compatibility with adjacent land uses (transmission lines already surround the existing Byron Substation), and the continuation of agricultural activities within the Transmission Line right-of-way.⁴⁸⁷

407. Under Minn. Stat. § 216E.10, subd. 1, a route permit from the Commission preempts all zoning, building and land use rules, regulations, and ordinances promulgated by regional, county, and local governments.⁴⁸⁸ The Blue Route crosses areas zoned as agricultural in Dodge County. The Dodge County Zoning Ordinance states that a Major Essential Service - Transmission (exceeding 34.5 kV) must acquire a conditional use permit prior to construction. Dodge County has determined that the Transmission Line is acceptable in the Agricultural Zoning District upon approval of a conditional use permit.⁴⁸⁹ Additionally, the Blue Route right-of-way is located approximately 0.25 miles east of the City of Kasson's Urban Expansion District. Byron Solar does not propose infrastructure or other construction activities in the Urban Expansion District, and no areas zoned as residential, commercial, or industrial are crossed by the Blue Route.⁴⁹⁰ The Blue Route is Both routes are located in the A-2 Agricultural Zoning District in Olmsted County. According to the Olmsted County Zoning Ordinance, the Transmission Line is

⁴⁸² Ex. 108 at 86-87 (Joint SP/RP Application).

⁴⁸³ Ex. 108 at 86-87 (Joint SP/RP Application) and Ex. 212 at 29 (EA).

⁴⁸⁴ See Ex. 212 at 26, 29 (EA).

⁴⁸⁵ Ex. 212 at 26

⁴⁸⁶ Ex. 212 at 53 (EA).

⁴⁸⁷ Ex. 108 at 84-85 (Joint SP/RP Application) and Ex. 212 at 53 (EA).

⁴⁸⁸ See Ex. 212 at 42 (EA).

⁴⁸⁹ Ex. 108 at 82-83 (Joint SP/RP Application).

⁴⁹⁰ Ex. 108 at 87 (Joint SP/RP Application).

considered part of the solar energy farm, which is permissible upon approval of a conditional use permit.⁴⁹¹ Under Kalmar Township and Salem Township zoning ordinances, transmission lines are considered essential services and are a permitted use.⁴⁹² Although the local zoning ordinances do not apply because the Transmission Line requires a Route Permit from the Commission, Byron Solar will apply county standards, where feasible, and coordinate with local and county officials regarding the Transmission Line.⁴⁹³

8. Property Values

408. Because property values are influenced by a complex interaction between factors specific to each individual piece of real estate as well as local and national market conditions, the effect of one particular project on the value of one particular property is difficult to determine. Transmission facilities have the potential to impact property values, but the type and extent of impacts, if any, depend upon the location of the facilities and existing land uses in the area.⁴⁹⁴

409. Impacts to property values in the local vicinity are anticipated to be minimal and significant negative effects to property values are not anticipated.⁴⁹⁵

9. Socioeconomics

~~410. The Project will result in both short- and long-term benefits to the local economy. Socioeconomic impacts are anticipated to be positive.~~⁴⁹⁶

411. The Project is expected to support approximately 293 temporary jobs during the construction and installation phases, and up to four full time permanent skilled jobs during the operations phase. Most of the construction jobs will support construction of the Solar Facility and job impacts from construction of the Transmission Line are incidental. Indirect economic benefits will occur from additional local spending on goods and services and local sales tax.⁴⁹⁷ Construction of the Project is also anticipated to result in increased expenditures for materials, food, and fuel at local businesses during construction.⁴⁹⁸ The Project Transmission Line will also contribute to the local economy through land-lease easement payments to participating landowners and direct/indirect purchases of goods and services.⁴⁹⁹ Adverse socioeconomic impacts arising from the Transmission Line are not anticipated.⁵⁰⁰

412. Impacts to communities of environmental justice concern are not anticipated to occur as a result of the Transmission Line.⁵⁰¹

⁴⁹¹ Ex. 108 at 82-83 (Joint SP/RP Application).

⁴⁹² Ex. 212 at 53 (EA).

⁴⁹³ Ex. 108 at 82-83 (Joint SP/RP Application).

⁴⁹⁴ Ex. 212 at 57-58 (EA).

⁴⁹⁵ Ex. 212 at 57 (EA).

⁴⁹⁶ See Ex. 212 at 64-65 (EA) and Ex. 108 at 70-71 (Joint SP/RP Application).

⁴⁹⁷ Ex. 212 at 65 (EA) and Ex. 108 at 71 (Joint SP/RP Application).

⁴⁹⁸ Ex. 212 at 64 (EA).

⁴⁹⁹ Ex. 108 at 75 (Joint SP/RP Application).

⁵⁰⁰ Ex. 212 at 65 (EA).

⁵⁰¹ See Ex. 212 at 65-67 (EA).

10. Effects on Human Settlement: Comparison of Route Alternatives

413. The Blue Route and Red Route are anticipated to have similar impacts with respect to displacement, noise, cultural values, recreation, public services and infrastructure, socioeconomics, and property values.

414. With respect to aesthetics and land use, the Red Route is anticipated to have somewhat greater impacts because the Red Route would require construction of more infrastructure, resulting in increased human impacts – namely, the Red Route would be approximately 4.5 miles long (as compared to the Blue Route’s three-mile length) and the associated alternative substation location would require over three miles of additional collection line length.⁵⁰² ~~Additionally, the Red Route is located closer to the nearest residence (250 feet).~~⁵⁰³

415. The record demonstrates that the Blue Route is designed to avoid or minimize impacts on human settlement. Further, the record demonstrates that the Blue Route takes into consideration comments and requests from individual landowners.

B. Public Health and Safety

416. There is no federal standard for transmission line electric fields. The Commission, however, has imposed a maximum electric field limit of eight kV/m measured at one meter (3.28 feet) above the ground. The standard was designed to prevent serious hazards from shocks when touching large objects parked under alternating current transmission lines of 500 kV or greater.⁵⁰⁴

417. The maximum electric field level for the Transmission Line is estimated to be 4.7 kV/m directly under the line, and will dissipate to approximately 1.1 kV/m at the edge of the right-of-way (75 feet either side of the center line). These field strengths are well below the Commission permit standard of 8.0 kV/m.⁵⁰⁵

418. No health impacts due to EMF are anticipated for either of the possible routing options; therefore, no mitigation is proposed. The Transmission Line will be constructed to maintain proper safety clearances, etc. Likewise, impacts to implantable medical devices are not expected.⁵⁰⁶

419. Potential impacts to residences or farming operations from neutral-to-earth stray voltage are not anticipated. High voltage transmission lines like the Transmission Line do not produce this type of stray voltage because they do not directly connect to businesses, residences, or farms.⁵⁰⁷ Neutral-to-earth stray voltage is most associated with local distribution lines and electrical wiring within the affected building. Induced voltage is the result of an electric field from the transmission line extending to nearby conductive objects. Constructing the Project to the National Electric Safety Code (“NESC”) standards and Commission route permit requirements

⁵⁰² See Ex. 212 at 4 and Appendix E (Responses to Data Requests) (EA).

⁵⁰³ ~~Ex. 212 at 48 (EA).~~

⁵⁰⁴ Ex. 212 at 70 (EA) and Ex. 108 at 54 (Joint SP/RP Application).

⁵⁰⁵ Ex. 212 at 70 (EA) and Ex. 108 at 56 (Joint SP/RP Application).

⁵⁰⁶ See Ex. 212 at 70-71, 103-104 (EA) and Ex. 108 at 51-57 (Joint SP/RP Application).

⁵⁰⁷ Ex. 212 at 71-73 (EA) and Ex. 108 at 56 (Joint SP/RP Application).

mitigates this concern. Therefore, potential impacts from stray voltage are anticipated to be minimal for all routing options.⁵⁰⁸

420. The Transmission Line will meet all local, state, and NESC safety standards and will be equipped with protective devices to safeguard the public in the event of an accident, or if a structure or conductor falls to the ground.⁵⁰⁹

421. The record demonstrates that the construction and operation of the Transmission Line is not expected to impact emergency services or have a negative impact on public health or safety. Further, the DRP contains conditions related to the protection of public safety.⁵¹⁰

422. *Comparison of Alternatives.* Regardless of the route alternative selected by the Commission, the Transmission Line is not anticipated to have a significant impact on human health and safety.⁵¹¹

C. Land-based Economies

1. Agriculture

423. Agricultural use encompasses approximately 97 percent of the Project Area. Both ~~The~~ Blue Route and the Red Route are located primarily on agricultural fields.⁵¹²

424. No Conservation Reserve Enhancement Program or Reinvest in Minnesota parcels have been identified within the Blue Route.⁵¹³

425. Construction of the ~~Project~~ Transmission Line could cause minimal, temporary impacts to farmland from soil compaction and rutting, accelerated soil erosion, crop damage, temporary disruption to normal farming activities, and introduction of noxious weeds to the soil surface. Byron Solar will implement measures to reduce compaction, soil erosion, and the introduction of noxious weeds. Construction impacts to farmland would be short term and minimal in nature and would be mitigated through the proper use and installation of BMPs.⁵¹⁴ Once construction is complete, Byron Solar will re-establish the right-of-way to pre-construction conditions.⁵¹⁵

426. Permanent impacts to agricultural land will occur where transmission line structures are placed in cultivated fields. Byron Solar proposes to minimize impacts to agricultural land by generally placing structures along field edges. The final spacing and location of structures will be designed to accommodate the movement of farm equipment within agricultural fields while still maintaining safety and design standards. The estimated permanent impacts from each transmission structure foundation will be 3 to 6 feet in diameter at the surface. Both crop and

⁵⁰⁸ Ex. 212 at 72-73 (EA).

⁵⁰⁹ Ex. 212 at 27 (EA) and Ex. 108 at 30, 52 (Joint SP/RP Application).

⁵¹⁰ See Ex. 212 at 72-74 (EA).

⁵¹¹ See Ex. 212 at 70-74 (EA).

⁵¹² Ex. 212 at 75, 92-93 (EA) and Ex. 108 at 90 (Joint SP/RP Application).

⁵¹³ Ex. 108 at 93 (Joint SP/RP Application).

⁵¹⁴ Ex. 108 at 92 (Joint SP/RP Application).

⁵¹⁵ Ex. 212 at 93 (EA); Ex. 108 at 93 (Joint SP/RP Application).

livestock activities will be able to continue around ~~Project facilities~~ transmission structures after construction.⁵¹⁶

427. During construction of the Transmission Line, a small portion of prime farmland will be temporarily taken out of agricultural production for temporary workspace associated with erecting structures along the right-of-way. The footprint of each structure measures approximately three to six feet in diameter and will permanently impact prime farmland but will not have a meaningful effect on the availability of prime farmland within the state of Minnesota or within Dodge and Olmsted counties.⁵¹⁷

428. The Blue Route was developed with attention to minimizing impacts to agricultural land.⁵¹⁸ Byron Solar sited the Transmission Line along the Blue Route to be co-located with existing transmission and railroad rights-of-way for about one mile of its length to minimize impacts to non-developed areas and reduce the overall width of the easement required from the private landowners.⁵¹⁹ The Blue Route follows existing rights-of-way for approximately 35 percent of its length.⁵²⁰

429. Aerial application of seeds, fertilizers, and crop protection chemicals are likely to occur within or near the Project. The construction of the Transmission Line has the potential to impact crop spraying by creating physical obstacles within the flight paths required to perform aerial application activities. The Transmission Line adjacent to fields where aerial application occurs can impact the airspace required for pilots to turn for their next pass over the field. Byron Solar will coordinate with landowners on a case-by-case basis regarding crop dusting.⁵²¹

430. The Blue Route takes into consideration comments and requests from individual landowners to minimize impacts on their individual parcels.⁵²²

2. Forestry, Mining, and Tourism

431. There are no forestry operations along the ~~Blue Route~~ either route. Impacts to forestry operations will not occur.⁵²³

432. The Blue Route is designed to avoid tree clearing to the greatest extent practicable, and the corridor does not contain significant trees, shrubs, or other vegetation that will be impacted during construction.⁵²⁴

⁵¹⁶ Ex. 108 at 93 (Joint SP/RP Application).

⁵¹⁷ Ex. 108 at 110 (Joint SP/RP Application).

⁵¹⁸ Ex. 108 at 93 (Joint SP/RP Application).

⁵¹⁹ Ex. 108 at 86-87 (Joint SP/RP Application) and Ex. 212 at 29 (EA).

⁵²⁰ See Ex. 212 at 26, 29 (EA).

⁵²¹ Ex. 108 at 93 (Joint SP/RP Application).

⁵²² Ex. 119 at 8-9 (Direct Testimony of Scott Wentzell).

⁵²³ Ex. 212 at 104 (EA).

⁵²⁴ Ex. 108 at 93-94 (Joint SP/RP Application).

433. The Red Route would require removal of approximately two acres of trees in two areas west of the Dodge/Olmsted County line.⁵²⁵

434. There are no gravel pits or rock quarries within the right-of-way of either route. Impacts to mining resources are not anticipated.⁵²⁶

435. The Transmission Line will have a negligible impact on tourism in Dodge and Olmsted counties. Various sections of the DRP indirectly address impacts to recreation, such as noise, aesthetics, soils, etc., and, as a result, indirectly mitigate impacts to tourism. No additional mitigation is proposed.⁵²⁷

3. Effects on Land-Based Economies: Comparison of Route Alternatives

436. Neither of the routes are anticipated to impact mining or tourism.

437. The record demonstrates that the Blue Route was designed to minimize impacts to agricultural land.⁵²⁸ Byron Solar sited the Transmission Line along the Blue Route to be co-located with existing transmission and railroad rights-of-way for about one mile of its length, thereby reducing the overall width of the easement required from the private landowners.⁵²⁹ The Blue Route takes into consideration comments and requests from individual landowners to minimize impacts on their individual parcels.⁵³⁰

438. The Red Route would require more tree clearing than the Blue Route.⁵³¹

D. Archaeological and Historic Resources

439. A Phase I archaeological survey of the Blue Route was completed in May 2021. No archaeological resources were identified. No previously recorded archaeological or historic sites will be directly impacted by the proposed Project. No State Register or NRHP listed or eligible structures are located within the viewshed of the Blue Route.⁵³²

440. Should the Commission select the Red Route additional surveys may be required.

441. Prior to construction, Byron Solar will prepare an Unanticipated Discoveries Plan outlining steps to be taken if previously unrecorded cultural resources or human remains are encountered during construction.⁵³³

⁵²⁵ Ex. 212 at 93 (EA).

⁵²⁶ Ex. 212 at 104 (EA).

⁵²⁷ Ex. 212 at 104 (EA).

⁵²⁸ Ex. 108 at 93 (Joint SP/RP Application).

⁵²⁹ Ex. 108 at 86-87 (Joint SP/RP Application) and Ex. 212 at 29 (EA).

⁵³⁰ Ex. 119 at 8-9 (Direct Testimony of Scott Wentzell).

⁵³¹ Ex. 212 at 88, 93 (EA).

⁵³² Ex. 212 at 79 (EA) and Ex. 108 at 96-97 (Joint SP/RP Application).

⁵³³ Ex. 212 at 79 (EA).

442. No previously recorded archaeological or historic sites will be directly impacted by the Blue Route. Impacts to archaeological and historic resources are not expected.⁵³⁴

443. The record demonstrates that the Blue Route will not cause adverse impacts to archaeological and historic resources. Further, Section 5.3.14 of the DRP addresses archeological and historic resources and requires the permittee to avoid impacts to archaeological and historic resources where possible and to mitigation impacts where avoidance is not possible. Because impacts to archeological and historic resources are not anticipated, additional mitigation is not proposed.⁵³⁵

444. *Comparison of Alternatives.* The Blue Route is not anticipated to impact archaeological or historic resources. If the Commission selected the Red Route, additional survey may be required.

E. Natural Environment

1. Air Quality and Climate Change

445. Potential air quality impacts associated with the Transmission Line come from two primary sources: short-term emissions from construction vehicles and ozone and nitrogen oxide emissions from operating the facility.⁵³⁶

446. Minimal intermittent air emissions are expected during construction of the Transmission Line. Air emissions during construction would primarily consist of emissions from construction equipment and would include carbon dioxide, nitrous oxide, and particulate matter; dust generated from earth disturbing activities would also give rise to particulate matter. Air emissions associated with construction are highly dependent upon weather conditions and the specific activity occurring. Emissions from construction vehicles will be minimized by using modern equipment with lower emissions ratings. Adverse effects on the surrounding environment are expected to be negligible because of the short and intermittent nature of the emission and dust-producing construction phases.⁵³⁷

447. An insignificant amount of ozone is created due to corona from the operation of transmission lines. Byron Solar has engineered the Transmission Line so as to limit the corona. The emission of ozone from the operation of the 345 kV Transmission Line is not anticipated to have a significant impact on air quality and no mitigation is proposed.⁵³⁸ Ozone and nitrous oxide emissions from the Transmission Line are anticipated to be well below state and national limits.⁵³⁹ Negligible fugitive dust and exhaust emissions would occur as part of routine maintenance activities. Once operational, the Transmission Line will not generate criteria pollutants or carbon dioxide.⁵⁴⁰

⁵³⁴ Ex. 212 at 79 (EA).

⁵³⁵ Ex. 212 at 79 (EA).

⁵³⁶ Ex. 212 at 81 (EA).

⁵³⁷ Ex. 212 at 80-81 (EA).

⁵³⁸ Ex. 108 at 99-100 (Joint SP/RP Application).

⁵³⁹ Ex. 212 at 80-81 (EA).

⁵⁴⁰ Ex. 212 at 80-81 (EA).

2. Water Quality and Resources

a) *Geologic and Groundwater Resources*

448. There are no private wells within the right-of-way of either route.⁵⁴¹

449. Indirect impacts to groundwater, if any, can be mitigated by avoiding or minimizing impacts to surface waters. Dewatering may be required during construction. The geotechnical report recommended a dewatering system using a sump and pump to discharge to the surrounding surface, thereby allowing it to infiltrate back into the ground to minimize potential impacts.⁵⁴²

450. Direct impacts to groundwater are generally associated with construction, for example, structure foundations that could penetrate shallow water tables or groundwater usage. The concern with groundwater contamination in karst areas is that due to permeability any contamination on the surface or in the shallow groundwater can quickly migrate from the surface to the aquifer even if construction activities are confined to areas above the aquifer. Due to the Red Route's proximity to identified active karst features, construction of the alternate substation location and transmission structures in the southern-most area of the Red Route has an increased potential for groundwater contamination.⁵⁴³ Transmission structures along the Red Route are more likely to require concrete pier foundations due to the potential for shallow bedrock. If concrete foundations are used, some portion of the soluble components of the cement paste might leach into groundwater prior to the setting and hardening of the concrete. This will change the pH of groundwater around the surface of the concrete but should not extend far from the foundation.⁵⁴⁴

451. The EA discusses mitigation measures related to the presence of karst in the Project Area, including following BMPs for construction in karst areas and stormwater management and avoiding construction activity and placement of Project infrastructure within at least 150 feet of documented active karst features.⁵⁴⁵ Byron Solar has committed to avoiding construction activity and locating of Project facilities within a 100-150-foot buffer around karst features. The Blue Route as proposed by Byron Solar complies with the 150-foot buffer around active karst features. However, as noted above, due to the Red Route's proximity to identified active karst features, construction of the alternate substation location and transmission structures in the southern-most area of the Red Route has an increased potential for groundwater contamination.⁵⁴⁶ Section 6.3 of the DRP precludes construction activity or placement of Project infrastructure within 150 feet of active karst features and requires the permittee to file a geotechnical investigation with recommendations for project design and construction.

452. The record demonstrates that Byron Solar has designed the Blue Route to avoid and minimize impacts to geologic and groundwater resources.⁵⁴⁷

⁵⁴¹ Ex. 212 at 83 (EA).

⁵⁴² Ex. 108 at 103 (Joint SP/RP Application) and Ex. 212 at 84 (EA).

⁵⁴³ Ex. 212 at 83 (EA).

⁵⁴⁴ Ex. 212 at 84 (EA).

⁵⁴⁵ See Ex. 212 at 85 (EA).

⁵⁴⁶ Ex. 212 at 83 (EA).

⁵⁴⁷ See Ex. 212 at 83 (EA).

b) Surface Waters

453. No waterbodies or MDNR PWI watercourses are identified within the Blue Route. There are seven wetlands present within the Blue Route. No impaired waterbodies were identified within the Project Area.⁵⁴⁸

454. Public waters are wetlands, water basins, and watercourses of significant recreational or natural resource value in Minnesota. There are no public waters in the Blue Route. The Red Route crosses two public waters - Cascade Creek just south of U.S. Highway 14, and an unnamed creek between County Road 25 and 15th Street Southwest.⁵⁴⁹

455. Portions of five streams/waterways were delineated in the field delineation of the Solar Facility and Blue Route conducted in October 2020 and April 2021. Waters within the Red Route have not been field delineated, but a GIS review indicates the Red Route crosses two watercourses.⁵⁵⁰

456. The Blue Route is designed to avoid direct impacts to surface waters by avoiding placement of transmission structures in surface waters.⁵⁵¹ No surface water impacts are anticipated for the construction of the Transmission Line.⁵⁵²

457. Impacts to surface waters are anticipated to be minimal.⁵⁵³ Further, the DRP requires several measures to minimize impacts to surface waters.

c) Wetlands

458. Jurisdiction field delineations of the Blue Route right-of-way were conducted in October 2020 and April 2021.⁵⁵⁴ Based on the field delineations, the Blue Route crosses approximately 0.7 acres of wetlands. Based on National Wetland Inventory for Minnesota (“NWI-MN”) data, the Red Route crosses approximately 4.7 acres of wetlands.⁵⁵⁵

459. The record demonstrates that the Blue Route is designed to avoid or minimize impacts to wetlands. Direct impacts to wetlands are not anticipated. All pole structures along the Blue Route have been sited outside of delineated wetlands. Some temporary impacts may be required in the form of matting across wetlands to access the proposed pole structure locations. All impacts related to construction matting are expected to be minor. Although there is a potential for wetland to be indirectly affected, these impacts will be short-term, of a small size, and localized,

⁵⁴⁸ Ex. 108 at 111 (Joint SP/RP Application).

⁵⁴⁹ Ex. 212 at 89 (EA).

⁵⁵⁰ Ex. 212 at 89 (EA).

⁵⁵¹ Ex. 212 at 89 (EA).

⁵⁵² Ex. 108 at 114 (Joint SP/RP Application).

⁵⁵³ Ex. 212 at 88 (EA).

⁵⁵⁴ Ex. 108 at 111 (Joint SP/RP Application).

⁵⁵⁵ Ex. 212 at 90-91 (EA).

and impacts can be mitigated.⁵⁵⁶ Additionally, the DRP requires several measures to minimize impacts to wetlands.⁵⁵⁷

d) Floodplains

460. Both routes cross the 100-year flood plain associated with Cascade Creek.⁵⁵⁸

461. The ~~Project~~ Transmission Line will not significantly impact FEMA-mapped floodplains and no mitigation is proposed. While a handful of transmission structures along the Blue Route are potentially located within the 100 year floodplain, the presence of the transmission structures will not impact the function of the floodplain.⁵⁵⁹

3. Wildlife

462. Wildlife species utilizing the Land Control Area include white-tailed deer, red fox, striped skunk, raccoon, Virginia opossum, coyote, garter snake, and a variety of insects including native bees, butterflies, and moths. Due to the lack of water resources in the EA Project Area and vicinity, waterfowl and shorebirds are not common in the area.⁵⁶⁰

463. There are no MDNR WMAs, Aquatic Management Areas, Sites of Biodiversity Significance, or Scientific and Natural Areas; or USFWS Waterfowl Production Areas within the local vicinity.⁵⁶¹

464. Impacts to wildlife are expected to be minimal. During Project construction, wildlife within the EA Project Area are likely to be temporarily displaced; however, as the current land use within the Blue Route right-of-way is predominately agricultural, and surrounding land use is rural residential and commercial, these species would be impacted by human activity regularly. Because the land control area does not provide important habitat, this should not impact life cycle functions, for example, nesting. Population level impacts are not anticipated. During operations, any potential impacts to wildlife are also expected to be minimal.⁵⁶²

465. The ~~Project~~ Transmission Line will not contribute to significant habitat loss or degradation or create new habitat edge effects.⁵⁶³

466. The introduction of the Transmission Line to the EA Project Area creates the potential for collision or electrocution for birds. Potential impacts can be mitigated in part through design and BMPs. The impact intensity level is expected to be minimal.⁵⁶⁴ Further, Section 5.3.15 of the DRP requires the permittee to coordinate with the MDNR on the placement of avian flight

⁵⁵⁶ Ex. 212 at 90 (EA) and Ex. 108 at 44, 114 (Joint SP/RP Application).

⁵⁵⁷ Ex. 212 at Appendix D, Section 5.3.8 (DRP) (EA) (eDocket No. [20229-189238-15](#)).

⁵⁵⁸ Ex. 212 at 105 (EA).

⁵⁵⁹ Ex. 212 at 105 (EA).

⁵⁶⁰ Ex. 212 at 94 (EA).

⁵⁶¹ Ex. 212 at 96 (EA).

⁵⁶² Ex. 212 at 94 (EA) and Ex. 108 at 119 (Joint SP/RP Application).

⁵⁶³ Ex. 212 at 94 (EA).

⁵⁶⁴ See Ex. 212 at 94-96 (EA).

diverters and also requires the line to be designed using BMPs for conductor spacing and shielding as codified in Avian Power Line Interaction Committee standards.⁵⁶⁵

467. Overall, potential impacts to wildlife and habitat are expected to be minimal for both routing options.⁵⁶⁶

4. Vegetation

468. Impacts on vegetation for the transmission line will primarily be associated with cultivated crop areas. Both the Blue Route and the Red Route are located primarily on agricultural fields.⁵⁶⁷

469. No native prairies or sensitive plant species were identified along the Blue Route during routine field surveys.⁵⁶⁸

470. Construction of the Transmission Line will result in long-term impacts on vegetation by permanently removing vegetation at each structure.⁵⁶⁹

471. Byron Solar will restore areas disturbed by construction in accordance with BMPs and any permit conditions. Disturbed areas will be restored to its original condition to the maximum extent practicable. Portions of permanent vegetation that are disturbed or removed during construction of the Transmission Line will be reestablished to pre-disturbance conditions.⁵⁷⁰ Once construction is complete, Byron Solar will re-establish the right-of-way to pre-construction conditions.⁵⁷¹

472. Because ~~the Blue Route is~~ both routes are situated in predominantly agricultural fields, significant impacts to vegetation during construction is not anticipated and no mitigation is proposed outside of normal erosion control BMPs and standard revegetation practices as outlined in the Project's SWPPP.⁵⁷²

473. The Red Route would require removal of approximately two acres of trees in two areas west of the Dodge/Olmsted County line.⁵⁷³ By contrast, the Blue Route is designed to avoid tree clearing to the greatest extent practicable, and the corridor does not contain significant trees, shrubs, or other vegetation that will be impacted during construction.⁵⁷⁴

474. Vegetation management is necessary for the safe operation of the Transmission Line as tree branches can cause stress on transmission lines and increase the risk of outages, especially in areas with a strong wind resource, which is typical of this area of the state. To the

⁵⁶⁵ Ex. 212 at 96-97 (EA).

⁵⁶⁶ See Ex. 212 at 94 (EA).

⁵⁶⁷ Ex. 108 at 116 (Joint SP/RP Application).

⁵⁶⁸ Ex. 108 at 116 (Joint SP/RP Application).

⁵⁶⁹ See Ex. 108 at 110 (Joint SP/RP Application).

⁵⁷⁰ Ex. 108 at 44 (Joint SP/RP Application).

⁵⁷¹ Ex. 212 at 93 (EA).

⁵⁷² Ex. 108 at 116 (Joint SP/RP Application).

⁵⁷³ Ex. 212 at 93 (EA).

⁵⁷⁴ See Ex. 212 at 88, 93 (EA) and Ex. 108 at 116 (Joint SP/RP Application).

extent possible, Byron Solar will minimize the need for trimming and removal of trees during construction and operation of the Transmission Line. Where trimming of trees is necessary, it will be performed with best practices for tree trimming so as to minimize stress on trees.⁵⁷⁵

475. Sections 5.3.11 and 5.3.12 of the DRP requires a permittee to employ BMPs to avoid the introduction and spread of invasive species and noxious weeds.

5. Soils

476. Impacts to soils from the Transmission Line would be primarily located at and near the location of the transmission structures.⁵⁷⁶ Soil cover along the Transmission Line route will not change significantly, although construction of the Red Route would require more tree removal.⁵⁷⁷

477. During construction of the Transmission Line, soil compaction and localized soil erosion may occur during clearing and grading of work areas. Byron Solar will implement measures to reduce soil compaction and will commit to decompaction of soils during restoration of Project workspaces. Impacts to soils would be temporary and minor and would be mitigated by using BMPs and standard construction practices. Byron Solar will also develop a SWPPP that complies with MPCA rules and guidelines; implementation of the protocols outlined in the SWPPP will minimize the potential for soil erosion during construction.⁵⁷⁸

478. The DRP contains multiple sections addressing minimization measures for impacts to soils. For example, Section 4.3.10 of the DRP requires measures to minimize soil compaction, and Section 5.3.7 of the DRP requires a permittee to implement soil erosion and sediment control practices.

6. Effects on Natural Environment: Comparison of Route Alternatives

479. Both route alternatives are anticipated to have similar impacts with respect to air quality, surface waters, and wildlife.

480. Neither route is anticipated to impact the function of floodplains.⁵⁷⁹

481. The record demonstrates that the Red Route would have potential for greater impacts on geologic and groundwater resources. Due to the Red Route's proximity to identified active karst features, construction of the alternate substation location and transmission structures in the southern-most area of the Red Route has an increased potential for groundwater contamination.⁵⁸⁰ The record demonstrates that Byron Solar has designed the Blue Route to avoid

⁵⁷⁵ Ex. 108 at 94 (Joint SP/RP Application).

⁵⁷⁶ Ex. 212 at 87 (EA) and Ex. 108 at 106 (Joint SP/RP Application).

⁵⁷⁷ See Ex. 212 at 88, 93 (EA).

⁵⁷⁸ Ex. 108 at 110 (Joint SP/RP Application).

⁵⁷⁹ Ex. 212 at 105 (EA).

⁵⁸⁰ Ex. 212 at 83 (EA).

and minimize impacts to geologic and groundwater resources. The Blue Route as proposed by Byron Solar complies with the 150-foot buffer around active karst features.⁵⁸¹

482. The Red Route crosses more wetland areas (4.7 acres), while the Blue Route only crosses approximately 0.7 wetland acres.⁵⁸²

483. The record demonstrates that the Red Route would have greater impacts on vegetation and soils because it would require more tree clearing. By contrast, the Blue Route is designed to avoid tree clearing to the greatest extent practicable, and the corridor does not contain significant trees, shrubs, or other vegetation that will be impacted during construction.⁵⁸³

484. The record demonstrates that the Blue Route is designed to avoid or minimize impacts on the environment and other sensitive resources.

F. Rare and Unique Natural Resources

485. According to the USFWS IPaC, three federally-listed species may occur within or near the Project Area: the federally-threatened NLEB, Leedy's roseroot, and prairie bush-clover.⁵⁸⁴ There are no documented occurrences of NLEB within or near the EA Project Area.⁵⁸⁵ No rare plant or animal communities have been identified within the Project boundary.⁵⁸⁶

486. There are no records of prairie bush clover or the required habitat within the EA Project Area and the probability of species occurrence within the EA Project Area is considered to be low due to the heavy agricultural use.⁵⁸⁷ There are no records of Leedy's roseroot or the required habitat within the EA Project Area and the probability of the species occurring within the EA Project Area is considered low due to the relatively flat topography and heavy agricultural use.⁵⁸⁸

487. According to the MDNR and USFWS, there are no known NLEB hibernacula or roost trees in Dodge or Olmsted counties; however, the NLEB may still occur within or near the Project Area. Activities that might impact this species include, but are not limited to, any disturbance to hibernacula and destruction or degradation of habitat (including tree removal).⁵⁸⁹ Any tree clearing that might be required would be accomplished outside of the NLEB pup-rearing season. Therefore, the Project is not anticipated to impact NLEB.⁵⁹⁰

488. No impacts to any Minnesota state endangered, threatened, or special concern species are anticipated throughout construction or operation of the Transmission Line. Although limited potentially suitable habitat for loggerhead shrike is present within the Project Area, no tree

⁵⁸¹ See Ex. 212 at 83 (EA).

⁵⁸² Ex. 212 at 91 (EA).

⁵⁸³ See Ex. 212 at 88, 93 (EA) and Ex. 108 at 116 (Joint SP/RP Application).

⁵⁸⁴ Ex. 108 at 120 (Joint SP/RP Application).

⁵⁸⁵ Ex. 212 at 98 (EA).

⁵⁸⁶ Ex. 212 at 97 (EA).

⁵⁸⁷ Ex. 212 at 98 (EA).

⁵⁸⁸ Ex. 212 at 98 (EA).

⁵⁸⁹ Ex. 108 at 121-122 (Joint SP/RP Application) and Ex. 212 at 97-98 (EA).

⁵⁹⁰ Ex. 108 at 121-122 (Joint SP/RP Application) and Ex. 212 at 97-98 (EA).

clearing is proposed; if any is required, it will take place outside of the breeding season to avoid any potential take.⁵⁹¹

489. The Blue Route is designed to avoid tree clearing to the greatest extent practicable, and the corridor does not contain significant trees, shrubs, or other vegetation that will be impacted during construction.⁵⁹² By contrast, the Red Route would require removal of approximately two acres of trees in two areas west of the Dodge/Olmsted County line.⁵⁹³

490. Potential impacts to rare and unique natural resources are anticipated to be minimal. Further, the DRP includes special conditions that adequately address the NLEB and the loggerhead shrike.⁵⁹⁴

491. *Comparison of Alternatives.* Potential impacts to rare and unique natural resources are anticipated to be minimal for both routing options, but the Red Route would require more tree clearing.

G. Application of Various Design Considerations

492. Minnesota's high voltage transmission line routing factors require consideration of the Transmission Line's applied design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of the transmission system in the area.⁵⁹⁵

493. The Transmission Line is designed to meet Project needs. The Solar Facility will generate up to 200 MW of renewable energy, and the 345 kV Transmission Line is the appropriate voltage to meet Project needs by reducing line losses and interconnecting at the voltage of the POI. The Applicant does not anticipate the need to connect the Project substation at a higher voltage than 345 kV within the foreseeable future and is, therefore, not proposing to build the line to accommodate greater voltage or transfer capacity than proposed.⁵⁹⁶

494. Constructing the Transmission Line on the Blue Route, as compared to the Red Route, would maximize energy efficiencies and minimize adverse environmental effects. The longer length of the Red Route (4.5 miles long as compared to the Blue Route's three-mile length) and the over three miles of additional collection line length required for the associated alternative substation location would result in higher electrical losses as well as greater environmental and human impacts.⁵⁹⁷

⁵⁹¹ Ex. 108 at 125 (Joint SP/RP Application).

⁵⁹² See Ex. 212 at 88, 93 (EA) and Ex. 108 at 116 (Joint SP/RP Application).

⁵⁹³ Ex. 212 at 93 (EA).

⁵⁹⁴ See Ex. 212 at 97, 100 (EA).

⁵⁹⁵ Minn. Stat. § 216E.03, subd. 7(a)-(b); Minn. R. 7850.4100, subp. 2(G).

⁵⁹⁶ Ex. 108 at 26 (Joint SP/RP Application).

⁵⁹⁷ See Ex. 212 at 4, 16, 32 and Appendix E (Responses to Data Requests) (EA) and Ex. 115 (Reply Comments).

H. Use or Paralleling of Existing Rights-of-Way

495. Minnesota's high voltage transmission line routing factors require consideration of use of or paralleling of existing transmission routes, transmission or highway rights-of-way, survey lines, natural division lines, and agricultural field boundaries.⁵⁹⁸ ~~Neither route uses existing transmission or highway rights-of-way, although both routes parallel existing transmission rights-of-way for portions of their length.~~

496. To minimize impacts on the environment and affected landowners, Byron Solar looked for routing opportunities that will parallel existing rights-of-way along transmission and railroad rights-of-way and field lines. In developing the Blue Route, Byron Solar undertook to analyze a number of human and environmental factors to identify a route that best meets the Commission's routing criteria, including following existing rights-of-way for approximately ~~35~~ 42 percent of its length.⁵⁹⁹ Of the Blue Route's approximately 2.8-mile length, approximately ~~one~~ 1.25 miles will parallel existing transmission and railroad rights-of-way, with the remaining portions of the route following field lines. This paralleling reduces the overall width of the easement required from the private landowners.⁶⁰⁰

497. The Red Route parallels, but does not use, existing transmission right-of-way for approximately ~~two-thirds~~ 3.25 miles, or 72 percent of its length.⁶⁰¹

I. Electrical System Reliability

498. Minnesota's high voltage transmission line routing factors require consideration of the Transmission Line's impact on electrical system reliability.⁶⁰²

499. The NESC are mandatory standards when constructing new facilities or upgrading existing facilities. NESC ensures that the collection system, the transmission lines, and all the associated structures are built from high-quality materials that will withstand the operational stresses placed upon them over the expected lifespan of the equipment, provided routine maintenance is performed. NESC standards require certain clearances between transmission line facilities and buildings for safe operation of the transmission line.⁶⁰³

500. The Transmission Line will be designed and constructed in accordance with applicable reliability standards.⁶⁰⁴

⁵⁹⁸ Minn. Stat. § 216E.03, subd. 7(b)(~~8~~-9), subd. 7(e); Minn. R. 7850.4100, subp. H, J.

⁵⁹⁹ See Ex. 212 at 26, 29 (EA).

⁶⁰⁰ Ex. 212 at 29 (EA).

⁶⁰¹ Ex. 212 at 16 (EA).

⁶⁰² Minn. Stat. § 216E.03, subd. 7(b)(10); Minn. R. 7850.4100, subp. K.

⁶⁰³ See Ex. 108 at 30, 57 (Joint SP/RP Application).

⁶⁰⁴ Ex. 212 at 27-28 (EA); Ex. 108 at 30 (Joint SP/RP Application).

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

501. Minnesota's high voltage transmission line routing factors require consideration of the Project's cost of construction, operation, and maintenance.⁶⁰⁵

502. The total estimated cost of the Transmission Line along the Blue Route is approximately \$3.2 million. Final costs will depend on a variety of factors, including the approved route, costs of materials, and labor.⁶⁰⁶

503. The total estimated cost of the Transmission Line along the Red Route would be approximately \$6.1 million.⁶⁰⁷

504. The anticipated annual operating and maintenance costs for the Transmission Line is approximately \$9,000 per year.⁶⁰⁸

K. Adverse Human and Natural Environmental Effects That Cannot be Avoided

505. Minnesota's power plant siting and high voltage transmission line routing factors require consideration of the adverse human and natural environmental effects that cannot be avoided.⁶⁰⁹ Transmission lines are infrastructure projects that have unavoidable adverse human and environmental impacts. Even with mitigation strategies, certain impacts cannot be avoided.⁶¹⁰

506. Unavoidable adverse impacts include the physical impacts to the land due to construction of the Project. However, as detailed in the Applications and the EA, Byron Solar will employ avoidance, minimization, and mitigation measures to limit Project impacts. The record demonstrates that the Blue Route has been sited to minimize adverse human and environmental impacts.

L. Irreversible and Irretrievable Commitments of Resources

507. Minnesota's power plant siting and high voltage transmission line routing factors require consideration of the irreversible and irretrievable commitments of resources that are necessary for the Project.⁶¹¹

508. Irreversible and irretrievable resource commitments are primarily related to construction, including the use of water, steel, and concrete and other consumable resources.⁶¹²

509. The Project will require only minimal commitments of resources that are irreversible and irretrievable. Resource commitments are irreversible when it is impossible or very difficult to redirect that resource to a different future use; an irretrievable commitment of resources

⁶⁰⁵ Minn. R. 7850.4100, subp. L.

⁶⁰⁶ Ex. 108 at 15-16 (Joint SP/RP Application); Ex. 212 at 32 (EA).

⁶⁰⁷ Ex. 212 at 32 (EA).

⁶⁰⁸ Ex. 108 at 15-16 (Joint SP/RP Application).

⁶⁰⁹ Minn. Stat. § 216E.03, subd. 7(b)(~~5~~)-(6); Minn. R. 7850.4100, subp. M.

⁶¹⁰ Ex. 212 at 102 (EA).

⁶¹¹ Minn. Stat. § 216E.03, subd. 7(b)(11); Minn. R. 7850.4100, subp. N.

⁶¹² Ex. 212 at 102-103 (EA).

means the resource is not recoverable for later use by future generations. Irreversible and irretrievable resource commitments are primarily related to construction, including the use of water, aggregate, hydrocarbons, steel, concrete, wood, and other consumable resources. The commitment of labor and fiscal resources to develop, construct, and operate the Transmission Line is considered irretrievable.⁶¹³

510. Irreversible and irretrievable commitments are anticipated to occur for both routes and not to vary significantly among alternatives.

M. Summary of Factors Analysis

511. As set forth in the EA, effects on displacement, noise, cultural values, public service and infrastructure, public health and safety, land-based economies, air quality, and rare and unique natural resources are anticipated to be similar across route alternatives. However, for some resources, the Red Route (and associated alternative substation location) will result in greater impacts without providing any specific benefits as compared to the Blue Route (and associated substation location).

512. The Blue Route best meets the Commission's routing criteria and results in less impacts. The Blue Route follows existing rights-of-way for approximately ~~35~~ 42 percent of its length, which reduces the overall width of the easement required from the private landowners.⁶¹⁴ The Blue Route is also designed to avoid or minimize impacts on residences, the environment, and other sensitive resources. The Blue Route would require construction of less infrastructure, resulting in less environmental and human impacts – namely, the Blue Route would be approximately three miles long (as compared to the Red Route's approximately 4.5-mile length), and the substation location associated with the Blue Route would require less miles of collection lines than the substation location associated with the Red Route.⁶¹⁵ The Blue Route would also require less tree clearing than the Red Route.⁶¹⁶ The Blue Route crosses fewer wetland acres (0.7 acres) than the Red Route (4.7 acres).⁶¹⁷ The Red Route would result in increased geologic and groundwater impacts. Due to the Red Route's proximity to identified active karst features, construction of the alternate substation location and transmission structures in the southern-most area of the Red Route has an increased potential for groundwater contamination.⁶¹⁸ Additionally, the Red Route is located closer to the nearest residence (250 feet).⁶¹⁹ Further, the Blue Route takes into consideration comments and requests from individual landowners. The Blue Route was voluntarily negotiated with landowners, and Byron Solar has secured 100 percent of the total necessary private easements from landowners for the 52.7 acres of right-of-way required for the Blue Route. By contrast, Byron Solar does not have land rights to construct the Red Route, and it is not guaranteed that Byron Solar would be able to secure the additional leases. Byron Solar states that, based on conversations with landowners along the Red Route, it seems unlikely that

⁶¹³ Ex. 212 at 102-103 (EA).

⁶¹⁴ Ex. 212 at 26, 29 (EA).

⁶¹⁵ See Ex. 212 at 4 and Appendix E (Responses to Data Requests) (EA).

⁶¹⁶ See Ex. 212 at 88, 93 (EA) and Ex. 108 at 116 (Joint SP/RP Application).

⁶¹⁷ Ex. 212 at 91 (EA).

⁶¹⁸ Ex. 212 at 83 (EA).

⁶¹⁹ Ex. 212 at 48 (EA).

Byron Solar could obtain the necessary land rights to construct along the Red Route.⁶²⁰ The increased length of the Red Route and additional collection lines required for the associated alternative substation location would result in higher electrical losses and additional capital costs, with no corresponding benefit associated with that increased electrical loss and cost.⁶²¹

513. Based on a consideration of all routing factors, Byron Solar’s proposed Blue Route is the best route for the Transmission Line.

VI. ROUTE PERMIT CONDITIONS

514. The DRP includes proposed permit conditions that apply to right-of-way preparation, construction, clean-up, restoration, operation, maintenance, abandonment, decommission, and other aspects of the Transmission Line. Many of the conditions contained in the DRP were established as part of the route permit proceedings of other transmission lines permitted by the Commission.

515. On November 29, 2022, EERA staff submitted comments with markups showing changes to the sample route permit reflected in the DRP that was filed with the EA. Most of EERA staff’s changes discussed in its comments and shown on Attachment B (DRP Markup) to its comments were already incorporated into the DRP filed with the EA. EERA staff also proposed an additional amendment to the DRP that was not otherwise reflected in the EA.⁶²²

516. Section 5.3.6 of the DRP requires in part that the permittee consider input pertaining to visual impacts from landowners and land management agencies. Byron Solar and EERA staff agreed that the term “land management agencies” is vague and should be deleted from the condition. In its November 29, 2022 comments, EERA staff proposed additional revisions which still require the permittee to consider input on visual impacts from local jurisdictions but provide more clarity as to the local authority to be consulted, which Byron Solar has no objection to.⁶²³ The proposed changes to Section 5.3.6 are stated in EERA staff’s comments but are not shown on Attachment B (DRP Markup) to the comments. EERA staff’s proposed changes to Section 5.3.6 are as follows:

Section 5.3.6 (Aesthetics)

The Permittee shall consider input pertaining to visual impacts from landowners ~~and land management agencies~~ and the local unit of government having direct zoning authority over the area in which the Project is located prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural

⁶²⁰ Byron Solar Comments and Table 1 (November 29, 2022) (eDocket No. [202211-190965-02](#)).

⁶²¹ See Ex. 212 at 4, 16, 32 and Appendix E (Responses to Data Requests) (EA) and Ex. 115 (Reply Comments).

⁶²² EERA Staff Comments and Attachments A (DSP Markup) and B (DRP Markup) (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)).

⁶²³ See EERA Staff Comments (November 29, 2022) (eDocket Nos. [202211-190960-02](#), [202211-190960-05](#), [202211-190960-08](#)) and Byron Solar Reply Comments and Attachments (December 9, 2022) (eDocket No. _____).

surroundings in the vicinity of the Project during construction and maintenance. The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads. Structures shall be placed at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highways, or trail crossings.

517. In its November 23, 2022 comments, the MDNR stated it supports the following conditions as written in the DRP: Section 5.3.15 (Avian Protection), Section 6.4 (Wildlife-Friendly Erosion Control) and Section 6.6 (Loggerhead Shrike).⁶²⁴

518. Any of the foregoing Findings more properly designated Conclusions of Law are hereby adopted as such.

NOTICE

519. Minnesota statutes and rules require Byron Solar to provide certain notice to the public and local governments before and during the certificate of need, site permit, and route permit process.⁶²⁵ Byron Solar provided notice to the public and local governments in satisfaction of Minnesota statutory and rule requirements.

520. Minnesota statutes and rules also require the EERA and the Commission to provide certain notice to the public throughout the site and route permit processes.⁶²⁶ The EERA and the Commission provided the notice in satisfaction of Minnesota statutes and rules.

ENVIRONMENTAL ASSESSMENT

521. When more than one application is pending before the Commission related to a facility, the environmental assessments required for each application may be combined.⁶²⁷ For the Solar Facility and Transmission Line, the EERA elected to prepare a combined EA.

522. The EA process is the alternative environmental review approved by the Environmental Quality Board for large electric power generating plants and high voltage transmission lines. The Commission is required to determine the completeness of the EA. An EA is complete if it and the record address the issues and alternatives identified in the Scoping Decision.⁶²⁸

523. 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 and alternatives raised in the Scoping Decision.

⁶²⁴ MDNR Comments at 2 (November 23, 2022) (eDocket No. [202211-190858-01](#)).

⁶²⁵ Minn. Stat. § 216E.03, subps. 3a, 4; Minn. R. 7850.3300; Minn. R. 7850.2100, subps. 2, 4.

⁶²⁶ Minn. Stat. § 216E.03, subd. 6; Minn. R. 7850.2300, subp. 2; Minn. R. 7850.3500; Minn. R. 7850.3700, subps. 2, 3, and 6.

⁶²⁷ Minn. R. 7849.1900, subp. 1; Minn. R. 7850.3700.

⁶²⁸ Minn. R. 4410.4400, subp. 6; Minn. R. 7850.3900, subp. 2.

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

CONCLUSIONS OF LAW

1. Any of the forgoing Findings of Fact more properly designated as Conclusions of Law are hereby adopted as such.
2. The Commission and the Administrative Law Judge have jurisdiction over the Certificate of Need, Site Permit, and Route Permit applied for by Byron Solar for the proposed up to 200 MW Solar Facility and 345 kV Transmission Line pursuant to Minn. Stat. §§ 216B.2421, 216E.02, and 216E.03.
3. The Commission and the Administrative Law Judge have jurisdiction over the Applications submitted by Byron Solar.
4. The Commission accepted the Applications as substantially complete on November 17, 2021.⁶²⁹
5. Byron Solar, the Commission, and the EERA provided all notices required under Minnesota States and Rules for the Applications and the Certificate of Need, Route Permit, and Site Permit proceedings. All procedural requirements for the Applications were met.
6. Byron Solar, the Commission, and the EERA have substantially complied with the procedural requirements of Minn. Stat. Ch. 216B, Minn. Stat. Ch. 216E, and Minn. R. Ch. 7829, 7849, and 7850.
7. The EERA has conducted an appropriate environmental analysis of the Project for purposes of the Certificate of Need, Site Permit, and Route Permit proceedings pursuant to Minn. R. 7849.1200 and 7850.3700 and the EA satisfies Minn. R. 7850.3700 and 7850.3900.
8. Public hearings were held on November 9, 2022 (in-person) and November 10, 2022 (remote-access). Proper notice of the public hearings was provided, and the public was given an opportunity to speak at the hearings and to submit written comments.
9. The record in this proceeding demonstrates that Byron Solar has satisfied the criteria for: a certificate of need set forth in Minn. Stat. § 216B.243 and Minn. R. 7849.0120; a LEPPG site permit set forth in Minn. Stat. § 216E.04, subd. 8 (referencing Minn. Stat. § 216E.03, subd. 7) and Minn. R. Ch. 7850; a route permit as set forth in Minn. Stat. § 216E.04, subd. 8 (referencing Minn. Stat. § 216E.03, subd. 7) and Minn. R. Ch. 7850; and all other applicable legal requirements.
10. No party or person has demonstrated by a preponderance of the evidence that there is a more reasonable and prudent alternative to address those needs met by the Project.

⁶²⁹ Ex. 302 (Order Accepting Applications, Setting Review Procedures, Authorizing Task Force, And Granting Variances).

11. No conditions on the Certificate of Need are necessary.
12. The record in this proceeding demonstrates that there is no feasible or prudent alternative to the Project under Minn. R. part 7850.4400, subp. 4.
13. The Commission has the authority under Minn. Stat. § 216E.03 to place conditions in a LEPGP site permit.
14. The DSP contains a number of important mitigation measures and other reasonable conditions.
- ~~15. It is reasonable to amend the DSP to include the changes to Section 2.2 of the DSP regarding Project ownership as proposed by Byron Solar.~~
- ~~16. It is reasonable to amend the DSP to include the changes to Section 4.3.8 of the DSP regarding visual impacts as proposed by Byron Solar.~~
17. It is reasonable to amend the DSP to include the changes to Section 4.3.10 of the DSP regarding soil compaction as proposed by Byron Solar.
18. It is reasonable to amend the DSP to include the changes to Section 4.3.16 of the DSP regarding beneficial habitat as proposed by Byron Solar and EERA.
- ~~19. It is reasonable to amend the DSP to include the changes to Section 4.3.31 of the DSP regarding security fencing as proposed by Byron Solar.~~
20. It is reasonable to amend the DSP to include the changes to Section 4.4 of the DSP regarding feeder lines as proposed by Byron Solar.
21. It is reasonable to amend the DSP to include the changes to Section 8.3 of the DSP regarding the site plan as proposed by ~~Byron Solar~~ EERA.
22. It is reasonable to amend the DSP to include the changes to Section 8.4 of the DSP regarding status reports as proposed by Byron Solar and EERA.
23. It is reasonable to amend the DSP to include the changes to Section 9.2 of the DSP regarding final site restoration as proposed by Byron Solar.
24. It is reasonable to amend the DSP to include the special permit condition Section 5.5 of the DSP as proposed by ~~Byron Solar~~ EERA.
25. It is reasonable to amend the DSP to include the special permit condition Section 5.6 regarding the snowmobile trail as recommended by the MDNR and proposed by Byron Solar.
26. It is reasonable to amend the DSP to include the special permit condition Section 5.7 regarding lighting at the O&M facility and Project substation as recommended by the MDNR and proposed by Byron Solar.

27. It is reasonable to amend the DSP to include the special permit condition Section 5.8 regarding the use of chemicals for dust control as recommended by the MDNR and proposed by Byron Solar.

28. The Solar Facility, with the permit conditions discussed above, satisfies the site permit criteria for an LEPGP in Minn. Stat. § 216E.03 and meets all other applicable legal requirements.

29. The Commission has the authority under Minn. Stat. § 216E.03 to place conditions in a route permit.

30. The DRP contains a number of important mitigation measures and other reasonable conditions.

31. It is reasonable to amend the DRP to include the changes to Section 5.3.6 of the DRP regarding visual impacts as proposed by EERA staff and Byron Solar.

32. The ~~Red-Blue~~ Route, with the permit conditions discussed above, satisfies the route permit criteria in Minn. Stat. § 216E.03 and meets all other applicable legal requirements.

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

34. Any of the foregoing Conclusions of Law which are more properly designated Findings of Fact are hereby adopted as such.

RECOMMENDATIONS

Based on these Findings of Fact and Conclusions of Law, the Administrative Law Judge recommends that the Commission issue a Certificate of Need, Site Permit, and Route Permit to Byron Solar, LLC to construct and operate the Project and associated facilities in Dodge and Olmsted Counties, with the conditions identified above.

THIS REPORT IS NOT AN ORDER AND NO AUTHORITY IS GRANTED HEREIN. THE MINNESOTA PUBLIC UTILITIES COMMISSION WILL ISSUE THE ORDER THAT MAY ADOPT OR DIFFER FROM THE PRECEDING RECOMMENDATION.

Dated on _____

Barbara J. Case
Administrative Law Judge