

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

In the Matter of the Application of Hayward  
Solar LLC for a Site Permit for the up to  
150 MW Hayward Solar Project in  
Freeborn County

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

This matter was assigned to Administrative Law Judge Jim Mortenson to conduct a public hearing on the Certificate of Need (MPUC Docket No. CN-21-112) and Site Permit (MPUC Docket No. GS-21-113) Applications of Hayward Solar LLC (Hayward Solar or Applicant) for an up to 150 megawatt (MW) solar energy generating system and associated facilities in Freeborn County, Minnesota (the Project). The Minnesota Public Utilities Commission (MPUC or Commission) also requested that the Judge prepare findings of fact, conclusions of law and recommendation of a preferred site and permit conditions.

Jeremy P. Duehr and Bridget A. Duffus, Fredrikson & Byron, P.A., 200 South Sixth Street, Suite 4000, Minneapolis, Minnesota 55402, and Michael Roth, Director of Strategic Development and Acquisitions and Joseph Finocchiaro, Director of Environmental Programs, Tenaska, Inc. (Tenaska), 14302 FNB Parkway, Omaha, Nebraska, 688145, appeared on behalf of Hayward Solar.

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

Ray Kirsch, 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).

Judge Mortenson held joint public hearings on the Site Permit and Certificate of Need Applications on March 28, 2022 (remote-access - telephone and internet) and March 29, 2022 (in-person). The factual record remained open until April 15, 2022, for the receipt of written public comments.

## STATEMENT OF ISSUES

Has Hayward Solar satisfied the criteria set forth in Chapter 216E of the Minnesota Statutes and Chapters 7849 and 7850 of the Minnesota Rules for a Certificate of Need and Site Permit, respectively, for the proposed Project?

## SUMMARY OF RECOMMENDATIONS

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

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

## FINDINGS OF FACT

### I. APPLICANT

1. Hayward Solar LLC is a wholly owned indirect subsidiary of CD Clean Energy and Infrastructure VII JV, LLC (CD Fund VII), a clean energy infrastructure fund.<sup>1</sup> Hayward Solar is a Delaware limited liability company registered with the Minnesota Secretary of State.

2. Arevon Energy Management (Arevon) is an affiliate of CD Fund VII with the mandate to oversee the development and energy products marketing while Arevon Asset Management is another affiliate of CD Fund VII that oversees financial and operational asset management; both are focused on providing highly specialized services to ensure portfolio growth.<sup>2</sup>

3. Tenaska, Inc. (Tenaska) is an energy development company with headquarters in Omaha, Nebraska. Tenaska is providing development services to Arevon for the Project.<sup>3</sup> Tenaska is one of the leading independent power producers in the United States and has developed approximately 10,000 MW of natural gas-fueled and renewable power generation with its affiliates. Tenaska, alongside Arevon, will oversee the Project. Tenaska most recently completed construction and commenced operation of the Nobles 2 Wind Project in Nobles County, Minnesota.<sup>4</sup>

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<sup>1</sup> Exhibit (Ex.) HS-107 at 3 (Application for a Site Permit (Corrected)).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.* at 3-4

<sup>4</sup> *Id.*

## II. SITE PERMIT AND CERTIFICATE OF NEED APPLICATIONS AND RELATED PROCEDURAL BACKGROUND

4. On February 5, 2021, Hayward Solar filed a Request for Exemption from Certain Certificate of Need Application Content Requirements with the Commission, requesting exemptions from certain Certificate of Need data requirements.<sup>5</sup>

5. On February 18, 2021, the Department of Commerce, Division of Energy Resources (DER) filed comments recommending that the Commission approve the data exemption requests, with modifications.<sup>6</sup>

6. On March 5, 2021, the Commission issued a Notice of Commission Meeting scheduling a meeting for March 18, 2021, to consider whether to grant Hayward Solar's data exemption requests.<sup>7</sup> The Commission met on March 18, 2021, and discussed Hayward Solar's request.<sup>8</sup>

7. On March 24, 2021, the Commission issued an Order approving Hayward Solar's data exemption requests with the modifications as provided in DER's February 18, 2021 comments.<sup>9</sup>

8. On April 13, 2021, Hayward Solar filed a Notice of Intent to Submit a Site Permit Application under the alternative permitting procedures of Minn. R. 7850.2800 to 7850.3900.<sup>10</sup>

9. On May 5, 2021, Hayward Solar filed a Certificate of Need Application (CN Application) for the Project with the Commission.<sup>11</sup> On May 6, 2021, Hayward Solar filed corrected figures for the CN Application.<sup>12</sup>

10. On May 5 and 6, 2021, Hayward Solar filed an Application for a Site Permit (SP Application) for the Project with the Commission.<sup>13</sup>

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<sup>5</sup> Ex. HS-100 (Request for Exemption from Certain Certificate of Need Application Content Requirements).

<sup>6</sup> DER Comments (February 18, 2021) (eDocket No. [20212-171093-01](#)).

<sup>7</sup> Notice Of Commission Meeting--March 18, 2021, Agenda (March 5, 2021) (eDocket No. [20213-171592-01](#)).

<sup>8</sup> See [meeting details](#).

<sup>9</sup> Order (March 24, 2021) (eDocket No. [20213-172146-01](#)).

<sup>10</sup> Ex. HS-101 (Notice of Intent to Submit a Site Permit Application under the Alternative Permitting Process). See also eDocket No. [20214-172854-01](#).

<sup>11</sup> Exs. HS-102 through HS-106 (CN Application, Appendices, and Figures).

<sup>12</sup> Ex. HS-103 (CN Application Figures (Corrected)); see also Hayward Solar Filing Letter Replacing CN Application Figures (May 6, 2021) (eDocket No. [20215-173941-01](#)).

<sup>13</sup> Exs. HS-107 through HS-120 (SP Application, Appendices, and Figures).

11. On May 7, 2021, the Commission filed a Notice of Comment Period on the SP Application and CN Application Completeness announcing it would accept written comments through March 28, 2021, and reply comments through June 11, 2021.<sup>14</sup>

12. On May 12, 2021, Hayward Solar filed the initial payment for the CN Application.<sup>15</sup>

13. On May 19, 2021, Hayward Solar filed confirmation that it had notified those persons on the Commission's general service list that Hayward Solar filed the CN Application and SP Application.<sup>16</sup> Hayward Solar also notified landowners and local government officials that Hayward Solar filed the CN Application and SP Application.<sup>17</sup>

14. Also on May 19, 2021, notice of Hayward Solar filing its CN Application and SP Application was published in the *Albert Lea Tribune*.<sup>18</sup>

15. On May 27, 2021, the EERA filed comments and recommendations on the completeness of the SP Application, recommending that the Commission: accept the SP Application as substantially complete and require Hayward Solar to amend its decommissioning plan to include a method and schedule for updating decommissioning costs and file its amended plan prior to the public hearing for the Project; not appoint an advisory task force; process the SP Application and CN Application jointly, including environmental review; and request a full Judge report with recommendations.<sup>19</sup>

16. On May 28, 2021, DER filed written comments recommending that the Commission find the CN Application to be substantially complete and that the Commission review the application using the Commission's informal comment process. DER accurately listed the rules the PUC exempted the Applicant from and those with which the Petition addressed.<sup>20</sup>

17. On June 11, 2021, Hayward Solar filed Reply Comments on the SP Application to address EERA's comments.<sup>21</sup>

18. Also, on June 11, 2021, Hayward Solar filed Reply Comments on the CN Application to address DER's comments.<sup>22</sup>

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<sup>14</sup> Notice Of Comment Period--On Application Completeness (May 7, 2021) (eDocket Nos. [20215-173985-01](#) (SP), [20215-173985-02](#) (CN)).

<sup>15</sup> Initial Payment (May 12, 2021) (eDocket No. [20215-174101-02](#)).

<sup>16</sup> Ex. HS-121 (Notice of Filing CN and SP Applications) (eDocket No. [20215-174298-01](#)).

<sup>17</sup> Hayward Solar Compliance Filing – Notice, Attachments B and C (April 22, 2022) (eDocket No. [20224-185038-02](#)).

<sup>18</sup> Hayward Solar Compliance Filing – Notice, Attachment D (April 22, 2022) (eDocket No. [20224-185038-02](#)).

<sup>19</sup> EERA Comments on Application Completeness (May 27, 2021) (eDocket No. [20215-174542-01](#)).

<sup>20</sup> DER Comments (May 28, 2021) (eDocket No. [20215-174602-01](#)).

<sup>21</sup> Ex. HS-123 (SP Reply Comments re Application Completeness).

<sup>22</sup> Ex. HS-122 (CN Reply Comments re Application Completeness).

19. On June 15, 2021, EERA filed additional comments and recommendations on the completeness of the SP Application, agreeing with Hayward Solar that: the SP Application is substantially complete with the understanding that Hayward Solar will submit an amended decommissioning plan prior to the public hearing; an advisory task force is not warranted; the SP Application and CN Application are appropriately processed jointly; there are no contested issues of fact; preparation of a full report with recommendations is appropriate; and a schedule consistent with the draft schedule provided in EERA's initial comments and recommendations is appropriate.<sup>23</sup>

20. On June 29, 2021, the Commission issued an Order which: accepted the SP Application as substantially complete with the understanding that Hayward Solar will submit an amended decommissioning plan prior to the public hearing; found that an advisory task force is not warranted; determined that the SP Application is appropriately processed jointly with the CN Application; determined there are no contested issues of fact; determined that preparation of a full report with recommendations is appropriate; and determined that a schedule consistent with the draft schedule provided in EERA's initial comments and recommendations is appropriate.<sup>24</sup>

21. Also, on June 29, 2021, the Commission issued an Order which accepted the CN Application as substantially complete and authorized review of the CN application using the Commission's informal comment process.<sup>25</sup>

22. On July 15, 2021, the Commission issued a Notice of Public Information and Environmental Assessment Scoping Meetings scheduling meetings on August 11, 2021 (in-person) and on August 12, 2021 (remote-access) and announcing that written comments would be accepted through August 26, 2021.<sup>26</sup> The Notice requested comments on issues and facts that should be considered in the development of the environmental assessment. The Notice of Public Information and Environmental Assessment Scoping Meetings was mailed to landowners and local units of government located within and adjacent to the Project.<sup>27</sup>

23. On August 6, the Judge issued a Scheduling Order scheduling a prehearing conference on September 29, 2021.<sup>28</sup>

24. On August 11 and 12, 2021, the Commission and EERA held public information and environmental assessment scoping meetings in-person and via remote

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<sup>23</sup> Ex. EERA-1 (Comments and Recommendations Regarding Application Completeness).

<sup>24</sup> Order (June 29, 2021) (eDocket No. [20216-175529-01](#)).

<sup>25</sup> Order (June 29, 2021) (eDocket No. [20216-175528-01](#)).

<sup>26</sup> Notice of Public Information and Environmental Assessment Scoping Meetings (eDocket No. [20217-176171-02](#)).

<sup>27</sup> Ex. EERA-2 (Notice of Public Information and Environmental Assessment Scoping Meetings).

<sup>28</sup> OAH Scheduling Order - Prehearing Conference (August 6, 2021) (eDocket No. [20218-176904-02](#)).

means, respectively, to provide the public with information about the Project and to solicit comments on the scope of the environmental assessment.<sup>29</sup>

25. During the comment period ending August 26, 2021, the Minnesota Department of Natural Resources (DNR) filed written comments.<sup>30</sup> DNR's comments addressed site suitability, soil limitations, erosion control netting, fencing, and the vegetation management plan.

26. On August 26, 2021, the International Union of Operating Engineers Local 49 (IUOE Local 49) submitted a comment.<sup>31</sup> The IUOE's comments recognized with appreciation Hayward Solar's stated priority to use local labor, that local labor at legacy facilities has historically been unionized, and that this project will further Minnesota's goals of increasing renewable energy output with the potential to support the regional economy.

27. The Minnesota Department of Transportation (MnDOT) submitted a timely comment.<sup>32</sup> MnDOT's comment addressed right of way access to I-90, that Hayward Solar should coordinate with MnDOT and that conversations with Hayward Solar have occurred consistent with the submitted comment.

28. On August 30, 2021, EERA filed additional written comments from the Minnesota Pollution Control Agency (MPCA).<sup>33</sup> The MPCA comments provide information and reminders of its jurisdiction and potential jurisdiction over aspects of the project. For example, surface water, noise and stormwater ponds installed at the site are elements that do or might fall under MPCA jurisdiction.

29. On August 30, 2021, EERA filed additional written comments from Freeborn County which had filed a written comment offering its "full county support for the project aspects."<sup>34</sup> Specifically, the County's support is based on the environmental and economic benefits the project is anticipated to provide.

30. On August 30, 2021, EERA filed additional written comments from four members of the public filed written comments.<sup>35</sup> The four members of the public shared in their support of the project. Specifically, the support comes from year-round vegetation

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<sup>29</sup> See *generally* August 11, 2021, Public Information and Environmental Assessment Scoping Meetings Transcript and August 12, 2021, Public Information and Environmental Assessment Scoping Meetings Transcript; see *also* Ex. EERA-3 (Oral Public Comments on Scope of Environmental Assessment); Handout - Commission--Public Meeting Presentation (August 12, 2021) (eDocket No. [20218-177083-01](#)); Handout - Commission--Public Meeting Handout (August 13, 2021) (eDocket No. [20218-177097-01](#)).

<sup>30</sup> See DNR Comments (August 18, 2021) (eDocket No. [20218-177247-01](#)).

<sup>31</sup> IUOE Local 49 Comments (August 26, 2021) (eDocket No. [20218-177483-01](#)).

<sup>32</sup> MnDOT Comments (August 26, 2021) (eDocket No. [20218-177461-01](#)).

<sup>33</sup> Ex. EERA-4 (Written Public Comments on Scope of Environmental Assessment) (eDocket No. [20218-177535-03](#)).

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*



to protect the soil and create habitats for pollinators and other wildlife, job opportunities, tax revenue, and the lack of risk to human health.

31. On September 28, 2021, the Judge filed a Continuance Order continuing the prehearing conference until October 20, 2021.<sup>36</sup>

32. On October 15, 2021, Hayward Solar filed a CN Application and SP Application Amendment (Application Amendment) and amended figures.<sup>37</sup>

33. The Judge convened the prehearing conference on October 20, 2021, and on October 22, 2021, issued the Second Scheduling Order.<sup>38</sup>

34. On October 26, 2021, EERA filed comments and recommendations on the scoping process and the environmental assessment that will be prepared for the Project, and Hayward Solar's Application Amendment. No alternative sites were proposed during the scoping public comment period. EERA recommended that no alternative sites be studied in the environmental assessment and to study the proposed site as amended.<sup>39</sup>

35. On November 5, 2021, the Commission issued a Notice of Commission Meeting scheduling a meeting for November 18, 2021, to address what action the Commission should take regarding site or system alternatives to be evaluated in the environmental assessment.<sup>40</sup> No action was taken at the November 18, 2021 meeting.<sup>41</sup>

36. On November 30, 2021, EERA issued the Environmental Assessment Scoping Decision (EA Scoping Decision) and Notice of the EA Scoping Decision,<sup>42</sup> which set forth the matters proposed to be addressed in the environmental assessment and identified certain issues outside the scope of the environmental assessment.<sup>43</sup> No site or system alternatives were recommended for study. Accordingly, no other project sites will be addressed. The EA will analyze the availability and feasibility of system alternatives.<sup>44</sup>

37. On January 3, 2022, the Commission filed a Sample Site Permit.<sup>45</sup>

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<sup>36</sup> OAH Continuance Order (September 28, 2021) (eDocket No. [20219-178306-01](#)).

<sup>37</sup> Ex. HS-124 (Cover Letter re CN and SP Application Amendment), Ex. HS-125 (CN and SP Application Amendment) and HS-126 (CN and SP Application Amendment – Amended Figures 1-16 and New 3A).

<sup>38</sup> OAH Second Scheduling Order (October 22, 2021) (eDocket No. [202110-179042-02](#)).

<sup>39</sup> Ex. EERA-6 (Comments and Recommendations on Scoping Process and Hayward Solar's CN and Site Permit Amendment).

<sup>40</sup> Notice Of Commission Meeting--November 18, 2021, Agenda Meeting (November 5, 2021) (eDocket No. [202111-179532-04](#)).

<sup>41</sup> November 18, 2021, Commission Meeting Minutes (December 1, 2021) (eDocket No. [202112-180319-04](#)).

<sup>42</sup> Ex. EERA-7 (Notice of EA Scoping Decision) (eDocket No. [202111-180257-01](#)).

<sup>43</sup> EA Scoping Decision (November 30, 2021) (eDocket No. [202111-180225-02](#)); Ex. EERA-7 (Notice of EA Scoping Decision).

<sup>44</sup> *Id.*

<sup>45</sup> Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)).

38. On February 15, 2022, the Commission issued a Notice of Comment Period on the Merits of the Certificate of Need Application announcing it would accept written comments through March 16, 2022, and reply comments through March 23, 2022. The Notice requested comments on whether the Commission should issue a certificate of need for the Project, whether the proposed Project is needed and in the public interest, what are the costs and benefits of the proposed Project, whether there are any contested issues of fact with respect to the representations made in the CN Application, and whether there are any other issues or concerns related to the Project.<sup>46</sup>

39. On March 2, 2022, EERA issued the Environmental Assessment (EA) for the Project.<sup>47</sup> Notice of the availability of the EA was published in the March 22, 2022 *EQB Monitor*.<sup>48</sup> A copy of the EA was also available at the Albert Lea Public Library.<sup>49</sup>

40. On March 8, 2022, DER filed comments outlining its analysis and ultimately recommending that if, after considering the EA, the proposed facility will provide benefits compatible with protecting the natural and socioeconomic environments, they recommend the Commission issue the Certificate of Need.<sup>50</sup>

41. On March 11, 2022, EERA filed confirmation that the EA was provided to various agencies and Freeborn County.<sup>51</sup>

42. Also on March 11, 2022, the Commission issued a Notice of EA Availability, Public Hearings and Comment Period, notifying the public of the March 28, 2022 remote-access hearing and the March 29, 2022 in-person hearing, and initiating a public comment period ending April 15, 2022.<sup>52</sup>

43. On March 11, 2022, the Commission filed a memorandum noting that the date of the remote-access public hearing was changed to March 28, 2022, from the date previously contemplated in the scheduling order.<sup>53</sup>

44. On March 22, 2022, Hayward Solar filed the direct testimony of Michael Roth and Joseph Finocchiaro.<sup>54</sup>

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<sup>46</sup> Notice Of Comment Period On The Merits Of The Certificate Of Need Application (February 15, 2022) (eDocket No. [20222-182838-01](#)).

<sup>47</sup> Ex. EERA-8 (EA).

<sup>48</sup> See Minnesota Environmental Quality Board's *EQB Monitor*, [Vol. 46 No. 12](#).

<sup>49</sup> Ex. EERA-11 (Notice of EA Availability, Public Hearings, and Comment Period in EQB Monitor) (eDocket No. [20223-184103-01](#)).

<sup>50</sup> DER Comments (March 8, 2022) (eDocket No. [20223-183553-01](#)).

<sup>51</sup> Ex. EERA-9 (EA Provided To Permitting Agencies) (eDocket No. [20223-183722-01](#)).

<sup>52</sup> Ex. EERA-10 (Notice of EA Availability, Public Hearings, and Comment Period) (eDocket No. [20223-183710-02](#)).

<sup>53</sup> Commission Memo on Virtual Public Hearing Date Change (March 11, 2022) (eDocket No. [20223-183719-01](#)).

<sup>54</sup> Ex. HS-127 (Direct Testimony of Michael Roth) (eDocket No. [20223-184071-03](#)) and Ex. HS-130 (Direct Testimony of Joseph Finocchiaro) (eDocket No. [20223-184071-05](#)).

45. On March 24, 2022, Hayward Solar filed reply comments in response to DER's comments on the merits of the CN Application.<sup>55</sup> Hayward Solar agreed with DER's recommendation that the PUC issue a CN upon finding the environmental impacts in the EA are acceptable.

46. On March 24, 2022, Laborers' International Union of North America (LIUNA) filed reply comments in response to DER's comments on the merits of the CN application.<sup>56</sup> LIUNA agreed with DER's recommendation that Hayward Solar demonstrated that the Project meets statute and rule requirements and a CN should be issued. LIUNA Noted the Project meets socioeconomic impact needs due to Tenaska's expressed commitment to working with unions to maximize use of local labor.

47. On March 28 and 29, 2022, the Judge presided over joint public hearings on the SP Application and the CN Application for the Project via remote means and in-person, respectively.<sup>57</sup> Commission Staff, EERA staff, and representatives from Hayward Solar were present. Twelve members of the public spoke during the March 29, 2022 public hearing (in-person), offering support for the Project and the positive economic impact it will have on the community.<sup>58</sup> No members of the public spoke during the remote-access public hearing held on March 28, 2022.<sup>59</sup>

48. On April 11, 2022, the Judge issued an amended scheduling order.<sup>60</sup>

49. On April 13, 2022, EERA filed comments on behalf of the interagency Vegetation Management Planning Work Group (VMPWG) regarding the Project's Vegetation Management Plan (VMP).<sup>61</sup> The VMPWG did not recommend any specific action in its comments and stated its commitment to working with Hayward Solar to develop an acceptable VMP to address outstanding concerns including seed mixes; herbicides and weed control; updates to the VMP; and monitoring.

50. During the public comment period ending April 15, 2022, written comments were filed by twenty-two members of the public, the Shell Rock River Watershed District,<sup>62</sup> DNR,<sup>63</sup> IUOE Local 49,<sup>64</sup> LIUNA,<sup>65</sup> and the North Central Regional Council of

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<sup>55</sup> Ex. HS-132 (Reply Comments regarding CN Merits) (eDocket No. [20223-184098-01](#)).

<sup>56</sup> LIUNA Comments (March 23, 2022) (eDocket No. [20223-184097-01](#)).

<sup>57</sup> See March 28, 2022, Public Hearing Transcript; March 29, 2022, Public Hearing Transcript; Public Hearing Presentation (March 28, 2022) (eDocket No. [20223-184184-01](#)); Public Hearing Presentation (March 29, 2022) (eDocket No. [20223-184192-01](#)).

<sup>58</sup> See March 29, 2022, Public Hearing Transcript.

<sup>59</sup> See March 28, 2022, Public Hearing Transcript.

<sup>60</sup> Amended Scheduling Order (April 11, 2022) (eDocket No. [20224-184607-01](#)).

<sup>61</sup> VMPWG Comments on the Revised Vegetation Management Plan (April 13, 2022) (eDocket No. [20224-184700-01](#)).

<sup>62</sup> See Public Comment - Batch 1 (March 31, 2022) (eDocket No. [20223-184305-01](#)) and Public Comments (April 14, 2022) (eDocket No. [20224-184789-02](#)).

<sup>63</sup> MDNR Comments (April 15, 2022) (eDocket No. [20224-184795-01](#)).

<sup>64</sup> IUOE Local 49 Comments (April 8, 2022) (eDocket No. [20224-184572-01](#)).

<sup>65</sup> LIUNA Minnesota & North Dakota Reply Comments (March 24, 2022) (eDocket No. [20223-184097-01](#)).

Carpenters.<sup>66</sup> On April 19, 2022, an additional written comment by a member of the public was filed.<sup>67</sup>

51. On April 15, 2022, EERA staff filed hearing comments on the Sample Site Permit, the EA, and the direct testimony of Hayward Solar.<sup>68</sup> EERA provided various recommendations regarding the Beneficial Habitat section, VMP, developing an Agricultural Impact Management Plan and a third-party monitor. The comments also recommended Hayward Solar coordinate with the relevant parties on noise coordination, snow mobile trails, perimeter fencing and to revise the decommissioning plan.

### III. DESCRIPTION OF THE PROJECT

52. The proposed Project is an up to 150 MW AC nameplate capacity solar energy conversion facility in Hayward Township, Freeborn County, Minnesota. The Project would also include associated facilities.<sup>69</sup>

53. Hayward Solar is planning to use PV solar panels with a total equivalent PV generating capacity of 156.6 MW and a mixture of 18 3150 kilovolt-ampere (kVA) and 30 3600 kVA central inverters. The preliminary design and Project layout takes into account applicable energy loss (approximately 2 percent AC losses) and would allow for a maximum of 150 MW AC of solar energy generation and transmission onto the grid (which is capped at 150 MW AC as part of the interconnection request and generator interconnection agreement with MISO that will be signed prior to construction of the Project). Accordingly, Hayward Solar is requesting a site permit and certificate of need for the nameplate capacity of the Project as measured at the point of interconnection.<sup>70</sup>

54. The components of the Project include photovoltaic (PV) solar panels/arrays, tracking racks, inverters, collection lines, a Project Substation, transformers, electrical wiring, stormwater collection ponds, supervisory control and data acquisition (SCADA) systems, switchgear, metering equipment, overhead 161 kV Project Gen-Tie Line, operations and maintenance (O&M) building, security fencing and gates, access roads, up to ten weather stations, temporary laydown yards/staging areas, and ancillary equipment or buildings as necessary.<sup>71</sup>

55. The panels will be installed on a tracking rack system, generally aligned in rows oriented north and south with the PV modules 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 modules 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

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<sup>66</sup> North Central Regional Council of Carpenters Comments (April 15, 2022) (eDocket No. [20224-184825-01](#)).

<sup>67</sup> Public Comment -Todd Hinrichs (April 19, 2022) (eDocket No. [20224-184912-02](#)).

<sup>68</sup> EERA Hearing Comments (April 15, 2022) (eDocket No. [20224-184798-01](#)).

<sup>69</sup> Ex. HS-107 at 9 (Application for a Site Permit (Corrected)) (eDocket No. [20215-173920-02](#)).

<sup>70</sup> *Id.* at 10; Ex. HS-127 at 6 (Direct Testimony of Michael Roth).

<sup>71</sup> Ex. HS-107 at 10, 14 (Application for a Site Permit (Corrected)).

the ground. The tracker rows will follow the sun from a maximum of 60 degrees east to 60 degrees west through the course of the day (the design tilt may vary). At the maximum 60 degrees (tilted to the highest position), the edge of the modules will be a maximum of 15 feet off the ground. The tracking rack system allows the Project to optimize the angle of the modules 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 pending geotechnical analysis.<sup>72</sup>

56. Electrical wiring will connect the PV panels to inverters which will convert solar energy generated power from DC to AC. A step-up transformer then converts the AC voltage to an intermediate voltage of 34.5 kV. Collection cables then carry the 34.5 kV power to the Project Substation. Step-up transformers are located with each of the inverters. The DC electrical collection cabling will be installed either below-ground, underhung beneath the PV panels and racking (i.e., CAB system), or suspended above ground via the CAB system. If suspended above the ground via the CAB system, some Project construction locations may install the CAB system on pile foundations (without racking on it) to connect the DC cables to the inverter/equipment pad. The CAB system is a cable management system that delivers a safe, strong and durable support for utility-scale wiring for ground-mount solar power generation facilities. CAB systems are quick and easy to install and provide potential labor and material cost benefits on solar projects. If buried, the underground trench will be approximately 2-5 feet deep below ground and one to two feet wide.<sup>73</sup>

57. Energy from the solar panels is directed through an electrical collection system to inverters where the power is converted from DC to AC power. After the inverter has converted the electricity, it is stepped-up via a transformer from low-voltage to medium or intermediate voltage (stepped up to 34.5 kV).<sup>74</sup> The power is then transmitted via the underground AC electrical collection system from the inverters/step-up transformer to the Project Substation.<sup>75</sup>

58. The 34.5 kV collector system voltage will then be stepped up to the interconnection voltage of 161 kV by the transformer located at the Project Substation and transmitted to the new Southern Minnesota Municipal Power Agency (SMMPA) Switchyard via the overhead Project Gen-Tie Line in a single span between dead-end structures.<sup>76</sup> The proposed Project Gen-Tie Line will be approximately 650 feet in length.<sup>77</sup> The Project Gen-Tie Line will interconnect to the existing SMMPA Hayward-Murphy Creek 161 kV HVTL via the new SMMPA Switchyard.<sup>78</sup> The new SMMPA

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<sup>72</sup> Ex. HS-107 at 14-15 (Application for a Site Permit (Corrected)).

<sup>73</sup> *Id.* at 18-19 (Application for a Site Permit (Corrected)).

<sup>74</sup> *Id.* at 19 (Application for a Site Permit (Corrected)).

<sup>75</sup> *Id.* at 16, 19 (Application for a Site Permit (Corrected)); see also Ex. HS-125 (CN and SP Application Amendment).

<sup>76</sup> Ex. HS-107 at 16, 19 (Application for a Site Permit (Corrected)).

<sup>77</sup> Ex. HS-125 at 5 (CN and SP Application Amendment).

<sup>78</sup> *Id.* at 3 (CN and SP Application Amendment).

Switchyard will connect to the existing SMMPA Hayward-Murphy Creek 161 kV HVTL via in/out 161 kV transmission lines to the existing Hayward-Murphy Creek 161 kV HVTL (i.e., SMMPA Line Tap). The SMMPA Line Tap is comprised of two lines measuring approximately 281 feet (west line) and 222 feet (east line) in length.<sup>79</sup> The SMMPA Line Tap and SMMPA Switchyard will be permitted, constructed, owned, and operated by SMMPA.<sup>80</sup>

59. 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.<sup>81</sup>

60. The Project will comply with Freeborn County's setback requirements, where applicable. Hayward Solar sited and designed the Project taking into account Freeborn County's setbacks, in addition to State requirements. The Project design setbacks meet or exceed requirements as provided in the Freeborn County ordinance. However, land constraints such as existing gas pipeline and transmission line easements, wetlands, trees and other factors 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 Project, and dwellings not owned by a participating landowner. Hayward Solar is committed to working with Freeborn County to meet setback requirements where feasible. In addition, all DNR buffer requirements under Minn. Stat. § 103F.48 (2020) have been met.<sup>82</sup>

61. Hayward Solar is working towards securing a Power Purchase Agreement (PPA) or other enforceable mechanism to sell the electricity generated by the Project. The power generated by the Project will be offered for sale to wholesale customers, including Minnesota utilities and cooperatives that have identified a need for additional renewable energy and capacity, and commercial and industrial customers that have set clean energy goals.<sup>83</sup>

62. The total installed capital costs for the Project are estimated to be approximately \$130 million, with Project cost depending on variables including, but not limited to, construction labor, Project equipment and materials, electrical and communication systems, taxes/tariffs, final design considerations (e.g., access roads, O&M building, etc.), as well as potential ongoing impacts from COVID-19.<sup>84</sup>

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

63. The Project is sited in Hayward Township in Freeborn County, Minnesota.<sup>85</sup>

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<sup>79</sup> *Id.* at 4, 6 (CN and SP Application Amendment).

<sup>80</sup> Ex. HS-107 at 5 (Application for a Site Permit (Corrected)); Ex. HS-125 at 1 (CN and SP Application Amendment).

<sup>81</sup> Ex. HS-107 at 28 (Application for a Site Permit (Corrected)).

<sup>82</sup> *Id.* at 22-23; Ex. HS-125 at 2 (CN and SP Application Amendment).

<sup>83</sup> Ex. HS-107 at 2 (Application for a Site Permit (Corrected)).

<sup>84</sup> *Id.* at 13.

<sup>85</sup> *Id.* at 9.

64. Hayward Solar has 100 percent land control for the Project, which is approximately 1,971.8 acres of private land under either a lease option agreement or a purchase option agreement (the Project Area).<sup>86</sup> The final Project design is expected to occupy approximately 1,272.7 acres (the Preliminary Development Area) within the overall 1,971.8-acre Project Area. Hayward Solar estimates that approximately 1,272.7 acres of the 1,971.8 acres is necessary to accommodate the final design and engineering of the proposed up to 150 MW AC Project (i.e., the Preliminary Development Area). The Preliminary Development Area is generally defined as the area containing all Project facilities located within the Project security fencing (e.g., arrays, inverters, collection lines, etc.) and includes the access roads extending beyond the Project facility fenced area. It also includes the Project Substation, O&M building and the area on which the new SMMPA Switchyard will be constructed by SMMPA.<sup>87</sup>

65. The Project is located in a rural, agricultural area. Based on the 2010 U.S. Census, the population of Freeborn County is 31,255 persons, which represents less than one percent of the total population of Minnesota.<sup>88</sup>

## V. SOLAR RESOURCE CONSIDERATIONS

66. Hayward Solar selected the Project location based upon a good solar resource, willing landowner participants, consistency with local land use designations and zoning, the proximity to existing electric transmission infrastructure, and minimal impact to natural and cultural resources.<sup>89</sup>

67. The Project is anticipated to have an average expected annual net capacity factor of between approximately 23 and 27 percent, with projected average output of approximately 168,000 megawatt hours (MWh) annually of reliable, deliverable on-peak energy.<sup>90</sup> The Project will provide electricity to approximately 28,000 homes annually and prevent emission of approximately 261,871,072 pounds (118,783 metric tons) of carbon dioxide equivalent annually.<sup>91</sup>

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<sup>86</sup> Note that the EA used different terms/definitions than the SP Application and Application Amendment when referring to the Project. Specifically, the EA used the term “land control area” (defined as “land for which the applicant maintains lease agreement options”) and “project area” (defined as “one mile from the land control area”). The SP Application and Application Amendment used the terms “Project Area” (privately-owned land for which Hayward Solar has either a lease option agreement or a purchase option agreement; revised in the Application Amendment to be approximately 1,971.8 acres) and “Preliminary Development Area” (the areas hosting solar equipment and supporting infrastructure located within the overall Project Area; revised in the Application Amendment to be approximately 1,272.7 acres). 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 “Project Area” (with the meaning designated in the SP Application and Application Amendment).

<sup>87</sup> See Ex. HS-125 at 3 (CN and SP Application Amendment) and Ex. HS-127 at 3-4, 6 (Direct Testimony of Michael Roth), and Ex. HS-107 at 11 (Application for a Site Permit (Corrected)).

<sup>88</sup> Ex. HS-102 at 9 (Application for a Certificate of Need).

<sup>89</sup> *Id.* at 26 (Application for a Certificate of Need).

<sup>90</sup> *Id.* at 14.

<sup>91</sup> Ex. HS-107 at 2 (Application for a Site Permit (Corrected)).

## VI. PROJECT SCHEDULE

68. Hayward Solar plans to start construction in the third quarter of 2024 and achieve commercial operation in the fourth quarter of 2025.<sup>92</sup>

## VII. SUMMARY OF PUBLIC COMMENTS

69. Two members of the public provided verbal comments during the Public Information and Environmental Assessment Scoping Meeting (in-person) held on August 11, 2021. The two commenters expressed support for the Project and the benefits to the local economy and environment.<sup>93</sup>

70. Two members of the public spoke during the Public Information and Environmental Assessment Scoping Meeting (remote-access) held on August 12, 2021. One commenter expressed support for the Project because it would result in construction jobs in the region. The other commenter raised erosion and drainage concerns in the Project area and having cover crops will help mitigate erosion and drainage issues. Hayward Solar responded to these comments at the public meeting.<sup>94</sup>

71. During the comment period ending August 26, 2021, written comments were filed by DNR,<sup>95</sup> MnDOT,<sup>96</sup> and IUOE Local 49.<sup>97</sup> On August 30, 2021, EERA filed additional written comments from the MPCA, Freeborn County, and four members of the public as described above.<sup>98</sup> No site or system alternatives were recommended for study.

72. DNR commented on site suitability and soil limitation, noting that previous solar projects had encountered numerous issues (e.g., rutting, soil compaction, flooding, and stuck equipment) during construction within farmed wetlands and/or historically wet areas, and that staff have observed that soils tend to get wetter over time after they have been removed from agricultural production and tillage ceases. DNR recommended that the EA address the challenges associated with constructing a solar project on this site and discuss measures to minimize or mitigate soil impacts, such as ongoing maintenance of drainage tile systems.<sup>99</sup>

73. DNR also recommended using wildlife friendly erosion control netting rather than synthetic netting. Additionally, DNR commented on the fence signage contemplated for the Project. Finally, DNR noted that it appreciates the revisions to the Project's VMP in response to multi-agency feedback and looks forward to further coordination with

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<sup>92</sup> Ex. HS-127 at 7 (Direct Testimony of Michael Roth).

<sup>93</sup> See *generally* August 11, 2021, Public Information and Environmental Assessment Scoping Meeting Transcript.

<sup>94</sup> *Id.*

<sup>95</sup> DNR Comments (August 18, 2021) (eDocket No. [20218-177247-01](#)).

<sup>96</sup> MnDOT Comments (August 26, 2021) (eDocket No. [20218-177461-01](#)).

<sup>97</sup> IUOE Local 49 Comments (August 26, 2021) (eDocket No. [20218-177483-01](#)).

<sup>98</sup> Ex. EERA-4 (Written Public Comments on Scope of Environmental Assessment).

<sup>99</sup> DNR Comments (August 18, 2021) (eDocket No. [20218-177247-01](#)).



Hayward Solar to ensure that seed mixes are compatible with the soil and hydrologic conditions of the site.<sup>100</sup>

74. IUOE Local 49 submitted comments in support of the Project and the benefits it will bring to the local economy, including construction jobs and local spending.<sup>101</sup>

75. MnDOT commented that Hayward Solar has been in contact to clarify the proposed access for the Project. MnDOT also commented regarding any potential occupation by the Project of MnDOT land and requested that Hayward Solar conduct early coordination with MnDOT staff for any applicable permitting, traffic control, and construction efforts.<sup>102</sup>

76. MPCA commented on permits that may be required for the Project. MPCA also noted that it does not anticipate any long-term impacts from noise from the operation of the Project and stated that it believes construction noise mitigation has been adequately addressed. MPCA commented that two county ditches are adjacent to the Project and flow into Peter Lund Creek, which has a nearly impaired macroinvertebrate community. MPCA also commented that Albert Lea Lake is impaired for eutrophication, and that the Project should aid in contributing to the reduction in total phosphorus load from Peter Lund Creek by taking agricultural land out of production. MPCA also noted that care should be taken during construction to ensure impacts to receiving waters are as minimal as possible.<sup>103</sup>

77. Freeborn County submitted comments in support of the Project, noting that the Project will result in long lasting environmental and economic benefits to Freeborn County and Hayward Township. Freeborn County also noted that the Project is responsibly sited in relation to road use and environmental impacts.<sup>104</sup>

78. Kristi Swalve (Hantelman) commented on the benefits of the Project, including vegetative cover that will benefit topsoil and water quality, creation of beneficial habitat, creation of local job opportunities, and tax revenue.<sup>105</sup>

79. Seth Light commented in support of the Project, noting the environmental benefits of the Project.<sup>106</sup>

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<sup>100</sup> *Id.*

<sup>101</sup> IUOE Local 49 Comments (August 26, 2021) (eDocket No. [20218-177479-01](#)).

<sup>102</sup> MnDOT Comments (August 26, 2021) (eDocket No. [20218-177461-01](#)).

<sup>103</sup> Ex. EERA-4 (Written Public Comments on Scope of Environmental Assessment).

<sup>104</sup> *Id.*

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

80. Tracy Skaar commented in support of the Project, noting that the area in which the Project will be constructed is well drained, that the vegetative cover may mitigate some of the existing wind erosion and runoff/flooding problems.<sup>107</sup>

81. Ian Wildeman commented in support of the Project, noting that the Project will have a positive environmental and economic impact on the area. Mr. Wildeman also commented on the beneficial land management practices that will be utilized by the Project.<sup>108</sup>

82. On March 28 and 29, 2022, the Judge presided over joint public hearings on the SP Application and the CN Application for the Project via remote means and in-person, respectively.<sup>109</sup> Commission staff, EERA staff, and representatives from Hayward Solar were present. Twelve members of the public spoke during the March 29, 2022 public hearing (in-person), offering support for the Project and the positive economic impact it will have on the community.<sup>110</sup> No members of the public spoke during the remote-access public hearing held on March 28, 2022.<sup>111</sup>

83. In addition, during the public comment period ending April 15, 2022, twenty-two members of the public, the Shell Rock River Watershed District,<sup>112</sup> DNR,<sup>113</sup> IUOE Local 49,<sup>114</sup> LIUNA,<sup>115</sup> and the North Central Regional Council of Carpenters filed written comments.<sup>116</sup> On April 19, 2022, an additional written comment was filed on behalf of a member of the public.<sup>117</sup>

84. On March 31 and April 14 and 19, 2022, the Commission filed written comments that had been submitted by members of the public. The comments included a broad range of topics, including: economic benefits such as jobs, tax revenue, and providing a diverse source of income for landowners; positive impacts on the land through native pollinator plantings; improved drainage; benefits to agricultural land by allowing the land to rest during the life of the Project; and the benefits of renewable energy.<sup>118</sup>

85. Written comments were filed on March 31, 2022, on behalf of the Shell Rock River Watershed District in support of the Project, the vegetation and habitat management

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<sup>107</sup> *Id.*

<sup>108</sup> Ex. EERA-4 (Written Public Comments on Scope of Environmental Assessment).

<sup>109</sup> See Public Hearing Presentation (March 28, 2022) (eDocket No. [20223-184184-01](#)).

<sup>110</sup> See March 29, 2022, Public Hearing Transcript.

<sup>111</sup> See March 28, 2022, Public Hearing Transcript.

<sup>112</sup> See Public Comment - Batch 1 (March 31, 2022) (eDocket No. [20223-184305-01](#)) and Public Comments (April 14, 2022) (eDocket No. [20224-184789-02](#)).

<sup>113</sup> DNR Comments (April 15, 2022) (eDocket No. [20224-184795-01](#)).

<sup>114</sup> IUOE Local 49 Comments (April 8, 2022) (eDocket No. [20224-184572-01](#)).

<sup>115</sup> LIUNA Reply Comments (March 24, 2022) (eDocket No. [20223-184097-01](#)).

<sup>116</sup> North Central Regional Council of Carpenters Comments (April 15, 2022) (eDocket No. [20224-184825-01](#)).

<sup>117</sup> Public Comment -Todd Hinrichs (April 19, 2022) (eDocket No. [20224-184912-02](#)).

<sup>118</sup> See Public Comment - Batch 1 (March 31, 2022) (eDocket No. [20223-184305-01](#)), Public Comments (April 14, 2022) (eDocket No. [20224-184789-02](#)), and Public Comment -Todd Hinrichs (April 19, 2022) (eDocket No. [20224-184912-02](#)).

plans included in the application, and the early coordination initiated by Hayward Solar, including presenting its strategies to improve groundcover with native vegetation within the Project Area. The Watershed District also stated that a project of this nature can be restorative to soil nutrient levels while providing stabilization to topsoil that can be lost when agricultural lands are tilled.<sup>119</sup>

86. On March 24, 2022, LIUNA submitted written comments in support of the Project, stating that the Project meets applicable requirements with respect to the need for energy and positive socioeconomic impacts through generating millions of dollars in economic activity in the area and creating jobs for local workers.<sup>120</sup>

87. On April 8, 2022, IUOE Local 49 submitted written comments in support of the Project, stating that the Project would create construction jobs in the region and provide significant economic benefits to the area.<sup>121</sup>

88. On April 15, 2022, the North Central States Regional Council of Carpenters submitted written comments in support of the Project, stating that the Project has the potential to provide significant local benefits to construction workers and their families in Freeborn County and the surrounding areas due to the preference for contractors utilizing local, union construction craft employees to the greatest extent feasible. 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.<sup>122</sup>

89. On April 15, 2022, DNR submitted written comments on soil conditions and limitations, water appropriation, facility lighting, wildlife-friendly erosion control, and the VMP. DNR commented that the Project is within an area that was historically a large wetland and most of the soils are in the poor and very poor drainage classes, so specific management practices are necessary to ensure that poorly drained soils are adequately addressed during construction, particularly during rain events. DNR also stated that a DNR water appropriation permit may be required for construction dewatering or dust control. DNR also recommended a special permit condition to minimize visual impacts of the Project substation, as well as the O&M building, by using shielded and downward facing lighting and LED lighting that minimizes blue hue. Additionally, DNR recommended a special condition requiring that erosion control blankets be limited to "bio-netting" or "natural netting" types and mulch products without synthetic fiber additives. DNR also recommended that Hayward Solar work with the VMPWG to modify the draft VMP, specifically as it related to seed mixes and herbicide use. DNR also noted that it supports a restriction on mowing after vegetation has been established, which typically occurs after

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<sup>119</sup> See Public Comment - Batch 1 (March 31, 2022) (eDocket No. [20223-184305-01](#)).

<sup>120</sup> LIUNA Reply Comments (March 24, 2022) (eDocket No. [20223-184097-01](#)).

<sup>121</sup> IUOE Local 49 Comments (April 8, 2022) (eDocket No. [20224-184572-01](#)).

<sup>122</sup> North Central Regional Council of Carpenters Comments (April 15, 2022) (eDocket No. [20224-184825-01](#)).

three-five years. DNR suggested that restricting mowing from April 15 to August 15 would improve the potential for ground nesting habitat.<sup>123</sup>

## **SITE PERMIT**

### **I. SITE PERMIT CRITERIA**

90. Large electric power generating plants (LEPGP) are governed by Minn. Stat. § 216E and Minn. R. part 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.”

91. On December 7, 2020, Hayward Solar submitted information to the Minnesota Department of Commerce requesting a size determination for the Project. On December 29, 2020, EERA informed Hayward Solar that, based on the information provided, the Project is subject to the Commission’s siting authority under Minn. Stat. § 216E. Therefore, a site permit is required prior to construction of the Project.<sup>124</sup>

92. A LEPPG powered by solar energy is eligible for the alternative permitting process authorized by Minn. Stat. § 216E.04. Hayward Solar filed the SP Application under the process established by the Commission in Minn. R. parts 7850.2800-7850.3900.<sup>125</sup>

93. Under Minn. Stat. § 216E.04, for a LEPPG permitted under the alternative permitting process, 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 Project.

94. EERA is responsible for evaluating the site permit application and administering the environmental review process.

### **II. APPLICATION OF SITING CRITERIA TO THE PROPOSED PROJECT<sup>126</sup>**

#### **A. Human Settlement**

95. The Project is sited in rural Hayward Township, Freeborn County, Minnesota.<sup>127</sup> Based on the 2010 U.S. Census, the population of Freeborn County was

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<sup>123</sup> DNR Comments (April 15, 2022) (eDocket No. [20224-184795-01](#)).

<sup>124</sup> Ex. HS-107 at 1 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 1 (EA).

<sup>125</sup> See Ex. HS-101 (Notice of Intent to Submit a Site Permit Application under the Alternative Permitting Process).

<sup>126</sup> See Minn. R. part 7850.4100.

<sup>127</sup> Ex. HS-107 at 35 (Application for a Site Permit (Corrected)).

31,255 persons, which represents less than one percent of the total population of Minnesota.<sup>128</sup>

96. The construction of the Project will not displace residents or change the demographics of the Project Area.<sup>129</sup>

97. The impact on cultural values is anticipated to be minimal. For example, the shift from agricultural use of the land to renewable energy for the duration of the permit might impact some local cultural values.<sup>130</sup> There are no known archaeological or historic resources in the Project Area.<sup>131</sup>

#### 1. Zoning and Land Use

98. The Project Area is zoned agricultural. The Freeborn County Code of Ordinances states that large solar energy systems are conditionally allowed in the Agricultural District. Per the Freeborn County Code of Ordinances, the Project uses are compatible with local land use regulations for solar energy systems. The County has determined that these types of land uses are acceptable in the Agricultural District upon issuance of a permit.<sup>132</sup> Additionally, after the Project's useful life, the affected parcels can be restored to agricultural or other planned land uses. Accordingly, the Project is compatible with County zoning and its goal to preserve agricultural land.<sup>133</sup>

99. The Freeborn County Zoning Ordinance applies to 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. § 216E). Pursuant to Minn. Stat. § 216E.10, subd. 1, the Site Permit is the only site approval required for construction of the proposed 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.<sup>134</sup> Hayward Solar has applied County standards to the Project where feasible. The Project design setbacks meet or exceed the County's setback requirements. In addition, Hayward Solar will work with Freeborn County in designing and constructing the Project to meet County standards when practicable.<sup>135</sup>

100. With the exception of a Freeborn County Snowmobile Trail Association (Association) - Trail 133 (a snowmobile trail) - there are no designated public (federal, state, or local) recreational lands within the Project Area boundaries. Trail 133 crosses through the center of the Project Area and northern border. The amended access road to the Project Substation/O&M facility and the new location of the SMMPA Switchyard will

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<sup>128</sup> *Id.* at 46-47; Ex. HS-102 at 9 (Application for a Certificate of Need).

<sup>129</sup> Ex. HS-107 at 39 (Application for a Site Permit (Corrected)).

<sup>130</sup> Ex. EERA-8 at 3 (EA).

<sup>131</sup> Ex. HS-125 at 11(CN and SP Application Amendment).

<sup>132</sup> Ex. HS-107 at 55, 22 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 35-36 (EA).

<sup>133</sup> Ex. EERA-8 at 36 (EA).

<sup>134</sup> Ex. HS-107 at 55 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 26 (EA).

<sup>135</sup> Ex. HS-107 at 22-23 (Application for a Site Permit (Corrected)).

impact the current route of existing Trail 133. Hayward Solar has discussed trail re-route options with the Association and the Association has indicated it agrees with rerouting Trail 133 in order to maintain its use.<sup>136</sup>

101. There are no state forests, national forests, or national wildlife refuges within close proximity to the Project boundaries. Additionally, there are no state-owned Off-Highway Vehicle trails and no DNR scientific and natural areas identified within a mile of the Project boundary. Also, no lakes with public access are located in the Project boundary.<sup>137</sup>

102. The Project will change the land use from agricultural to solar energy generation use for at least the life of the Project. The temporary conversion of agricultural land to the solar facility will have a relatively minimal impact on the rural character of the surrounding area or Freeborn County.<sup>138</sup> Upon decommissioning and removal of the Project, the affected parcels may be returned to the existing agricultural use or transitioned to other planned land uses.<sup>139</sup>

103. Of the 462,416 acres in Freeborn County, the majority is classified as agricultural land. Impacts to 1,272.7 or less acres of agricultural land within the planned Project facility would reduce the amount of agricultural land in the County by less than one percent.<sup>140</sup>

104. The Project meets or exceeds all county setback requirements for renewable energy facilities.<sup>141</sup>

105. The Project has been designed in compliance with the Freeborn County Land Use Policy Plan. Agricultural activities may be resumed upon decommissioning of the Project. Components of the Project may be located in areas where there is a planned extension of water, sewer, or other services. Construction of the Project would not preclude the future orderly extension of these services across property under Hayward Solar's control as these extensions would likely be accomplished by utilizing existing public rights-of-way which will not be impacted by the Project. Since a majority of the Project land will be temporarily leased from participating landowners and land will be returned to agricultural use upon decommissioning of the Project, the Project will further the County's goals of providing long-term agricultural opportunities.<sup>142</sup>

106. Normal agricultural activities can continue within some portions of the Project Area not converted to solar modules, access roads, O&M buildings, transmission facilities, and fencing. After the useful life of the Project, the current agricultural land use

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<sup>136</sup> Ex. HS-125 at 8 (CN and SP Application Amendment); Ex. HS-107 at 51 (Application for a Site Permit (Corrected)).

<sup>137</sup> Ex. HS-107 at 51 (Application for a Site Permit (Corrected)).

<sup>138</sup> *Id.* at 56 (Application for a Site Permit (Corrected)).

<sup>139</sup> *Id.* at 57.

<sup>140</sup> *Id.* at 56; Ex. HS-125 at 3 (CN and SP Application Amendment); Ex. EERA-8 at 49 (EA).

<sup>141</sup> Ex. EERA-8 at 36 (EA).

<sup>142</sup> Ex. HS-107 at 56-57 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 36 (EA).

would be restored by removing the solar facility. The Project is not anticipated to preclude current or planned land use on adjacent parcels.<sup>143</sup>

## 2. Property Values

107. 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.<sup>144</sup>

108. The installation of the Project would create a limited visual impact at ground level or from adjacent roadways and parcels and higher elevation points (e.g., the I-90 overpass located on the north end of the Project). The transmission facilities will be visible from a greater distance than the solar array, but the change is likely to be barely perceptible given the proximity to the point of interconnection and other existing transmission structures. Hayward Solar has not received any feedback indicating aesthetic or visual concerns associated with the Project from the surrounding landowners or community.<sup>145</sup>

109. The Project is not expected to have emissions during operation of the facilities.<sup>146</sup> Noise levels during operation of the Project are anticipated to be negligible.<sup>147</sup>

110. Widespread negative impacts to property value as a result of the Project are not anticipated. While it is possible that specific, individual property values may be negatively impacted, such impacts can be mitigated by reducing aesthetic impacts and through individual land use agreements with landowners.<sup>148</sup>

## 3. Aesthetic Impacts

111. The existing landscape in the Project Area is rural and agricultural consisting of flat to gently rolling row crop fields of corn and soybeans.<sup>149</sup>

112. There is one farmstead within the Project Area along 840th Avenue; there are 11 residences on parcels and two observation points within the Albert Lea/Austin *Kampgrounds of America* (KOA) campground adjacent to the Project Area.<sup>150</sup> Most farms in the area have planted windbreaks consisting of trees and shrubs around them. Untilled

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<sup>143</sup> Ex. HS-107 at 57 (Application for a Site Permit (Corrected)).

<sup>144</sup> Ex. EERA-8 at 39-40 (EA).

<sup>145</sup> Ex. HS-107 at 45-46 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 32-33 (EA).

<sup>146</sup> Ex. EERA-8 at 4 (EA); Ex. HS-107 at 66 (Application for a Site Permit (Corrected)).

<sup>147</sup> Ex. EERA-8 at 38-39 (EA).

<sup>148</sup> *Id.* at 39-40.

<sup>149</sup> *Id.* at 32.

<sup>150</sup> Ex. HS-107 at 43-44 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 32 (EA).

lines of trees and shrubs can be seen along fence rows. I-90, an existing rail line, and an existing transmission line bound the northern edge of the Project Area.<sup>151</sup>

113. For residents outside the Project vicinity and for others with low viewer sensitivity, such as travelers on I-90, aesthetic impacts are anticipated to be minimal. For these viewers, the solar panels would be relatively difficult to see or would be visible for a very short period. For all residents and viewers, the aesthetic impacts of the Project Substation, Gen-Tie Line, and interconnection facilities are anticipated to be minimal given the relatively low profile of these features and the proximity to an existing rail line and I-90.<sup>152</sup> While the Project will have some aesthetic impact compared to current predominately agricultural land use, the Project facilities will be similar to existing facilities associated with farming and utilities serving the area. Since the Project Area and vicinity are generally flat and due to existing trees along agricultural fields and vegetative cover along windbreak, the visual impact of the Project is expected to be limited to surrounding land and higher elevation points (e.g., the I-90 overpass located on the north end of the Project).<sup>153</sup> Hayward Solar has not received any feedback indicating aesthetic or visual concerns associated with the Project from the surrounding landowners or community.<sup>154</sup> Aesthetic impacts are unavoidable but can be mitigated by screening, preserving natural landscapes, and by using shielded lighting.<sup>155</sup>

114. Operational lighting at the Project will be minimal and will be used primarily for repair or maintenance work. The Project Substation and O&M building will have security lighting, and Project entrances will have motion activated down-lit security lights.<sup>156</sup> Impacts to light-sensitive land uses are not anticipated given the rural Project location coupled with minimal required lighting for operation of the Project.<sup>157</sup>

115. In its April 15, 2022 written comments, DNR recommended a special permit condition requiring the permittee to use shielded and downward facing lighting and LED lighting that minimizes blue hue at the Project substation and O&M building.<sup>158</sup> In its response to comments, Hayward Solar stated it has no objection to such a special condition, and proposed the following language based on the example provided by DNR:

Permittee must use shielded and downward facing lighting and LED lighting that minimizes blue hue at the project substation [and O&M building](#). Downward facing lighting must be clearly visible on the plan and profile submitted for the project.<sup>159</sup>

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<sup>151</sup> Ex. HS-107 at 43 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 32 (EA).

<sup>152</sup> Ex. EERA-8 at 32 (EA); Ex. HS-107 at 45 (Application for a Site Permit (Corrected)).

<sup>153</sup> Ex. HS-107 at 45 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 32 (EA).

<sup>154</sup> Ex. HS-107 at 45-46 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 32-33 (EA).

<sup>155</sup> Ex. EERA-8 at 31 (EA).

<sup>156</sup> *Id.* at 33.

<sup>157</sup> Ex. HS-107 at 46 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 33 (EA).

<sup>158</sup> DNR Comments (April 15, 2022) (eDocket No. [20224-184795-01](#)).

<sup>159</sup> Hayward Solar Response to Comments (April 25, 2022) (eDocket No. [20224-185109-01](#)).



116. Section 5 of the Sample Site Permit contains an example special condition that requires a landscaping plan to be developed to mitigate, to the extent practicable, the visual impacts to all adjacent residences.<sup>160</sup> However, residences adjacent to the Project Area have existing buildings and/or vegetative screening around them and Hayward Solar has incorporated spatial buffers around each residence. No owner of any adjacent residence has requested any additional screening or buffers beyond that which may already screen the Project from the residence. The record demonstrates that additional screening is not necessary for these residences.<sup>161</sup>

117. The record demonstrates that Hayward Solar has taken steps to avoid and minimize impacts to aesthetics. Further, the Sample Site Permit contains adequate general conditions to address aesthetic impacts. Section 4.3.7 (Aesthetics) of the Sample Site Permit requires the Applicant to consider visual impacts from landowners and land management agencies.<sup>162</sup>

#### 4. Public Service and Infrastructure

118. The Project is located in a rural, agricultural area. Access to the Project will be via existing County and Township roads. The major roadway in the area is I-90 located immediately north of the proposed Project. Other roads that surround the Project Area are local County or Township roads. The Project Area is bordered by County Road 46 in the northern portion and bound by County Road 30 to the east.<sup>163</sup>

119. Electricity in the Project Area is provided by the Freeborn Mower Electric Cooperative. There are two high voltage transmission lines in the Project Area, one along the northern edge of the Project Area and the other through the southern part of the Project Area. Water in the Project Area is provided by private wells, and wastewater is managed by septic systems. Telephone and internet service is provided by many companies. There are two pipelines that run through the Project Area.<sup>164</sup> The Project is located in an area where private wells and septic systems are used at rural and farmstead residences. There are three irrigation wells within the Project Area.<sup>165</sup>

120. During construction, temporary impacts are anticipated on some public roads. Construction activities will increase the amount of traffic using local roadways, and such use might result in congestion which would be noticeable to neighboring landowners. Operation of the Project after construction will not noticeably increase traffic.

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<sup>160</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)) [hereinafter, "Sample Site Permit"]. Note that Section 4.3 of the Sample Site Permit is improperly numbered. After reaching Section 4.3.7 (Aesthetics), the section begins numbering again; thus, instead of being Section 4.3.8, the Topsoil Protection text is noted as Section 4.3.1. For purposes of these Findings of Fact, Conclusions of Law, and Recommendations, references to the Sample Site Permit will be to the current numbering.

<sup>161</sup> See Ex. HS-127 at 8 (Direct Testimony of Michael Roth); Ex. HS-125 at 10-11 (CN and SP Application Amendment); Ex. HS-107 at 44-46 (Application for a Site Permit (Corrected)).

<sup>162</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)).

<sup>163</sup> Ex. HS-107 at 53 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 41 (EA).

<sup>164</sup> Ex. EERA-8 at 40-41 (EA).

<sup>165</sup> Ex. HS-107 at 72 (Application for a Site Permit (Corrected)).

No impacts to roads are anticipated during the operation; negligible traffic increases would occur for maintenance. The impact intensity level will be minimal. Potential impacts associated with construction are anticipated to be short-term, intermittent, and localized.<sup>166</sup>

121. There will be several access points to the Project. The northern portion of the Project will be accessed from County Road 46 (East Main Street), 200th Street (T-121) and T-236. The southern portion of the Project will be accessed from County Road 30 (850th Avenue), 200th Street, and T236.<sup>167</sup> Hayward Solar is working with Freeborn County staff on a road use agreement to address road use and related concerns.<sup>168</sup>

122. Hayward 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. Hayward 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 utilities; if conflicts are unavoidable, Hayward Solar will coordinate with the utility to develop an approach to reroute or otherwise protect the utility. Underground utilities will be marked prior to construction start.<sup>169</sup>

123. Limited, temporary impacts to service may occur during interconnection construction work associated with the new SMMPA Switchyard when the Hayward-Murphy Creek 161 kV HVTL is shut down and temporary service is being established. These outages are anticipated to be of short duration and closely coordinated with utilities and landowners.<sup>170</sup>

124. As part of the Project design, underground electric collection lines are planned to cross underneath the existing oil and natural gas pipelines and electrical infrastructure that cross the Project. Hayward Solar will enter into agreements that ensure the safety of the pipelines.<sup>171</sup>

125. There are no Federal Aviation Administration-registered airports located within three nautical miles of the Project Area; therefore, no mitigation is needed or planned concerning airports.<sup>172</sup>

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<sup>166</sup> Ex. EERA-8 at 41 (EA); Ex. HS-107 at 54 (Application for a Site Permit (Corrected)).

<sup>167</sup> Ex. HS-125 at 6, 14, 15-16 (CN and SP Application Amendment); Ex. HS-107 at 53 (Application for a Site Permit (Corrected)).

<sup>168</sup> Ex. EERA-8 at 41 (EA); Ex. HS-107 at 54 (Application for a Site Permit (Corrected)).

<sup>169</sup> Ex. HS-107 at 52 (Application for a Site Permit (Corrected)).

<sup>170</sup> Ex. EERA-8 at 41 (EA); Ex. HS-107 at 53 (Application for a Site Permit (Corrected)).

<sup>171</sup> Ex. EERA-8 at 41 (EA); Ex. HS-107 at 53 (Application for a Site Permit (Corrected)).

<sup>172</sup> Ex. HS-107 at 54-55 (Application for a Site Permit (Corrected)).

126. 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.<sup>173</sup>

127. Section 4.3.12 (Roads) of the Sample Site Permit addresses roads. Section 4.3.12 of the Sample Site Permit requires the Applicant to inform road authorities of roads that will be used during construction and acquire necessary permits and approvals for oversize and overweight loads. Additionally, Section 4.3.4 (Public Services and Public Utilities) of the Sample Site Permit requires the Applicant to minimize disruption to public services and public utilities and to restore service promptly if disrupted by the Applicant.<sup>174</sup>

## 5. Recreational Resources

128. Recreational opportunities in Freeborn County primarily include snowmobiling, swimming, hiking, camping, bicycling, nature walking, picnicking, and fishing, and opportunities to explore museums, parks, nature centers, and Albert Lea Lake.<sup>175</sup>

129. There are limited recreational resources in the Project Area. The two closest resources are a snowmobile trail (Trail 133) that passes through the Project Area, and the KOA campground on the extreme northeast side of the Project, and to the north of I-90. Other resources nearby but outside of the Project Area include Albert Lea Lake, the Blazing Star Trail, Juglan Woods Aquatic Management Area, and Myre-Big Island State Park. With the exception of Trail 133 (snowmobile trail), there are no designated public (federal, state, or local) recreational lands within the Project Area boundaries. There are no state forests, national forests, or national wildlife refuges within close proximity to the Project boundary. There are no city or county parks in the Project Area. Also, no lakes with public access are located within the Project boundary.<sup>176</sup>

130. The amended access road to the Project Substation/O&M facility and the new location of the SMMPA Switchyard will impact the current route of the existing Trail 133 (snowmobile trail). Hayward Solar has discussed trail re-route options with the Association and the Association has indicated it agrees with rerouting Trail 133 to allow this facility to be constructed and maintain Trail 133 use.<sup>177</sup> Construction of the Project will temporarily impact Trail 133.

131. EERA staff recommended a special condition requiring the permittee to coordinate with local snowmobile trail associations to reroute Trail 133 (snowmobile trail) “and any associated snowmobile trails impacted by the [Project].”<sup>178</sup> As noted above, Hayward Solar has begun discussions with the Association regarding rerouting Trail

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<sup>173</sup> See Ex. EERA-8 at 40-41 (EA); Ex. HS-107 at 52-53 (Application for a Site Permit (Corrected)).

<sup>174</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)).

<sup>175</sup> Ex. HS-107 at 51 (Application for a Site Permit (Corrected)).

<sup>176</sup> Ex. EERA-8 at 42 (EA); Ex. HS-107 at 51 (Application for a Site Permit (Corrected)).

<sup>177</sup> Ex. HS-125 at 8, 11 (CN and SP Application Amendment); Ex. EERA-8 at 43 (EA).

<sup>178</sup> EERA Hearing Comments (April 15, 2022) (eDocket No. [20224-184798-01](#)).

133.<sup>179</sup> In its response to comments, Hayward Solar stated it has no objection to this special condition.<sup>180</sup>

132. Construction noise from the Project will also temporarily impact the KOA campground. However, potential impacts are anticipated to be minimal and temporary given the location of the campground on the extreme northeast side of the Project and across I-90 to the north.<sup>181</sup>

133. EERA staff proposed a special condition requiring the permittee to coordinate with local residents, including the KOA campground, regarding potential noise impacts prior to the installation of any foundation posts.<sup>182</sup> In its response to comments, Hayward Solar stated it has no objection to this special condition.<sup>183</sup> Special conditions can include time-of-day and time-of-year restrictions for certain construction activities.<sup>184</sup>

134. No significant impacts to recreational opportunities are anticipated.<sup>185</sup>

## **B. Public Health and Safety**

135. 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).<sup>186</sup>

136. No health impacts from EMF are anticipated. Potential impacts are anticipated to be negligible and are not expected to negatively affect human health. The maximum electric field levels for the Project Gen-Tie Line and the SMMPA Line Tap are estimated to be consistent with the Commission’s electric field limit (less than 8.0 kV/m). The EMF levels generated by the proposed Project are anticipated to be well below the internationally accepted guideline for general public exposure. Based on the most current research on EMF, and the distance between the Project and residences, the Project will have no impact to public health and safety due to EMF.<sup>187</sup>

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

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<sup>179</sup> Ex. HS-125 at 8, 11 (CN and SP Application Amendment); Ex. EERA-8 at 43 (EA).

<sup>180</sup> Hayward Solar Response to Comments (April 25, 2022) (eDocket No. [20224-185109-01](#)).

<sup>181</sup> Ex. EERA-8 at 43 (EA).

<sup>182</sup> EERA Hearing Comments (April 15, 2022) (eDocket No. [20224-184798-01](#)).

<sup>183</sup> Hayward Solar Response to Comments (April 25, 2022) (eDocket No. [20224-185109-01](#)).

<sup>184</sup> Ex. EERA-8 at 43 (EA).

<sup>185</sup> *Id.*

<sup>186</sup> *Id.* at 44-45.

<sup>187</sup> *See id.* at 46-47; Ex. HS-107 at 44 (Application for a Site Permit (Corrected)).

the Project will undergo routine inspection. Electrical work will be completed by properly licensed technicians.<sup>188</sup>

138. The Project will not result in the construction of large transmission lines; interconnect to businesses, farms, or residences; or change local electrical service. Therefore, impacts from stray voltage are not expected.<sup>189</sup>

139. No significant impacts to public health and safety are expected to result from construction and operation of the Project. Further, the Sample Site Permit contains conditions to address public health and safety. Section 4.3.19 (Public Safety) of the Sample Site Permit addresses public safety, including landowner educational materials, appropriate signs and gates, etc. Section 8.10 (Emergency Response) requires permittees file an emergency response plan with the Commission prior to operation. Section 8.11 (Extraordinary Events) requires disclosure of extraordinary events, such as fires.<sup>190</sup>

## **C. Land-based Economies**

### **1. Local Economy**

140. The Project will result in both short- and long-term benefits to the local economy.<sup>191</sup>

141. Landowner compensation is established by voluntary option leases or purchase agreements between the landowners and Hayward Solar for lease or purchase of the land for the Project.<sup>192</sup>

142. The Project is expected to generate annual property tax revenue of \$305,000 for Freeborn County and approximately \$76,000 for Hayward Township. The Project will also support 204 jobs during the construction and installation phases, and four permanent jobs during the 35-year operational life of the Project. The Project will also contribute to the local economy through land lease payments to participating landowners and direct/indirect purchases of goods and services. Construction of the Project will increase local demand for food, lodging, fuel, and other supplies. Adverse revenue impacts associated with the loss of agricultural land and agricultural production will be mitigated through lease options and purchase payments to landowners.<sup>193</sup>

143. Wages to local labor and expenditures will be made to local businesses and landowners during the Project's construction and operation. Construction of the Project would provide temporary increases to the revenue of the area through increased demand for lodging, food services, fuel, transportation, and general supplies. The Project will also

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<sup>188</sup> Ex. EERA-8 at 47 (EA).

<sup>189</sup> *Id.* at 66.

<sup>190</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)).

<sup>191</sup> See Ex. EERA-8 at 43 (EA).

<sup>192</sup> Ex. HS-107 at 49 (Application for a Site Permit (Corrected)).

<sup>193</sup> Ex. EERA-8 at 43-44 (EA); Ex. HS-107 at 49-50 (Application for a Site Permit (Corrected)).

create new local job opportunities for various trade professionals that live and work in the area, and it is typical to advertise locally to fill required construction positions. Opportunity exists for sub-contracting to local contractors for gravel, fill, and civil work. Additional personal income will also be generated by circulation and recirculation of dollars paid out by the Project as business expenditures and state and local taxes.<sup>194</sup>

144. The record demonstrates that the Project will result in both short- and long-term benefits to the local economy.<sup>195</sup> Additionally, Section 8.5 (Labor Statistic Reporting) of the Sample Site Permit requires quarterly reports concerning efforts to hire Minnesota workers.

145. Section 9 (Decommissioning and Restoration) 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.<sup>196</sup>

## 2. Agriculture

146. The majority of the Project Area is in agricultural use, with cultivated crops covering approximately 96 percent of the Project Area. The remainder of the Project Area consists of developed land (3.2 percent) and a small amount of herbaceous or hay/pasture land (0.1 percent). The remaining identified land use is a minor area (less than 0.1 percent) of mixed forest.<sup>197</sup>

147. The Project will result in approximately 1,272.7 acres of agricultural land being removed from agricultural production for at least the life of the Project. Impacts to 1,272.7 or less acres of agricultural land within the planned Project facility would reduce the amount of agricultural land in Freeborn County by less than one percent. This change in land use would take productive farmland out of production but would result in a negligible loss of farmland in Freeborn County.<sup>198</sup>

148. Normal agricultural activities can continue within some portions of the Project Area not converted to solar modules, access roads, O&M building, transmission facilities, and fencing. After the useful life of the Project, the land could be returned to agricultural production after the Project is decommissioned. Hayward Solar has prepared a Decommissioning Plan which will be implemented upon completion of the Project.<sup>199</sup> Additionally, Hayward Solar has developed and is committed to an Agricultural Impact Mitigation Plan (AIMP) that details methods to minimize soil compaction, preserve topsoil, and establish and maintain appropriate vegetation to ensure the Project is designed,

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<sup>194</sup> Ex. EERA-8 at 43-44 (EA); Ex. HS-107 at 49-50 (Application for a Site Permit (Corrected)).

<sup>195</sup> Ex. EERA-8 at 43-44 (EA); Ex. HS-107 at 49-50 (Application for a Site Permit (Corrected)).

<sup>196</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)).

<sup>197</sup> Ex. HS-107 at 55-56 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 31, 60 (EA).

<sup>198</sup> See Ex. HS-125 at 3 (CN and SP Application Amendment); Ex. HS-107 at 56 (Application for a Site Permit (Corrected)), and Ex. EERA-8 at 49 (EA).

<sup>199</sup> Ex. EERA-8 at 49 (EA); Ex. HS-107 at 57 (Application for a Site Permit (Corrected)).

constructed, operated and ultimately restored in a manner that would allow the land to be returned to agricultural use.<sup>200</sup>

149. The revenue lost or reduced from removing land from agricultural production will be offset by lease options and purchase payments to landowners.<sup>201</sup>

150. EERA staff proposed a special condition requiring that the permittee develop an AIMP in coordination with the Minnesota Department of Agriculture (MDA) and file the AIMP with the Commission 14 days prior to the pre-construction meeting.<sup>202</sup> In its response to comments, Hayward Solar stated it has no objection to this special condition.<sup>203</sup>

151. The presence of the Project will not result in a significant impact to land-based economies in the Project vicinity, as impacts to 1,272.7 or less acres of agricultural land within the planned Project facility would reduce the amount of agricultural land in Freeborn County by less than one percent.<sup>204</sup>

### 3. Prime Farmland

152. Prime Farmland as defined by federal regulation at 7 C.F.R. § 657.5(a)(1) as “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.”<sup>205</sup>

153. Subject to certain exceptions, Minn. R. 7850.4400, subp. 4 prohibits large energy power generating plants from being sited on more than 0.5-acre of prime farmland per MW of net generating capacity unless there is no feasible and prudent alternative.<sup>206</sup>

154. Given the generating capacity of up to 150 MW, Minn. R. part 7850.4400, subp. 4 would allow up to 75 acres of prime farmland for the Project unless there is no feasible and prudent alternative.<sup>207</sup>

155. Approximately 107.67 acres of current prime farmland - and 1,107.57 acres of prime farmland if drained - are located within the Project Area. The Project is anticipated to impact an approximate total of 648 acres of current and potential prime farmland.<sup>208</sup>

156. Hayward Solar conducted a prime farmland assessment to review the feasibility and prudence of potential sites as well as the prime farmland impacts. Hayward

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<sup>200</sup> Ex. EERA-8 at 50 (EA).

<sup>201</sup> *Id.*; Ex. HS-107 at 50 (Application for a Site Permit (Corrected)).

<sup>202</sup> EERA Hearing Comments (April 15, 2022) (eDocket No. [20224-184798-01](#)).

<sup>203</sup> Hayward Solar Response to Comments (April 25, 2022) (eDocket No. [20224-185109-01](#)).

<sup>204</sup> See Ex. EERA-8 at 48-49 (EA), Ex. HS-125 at 3 (CN and SP Application Amendment), and Ex. HS-107 at 55-56 (Application for a Site Permit (Corrected)).

<sup>205</sup> Ex. EERA-8 at 48 (EA).

<sup>206</sup> *Id.*

<sup>207</sup> *Id.*

<sup>208</sup> *Id.*

Solar identified and assessed two other potential sites for the Project in an attempt to find a site that would otherwise be compliant with the prime farmland exclusion rule in Minn. R. 7850.4400, subp. 4. Hayward Solar ruled out the two potential sites during its review of possible sites and does not have any leases or purchase options that would allow it to use the optional sites for the Project. Moreover, Hayward Solar does not have condemnation rights and therefore is unable to force any landowner to grant Hayward Solar any lease, easement or purchase option. Hayward Solar's detailed assessment concluded that these two other potential sites were not feasible or prudent areas for siting the Project.<sup>209</sup>

157. Hayward Solar chose the Project site due to the capacity of and proximity to the SMMPA Hayward-Murphy Creek 161 kV transmission line, (thus minimizing the need for extensive new transmission facilities), the presence of one of the largest concentrations of non-prime farmland soils in Freeborn County, willing landowners and community interest in the Project, the lack of farmsteads and rural residences and human settlement impacts, the lack of other environmental constraints, adequate roads for access, flat terrain, and overall need for renewable energy generation.<sup>210</sup>

158. No alternatives to Hayward Solar's proposed site were presented at the public meeting or during the public comment period.<sup>211</sup>

159. There is no feasible and prudent alternative available to Hayward Solar to construct the Project with less impact on prime farmland in southern Minnesota given the nameplate capacity, comparable solar resource, and access to transmission for this Project at this location. A finding that there is no feasible and prudent alternative to avoidance of prime farmland for the Project is consistent with past Commission decisions for large solar generating systems sited in prime farmland because other Project-sized areas in southern Minnesota also contain similar amounts of prime farmland as the proposed site.<sup>212</sup>

160. Hayward Solar has developed its VMP in consultation with DNR and other state agencies to guide site preparation, installation of prescribed seed mixes, and management of invasive species and noxious weeds. Hayward Solar revised its VMP to reflect changes made following Hayward Solar's review of the Vegetation and

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<sup>209</sup> Ex. HS-107 at 60 (Application for a Site Permit (Corrected)); see also Ex. HS-110 (SP Application Appendix C – Prime Farmland Assessment).

<sup>210</sup> Ex. HS-107 at 61 (Application for a Site Permit (Corrected)).

<sup>211</sup> See EA Scoping Decision (November 30, 2021) (eDocket No. [202111-180225-02](#)); Ex. EERA-7 (Notice of EA Scoping Decision).

<sup>212</sup> Ex. HS-107 at 60-61 (Application for a Site Permit (Corrected)); see also *In the Matter of the Site Permit Application for the 100 MW Aurora Distributed Solar Energy Project at Multiple Facilities in Minnesota*, PUC Docket No. E-6928/GS-14-515, Order Issuing Site Permit, As Amended (June 30, 2015); *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*, PUC Docket No. IP-6964/GS-14-1052, Order Issuing Site Permit (May 5, 2016); *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*, PUC 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).



Establishment Management Plan Guidance document, as well as comments received from and consultation with the state VMPWG, which is comprised of representatives of EERA, DNR, the Minnesota Department of Agriculture and the Minnesota Board of Water and Soil Resources (BWSR). Additionally, Hayward Solar has indicated that it will take several steps during the 2022 growing season to ensure proper seed mixes for the site, including re-evaluating the VMP to determine if any changes are needed and continuing to coordinate with DNR. Further, Hayward Solar has stated that it plans to file the final VMP prior to initiation of construction.<sup>213</sup>

161. EERA proposed a special condition requiring that the permittee develop a VMP in coordination with the Department of Commerce, DNR, BWSR, and MPCA; requiring that the VMP and documentation of the coordination efforts between the permittee and the coordinating agencies be filed at least 14 days prior to the pre-construction meeting; requiring that the permittee provide all affected landowners with a copy of the VMP; and specifying information that the VMP must include.<sup>214</sup> Hayward Solar has no objection to this special condition.<sup>215</sup>

162. EERA also proposed changes to Section 4.3.8 of the Sample Site Permit (Beneficial Habitat), so that the section addresses only beneficial habitat.<sup>216</sup> Hayward Solar stated it has no objection to this special condition.<sup>217</sup>

163. The Sample Site Permit contains multiple sections addressing soil and agricultural related issues associated with the Project.<sup>218</sup>

#### **D. Archaeological and Historic Resources**

164. A Phase I Cultural Resource Survey Report was completed in September 2020 for the Project Area and a one-mile buffer. A review of archaeological data indicated that no previously recorded archaeological sites had been identified in the study area. Four architectural resources were previously recorded in the study area.<sup>219</sup>

165. Because a significant portion of the Project Area was historically within a large wetland, most of the Project Area was determined to be of low potential for unrecorded prehistoric cultural resources. An archaeological survey model was

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<sup>213</sup> See Ex. EERA-8 at 60-61 (EA), Ex. HS-127 at 9 (Direct Testimony of Michael Roth), and Ex. HS-130 at 4-5 (Direct Testimony of Joseph Finocchiaro); see also Ex. HS-112 (SP Application Appendix E – Vegetation Management Plan) and Ex. HS-111 (SP Application Appendix D – Agricultural Impact Mitigation Plan).

<sup>214</sup> EERA Hearing Comments (April 15, 2022) (eDocket No. [20224-184798-01](#)).

<sup>215</sup> Hayward Solar Response to Comments (April 25, 2022) (eDocket No. [20224-185109-01](#)).

<sup>216</sup> EERA Hearing Comments (April 15, 2022) (eDocket No. [20224-184798-01](#)).

<sup>217</sup> Hayward Solar Response to Comments (April 25, 2022) (eDocket No. [20224-185109-01](#)).

<sup>218</sup> See Sample Site Permit at Sections 4.3.1 (Field Representative), 4.3.2 (Site Manager), 4.3.1 (Topsoil Protection), 4.3.2 (Soil Compaction), 4.3.3 (Soil Erosion and Sediment Control), 4.3.6 (Native Prairie), 4.3.7 (Vegetation Removal), 4.3.8 (Beneficial Habitat), 4.3.9 (Application of Pesticides), 4.3.10 (Invasive Species), 4.3.11 (Noxious Weeds), and 4.3.15 (Restoration) (January 3, 2022) (eDocket No. [20221-181162-01](#)).

<sup>219</sup> Ex. HS-107 at 63-64 (Application for a Site Permit (Corrected)).

developed to ascertain the areas of highest potential for unrecorded cultural resources. Field surveys were conducted in May 2020 on the approximately 287 acres of the Project Area determined to have potential for unrecorded archaeological resources (survey corridor). No archaeological resources were identified within the reviewed survey corridor.<sup>220</sup> No archaeological or historic resources are known to occur in the new portions of the Project Area based on results of the Phase I cultural resources literature review which covered the Project Area updated in Hayward Solar's Application Amendment. Field review for cultural resources of a limited additional area within the Project Area was to be completed in spring 2022. Given that the area is predominately used for agricultural uses and is disturbed, it is not anticipated that cultural resources will be identified in the area during the field review.<sup>221</sup>

166. Hayward Solar also reached out to the eleven recognized Minnesota Tribal Nations and the Minnesota Indian Affairs Council for comment on the Project.<sup>222</sup> Hayward Solar prepared an Unanticipated Discoveries Plan that outlines steps to be taken if previously unrecorded cultural resources or human remains are encountered during construction.<sup>223</sup>

167. No previously recorded archaeological or historic sites will be directly impacted by the proposed Project.<sup>224</sup> Impacts to archaeological and historic resources are not expected.<sup>225</sup>

168. The record demonstrates that the Project will not cause adverse impacts to archaeological and historic resources. Further, Section 4.3.13 (Archaeological and Historic Resources) of the Sample Site Permit addresses archeological and historic resources. If previously unidentified archaeological sites are found during construction, the Applicant would be required to stop construction and contact SHPO and the state archaeologist to determine how best to proceed. Ground disturbing activity will stop and local law enforcement will be notified should human remains be discovered. Because impacts to archeological and historic resources are not anticipated, additional mitigation is not proposed.<sup>226</sup>

## **E. Natural Environment**

### **1. Wildlife**

169. Wildlife utilizing the Project Area are common species associated with disturbed habitats and are accustomed to human activities (such as agricultural activities and road traffic) occurring in the area. Mammals, reptiles, amphibians, and insects are

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<sup>220</sup> *Id.*; Ex. EERA-8 at 51-52 (EA).

<sup>221</sup> Ex. HS-125 at 11 (CN and SP Application Amendment); Ex. EERA-8 at 51-52 (EA).

<sup>222</sup> Ex. HS-107 at 63, 89 (Application for a Site Permit (Corrected)).

<sup>223</sup> Ex. HS-107 at 64 (Application for a Site Permit (Corrected)).

<sup>224</sup> *Id.*

<sup>225</sup> Ex. EERA-8 at 51 (EA).

<sup>226</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)); see also Ex. EERA-8 at 52 (EA).

present.<sup>227</sup> These species include white-tailed deer, raccoon, striped skunk, woodchuck, ring-necked pheasant, red-winged blackbird, red-tailed hawks, garter snake, and insects.<sup>228</sup>

170. Given the agricultural nature of the Project Area, impacts to the current wildlife inhabiting the area are expected to be minimal. Population level impacts are not anticipated.<sup>229</sup>

171. There are very few trees located within the Project Area. While a limited amount of tree clearing may be necessary to prevent shading of some panels, Hayward Solar designed the Project to avoid and minimize the need for tree removal. According to DNR and the U.S. Fish and Wildlife Service, there are no known northern long-eared bat (NLEB) maternity roost trees or hibernaculum in Freeborn County. There are very few trees and water sources within the Project Area, so impacts to NLEB and their habitat is not expected. Similarly, the Project is not expected to impact migratory birds.<sup>230</sup>

172. The largest impact to wildlife associated with the Project would be fencing and plastic erosion control netting. Studies estimate that one ungulate per year becomes entangled for every two and one-half miles of fence. Deer can jump many fences, “but smooth or barbed-wire can snag animals and tangle legs, especially if wires are loose and spaced too closely together.” Predators can use fences to corner and kill prey species. Bird injuries or mortality occurs from fencing “due to lack of visibility” and low flying birds such as grouse and owls are also vulnerable to fence collisions.<sup>231</sup>

173. Movement of large mammals, such as white-tailed deer, will not be impeded within the Project Area. Hayward Solar plans to use lightweight agricultural woven wire fencing extending approximately eight feet above grade around the Project arrays/construction units for safety and security purposes to prevent larger wildlife and the public from accessing Project electrical equipment. This fencing will be topped by three-four strands of smooth wire (and not barbed wire). “High Voltage Keep Out” signs will be placed in accordance with National Electric Code (NEC) requirements along the fence line. There will be wide corridors between fenced areas throughout the Project Area. The arrangement of the fenced areas of the Project array relative to existing roads and utilities provide various pathways through the Project Area which would allow wildlife to cross. These corridors will allow larger wildlife various options to cross unimpeded through the Project Area. The fencing proposed by Hayward Solar considered the impact on wildlife.<sup>232</sup>

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<sup>227</sup> Ex. EERA-8 at 61 (EA).

<sup>228</sup> Ex. HS-107 at 81 (Application for a Site Permit (Corrected)).

<sup>229</sup> See Ex. EERA-8 at 62 (EA).

<sup>230</sup> See Ex. HS-107 at 80, 82 (Application for a Site Permit (Corrected)) and Ex. HS-127 at 10 (Direct Testimony of Michael Roth).

<sup>231</sup> Ex. EERA-8 at 62 (EA).

<sup>232</sup> Ex. HS-107 at 20-21, 81-82 (Application for a Site Permit (Corrected)); Ex. HS-127 at 9 (Direct Testimony of Michael Roth).

174. To comply with the NEC, security fencing around the Project substation will consist of six-foot high chain-link fence with one foot of barbed wire at the top for security and safety purposes. High voltage warning signs will also be installed on the Project substation fence. The record demonstrates that six-foot high chain-link fence with one foot of barbed wire at the top is appropriate for the Project substation.<sup>233</sup>

175. EERA staff noted that potential impacts to wildlife, particularly deer, could be mitigated by placing visibility markers at appropriate locations along the Project's perimeter fencing. EERA staff proposed a special condition requiring the permittee to place visibility markers at appropriate locations along the Project's perimeter fencing to mitigate impacts to wildlife and requiring the permittee to coordinate with the DNR regarding to locations of visibility markers.<sup>234</sup> EERA did not provide any data or other evidence indicating visibility markers are warranted for the Project. Further, DNR has not requested visibility markers be placed along the perimeter fencing. The fencing proposed by Hayward Solar is consistent with acceptable standards for this type of project.

176. In its April 15, 2022 comments, DNR recommended that, due to entanglement issues with small animals, the site permit include a special condition requiring erosion control blankets to be limited to "bio-netting" or "natural netting" types and mulch products without synthetic fiber additives.<sup>235</sup> In its response to comments, Hayward Solar stated it has no objection to this special condition.<sup>236</sup>

177. The record demonstrates that Hayward has taken steps to avoid and minimize impacts to wildlife. Further, the Sample Site Permit contains general conditions that adequately protect wildlife. Section 8.12 (Wildlife Injuries and Fatalities) of the Sample Site Permit requires permittees to report any wildlife injuries and fatalities to the Commission on a quarterly basis.

## 2. Vegetation

178. The majority of the Project Area is cultivated agricultural land. Few areas with trees exist in the land control area, although one windbreak remnant exists.<sup>237</sup>

179. There is no DNR-mapped native prairie in the Project Area. There are no records of native prairie or native plant communities within the Project Area.<sup>238</sup>

180. A limited amount of tree clearing may be necessary to prevent shading of some panels; however, the Project was designed to avoid and minimize the need for tree removal and relatively few trees are located within the Project Area.<sup>239</sup> A majority of the

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<sup>233</sup> See Ex. HS-127 at 9 (Direct Testimony of Michael Roth) and Ex. HS-107 at 20-21 (Application for a Site Permit (Corrected)).

<sup>234</sup> EERA Hearing Comments (April 15, 2022) (eDocket No. [20224-184798-01](#)).

<sup>235</sup> DNR Comments (April 15, 2022) (eDocket No. [20224-184795-01](#)).

<sup>236</sup> Hayward Solar Response to Comments (April 25, 2022) (eDocket No. [20224-185109-01](#)).

<sup>237</sup> See Ex. EERA-8 at 59-60 (EA); Ex. HS-107 at 79 (Application for a Site Permit (Corrected)).

<sup>238</sup> See Ex. EERA-8 at 60 (EA); Ex. HS-107 at 80 (Application for a Site Permit (Corrected)).

<sup>239</sup> See Ex. EERA-8 at 59-60 (EA); Ex. HS-107 at 80-81 (Application for a Site Permit (Corrected)).

Project infrastructure and facilities are located within areas currently in row-crop agriculture. Hayward Solar will avoid and minimize impacts to vegetation to the extent practicable within the context of the Project and applying applicable buffers and setbacks. Construction of the Project will eliminate vegetative cover at access roads, Project substation, O&M building, and parking lot.<sup>240</sup>

181. The record demonstrates that overall, the Project will result in a net improvement to vegetative cover in the Project Area 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, Hayward Solar anticipates site restoration, seeding, establishing, maintaining and monitoring disturbed areas and areas below the PV arrays in accordance with the AIMP and VMP plans. Native seed mixes developed in cooperation with DNR will be used. 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.<sup>241</sup>

182. Hayward Solar has developed its VMP in consultation with DNR and other state agencies to guide site preparation, installation of prescribed seed mixes, and management of invasive species and noxious weeds. Hayward Solar revised its VMP to reflect changes made following Hayward Solar's review of the Vegetation and Establishment Management Plan Guidance document, as well as comments received from and consultation with the state VMPWG, which is comprised of representatives of EERA, DNR, the Minnesota Department of Agriculture and the BWSR.<sup>242</sup> Additionally, Hayward Solar has stated that it intends to re-evaluate the VMP to determine if any changes are needed and continue coordinating with DNR. Hayward Solar has stated that it plans to file the final VMP prior to initiation of construction.<sup>243</sup>

183. EERA staff proposed a special condition requiring that the permittee develop a VMP in coordination with the Department of Commerce, DNR, BWSR, and MPCA; requiring that the VMP and documentation of the coordination efforts between the permittee and the coordinating agencies be filed at least 14 days prior to the pre-construction meeting; requiring the permittee provide all affected landowners with a copy

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<sup>240</sup> See Ex. EERA-8 at 59-60 (EA); Ex. HS-107 at 80-81 (Application for a Site Permit (Corrected)).

<sup>241</sup> Ex. EERA-8 at 59-60 (EA); Ex. HS-107 at 80-81 (Application for a Site Permit (Corrected)).

<sup>242</sup> See Ex. EERA-8 at 60-61 (EA), Ex. HS-127 at 9 (Direct Testimony of Michael Roth), and Ex. HS-130 at 4-5 (Direct Testimony of Joseph Finocchiaro); see also Ex. HS-112 (SP Application Appendix E – Vegetation Management Plan).

<sup>243</sup> See Ex. EERA-8 at 60-61 (EA), Ex. HS-127 at 9 (Direct Testimony of Michael Roth), and Ex. HS-130 at 4-5 (Direct Testimony of Joseph Finocchiaro); see also Ex. HS-112 (SP Application Appendix E – Vegetation Management Plan) and Ex. HS-111 (SP Application Appendix D – Agricultural Impact Mitigation Plan).

of the VMP; and specifying information that the VMP must include.<sup>244</sup> In its response to comments, Hayward Solar stated it has no objection to this special condition.<sup>245</sup>

184. EERA staff also proposed changes to Section 4.3.8 of the Sample Site Permit (Beneficial Habitat), so that the section addresses only beneficial habitat.<sup>246</sup> In its response to comments, Hayward Solar stated it has no objection to this special condition.<sup>247</sup>

185. Hayward Solar has also developed 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. Hayward Solar will follow the best management practices (BMPs) set forth in the AIMP during construction and operation, including erosion and sediment control measures.<sup>248</sup>

186. In accordance with the Project's VMP, AIMP, and SWPPP, during the operating life of the Project, erosion control will be further accomplished by establishment of a perennial, primarily native vegetative cover under the solar arrays and installation of gravel roads with culverts (as necessary) to redirect concentrated surface water. Additionally, as outlined in the EA, Hayward Solar will take steps during the 2022 growing season to ensure proper seed mixes for the site, including: collecting and analyzing soil samples, interviewing landowners and farmers who are familiar with the Project Area, re-evaluating the VMP to determine if any changes are needed, reviewing the availability of seed mixes for the 2023 growing season (the anticipated construction timeframe), and coordinating with DNR staff.<sup>249</sup>

187. The record demonstrates that Hayward Solar has taken steps to avoid and minimize impacts to vegetation. Further, the Sample Site Permit contains adequate conditions to monitor and mitigate the Project's potential impacts on vegetation. Section 4.3.7 (Vegetation Removal) of the Sample Site Permit requires that vegetation clearing be limited to only the extent necessary for construction access and safe operation and maintenance of the Project. Section 4.3.9 (Application of Pesticides) discusses restricted pesticide use. Section 4.3.10 (Invasive Species) requires permittees to employ BMPs to avoid the potential introduction and spread of invasive species on lands disturbed by Project construction. Section 4.3.11 (Noxious Weeds) requires permittees to take all

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<sup>244</sup> EERA Hearing Comments (April 15, 2022) (eDocket No. [20224-184798-01](#)).

<sup>245</sup> Hayward Solar Response to Comments (April 25, 2022) (eDocket No. [20224-185109-01](#)).

<sup>246</sup> EERA Hearing Comments (April 15, 2022) (eDocket No. [20224-184798-01](#)).

<sup>247</sup> Hayward Solar Response to Comments (April 25, 2022) (eDocket No. [20224-185109-01](#)).

<sup>248</sup> See Ex. EERA-8 at 60-61 (EA); Ex. HS-130 at 4-5 (Direct Testimony of Joseph Finocchiaro); Ex. HS-111 (SP Application Appendix D – Agricultural Impact Mitigation Plan).

<sup>249</sup> See Ex. EERA-8 at 60-61 (EA); Ex. HS-127 at 9 (Direct Testimony of Michael Roth); Ex. HS-130 at 4-5 (Direct Testimony of Joseph Finocchiaro); see also Ex. HS-112 (SP Application Appendix E – Vegetation Management Plan); Ex. HS-111 (SP Application Appendix D – Agricultural Impact Mitigation Plan).

reasonable precautions against the spread of noxious weeds during all phases of construction.<sup>250</sup>

### 3. Soils, Geologic, and Groundwater Resources

188. Construction of the Project will disturb approximately 1,272.7 acres within the Project Area. Of this, about 19 acres will be graded. As with any ground disturbance, the potential exists for soil compaction and erosion. Construction may require some amount of grading to provide a level surface for the foundations for the Project Substation, O&M building, access roads, and spot grading for the solar arrays, foundations and inverter skid locations. Because the Project is located on relatively level existing agricultural fields, a relatively small amount of grading will be necessary for the Project overall given its size. Additional soil impacts during construction will come from the installation of the direct-embedded piers for the solar arrays and inverter skids. Soil compaction will be mitigated by use of low-impact equipment and methods, regrading and tilling these areas following construction.<sup>251</sup>

189. The type of electrical collection system used would affect soils differently. In all systems, some trenching will be required to bury electrical cables. Impacts are most substantial with the belowground system and decrease substantially with above-ground systems because trenching is not required.<sup>252</sup>

190. During operation of the Project, ongoing soil compaction could occur from the use of access roads. This impact is expected to be negligible, confined to the roadbed and mainly from relatively light-duty maintenance vehicles. Overall, the Project is expected to reduce the potential for erosion by establishing permanent vegetation, in contrast to the current amount of exposed soils common to row cropping in the existing agriculture fields. Potential erosion will be further minimized by dressing access roads with gravel and installing culverts under access roads where necessary to redirect concentrated surface water runoff.<sup>253</sup> Additionally, Hayward Solar has preliminarily designed 10 drainage basins throughout the Preliminary Development Area that range in size from approximately 0.25 to 3.5 acre to manage stormwater runoff from the Project during operation. These basins are located in existing low areas that also contain hydric soils and for which the preliminary design for solar facilities has avoided. These areas will be vegetated with a wet seed mix that will help stabilize soils after rain events.<sup>254</sup>

191. The Project Area is well drained through existing drainage systems such as drain tile and judicial drainage ditch systems. There are areas in the Project Area where historic wetlands were likely present, but those areas have been drained (e.g., by installation of drain tiles and judicial drainage ditches). Hayward Solar will restore,

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<sup>250</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)).

<sup>251</sup> See Ex. HS-125 at 3 (CN and SP Application Amendment); Ex. HS-107 at 68-69 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 55-57 (EA).

<sup>252</sup> Ex. EERA-8 at 57 (EA).

<sup>253</sup> See Ex. HS-107 at 68-69 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 57 (EA).

<sup>254</sup> Ex. HS-130 at 5 (Direct Testimony of Joseph Finocchiaro).

replace, or repair the existing subsurface and surface drainage systems to the greatest extent practicable in the Project Area during Project construction and operation.<sup>255</sup>

192. Hayward Solar has developed an AIMP for the Project 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's AIMP specifically addresses construction in the type of soil conditions present in the Project Area. Hayward Solar will follow the BMPs set forth in the AIMP during construction and operation, including erosion and sediment control measures. Additionally, Hayward Solar's VMP lists BMPs, that while directly related to vegetation, will stabilize soils.<sup>256</sup> Additionally, Hayward Solar will obtain a National Pollutant Discharge Elimination System (NPDES) permit from MPCA to discharge stormwater from construction facilities. BMPs will be used during construction and operation to protect topsoil and adjacent resources and to minimize soil erosion. In addition, a SWPPP will be developed for the Project prior to construction that will include BMPs such as silt fencing (or other erosion control devices), revegetation plans, and management of exposed soils to prevent erosion.<sup>257</sup>

193. Private wells exist throughout the Project vicinity; however, no verified drinking water wells are within the Project Area. Three irrigation wells are present in the Project Area. Project facilities are not likely to affect the use of existing water wells. The status of these three wells is unknown, but the wells will be identified and avoided if possible or properly decommissioned if avoidance is impossible and the underlying landowner consents. If an unknown well is discovered that was not mapped on available mapping resources, Hayward Solar will assess whether the well is open, coordinate with the underlying landowner and cap it, if necessary and approved by the underlying landowner, in accordance with Minnesota Department of Health requirements.<sup>258</sup>

194. Impacts to geologic and groundwater resources are not anticipated.<sup>259</sup>

195. The record demonstrates that Hayward Solar has taken steps to avoid and minimize negative impacts to soils, geologic, and groundwater resources. Further, the Sample Site Permit contains adequate conditions to monitor and mitigate the Project's potential impacts on soils, geologic, and groundwater resources. Sections 4.3.1 (Topsoil Protection), 4.3.2 (Soil Compaction), and 4.3.3 (Soil Erosion and Sediment Control) of the Sample Site Permit address soil related impacts: 4.3.1 requires protection and segregation of topsoil; 4.3.2 requires measures to minimize soil compaction; and 4.3.3 requires the permittee to implement erosion prevention and sediment control practices recommended by the MPCA and to obtain a NPDES Construction Stormwater Permit from the MPCA, which requires both temporary and permanent stormwater controls.

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<sup>255</sup> *Id.*; Ex. EERA-8 at 58 (EA).

<sup>256</sup> Ex. HS-130 at 3-4 (Direct Testimony of Joseph Finocchiaro); Ex. EERA-8 at 58 (EA).

<sup>257</sup> See Ex. HS-107 at 69 (Application for a Site Permit (Corrected)); Ex. EERA-8 at 57-58 (EA).

<sup>258</sup> Ex. HS-107 at 72 (Application for a Site Permit (Corrected)).

<sup>259</sup> See Ex. EERA-8 at 55-56 (EA); Ex. HS-107 at 70, 72-73 (Application for a Site Permit (Corrected)).



Section 4.3.3 also requires implementation of reasonable erosion and sediment control measures, contours graded to provide for proper drainage, and all disturbed areas be returned to pre-construction conditions.<sup>260</sup>

#### 4. Surface Water and Wetlands

196. Hayward Solar identified surface water and floodplain resources for the Project Area.<sup>261</sup>

197. The Project is located within the Shell Rock River Watershed, which is part of the Upper Mississippi River Basin. No rivers, streams, lakes or DNR Public Watercourses or Waterbodies are within the Project site. The nearest MDNR Public Waterbody is Lake Albert Lea, located approximately three miles west of the Project Area. The nearest DNR Public Watercourse is a named stream (Peter Lund Creek) located approximately 0.5 miles west of the Project Area, flowing to the west into Lake Albert Lea. There are no National Hydrography Dataset (NHD) mapped waterbodies within the Project Area. There are ten segments of two named NHD watercourses, comprised of public ditches, within the Project Area.<sup>262</sup> Few remaining surface water features exist as the area now has numerous drain tiles and judicial drainage ditches to remove water from agricultural fields.<sup>263</sup>

198. County Ditch No. 62 and County Ditch No. 47 are within the northern portion of the Project Area.<sup>264</sup> Existing Freeborn County agriculture field drain tile is located in the northernmost section of the Project Area and a network of ditches exists throughout the site. Additionally, judicial drainage ditches are located along 190th and 200th Streets, County Highway 102, and 840th Avenue. In addition to county drain tile information from Freeborn County, Hayward Solar has obtained maps of private drain tile within farm fields located within most of the Project Area from participating landowners. Review of these maps indicate a number of private drain tiles are located throughout the Project Area which appear to be connected to the surrounding County drain tile/judicial drainage ditch systems. Hayward Solar will further evaluate drain tile locations and take this into account as final design/engineering is completed for the Project. Hayward Solar will restore, replace, or repair the existing drain tile across the Project site and avoid impacts to judicial drainage ditches to the greatest extent practicable.<sup>265</sup>

199. The Project Area is within an area of minimal flood hazard as determined by the Federal Emergency Management Agency. It is not in a mapped floodplain; therefore, impacts to floodplains will not occur.<sup>266</sup>

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<sup>260</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)).

<sup>261</sup> Ex. HS-107 at 73-74 (Application for a Site Permit (Corrected)); see also Ex. HS-126 (CN and SP Application Amendment – Amended Figures 1-16 and New 3A).

<sup>262</sup> Ex. EERA-8 at 58-59 (EA); Ex. HS-107 at 73-74 (Application for a Site Permit (Corrected)).

<sup>263</sup> Ex. HS-130 at 2 (Direct Testimony of Joseph Finocchiaro).

<sup>264</sup> Ex. EERA-8 at 58 (EA); Ex. HS-107 at 73-74 (Application for a Site Permit (Corrected)).

<sup>265</sup> Ex. HS-130 at 3-4 (Direct Testimony of Joseph Finocchiaro).

<sup>266</sup> Ex. EERA-8 at 65 (EA).

200. The Project will not directly impact surface waters.<sup>267</sup>

201. Desktop and field delineations of wetlands have been conducted for the Project. A wetland area was delineated along the north and west boundaries of the Project Area. However, neither SMMPA nor Project facilities would impact or be constructed within the wetlands. The wetlands may be temporarily disturbed during the installation of the SMMPA Line Tap and, if so, will be restored to pre-construction conditions after construction. The planned Project facilities will not be installed within either of these wetlands. All field delineated wetlands have been identified and accounted for in the design through avoidance of placing Project infrastructure in the delineated wetlands to the greatest extent practicable.<sup>268</sup> The Project layout avoids wetlands to the greatest extent practicable, including all farmed wetlands. With proper sediment control measures, potential impacts are expected to be negligible. Impacts to undisturbed wetlands will not occur.<sup>269</sup>

202. Temporary dewatering may be required during construction. Any dewatering required during construction will be managed in accordance with the Project's SWPPP and discharged to the surrounding surface, thereby allowing it to infiltrate back into the ground to minimize potential impacts. If dewatering is necessary, Hayward Solar will obtain a Water Appropriation Permit from DNR if the applicable permit thresholds are expected to be exceeded during construction.<sup>270</sup>

203. The record demonstrates that Hayward Solar has taken steps to avoid and minimize impacts to surface waters and wetlands. Further, the Sample Site Permit contains conditions that adequately address potential impacts. Section 4.3.5 (Wetlands and Water Resources) addresses impacts to wetlands and other water resources. Section 4.3.3 (Soil Erosion and Sediment Control) requires reasonable measures to minimize erosion and sedimentation during construction.<sup>271</sup>

## 5. Air and Water Emissions

204. Temporary short-term air quality impacts would occur during the construction phase of the Project as a result of exhaust emissions from construction equipment and other vehicles, and from fugitive dust from wind erosion of agricultural land that becomes airborne during dry periods of construction activity. Once operational, the Project will not generate criteria pollutants or carbon dioxide.<sup>272</sup>

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<sup>267</sup> *Id.* at 58.

<sup>268</sup> See Ex. HS-125 at 7, 12, 15 (CN and SP Application Amendment); Ex. HS-130 at 3 (Direct Testimony of Joseph Finocchiaro).

<sup>269</sup> Ex. EERA-8 at 66 (EA); Ex. HS-130 at 3-4 (Direct Testimony of Joseph Finocchiaro).

<sup>270</sup> Ex. HS-107 at 73 (Application for a Site Permit (Corrected)).

<sup>271</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)).

<sup>272</sup> Ex. EERA-8 at 52-53 (EA); Ex. HS-107 at 66 (Application for a Site Permit (Corrected)).

205. BMPs will be used during construction and operation of the Project to minimize dust emissions.<sup>273</sup>

206. Overall, the Project is expected to have a positive impact on water quality.<sup>274</sup>

## 6. Solid and Hazardous Wastes

207. The Project is not expected to generate significant quantities of solid waste during operation. The Project will require use of certain 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. In addition, some waste streams will be generated at the O&M building. These materials will also be stored, recycled, and/or disposed of in accordance with applicable local, State, and Federal regulations.<sup>275</sup>

208. Project operation 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. Herbicides may be used for vegetation management which will follow applicable regulatory use and management requirements or as required by applicable permit(s). Pesticides may be used around inverters and other electrical cabinets to control insects and any use would also follow applicable requirements. A Spill Prevention, Control, and Countermeasure (SPCC) plan will be required for the Project substation transformer. The transformer will be properly designed, constructed and operated per the SPCC plan and in accordance with EPA and MPCA requirements; it will be equipped with required secondary containment to contain a potential spill or leak and to prevent impacting the ground from transformer oil.<sup>276</sup>

209. Section 4.3.16 (Cleanup) of the Sample Site Permit 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 4.3.17 (Pollution and Hazardous Wastes) of the Sample Site Permit 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 operation of the facility, including decommissioning.<sup>277</sup>

## F. Rare and Unique Natural Resources

210. Hayward Solar reviewed the U.S. Fish and Wildlife Service (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

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<sup>273</sup> Ex. HS-107 at 66 (Application for a Site Permit (Corrected)).

<sup>274</sup> Ex. EERA-8 at 59 (EA).

<sup>275</sup> Ex. HS-102 at 50 (Application for a Certificate of Need).

<sup>276</sup> Ex. HS-107 at 73 (Application for a Site Permit (Corrected)).

<sup>277</sup> See Sample Site Permit (January 3, 2022) (eDocket No. [20221-181162-01](#)).

within or near the Project Area. Hayward Solar also submitted a formal DNR's Natural Heritage Information System (NHIS) request, and DNR reviewed the Project for documented occurrences of federally- or state-listed species, state Species of Concern, and rare habitats.<sup>278</sup>

211. According to the USFWS IPaC, one federally-listed species may occur within or near the Project Area: the federally-threatened NLEB. There are no known NLEB maternity roost trees or hibernaculum in Freeborn County. There are very few trees and water sources within the Project Area, so impacts to NLEB and their habitat is not expected. Additionally, few trees are expected to be removed for construction of the Project.<sup>279</sup>

212. According to the USFWS habitat connectivity model for the federally endangered rusty-patched bumble bee (RPBB), there is approximately 352 acres of RPBB Low Potential Zone within the one-mile Project buffer. No negative impacts on rusty patched bumble bees are expected because the RPBB Low Potential Zone does not fall within the Project Area, and with the establishment of native perennials, negative impacts to RPBB is not expected.<sup>280</sup>

213. The DNR formal response to the NHIS request for the Project did not identify species of concern and the DNR stated the Project will not negatively affect any known occurrences of rare features. Therefore, impacts are not anticipated.<sup>281</sup>

### **III. SITE PERMIT CONDITIONS**

214. The Sample Site Permit 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.

215. Many of the conditions contained in the Sample Site Permit 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 Sample Site Permit for this Project.

216. On April 15, 2022, EERA provided suggested changes to Section 4.3.8 of the Sample Site Permit related to Beneficial Habitat. The revisions are as follows:

#### **4.3.8 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 enhances soil water

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<sup>278</sup> Ex. HS-107 at 82 (Application for a Site Permit (Corrected)).

<sup>279</sup> *Id.*

<sup>280</sup> Ex. HS-107 at 82 (Application for a Site Permit (Corrected)).

<sup>281</sup> Ex. EERA-8 at 66 (EA); Ex. HS-107 at 82 (Application for a Site Permit (Corrected)).

retention and reduces 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). All documents required by BWSR for meeting Habitat Friendly Solar Certification and maintenance of that Certification, if filed with BWSR, should also be filed with the Commission.<sup>282</sup>

217. EERA provided suggested changes to Section 9.1 regarding the decommissioning plan, as follows:

### 9.1 Decommissioning Plan

The Permittee shall comply with the provisions of the most recently filed and accepted decommissioning plan. The initial version of the decommissioning plan was submitted for this project as part of the May 5, 2021, site permit application. The Permittee shall file submit an updated decommissioning plan, incorporating comments and information from the permit issuance process and any updates associated with final construction plans, with to the Commission at least fourteen 14 days prior to the pre-operation pre-construction meeting and provide updates to the plan every five years thereafter. The decommissioning plan shall be updated every five years following the commercial operation date.

The decommissioning plan shall provide information identifying all surety and financial securities established for decommissioning and site restoration.<sup>283</sup>

EERA made the following additional comments for the benefit of the Applicant:

- Staff recommends that the plan include a site map identifying major components of the project.
- An updated plan should include a discussion of the use of generation output and should describe permits necessary for decommissioning the project.
- Staff notes that the plan indicates a net financial decommissioning surplus. This surplus is based on what EERA staff believes is a relatively high value for used solar panels at the project's end of life. Staff acknowledges the difficulty in estimating the value of used solar

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<sup>282</sup> EERA Hearing Comments (Apr. 15, 2022) (eDocket No. [20224-184798-01](#)).

<sup>283</sup> *Id.*

panels 30 years into the future. Staff recommends that the permittee continue to evaluate the value of used solar panels, at a minimum, on the five-year schedule required by the Commission's sample permit. A section should be added to the plan reflecting the Commission's required five-year update schedule. Further, the plan should note that it must be updated with any change of project ownership.

- Consistent with Solar and Wind Decommissioning Working Group recommendations, staff recommends that a financial surety for decommissioning the project be established no later than the tenth year of operation and that the surety provide for full decommissioning costs prior to the expiration of any power purchase agreement. A final, updated plan should discuss the anticipated beneficiary of the surety.<sup>284</sup>

218. EERA also proposed the following with regard to the VMP:

### **5.1 Vegetation Management Plan**

The Permittee shall develop a vegetation management plan using best management practices established by the DNR and BWSR. The vegetation management plan shall be prepared in coordination with the Department of Commerce, DNR, BWSR, and MPCA. The vegetation management plan and documentation of the coordination efforts between the Permittee and the coordinating agencies shall be filed at least 14 days prior to the preconstruction meeting. The Permittee shall provide all affected landowners with a copy of the plan.

The vegetation management plan must include the following:

- Management objectives addressing short term (Year 0-5, seeding and establishment) and long term (Year 5 through the life of the permit) goals.
- A description of planned restoration and vegetation management activities, including how the site will be prepared, timing of activities, how seeding will occur (broadcast, drilling, etc.), and the types of seed mixes to be used.
- A description of how the site will be monitored and evaluated to meet management goals.

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<sup>284</sup> *Id.*

- A description of the management tools used to maintain vegetation (e.g., mowing, spot spraying, hand removal, fire, grazing, etc.), including the timing and frequency of maintenance activities.
- Identification of the third-party (e.g., consultant, contractor, site manager, etc.) responsible for restoration, monitoring, and long-term vegetation management of the site.
- Identification of on-site noxious weeds and invasive species (native and non-native) and the monitoring and management practices to be utilized.
- A site plan showing how the site will be revegetated and that identifies the corresponding seed mixes. Best management practices should be followed concerning seed mixes, seeding rates, and cover crops.

Additionally, and for future solar projects, EERA staff recommends that a VMP be a standard permit condition in the Commission's sample site permit.<sup>285</sup>

219. EERA recommended adding the following special permit condition requiring the Permittee to develop an AIMP in coordination with the MDA and file it with the Commission 14 days prior to the pre-construction meeting:

### **5.2 Agricultural Impact Management Plan**

The Permittee shall develop an agricultural impact mitigation plan (AIMP) in coordination with the MDA. The AIMP shall be filed at least 14 days prior to the pre-construction meeting. The Permittee shall provide all affected landowners with a copy of the plan.<sup>286</sup>

220. EERA proposed adding the following special permit condition requiring an independent monitor:

### **5.3 Independent Monitor**

The Permittee shall employ an independent, third-party monitor to ensure compliance with this site permit. Prior to construction, and in consultation with Department of Commerce, Energy Environmental Review and Analysis (EERA) staff, the Permittee shall develop a scope of work for the monitor. If the monitor will report to several agencies (e.g., the Minnesota Department of Agriculture and

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<sup>285</sup> *Id.*

<sup>286</sup> *Id.*

Commerce) the scope of work must be developed in coordination with all agencies. The scope of work must be approved by EERA and all agencies receiving monitoring reports. All costs for the monitor will be borne by the Permittee.

The Permittee shall file an approved scope of work for the monitor with the Commission 30 days prior to commencing construction. The Permittee shall file the name, address, email, phone number, and emergency phone number of the third-party monitor 14 days prior to commencing construction.<sup>287</sup>

221. EERA proposed adding a special permit condition requiring the permittee to coordinate with local residences and the KOA campground regarding potential noise impacts:

#### **5.4 Noise Coordination**

The Permittee shall coordinate with local residents, including the KOA campground north of I-90, regarding potential noise impacts prior to the installation of any foundation posts. The Permittee shall take reasonable measures to minimize the noise impacts associated with installation of the posts.<sup>288</sup>

222. EERA proposed adding a special permit condition requiring the permittee to coordinate with local snowmobile trail associations to reroute Trail 133 (snowmobile trail):

#### **5.5 Snowmobile Trails**

The Permittee shall coordinate with local snowmobile trail associations to reroute Freeborn County Trail 133 and any associated snowmobile trails impacted by the project.<sup>289</sup>

223. In its April 14, 2022 comments, DNR recommended adding a special permit condition on lighting at the Project substation and O&M building:

The DNR recommends a special permit condition to minimize visual impacts of the substation, as well as the operations and maintenance building, by using shielded and downward facing lighting and lighting that minimizes blue hue. LED lighting is often high in blue light, which is harmful to birds, insects, and fish. A similar special permit condition was included for the substation associated with the Frazee to Erie 115 kV Transmission Line Project (Docket TL-20-423): *Permittees must use shielded and downward*

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<sup>287</sup> *Id.*

<sup>288</sup> *Id.*

<sup>289</sup> *Id.*



*facing lighting and LED lighting that minimizes blue hue at the project substation. Downward facing lighting must be clearly visible on the plan and profile submitted for the project.*<sup>290</sup>

224. DNR also recommended adding a special permit condition requiring wildlife-friendly erosion control:

The Permittee shall use only “bio-netting” or “natural netting” types *and* mulch products without synthetic (plastic) fiber additives.<sup>291</sup>

Based on the foregoing findings of fact and the record in this proceeding, the Judge makes the following:

### **CONCLUSIONS OF LAW**

1. Any of the forgoing findings of fact more properly designated as conclusions of law are hereby adopted as such.

2. The Commission and the Administrative Law Judge have jurisdiction over the application for a site permit for the up to 150 MW AC proposed Project pursuant to Minn. Stat. §§ 216E.02 and 216E.03.

3. Hayward Solar has adequately addressed all of the certificate of need requirements for which the Commission did not provide an exemption. Therefore, a Certificate of Need should be issued.

4. The Commission accepted the SP Application as substantially complete on June 29, 2021.<sup>292</sup>

5. Hayward Solar has substantially complied with the procedural requirements of Minn. Stat. Ch. 216E and Minn. R. Ch. 7850.

6. The Commission has substantially complied with the procedural requirements of Minn. Stat. Ch. 216E and Minn. R. Ch. 7850.

7. EERA has conducted an appropriate environmental analysis of the Project for purposes of the Site Permit proceeding pursuant to Minn. R. 7850.3700.

8. Public hearings were held on March 28, 2022 (remote-access) and March 29, 2022 (in-person). 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.

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<sup>290</sup> DNR Letter to PUC (Apr. 14, 2022) (emphasis in original) (eDockets No. [20224-184795-01](#)).

<sup>291</sup> *Id.*

<sup>292</sup> Order (June 29, 2021) (eDocket No. [20216-175529-01](#)).

9. The Commission has the authority under Minn. Stat. § 216E.03 to place conditions in a LEPGP site permit.

10. The Sample Site Permit contains a number of important mitigation measures and other reasonable conditions.

11. It is reasonable to amend the Sample Site Permit to include the changes to Section 4.3.8 of the Sample Site Permit as proposed by EERA staff.

12. It is reasonable to amend the Sample Site Permit to include the changes to Section 9.1 of the Sample Site Permit as proposed by EERA, with consultation with the Applicant.

13. It is reasonable to amend the Sample Site Permit to include the special permit condition regarding the vegetation management plan as proposed by EERA.

14. It is reasonable to amend the Sample Site Permit to include the special permit condition requiring development of an AIMP as proposed by EERA.

15. It is reasonable to amend the Sample Site Permit to include the special permit condition regarding the agricultural impact mitigation plan as proposed by EERA.

16. It is reasonable to amend the Sample Site Permit to include the special permit condition regarding the independent monitor as proposed by EERA, with consultation with the Applicant.

17. It is reasonable to amend the Sample Site Permit to include the special permit condition regarding noise coordination as proposed by EERA.

18. It is reasonable to amend the Sample Site Permit to include the special permit condition regarding snowmobile trails as proposed by EERA.

19. It is reasonable to amend the Sample Site Permit to include the special permit condition regarding lighting at the Project substation and O&M building as proposed by DNR, with consultation with Applicant.

20. It is reasonable to amend the Sample Site Permit to include the special permit condition regarding wildlife-friendly erosion control as proposed by DNR.

21. The record in this proceeding demonstrates that Hayward Solar has satisfied the criteria for a Site Permit as set forth in Minn. Stat. § 216E.03 and Minn. R. Ch. 7850 and all other applicable legal requirements.

22. The Project, 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.

23. 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.

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

### RECOMMENDATION

Based upon these Conclusions, the Judge recommends that the Commission issue a Site Permit to Hayward Solar LLC, to construct and operate the up to 150 MW Hayward Solar Project in Freeborn County, and that the permit include the sample site permit conditions amended as set forth in paragraphs 11 through 20 of the conclusions above.

Dated: June 6, 2022



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Jim Mortenson  
Administrative Law Judge

### NOTICE

Notice is hereby given that exceptions to this Report, if any, by any party adversely affected must be filed under the time frames established in the Commission's rules of practice and procedure, Minn. R. 7829.1275, .2700 (2021), unless otherwise directed by the Commission. Exceptions should be specific and stated and numbered separately. Oral argument before a majority of the Commission will be permitted pursuant to Minn. R. 7829.2700, subp. 3. The Commission will make the final determination of the matter after the expiration of the period for filing exceptions, or after oral argument, if an oral argument is held.

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

June 6, 2022

See Attached Service List

**Re: *In the Matter of the Application of Hayward Solar LLC for a Certificate of Need for the up to 150 MW Hayward Solar Project in Freeborn County;***

***In the Matter of the Application of Hayward Solar LLC for a Site Permit for the up to 150 MW Hayward Solar Project in Freeborn County***

**OAH 5-2500-37666, 37667  
MPUC Docket No. IP-7053/CN-21-112  
MPUC Docket No. IP-7053/GS-21-113**

To All Persons on the Attached Service List:

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

If you have any questions, please contact me at (651) 361-7874, [michelle.severson@state.mn.us](mailto:michelle.severson@state.mn.us), or via facsimile at (651) 539-0310.

Sincerely,



MICHELLE SEVERSON  
Legal Assistant

Enclosure

cc: Docket Coordinator

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

**CERTIFICATE OF SERVICE**

<p><i>In the Matter of the Application of Hayward Solar LLC for a Certificate of Need for the up to 150 MW Hayward Solar Project in Freeborn County;</i></p> <p>In the Matter of the Application of Hayward Solar LLC for a Site Permit for the up to 150 MW Hayward Solar Project in Freeborn County</p>	<p>OAH Docket No.: 5-2500-37666, 37667</p>
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Dara Xiong certifies that on June 6, 2022, she served the true and correct **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** by eService, and U.S. Mail, (in the manner indicated below) to the following individuals:

Last Name	First Name	Email	Company Name	Delivery Method	View Trade Secret
Branam	A	abranam@arevonenergy.com	Arevon	Electronic Service	No
Commerce Attorneys	Generic Notice	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	Electronic Service	Yes
Duehr	Jeremy	jduehr@fredlaw.com	Fredrikson & Byron, P.A.	Electronic Service	No
Fairman	Kate	kate.frantz@state.mn.us	Department of Natural Resources	Electronic Service	No
Felix Gerth	Annie	annie.felix-gerth@state.mn.us	N/A	Electronic Service	No
Ferguson	Sharon	sharon.ferguson@state.mn.us	Department of Commerce	Electronic Service	No
Foley	Jacqueline	jfoley@arevonenergy.com	Arevon Energy	Electronic Service	No
Gerking	Kyle	kgerking@tenaska.com	Tenaska, Inc.	Electronic Service	No
Howe	Kari	kari.howe@state.mn.us	DEED	Electronic Service	No
Iurek	Breann	biurek@fredlaw.com	Fredrikson & Byron PA	Electronic	No

				Service	
Kirsch	Ray	Raymond.Kirsch@state.mn.us	Department of Commerce	Electronic Service	No
Kromar	Karen	karen.kromar@state.mn.us	MN Pollution Control Agency	Electronic Service	No
Matthews	Chris	cmatthews@arevonenergy.com	Arevon	Electronic Service	No
Mortenson	James	james.mortenson@state.mn.us	Office of Administrative Hearings	Electronic Service	Yes
Residential Utilities Division	Generic Notice	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	Electronic Service	Yes
Roos	Stephan	stephan.roos@state.mn.us	MN Department of Agriculture	Electronic Service	No
Roth	Michael	MRoth@tenaska.com	Tenaska, Inc.	Electronic Service	No
Sedarski	Joe	joe.sedarski@westwoodps.com	Westwood	Electronic Service	No
Seuffert	Will	Will.Seuffert@state.mn.us	Public Utilities Commission	Electronic Service	Yes
Shaddix Elling	Janet	jshaddix@janetshaddix.com	Shaddix And Associates	Electronic Service	Yes
Sosa	Sean	ssosa@arevonenergy.com	Arevon	Electronic Service	No
Todnem	Suzanne	suzanne.todnem@state.mn.us	Office of Administrative Hearings	Electronic Service	Yes
Warzecha	Cynthia	cynthia.warzecha@state.mn.us	Minnesota Department of Natural Resources	Electronic Service	No