

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

**In the Matter of the Request for  
Amendment of Permit Conditions by Elk  
Creek Solar, LLC for the 160 MW Elk  
Creek Solar Project in Rock County,  
Minnesota**

MPUC Docket No. IP-7009/GS-19-495  
OAH Docket No. 65-2500-39582

**ELK CREEK SOLAR, LLC'S  
PROPOSED FINDINGS OF FACT,  
CONCLUSIONS OF LAW, AND  
RECOMMENDATIONS**

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This matter was assigned to Administrative Law Judge Ann O'Reilly ("ALJ") to conduct a public hearing on the Site Permit Amendment Application (MPUC Docket No. GS-19-495) of Elk Creek Solar, LLC ("Elk Creek" or "Applicant") for a 160 MW solar energy generating system in Rock County (the "Project"). The Public Utilities Commission also requested that the ALJ prepare a summary report.

Public hearings on the Site Permit Amendment Application for the Project were held on February 12, 2024 (in-person) and February 13, 2024 (remote-access - telephone and internet). The factual record remained open until February 26, 2024, for the receipt of written public comments.

Jeremy P. Duehr, Fredrikson & Byron, P.A., 60 South Sixth Street, Suite 1500, Minneapolis, MN 55402, Tom Karas, Senior Developer, and Marc Morandi, Sr. Permitting Specialist, National Grid Renewables Development, LLC, 8400 Normandale Lake Blvd., Suite 1200, Bloomington, Minnesota 55347 appeared on behalf of Elk Creek.

Erika Wilder, Environmental Review Manager, 445 Minnesota Street, Suite 1500, St. Paul, MN 55101 appeared on behalf of the Minnesota Department of Commerce Energy, Environmental Review, and Analysis ("EERA").

Samuel Lobby, Minnesota Public Utilities Commission ("Commission" or "MPUC") Staff, 121 Seventh Place East, Suite 350, St. Paul, MN 55101 appeared on behalf of the Commission.

**STATEMENT OF ISSUE**

Has Elk Creek satisfied the criteria set forth in Chapter 216E of the Minnesota Statutes and Chapter 7850 of the Minnesota Rules for an amended site permit for the proposed Project?

**SUMMARY OF RECOMMENDATION**

Elk Creek has satisfied the applicable legal requirements and, accordingly, the Commission should grant a Site Permit for the Project, subject to the conditions discussed below.

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

## FINDINGS OF FACT

### **I. APPLICANT**

1. Elk Creek Solar, LLC, is a wholly owned subsidiary of subsidiary of National Grid Renewables Development, LLC (“NG Renewables”). NG Renewables is a utility-scale renewable energy developer headquartered in Bloomington, Minnesota that has developed multiple operating wind farms and solar facilities throughout the United States.<sup>1</sup>

2. NG Renewables has a multi-gigawatt development pipeline of wind and solar projects in various stages of development throughout the United States and 97 utility-scale and community solar projects completed. NG Renewables currently has approximately 1,300 megawatts (“MW”) of wind and solar projects under construction.<sup>2</sup>

### **II. SITE PERMIT AMENDMENT APPLICATION AND RELATED PROCEDURAL BACKGROUND**

3. On September 13, 2019, Elk Creek filed a Site Permit Application (the “Original Application”) with the Commission to construct a solar energy conversion facility with an 80 MW alternating current (“AC”) nameplate capacity located on 976 acres in Vienna Township, Rock County, Minnesota (the “80 MW Project”).<sup>3</sup>

4. On December 31, 2020, the Commission issued a certificate of need and site permit authorizing Elk Creek to construct and operate the 80 MW Project (the “2020 Site Permit”).<sup>4</sup>

5. On June 2, 2023, prior to the start of construction on the 80 MW Project, Elk Creek filed a Site Permit Amendment Application (“SPAA” or “Amendment Application”), under Minn. R. 7850.4900, with the Commission, requesting approval to expand the 80 MW Project boundary from 976 acres to 1,522 acres to accommodate an increase in the nameplate capacity to the full 160 MWs for which Elk Creek has executed Generation Interconnection Agreements with the Midcontinent Independent System Operator (“MISO”) and transmission owner.<sup>5</sup>

6. On June 12, 2023, the Commission issued a Notice of Comment Period on Elk Creek’s Amendment Application.<sup>6</sup>

7. On June 21, 2023, EERA filed comments on Elk Creek’s Amendment Application.<sup>7</sup>

8. On June 28, 2023, the Minnesota Department of Natural Resources (“DNR”) filed comments on Elk Creek’s Amendment Application.<sup>8</sup>

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<sup>1</sup> Ex. EC-5 at 1 (Site Permit Amendment Application (SPAA)).

<sup>2</sup> Ex. EC-5 at 1 (SPAA).

<sup>3</sup> Ex. EC-2 (Site Permit Application).

<sup>4</sup> Ex. PUC-1 (Order Issuing Site Permit).

<sup>5</sup> Ex. EC-5 at 1 (SPAA).

<sup>6</sup> Ex. PUC-2 (Notice of Comment Period on SPAA).

<sup>7</sup> Ex. EERA-1 (EERA Comments on SPAA).

<sup>8</sup> Comment by DNR (June 28, 2023) (eDocket No. [20236-196976-01](#)).

9. On July 12, 2023, Elk Creek filed reply comments in response to EERA and DNR comments recommending that the Commission review the Amendment Application as a site permit application for a new solar project.<sup>9</sup>

10. On August 16, 2023, Commission Staff issued an information request asking Elk Creek to file a new stand-alone site permit application to facilitate review of the Project in the event the Commission determines a site permit amendment process is not appropriate.<sup>10</sup>

11. On August 29, 2023, Elk Creek filed a stand-alone site permit application for the Project in response to the information request (the “Standalone Application”).<sup>11</sup>

12. On August 30, 2023, EERA filed comments with the Commission recommending that the Commission accept the Standalone Application as complete.<sup>12</sup>

13. On August 31, 2023, the Commission met to consider this matter.

14. On September 13, 2023, the Commission issued a Notice of Public Comment Period to solicit comments on the scope of the environmental assessment (“EA”).<sup>13</sup>

15. On October 4, 2023, DNR filed comments regarding the potential environmental impacts that should be considered in the EA.<sup>14</sup>

16. On October 10, 2023, the Commission issued an Order finding that the requested changes to the Project are appropriately evaluated under Minn R. 7850.4900’s site-permit-amendment process modified to require a public meeting, a supplemental EA, and an extension of the ten-day decision timelines in Minn R. 7850.4900, subp. 3.<sup>15</sup>

17. On October 23, 2023, EERA filed the EA Scoping Decision, which set forth the matters proposed to be addressed in the EA and identified certain issues outside the scope of the EA.<sup>16</sup>

18. On November 7, 2023, the ALJ issued an Order for Prehearing Conference setting the prehearing conference for November 14, 2023.<sup>17</sup>

19. On November 21, 2023, the ALJ issued a First Prehearing Order setting for the procedural deadlines in the proceedings.<sup>18</sup> The ALJ amended the First Prehearing Order on December 5, 2023.<sup>19</sup>

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<sup>9</sup> Ex. EC-6 (Elk Creek Reply Comment).

<sup>10</sup> Ex. PUC-4 (PUC Information Request).

<sup>11</sup> Ex. EC-7 (Standalone Application).

<sup>12</sup> Ex. EERA-2 (EERA Comments on Standalone Application Completeness).

<sup>13</sup> Ex. PUC-8 (Notice of Comment Period on Scope of EA).

<sup>14</sup> Ex. DNR-1 (DNR Comments).

<sup>15</sup> Ex. PUC-9 (Order Approving Modified Site Permit Amendment Process).

<sup>16</sup> Ex. EERA-3 (EA Scoping Decision).

<sup>17</sup> Order For Prehearing Conference (Nov. 7, 2023) (eDocket No. [202311-200328-01](#)).

<sup>18</sup> First Prehearing Order (Nov. 21, 2023) (eDocket No. [202311-200660-01](#)).

<sup>19</sup> Amended First Prehearing Order (Dec. 5, 2023) (eDocket No. [202312-201004-01](#)).

20. On January 11, 2024, the ALJ issued a Second Prehearing Order.<sup>20</sup>

21. On January 29, 2024, EERA issued the supplemental EA for the Project (“Supplemental EA”).<sup>21</sup> The purpose of the EA supplement is to provide information on the potential human and environmental impacts of the proposed amendment to the Project and possible mitigations for identified impacts. Notice of the availability of the supplemental EA was also published in the *EQB Monitor*.<sup>22</sup>

22. On January 29, 2024, the Commission issued a Notice Public Hearings, Availability of Environmental Assessment, and Comment Period notifying the public of the February 12 and 13, 2024, hearings and initiating a public comment period to close on February 26, 2024.<sup>23</sup>

23. On February 9, 2024, Elk Creek submitted direct testimony from Marc Morandi.<sup>24</sup>

24. On February 12, 2024, the ALJ presided over an in-person public hearing in Luverne, MN. Commission Staff, EERA Staff, and representatives from Elk Creek were present. Approximately 12 members of the public spoke at the hearing.

25. On February 13, 2024, the ALJ presided over a public hearing via remote means. Commission Staff, EERA Staff, and representatives from Elk Creek were present. No members of the public spoke at the hearing.

26. On February 26, 2024, EERA submitted comments recommending modifications to Elk Creek’s draft decommissioning plan and summarizing the proposed amendments to the 2020 Site Permit.<sup>25</sup>

27. By February 26, 2024, several additional written comments were submitted on the Project.

28. On March 7, 2024, the ALJ issued its Report to the Commission.<sup>26</sup>

29. On March 11, 2024, Elk Creek submitted responses to comments received during the public comment period.

### III. DESCRIPTION OF THE PROJECT

30. The proposed Project is an up to 160 MW AC nameplate capacity solar energy conversion facility in Vienna and Magnolia Townships, Rock County, Minnesota. The Project would also include associated facilities.<sup>27</sup>

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<sup>20</sup> Second Prehearing Order (Jan. 11, 2024) (eDocket No. [20241-202100-01](#)).

<sup>21</sup> Ex. EERA-4 (Supplemental EA).

<sup>22</sup> Ex. EERA-6 (*EQB Monitor* Notice of Supplemental EA Availability).

<sup>23</sup> Ex. PUC-10 (Notice of Public Hearing and Comment Period).

<sup>24</sup> Ex. EC-8 (Morandi Testimony).

<sup>25</sup> Ex. EERA-7 (EERA Comments)

<sup>26</sup> Ex. EC-18 (Report to the Commission).

<sup>27</sup> Ex. EC-5 at 3–4 (SPAA).

31. The Project is exempt from certificate of need requirements because Elk Creek is an independent power producer.<sup>28</sup>

32. Elk Creek is proposing to expand the PUC-approved 80 MW Project by increasing the approved Project boundary to 1,522 acres and the nameplate capacity of the Project to 160 MWs.<sup>29</sup>

33. The preliminary Project layout includes photovoltaic (“PV”) solar panels and racking, inverters, security fencing, Project substation, an operations and maintenance building (“O&M building”), on-site below-ground or hybrid below-ground/above-ground electrical collection and communication lines, and up to five weather stations (up to 20 feet tall).<sup>30</sup> There are seven laydown areas proposed in the preliminary Project layout.<sup>31</sup>

34. Similar to the design approved in the 2020 Site Permit, the Project will utilize PV panels with tempered glass varying in size approximately 4 to 7 feet long by 2 to 4 feet wide, and 1 to 2 inches thick.<sup>32</sup>

35. The panels will be installed on a linear axis tracking rack system that utilizes galvanized steel and aluminum for the foundations and frame with a motor that allows the racking to rotate from east to west throughout the day. Each tracking rack will contain multiple panels. On the tracking rack system, panels will be approximately 15 feet in height from the ground to the top of the panels when at a 45-degree angle. Height may vary due to manufacturer, topography and vegetation constraints and could reach a height of approximately 20 feet from the ground. The PV panels will have a silicon and weatherized plastic backing or a side-mount or under-mount aluminum frame, heat strengthened front glass, and laminate material encapsulation for weather protection.<sup>33</sup>

36. The panels and tracking rack system are generally aligned in rows north and south with the PV panels facing east toward the rising sun in the morning, parallel to the ground during mid-day, and then west toward the setting sun in the afternoon. The panels are rotated by a small motor connected to the tracking rack system to slowly track with the sun throughout the day. The tracking rack system allows the Project to optimize the angle of the panels in relation to the sun throughout the day thereby maximizing production of electricity and the capacity value of the Project.<sup>34</sup>

37. The tracking rack system is mounted on top of steel piers that are typically driven into the ground, without the need for excavation or concrete to install the piers. Piers are typically installed at eight to fifteen feet below the surface, pending site-specific conditions that will be determined through geotechnical borings prior to construction.<sup>35</sup>

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<sup>28</sup> Minn. Stat. § 216B.243, subd. 8(a)(7)

<sup>29</sup> Ex. EC-5 at 8 (SPAA).

<sup>30</sup> Ex. EC-5 at 9 (SPAA).

<sup>31</sup> Ex. EC-5 at 9 (SPAA).

<sup>32</sup> Ex. EC-5 at 19 (SPAA).

<sup>33</sup> Ex. EC-5 at 19 (SPAA).

<sup>34</sup> Ex. EC-5 at 19 (SPAA).

<sup>35</sup> Ex. EC-5 at 19 (SPAA).

38. Electrical wiring will connect the panels to inverters, which will convert the power from direct current (“DC”) to AC. Inverters convert approximately 1,500 volts of DC output of the PV panels to between 650-950 volts of AC. The AC will be stepped up through a transformer from the inverter output voltage to 34.5 kilovolt (“kV”) and brought via the collection cables to the Project substation. The electrical collection system will be installed below-ground or a hybrid of below-ground and above-ground. For both options, the AC collection line that would travel along 190th Avenue to connect the northern unit to the Project substation in the central unit may be installed either below-ground or above-ground, depending on final engineering design.<sup>36</sup>

39. Elk Creek plans to install the AC collection system between the southern unit and the central unit below-ground.<sup>37</sup>

40. If the AC collection line connecting the northern unit to the Project substation is installed above-ground, the AC collection line would be moved above-ground just outside of the fenced area via a riser installed in the southeastern corner of the northern unit, near the intersection of 190th Avenue and 141st Street. Approximately 15 poles spaced roughly 300 feet apart would be installed along the west side of 190th Avenue. The first pole would be just outside the fence line of the northern unit, and the collection line would extend for about 0.6 mile before turning east, crossing over 190th Avenue, and connecting to another pole installed adjacent to the fence line of the central unit. From here, the collection line would be moved below ground as it continues to the Project substation.<sup>38</sup>

41. If above-ground cabling is utilized, the DC collection lines will be strung under each row of panels on steel arms and a steel cable attached to the piles. At the end of each row, hanging brackets would connect several racks/rows of cables to a common collection point near their assigned inverter/transformer skid where the cables will be routed below-ground at a minimum depth of at least four feet below grade to the inverter/transformer skid where the current is converted to AC and voltage is stepped up to 34.5 kV.<sup>39</sup> From the inverter/transformer skids, AC collection lines would be installed below ground to the Project substation.<sup>40</sup>

42. The Project will utilize central inverter/transformer skids at locations throughout the Project and include a transformer to which the inverters will feed electricity. The final number of inverters for the Project will depend on the inverter size, as well as inverter and panel availability. The Project’s preliminary design proposes 89 central inverter skids (one inverter is required for every 2-3 MW). These skids provide the foundation for the inverter, transformer, and Supervisory Control and Data Acquisition (“SCADA”) system. The skids will be placed atop a concrete slab or pier foundations and typically measure ten feet wide by 25 feet long, with a structure height of approximately 12 feet above grade. Concrete foundations will be poured onsite or precast and assembled off-site.<sup>41</sup>

43. Below-ground AC collection systems from the inverter skids to the substation will be installed in trenches or ploughed into place at a depth of at least four feet below grade. During

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<sup>36</sup> Ex. EC-5 at 21 (SPAA).

<sup>37</sup> Ex. EC-5 at 22 (SPAA).

<sup>38</sup> Ex. EC-5 at 22 (SPAA).

<sup>39</sup> Ex. EC-5 at 22 (SPAA).

<sup>40</sup> Ex. EC-5 at 22–23 (SPAA).

<sup>41</sup> Ex. EC-5 at 23 (SPAA).



all trench excavations the topsoil and subsoil will be removed and stockpiled separately. Once the cables are laid in the trench, the area will be backfilled with subsoil followed by topsoil.<sup>42</sup>

44. The Project will include approximately 11.1 miles of graveled access roads that lead to the inverters and Project substation for operation and maintenance. The final length of the access roads will depend on the equipment selected and final engineering. These roads are up to 16 feet wide along straight portions of the roads and wider along curves at internal road intersections (approximately 45 feet). There are nine access points to the Project from existing county roads. These entrances will have locked gates.<sup>43</sup>

45. 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>44</sup>

46. The Project will meet all Rock County setbacks for large solar energy systems.<sup>45</sup>

47. Elk Creek Solar has executed two 80 MW interconnection agreements. Elk Creek has no intention of expanding beyond the 160 MW for which it has interconnection agreements.<sup>46</sup>

48. The total installed capital costs for the Project are estimated to be approximately \$277.2 million, with Project cost depending on variables including, but not limited to, construction costs, taxes, tariffs, and panel selection, along with associated electrical and communication systems, and access roads.<sup>47</sup>

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

49. The Project is located in Vienna and Magnolia Townships, in Rock County in southwest Minnesota.<sup>48</sup>

50. Elk Creek is proposing to amend the 2020 Site Permit to add approximately 545 acres of land under lease or easement in Sections 34 and 35, Township 103 North, Range 44 West, in Vienna Township and Section 3, Township 102 North, Range 44 West, in Magnolia Township, Rock County, Minnesota (the “Amendment Land Control Area”).<sup>49</sup>

51. Elk Creek has obtained leases and purchase options for 1,522 acres of privately-owned land, which is defined in the Amendment Application as the “2023 Land Control Area.”<sup>50</sup>

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<sup>42</sup> Ex. EC-5 at 22 (SPAA).

<sup>43</sup> Ex. EC-5 at 24 (SPAA).

<sup>44</sup> Ex. EC-5 at 29 (SPAA).

<sup>45</sup> Ex. EC-5 at 28 (SPAA).

<sup>46</sup> Ex. EC-5 at 1, 17 (SPAA).

<sup>47</sup> Ex. EC-5 at 17 (SPAA).

<sup>48</sup> Ex. EC-5 at 8 (SPAA).

<sup>49</sup> Ex. EC-5 at 8 (SPAA).

<sup>50</sup> Ex. EC-5 at 8 (SPAA).

52. Elk Creek’s 2020 Land Control Area included 976 acres of leases, easements, and purchase options on privately owned land.<sup>51</sup>

53. The proposed Project is an up to 160 MW AC nameplate capacity solar energy conversion facility in Vienna and Magnolia Townships, Rock County, Minnesota. The Project would also include associated facilities.<sup>52</sup>

54. Based on preliminary design, the Project facilities will cover approximately 1,161 acres of the 2023 Land Control Area, which is defined in the SPAA as the “2023 Preliminary Development Area.”<sup>53</sup> An approximately 360-acre portion of the land currently under lease that will not be utilized by the Project will be excluded from the area leased by Elk Creek during the operation of the Project. The underlying landowner can then continue to farm the area released from the lease for the life of the Project.<sup>54</sup>

55. The Project is in rural Rock County which according to the 2020 U.S. Census, has a population density of 20.1 persons per square mile of land area.<sup>55</sup>

## **V. SOLAR RESOURCE CONSIDERATIONS**

56. Based on the National Renewable Energy Laboratory’s Direct Normal Solar Resource of Minnesota, predicted annual average daily total solar resource near the Project are between 4.7 and 4.9 kilowatt hours per square meter per day.<sup>56</sup>

57. Elk Creek estimates the Project will have a net capacity factor of between 22.2 to 24 percent and an average annual output of between approximately 156,000 and 168,000 MW hours.<sup>57</sup>

## **VI. PROJECT SCHEDULE**

58. Commercial operation of the Project is anticipated by the third quarter 2026. The commercial operation date is dependent on the completion of construction, commercial testing, and other development activities.<sup>58</sup>

## **VII. SUMMARY OF PUBLIC COMMENTS**

59. On September 13, 2023, the Commission and the Minnesota Department of Commerce issued a notice soliciting comments on the scope of the Supplemental EA to be prepared by EERA for the Project.<sup>59</sup> On October 4, 2023, DNR submitted comments

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<sup>51</sup> Ex. EC-5 at 8 (SPAA).

<sup>52</sup> Ex. EC-5 at 3–4 (SPAA).

<sup>53</sup> Ex. EC-5 at 8 (SPAA).

<sup>54</sup> Ex. EC-5 at 8 (SPAA).

<sup>55</sup> Ex. EC-5 at 42 (SPAA).

<sup>56</sup> Ex. EC-5 at 12 (SPAA).

<sup>57</sup> Ex. EC-12 (Morris Testimony).

<sup>58</sup> Ex. EC-8 (Morandi Testimony).

<sup>59</sup> Ex. PUC-8 (Notice of Comment Period on Scope of EA).

recommending that the supplemental EA consider the following: security fencing, impacts to state-listed fish species, facility lighting, dust control, and wildlife-friendly erosion control measures.<sup>60</sup>

60. On January 29, 2024, the Commission issued a Notice Public Hearings, Availability of Environmental Assessment, and Comment Period notifying the public of the February 12 and 13, 2024, hearings and initiating a public comment period to close on February 26, 2024.<sup>61</sup>

61. Twelve (12) members of the public provided verbal comments/questions during the in-person public hearing held in Luverne, MN on February 12, 2024; no members of the public made verbal comments or questions during the virtual public hearing on February 13, 2024.<sup>62</sup>

62. Approximately fifty (50) members of the public provided written comments during the public comment period. In addition, comment letters were received from EERA, DNR, the Minnesota Pollution Control Agency (“MPCA”), and LIUNA Minnesota & North Dakota (“LIUNA”).<sup>63</sup>

63. The verbal and written comments and questions included a broad range of topics, including impacts resulting from the construction and operation of the Project; aesthetics; property values; public health and safety, including the impact of electromagnetic fields (“EMF”) and potential heat island effects; natural resources; decommissioning including the potential for contamination from panels and return to agricultural use; local economics, and land use more generally.

64. On March 7, 2024, the ALJ issued its Report to the Commission summarizing comments received during the public hearings on February 12 and 13, 2024, and the public comment period which closed on February 26, 2024.<sup>64</sup>

#### **A. Public Comments and Questions at the February 12, 2024, 1:00 p.m. Public Hearing**

65. ALJ O’Reilly presided over the in-person public hearing on February 12, 2024, at the Grand Event Center in Luverne, Minnesota. The hearing commenced at 1:00 p.m. and continued until approximately 3:15 p.m. Approximately thirty (30) people attended the public hearing and twelve (12) people offered oral comments at the hearing. After all persons present who wished to comment were given an opportunity the speak, the hearing adjourned.<sup>65</sup> PowerPoint presentations made by the Applicant, EERA, and ALJ were filed in eDockets.<sup>66</sup>

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<sup>60</sup> Ex. DNR-1 (DNR Comments).

<sup>61</sup> Ex. PUC-10 (Notice of Public Hearing and Comment Period).

<sup>62</sup> See generally, Luverne 1:00 p.m. Public Hearing Transcript (Luverne 1:00pm Tr.) (Feb. 12, 2024), and Webex 6:00 p.m. Public Hearing Transcript (WebEx 6:00 p.m. Tr) (Feb. 13, 2024).

<sup>63</sup> See generally, exs. PUC-11, PUC-14 through -31; EERA-7, DNR-2, MPCA-1, and LIUNA-1.

<sup>64</sup> Ex. EC-18 at 11 (Report to the Commission).

<sup>65</sup> Ex. EC-18 at 4 (Report to the Commission).

<sup>66</sup> Ex. PUC-12 (In Person Hearing Presentation).

66. Jeff Cromberg of Magnolia, Minnesota, expressed significant concern about the impact to property values surrounding the Project. Mr. Cromberg concluded his comments by noting his opposition to the Project based upon the negative impact to nearby property values.<sup>67</sup>

67. Jane Nelson of Magnolia owns property directly adjacent to the west and north of the amended Project site. Ms. Nelson expressed concern that her adjacent properties will suffer from more severe weather events, increased runoff and flooding, and noxious weed infestation, and that her family will be exposed to health hazards. She fears that her livestock will also suffer negative health effects from the heat generated by the Project.<sup>68</sup> During the hearing, Ms. Nelson offered Exhibit A, an article supporting her comments.<sup>69</sup>

68. Mike Gangstad of Springwater asked about the efficiency of the Project and how many megawatts of energy the Project will actually produce in a year. Mr. Gangstad asserted that solar is an “entirely unreliable” form of energy and that renewable energy requirements are going to cost rate payers substantially.<sup>70</sup> Mr. Gangstad’s also expressed concerns related to the “toxicity” of solar panels and the “heat island effect” that Ms. Nelson described. Mr. Gangstad further emphasized that the Project takes valuable and productive agricultural land out of use, thereby reducing food supply to the country and income to the local farmers who rent that land to grow crops.<sup>71</sup>

69. Eric Binford, of Luverne, provided background information about the development of the Project and his family’s association with the 80 MW Project. Mr. Binford’s comments also addressed the economic impacts to the community caused by taking valuable and productive agricultural land out of use.<sup>72</sup>

70. Nathan Runke, of Rochester, is a representative of the Local 49 Heavy Equipment Operators Union. He states that a large portion of the Local 49 members work in the energy sector. Mr. Runke stated that it is in the interest of his union that this Project be approved, so long as construction jobs are awarded to contractors using union labor.<sup>73</sup>

71. Loren Forrest has lived all of his 81 years in Luverne. Mr. Forrest is concerned about the Electromagnetic Fields (EMFs) that many energy projects emit and the cancer risk they pose to people living in proximity to the projects.<sup>74</sup> During the hearing, Mr. Forrest offered Exhibit B, which includes some scientific excerpts supporting his comments.<sup>75</sup>

72. Paul Arends, of Luverne, asked questions about the permit amendments and whether incentives or subsidies going to be paid by the state of Minnesota for this Project. Mr.

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<sup>67</sup> Ex. EC-18 at 4–5 (Report to the Commission).

<sup>68</sup> Ex. EC-18 at 5–6 (Report to the Commission).

<sup>69</sup> See EC-15 (Public Hearing Exhibit A).

<sup>70</sup> Ex. EC-18 at 6 (Report to the Commission).

<sup>71</sup> Ex. EC-18 at 7 (Report to the Commission).

<sup>72</sup> Ex. EC-18 at 7–8 (Report to the Commission).

<sup>73</sup> Ex. EC-18 at 8 (Report to the Commission).

<sup>74</sup> Ex. EC-18 at 8-9 (Report to the Commission).

<sup>75</sup> Ex. EC-16 (Public Hearing Exhibit B).

Arends comments also addressed the impact on farmers that formerly leased land from participating landowners.<sup>76</sup>

73. Todd Sorter, of Murray County, represents the Local 563 Laborers Union, which has 11,000 members in Minnesota. He states that he supports the construction of the proposed Project so long as the Applicant uses trained union and local workers to construct it.<sup>77</sup>

74. Craig Schilling, of Ellsworth, currently rents some of the agricultural land that the Applicant plans to use for the Project. He states that he is going to lose his lease and the income the land produces from his labor. He notes that such loss also negatively affects the community and that such indirect losses cannot be fully measured in dollars.<sup>78</sup>

75. Will Thomssen, of Pipestone, is a representative of the Local 49 Union of heavy equipment operators. He notes that his union offers a good apprenticeship program. He states that the union supports the proposed Project so long as it is permitted correctly and local union labor is used for construction.<sup>79</sup>

76. Grant Binford, of Luverne, operates a livestock feedlot. Mr. Binford discussed the notice regulations applicable to feedlots and explained that living next to a small solar project, as was originally proposed, is much different from the Project that is now being proposed in the amendment. Mr. Binford also stated that he believes that there is a better place for the Project than on prime agricultural land.<sup>80</sup>

77. Dick Remme is a farmer from Luverne. He stated that the proposed Project will be taking valuable, prime farmland out of production and noted that there are a lot of incidents of cancer in the area that may be associated with high voltage transmission lines and EMFs.<sup>81</sup>

## **B. Public Comments and Questions at the February 13, 2024, 6:00 p.m. Virtual Hearing**

78. ALJ O'Reilly presided over the virtual hearing held on February 13, 2024, via WebEx teleconferencing. The virtual hearing commenced at 6:00 p.m. and ended at approximately 7:00 p.m. While approximately seventeen (17) people attended the public hearing, no one wished to speak or provide public comment. After all persons present who wished to comment were given an opportunity to speak, the hearing adjourned.<sup>82</sup> PowerPoint presentations made by the Applicant, EERA, and ALJ were filed in eDockets.<sup>83</sup>

## **C. State Agency Written Hearing Comments**

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<sup>76</sup> Ex. EC-18 at 8 (Report to the Commission).

<sup>77</sup> Ex. EC-18 at 10 (Report to the Commission).

<sup>78</sup> Ex. EC-18 at 10 (Report to the Commission).

<sup>79</sup> Ex. EC-18 at 10 (Report to the Commission).

<sup>80</sup> Ex. EC-18 at 10–11 (Report to the Commission).

<sup>81</sup> Ex. EC-18 at 11 (Report to the Commission).

<sup>82</sup> Ex. EC-18 at 11 (Report to the Commission).

<sup>83</sup> Ex. PUC-13 (WebEx Presentation).

79. Three state agencies submitted comments following the hearing: EERA, DNR, and MPCA.

80. EERA submitted written comments on February 20, 2024, recommending modifications to Elk Creek’s draft decommissioning plan and the 2020 Site Permit.<sup>84</sup>

81. DNR submitted written comments on February 20, 2024, expressing support for the inclusion of the language in the Draft Site Permit regarding security fencing requirements, as well as the inclusion of the following special conditions: 5.1 State-Listed Fish; 5.2 Facility Lighting; 5.3 Dust Control; and 5.4 Wildlife-Friendly Erosion Control.<sup>85</sup>

82. MPCA submitted written comments on February 28, 2024, highlighting applicable construction stormwater permit conditions.<sup>86</sup>

#### **D. Written Hearing Comments from the Public**

83. Jeff Thorson is a farmer who lives approximately five miles from the proposed Project site in Luverne. Mr. Thorson is in favor of the Project and states that it is “good for the country.”<sup>87</sup>

84. David Severtson is a local resident whose comments contrasted the proposed Project with two other recent energy projects in the area: the Agri-Energy ethanol plant in Luverne and a local wind turbine project. Mr. Severtson urges the Commission to realize that the proposed Project is not a “community project.”<sup>88</sup>

85. Kevin Pranis submitted comments on behalf of LIUNA. Mr. Pranis noted that the proposed Project has the potential to help the state meet new renewable and carbon-free energy goals, while at the same time creating high-quality construction and maintenance jobs.<sup>89</sup>

86. Mallory Nelson, of rural Magnolia, submitted comments expressing concerns about health risks associated with solar farms; specifically, “electromagnetic hypersensitivity.” She also fears that the Project will increase crime in the small community due to the influx of “illegal immigrants” as workers. Ms. Nelson also expressed concern about removing fertile farmland from production and the Project’s impact on the ecosystem and biodiversity.<sup>90</sup>

87. Chad Hoff, of Luverne, expressed his concern about converting productive agricultural farmland to solar energy generation and noted that crops provide an important environmental benefit and convert carbon dioxide (CO<sub>2</sub>) into oxygen.<sup>91</sup>

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<sup>84</sup> Ex. EERA-7 (EERA Comments).

<sup>85</sup> Ex. DNR-2 (DNR Comments).

<sup>86</sup> Ex. MPCA-1 (MPCA Comments).

<sup>87</sup> Ex. EC-18 at 11 (Report to the Commission).

<sup>88</sup> Ex. EC-18 at 11–12 (Report to the Commission).

<sup>89</sup> Ex. EC-18 at 12 (Report to the Commission).

<sup>90</sup> Ex. EC-18 at 13 (Report to the Commission).

<sup>91</sup> Ex. EC-18 at 13 (Report to the Commission).

88. Cindy Frensko, of Ivanhoe, claims that the project is an “overreach” of government, and that farmland should not be used for the Project.<sup>92</sup>

89. Issac DeBoer, of Luverne, is concerned with the lack of local planning and zoning input that has been received on the amended proposed Project. He urges the Commission to require, as a condition of approval, that the amended Project be subject to a local planning and zoning review, specifically as to impacts to feedlots and farming operations in the area.<sup>93</sup>

90. Jane Nelson, who spoke at the February 12, 2024, hearing in Luverne, also submitted written comments. Ms. Nelson’s written comments address setbacks and the Prime Farmland Exception in Minn. R. 7850.4400, subp. 4. Ms. Nelson also asserts that the Project violates Rock County ordinances related to new construction near feedlots.<sup>94</sup>

91. Josh Fick, a farmer in Rock County, submitted comments concerning the use of prime farmland and the impact on the agricultural land rental market.<sup>95</sup>

92. Jason Fick submitted comments expressing concern about taking prime farmland out of agricultural production and the impacts on the farmers, agricultural retailers, equipment dealers, and other local businesses that rely on the farming industry. Mr. Fick also disputes the Applicant’s assertion that the Project will allow the land to “rest.” Mr. Fisk further asserts that the Project will destroy the topsoil, which will forever be changed.<sup>96</sup>

93. Lane Binford, of Luverne, is in the 8th grade. He plans to farm with his father and uncle someday near their local farm. He worries that the Project will impact his ability to achieve that goal if farmland in the area becomes too expensive or unavailable for new farmers and questions why the Project cannot be located on non-agricultural land.<sup>97</sup>

94. Levi Binford is a junior in high school from Luverne. He expressed his opposition to the Project. He explains that the Project poses a threat to his ability to farm someday. Like Lane Binford, Levi believes that the Project should be sited on less valuable, non-agricultural land.<sup>98</sup>

95. Marybeth Binford is a retired farmer. She notes that when the Project was first proposed, it was to be a small solar farm. However, now it has doubled in capacity and will displace over 1,500 acres of farmland. She notes that the Project will have no benefit to, and will only harm, local farmers and the community. She explained that farms in the area already do not have enough corn to feed the local livestock, causing them to import feed. Removing 1,500 acres of prime cropland from production will only exacerbate the problem for local farmers. Ms. Binford worries about the future of farming in the area when primary resources are being taken away.<sup>99</sup>

96. Rebecca Binford is a farmer in the Luverne area. Ms. Binford urges the Commission to follow the guidance of the Minnesota Department of Commerce, as published in

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<sup>92</sup> Ex. EC-18 at 13 (Report to the Commission).

<sup>93</sup> Ex. EC-18 at 13 (Report to the Commission).

<sup>94</sup> Ex. EC-18 at 13–14 (Report to the Commission).

<sup>95</sup> Ex. EC-18 at 15 (Report to the Commission).

<sup>96</sup> Ex. EC-18 at 15 (Report to the Commission).

<sup>97</sup> Ex. EC-18 at 15 (Report to the Commission).

<sup>98</sup> Ex. EC-18 at 16 (Report to the Commission).

<sup>99</sup> Ex. EC-18 at 16 (Report to the Commission).

its “Solar Energy Production and Prime Farmland – Guidance for Evaluating Prudent and Feasible Alternatives.” Ms. Binford also disputes the Applicant’s claims that the Project will allow the land to “rest.” Ms. Binford asserts that modern farming practices and technology ensure that agricultural land is enriched by continuous use for crops and livestock.<sup>100</sup>

97. Shari Binford submitted comments expressing concerns about the ability for young people to start their own farming operations and the negative impacts to human health, wildlife, livestock, and water resources that could result from the Project, as well as negative impacts caused by improper decommissioning requirements. Ms. Binford asserts that the environmental benefits of renewable energy production are outweighed by the negative environmental effects of solar projects.<sup>101</sup>

98. Susan Bullerman and her family own land adjacent to the proposed Project. Ms. Bullerman’s comments address the Prime Farmland Exception, Rock County feedlot ordinances, and impacts on federally-listed endangered and state-listed threatened fish species that have been documented in Elk Creek.<sup>102</sup>

99. Valerie Downing opposes the proposed Project for “the mere fact [of] the untruths stated.”<sup>103</sup>

100. Dustin Hubbling, of Luverne, submitted comments stating that he believes the PUC and community have been given false information regarding the negative impacts the Project will have on surrounding property values. His comments also address concerns related to noise, glare, aesthetics, and potential health effects caused by Project.<sup>104</sup>

101. Amy Domagala, of Luverne, writes to state that she opposes the Project in her rural community. She asserts that the state and governor are not concerned about protecting rural, non-metro communities. She believes local permitting should be required for the Project to move forward.<sup>105</sup>

102. Brad Lynn, of Lismore, is concerned about removing prime farmland from production when there are alternative, less valuable land (prudent and feasible alternatives) available for the Project.<sup>106</sup>

103. Craig Schilling of Ellsworth states that if the amended Project is approved, he will be losing a quarter of his income due to the loss of farmland he currently rents. He opposes the use of prime farmland for the siting of a solar plant.<sup>107</sup>

104. Shawn Feikema owns a third-generation farm in Rock County. Mr. Feikema asserts that the Applicant is “lying” to the community, the PUC, and to EERA when it states that taking

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<sup>100</sup> Ex. EC-18 at 16–17 (Report to the Commission).

<sup>101</sup> Ex. EC-18 at 17 (Report to the Commission).

<sup>102</sup> Ex. EC-18 at 17–18 (Report to the Commission).

<sup>103</sup> Ex. EC-18 at 18 (Report to the Commission).

<sup>104</sup> Ex. EC-18 at 18 (Report to the Commission).

<sup>105</sup> Ex. EC-18 at 18 (Report to the Commission).

<sup>106</sup> Ex. EC-18 at 18–19 (Report to the Commission).

<sup>107</sup> Ex. EC-18 at 19 (Report to the Commission).



prime farmland out of production will be beneficial because it will allow the land to “rest.” Rather, Mr. Feikema believes that the land is best used for continued agricultural production.<sup>108</sup>

105. Brand and Bonnie Meinerts oppose the Project because it will reduce surrounding property values and negatively impact the quality of life in the area.<sup>109</sup>

106. Becky Feikema owns a third-generation family farm in the Luverne and states that her family has become a leader in sustainable and regenerative agricultural practices, pioneering strip-till, no-till, and cover crop practices to improve soil health on large-scale farms. She notes that the subject land and soil is best protected through conservation, erosion prevention, and nutrient management practices that the local farmers have developed over time.<sup>110</sup>

107. Curtis Hendel, of Luverne, notes that the majority of landowners willing to lease their land to the Applicant for the Project are “absentee owners” who are looking only to benefit financially; whereas local farmers and residents will be the ones who suffer.<sup>111</sup> Several commentors have described participating landowners as “absentee owners.”

108. In addition to his comments at the February 12, 2024, public hearing, Grant Binford, of Luverne, raised concerns related to the loss of local control over permitting of the Project, the lack of economic benefit to the community, and the Prime Farmland Exception. Like others commentors, Mr. Binford asserts that the Applicant’s claims about allowing the land to “rest” have no scientific basis.<sup>112</sup>

109. Jaxon Nelson is a young farmer in the area. He is concerned about radiation from the solar panels and potential impacts to humans, wildlife, crops, and livestock. He questions whether water sources feeding Elk Creek will be contaminated and harm cattle that drink from these sources.<sup>113</sup>

110. Joey Pick is a young farmer who currently farms 430 acres in Rock County, 160 acres of which are part of the proposed, amended Project site. Mr. Pick states that losing 160 acres of rented land to the Project will be catastrophic for his business.<sup>114</sup>

111. Matthew Binford recently graduated from school and started farming. He explains that it is hard for young people to start their own farming operations because it requires acquiring land. Mr. Binford asserts that removing 1,522 acres of prime farmland from crop production in the area will only exacerbate the problems for young farmers in the community who want to make a start in the industry.<sup>115</sup>

112. Seth Miller, whose family owns a farm in the area, is concerned that the proposed Project will be an “eye sore” to the rural community and drive property values down. Mr. Miller

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<sup>108</sup> Ex. EC-18 at 19 (Report to the Commission).

<sup>109</sup> Ex. EC-18 at 19–20 (Report to the Commission).

<sup>110</sup> Ex. EC-18 at 20 (Report to the Commission).

<sup>111</sup> Ex. EC-18 at 20 (Report to the Commission).

<sup>112</sup> Ex. EC-18 at 20 (Report to the Commission).

<sup>113</sup> Ex. EC-18 at 21 (Report to the Commission).

<sup>114</sup> Ex. EC-18 at 21 (Report to the Commission).

<sup>115</sup> Ex. EC-18 at 21 (Report to the Commission).

also raises concerns related to the removal/disposal of the solar panels and the remediation of the land.<sup>116</sup>

113. Taylor Nelson submitted written comments related to removing fertile agricultural land from its most productive use, loss of biodiversity, irreversible loss of prime farmland, potential health effects, and potential for increased crime as a result of an influx of non-local workers for the Project.<sup>117</sup>

114. Caleb Binford is a high school student and plans to be a fifth-generation family farmer. He is concerned that taking 1,522 acres of farmland out of agricultural use will make it even more difficult for young farmers in the area to start their own farming operations.<sup>118</sup>

115. Chad Nelson is concerned about the potential long-term health effects to people and animals related to solar panels, as well as to their effect on air quality. Mr. Nelson contends that non-local and out-of-state investors and businesses will profit from the Project, while local farmers and citizens will suffer from its harmful impacts.<sup>119</sup>

116. Eric Binford submitted two written comments in addition to oral comments presented at the February 12, 2024, public hearing. Mr. Binford believes it is a “huge double standard” between the treatment of agricultural operations and energy projects in the state and argues that the Applicant has not established that there is no “feasible and prudent alternative” for the siting of the Project under the Prime Farmland Exception, and that the Applicant’s assertion that the benefits of taking prime farmland out of agricultural production and allow it to “rest” is a blatantly false and scientifically unsupported claim aimed at deceiving the Commission. Mr. Binford also questions why neither -EERA nor Commission staff addressed the Prime Farmland Exception and the DOC guidance document recommending against the use of prime agricultural land for utility siting during the two public hearings in this matter. Mr. Binford’s believes that there is no legal justification that the Commission can cite to justify the approval of the site permit amendment.<sup>120</sup>

117. Jennifer Nelson lives to the south of the proposed Project site. Ms. Nelson is concerned about the potential health effects that the Project may have on her, her family, and her pets.<sup>121</sup>

118. Jason Schutz is concerned about the detrimental effect the Project would have on the land and the environment. He asserts that by covering the property with solar panels and facilities, the land will not receive the sunlight and rain necessary to maintain the quality soil it now possesses. Mr. Schutz is also concerned about atmospheric warming that results from solar farms, which can alter weather patterns.<sup>122</sup>

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<sup>116</sup> Ex. EC-18 at 21–22 (Report to the Commission).

<sup>117</sup> Ex. EC-18 at 22 (Report to the Commission).

<sup>118</sup> Ex. EC-18 at 22 (Report to the Commission).

<sup>119</sup> Ex. EC-18 at 22 (Report to the Commission).

<sup>120</sup> Ex. EC-18 at 22–23 (Report to the Commission).

<sup>121</sup> Ex. EC-18 at 24 (Report to the Commission).

<sup>122</sup> Ex. EC-18 at 24 (Report to the Commission).

119. Madyson Miler’s family runs a farm in the Project area. She is concerned that the Project will reduce property values in the area and have long-lasting negative impacts to the community. Ms. Miller states that a solar farm has a much “larger carbon footprint” than agricultural use of the land.<sup>123</sup>

120. Randy Hudson, of Luverne, states that the Project will take land from productive generational farmers only to enrich “a handful of bureaucratic people’s pockets.” Mr. Hudson proposes that the state of Minnesota give up some of its own land for a solar farm instead. He believes that the information provided by the Applicant is filled with “untruths” aimed at persuading landowners to rent their land or support the Project.<sup>124</sup>

121. Robin Hudson believes that the Project is just a “ploy” “to line the pockets of a few big corporate companies who have no interest in the people and . . . families of Rock County.” She asks the Commission to “do what is right” and deny the amendment application.<sup>125</sup>

122. Stan Nelson’s family own property adjacent to the proposed Project and has farmed in the area for four generations. Mr. Nelson is concerned that the magnitude of the proposed amended Project will destroy the rural landscape and forever alter the agricultural land upon which it is built.<sup>126</sup>

123. Tom Fick wrote to alert the Commission to unsupported statements made by the Applicant regarding a benefit of the Project: allowing the agricultural land to “rest.” Mr. Fick, a longtime farmer, rejects this assertion and points out that the Applicant provides no scientific data in support of its claims. In addition, Mr. Fick disputes Applicant’s claims that taking 1,522 acres of land out of agricultural production will reduce nitrate levels in groundwater in southwestern Minnesota.<sup>127</sup>

124. Corey Nelson owns a farm in close proximity to the Project area. He asserts that the Commission and Applicant have not provided sufficient notice and information to the local public to allow the public to have sufficient input and organize against it. He believes it is “grossly unethical” that the state and regulators have failed to make better efforts to inform the community.<sup>128</sup>

125. Dave and Stacy Mente expressed their “displeasure” with using prime farmland to locate a solar farm.<sup>129</sup>

126. Jeff Bowen, of Luverne, opposes the Project, stating that prime farmland is too valuable for food production to waste on “a green energy boondoggle.”<sup>130</sup>

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<sup>123</sup> Ex. EC-18 at 24 (Report to the Commission).

<sup>124</sup> Ex. EC-18 at 24 (Report to the Commission).

<sup>125</sup> Ex. EC-18 at 24–25 (Report to the Commission).

<sup>126</sup> Ex. EC-18 at 25 (Report to the Commission).

<sup>127</sup> Ex. EC-18 at 25–26 (Report to the Commission).

<sup>128</sup> Ex. EC-18 at 26 (Report to the Commission).

<sup>129</sup> Ex. EC-18 at 26 (Report to the Commission).

<sup>130</sup> Ex. EC-18 at 26 (Report to the Commission).

127. Jerry Reu submitted written comments related to decommissioning and disposal at the end of the Project's useful life.<sup>131</sup>

128. Ken Reverts is against a "massive solar farm" because it is "ugly." He also asks the Commission to think about what will happen to the solar panels at the end of their useful life.<sup>132</sup>

129. Tom Remme lives five miles from the proposed Project. Mr. Remme's comments relate to the removal of productive cropland from food production, increase in property taxes for local landowners, increase in field rental rates, and changes to the landscape.<sup>133</sup>

130. Ron and Rosemary Tabbert oppose the Project.<sup>134</sup>

131. Thompson and Michael Chambers (Chambers Family Farms, LLC); Peter Boardman, John Boardman, and Kate Walters (Boardman Family Farms, LLC), and Marina and Benjamin Thompson, together, submitted a comment in favor of the Project. Their comments discuss the Applicant's plans for vegetation and stormwater retention to help protect the land for future use, the \$7.6 million of tax revenue to Rock County and Vienna/Magnolia Townships over the course of 20 years, and the education fund associated with the Project, which is estimated to generate approximately \$800,000 over 20 years.<sup>135</sup>

## VIII. SITE PERMIT CRITERIA

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

133. A LEPPG powered by solar energy is eligible for the alternative permitting process authorized by Minn. Stat. § 216E.04. 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 environmental assessment is the only state environmental review document required to be prepared on the project. EERA staff is responsible for evaluating the site permit application and administering the environmental review process.

134. Elk Creek filed the Original Application under the process established by the Commission in Minn. R. parts 7850.2800-7850.3900.

135. On December 31, 2020, the Commission issued the 2020 Site Permit authorizing Elk Creek to construct and operate the 80 MW Project.<sup>136</sup>

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<sup>131</sup> Ex. EC-18 at 26 (Report to the Commission).

<sup>132</sup> Ex. EC-18 at 26 (Report to the Commission).

<sup>133</sup> Ex. EC-18 at 27 (Report to the Commission).

<sup>134</sup> Ex. EC-18 at 27 (Report to the Commission).

<sup>135</sup> Ex. EC-18 at 27 (Report to the Commission).

<sup>136</sup> Ex. PUC-1 (Order Issuing Site Permit).

## **IX. SITE PERMIT AMENDMENT CRITERIA**

136. Pursuant to Minn. R. 7850.4900, subp. 1, the Commission is authorized to “amend any of the conditions in a site permit for a [LEPGP] . . . issued by the [Commission] upon request of any person.”

137. The permit amendment process set forth in Minn. R. 7850.4900, subp. 2, includes opportunity for public comment on proposed permit amendments.

138. On August 31, 2023, the Commission concluded that Elk Creek’s proposal to expand the area of the Project by approximately 50 percent and double the nameplate capacity of the Project are appropriately evaluated under Minn. R. 7850.4900’s site-permit-amendment process modified to require a public meeting, a supplemental EA, and a variance of the ten-day decision timelines in Minn. R. 7850.4900, subp. 3.<sup>137</sup>

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

### **A. Human Settlement**

139. The Project is in rural Rock County which according to the 2020 U.S. Census, has a population density of 20.1 persons per square mile of land area.<sup>138</sup>

140. The construction and operation of the Project will not displace residents or change the demographics of the Land Control Area. There are no residences, business, or structures such as barns or sheds within the northern and central portions of the Land Control Area. There is grain bin within the southern portion of the Land Control Area at a field edge along 190th Avenue. Elk Creek Solar has coordinated with the landowner of the grain bin, who has agreed to its removal. There are no occupied residences in the Land Control Area, and the business activity lost from removing land from agricultural production would be offset by the leases and purchase options with the landowners.<sup>139</sup>

#### **1. Zoning and Land Use**

141. The Land Control Area is zoned as general agriculture. Rock County does have a Renewable Energy Ordinance that governs the development of large solar energy systems, which are not otherwise under the jurisdiction of the Commission, within the agricultural district through a conditional use permit. Elk Creek has applied the county standards for solar facilities where practicable and has entered into a Development Agreement with Rock County to document how the County and Elk Creek would work together during construction of the Project.<sup>140</sup>

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<sup>137</sup> Ex. PUC-9 (Order Approving Modified Site Permit Amendment Process).

<sup>138</sup> Ex. EC-5 at 42 (SPAA).

<sup>139</sup> Ex. EERA-4 at 38 (Supplemental EA).

<sup>140</sup> Ex. EERA-4 at 39–40 (Supplemental EA). Magnolia and Vienna Townships ratified the Development Agreement through resolutions dated November 10, 2020, and July 14, 2020, respectively. Rock County continues to support the Elk Creek Solar Project and as demonstrated by the letter of support is provided in Appendix K of the Supplemental EA. (Ex. EERA-4, Appendix K (Supplemental EA)).

142. There are no conservation easements held by public agencies or private organizations within the Land Control Area.<sup>141</sup>

143. Development of the Project would result in the change of land use from a generally agricultural use to solar energy generation for the life of the Project. This would not interfere with planned land use or development plans and would have a minimal impact on the rural character of the surrounding area and Rock County.<sup>142</sup>

144. At the end of the useful life of the Project, the Preliminary Development Area could be restored to agricultural use or other planned use.<sup>143</sup>

145. Of the 309,120 acres in Rock County, approximately 93 percent (approximately 287,871 acres) are actively cultivated farmland; impacts to the 1,161.3 acres of agricultural land within the Project's Preliminary Development Area would reduce the amount of agricultural land in the county by less than one percent.<sup>144</sup>

## 2. Property Values

146. 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>145</sup>

147. The installation of the Project would create a limited visual impact at ground level or from a neighboring property. Because the Project is relatively low-profile, impacts to the immediate surrounding area would also be low.<sup>146</sup> Potentially affected properties either have or are planned to have vegetative screening.<sup>147</sup> The Project is not expected to have emissions or noise impacts to adjacent land uses during operation of the facilities.<sup>148</sup>

148. Widespread negative impacts to property value as a result of the Project are not anticipated. In unique situations, it is possible that specific, individual property values may be negatively impacted. Such impacts can be mitigated by proper siting, restoration and vegetation management and screening the site.<sup>149</sup>

## 3. Aesthetic Impacts

149. The existing landscape in the Land Control Area is generally flat and agricultural.<sup>150</sup>

150. Installation of the proposed Elk Creek Solar farm will result in visible landscape changes. Due to their low profile, the arrays will not be visible from a great distance, however, the

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<sup>141</sup> Ex. EC-5 at 87 (SPAA).

<sup>142</sup> Ex. EERA-4 at 39 (Supplemental EA).

<sup>143</sup> Ex. EERA-4 at 39 (Supplemental EA).

<sup>144</sup> Ex. EERA-4 at 52-53 (Supplemental EA).

<sup>145</sup> Ex. EERA-4 at 46 (Supplemental EA).

<sup>146</sup> Ex. EERA-4 at 46 (Supplemental EA).

<sup>147</sup> Ex. EERA-4 at 46 (Supplemental EA).

<sup>148</sup> Ex. EERA-4 at 46 (Supplemental EA).

<sup>149</sup> Ex. EERA-8 at 115 (EA).

<sup>150</sup> Ex. EERA-4 at 35 (Supplemental EA).

above-ground layout option will have a larger impact. Aesthetic impacts will be experienced primarily by nearby residents and people using the roads adjacent to the Land Control Area. There are no residences or businesses within the Land Control Area, but there are eight residences and several agricultural buildings on parcel adjacent to the Land Control Area. Elk Creek has coordinated with adjacent landowners of Residences A and F, as identified in the Supplemental EA, to install vegetative screening to help screen views of the solar facility of their homes.<sup>151</sup>

151. The use of the below-ground or the hybrid electrical collection system would minimize the visual impact by reducing the number of aerial structures from a distance.<sup>152</sup>

152. In addition, Elk Creek will install lighting that is down lit to minimize impacts to adjacent uses.<sup>153</sup>

153. Section 4.3.8 of the Draft Site Permit requires the Applicant to consider visual impacts from landowners and land management agencies.

#### 4. Public Service and Infrastructure

154. The Project is located in a rural area in southwestern Minnesota. There is an established transportation and utility network that provides access and necessary services to the Project.<sup>154</sup>

155. During construction, temporary impacts are anticipated on some public roads adjacent to the Land Control Area. Construction activities will increase the amount of traffic using local roadways, but such use is not anticipated to result in adverse traffic impacts.<sup>155</sup> Operation of the Project after construction will not noticeably increase traffic near the Land Control Area.<sup>156</sup>

156. Road use and improvements will be incorporated into a Development Agreement with Rock County.<sup>157</sup> Under the Development Agreement, Vienna and Magnolia Townships executed resolutions delegating their authority to Rock County for Project purposes, including the development and road use agreement.<sup>158</sup>

157. Elk Creek will contact Gopher State One Call prior to construction to locate and avoid underground facilities.<sup>159</sup> Final design will minimize and avoid impacts to underground utilities; if conflicts are unavoidable Elk Creek will coordinate with the utility to develop an approach to reroute or otherwise protect the utility.<sup>160</sup>

158. Elk Creek filed Federal Aviation Administration (“FAA”) 7460-1 Notice of Proposed Construction forms for the perimeter of the 2023 Land Control Area. On May 19, 2023,

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<sup>151</sup> Ex. EERA-4 at 36–37 (Supplemental EA). Elk Creek Response to Comments (March 11, 2024) (eDocket No. \_\_\_\_\_).

<sup>152</sup> Ex. EERA-8 at 106 (EA).

<sup>153</sup> Ex. EERA-8 at 106 (EA).

<sup>154</sup> Ex. EERA-8 at 28–29 (EA).

<sup>155</sup> Ex. EERA-4 at 48 (Supplemental EA).

<sup>156</sup> Ex. EERA-4 at 48 (Supplemental EA).

<sup>157</sup> Ex. EERA-4 at 35 (Supplemental EA).

<sup>158</sup> Ex. EERA-4 at 35 (Supplemental EA).

<sup>159</sup> Ex. EC-5 at 60 (SPAA).

<sup>160</sup> Ex. EC-5 at 60 (SPAA).

the FAA provided Determinations of No Hazard to air navigation for each of the thirty-six points around the 2023 Land Control Area. As such, Project facilities will not exceed obstruction standards and would not be a hazard to air navigation.<sup>161</sup>

159. Section 4.3.5 of the Draft Site Permit requires Elk Creek to minimize disruption to public services and public utilities and to restore service promptly if disrupted by Elk Creek.

## 5. Recreational Resources

160. Recreational opportunities in the vicinity of the Project include hiking, biking, fishing, camping, cross country skiing, snowmobiling, hunting, and wildlife viewing.<sup>162</sup>

161. There are no Wildlife Management Areas (“WMA”), Scientific and Natural Areas (“SNA”), and migratory waterfowl feeding or resting areas, or DNR mapped snowmobile trails within one mile of the 2023 Land Control Area.<sup>163</sup>

162. No impacts to tourism or recreational opportunities are anticipated in or near the Land Control Area.<sup>164</sup>

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

163. 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 (feeder) lines, substation transformers, house wiring, and electrical appliances.<sup>165</sup>

164. Based on the most current research on electromagnetic fields, and the distance between the Project and houses, the Project will have no impact to public health and safety due to EMF or magnetic fields.<sup>166</sup>

165. Stray voltage (also referred to as neutral to earth voltage) is an extraneous voltage that appears on metal surfaces in buildings, barns, and other structures, which are grounded to earth. Stray voltage is typically experienced by livestock which simultaneously come into contact with two metal objects (feeders, waterers, stalls). Problems are usually related to the distribution and services lines directly serving the farm or the wiring on a farm affecting confined farm animals. The potential for the Project to create stray voltage is negligible and if a fault would occur during operation, it would be identified quickly by the facility’s monitoring systems and corrected.<sup>167</sup>

166. No significant impacts to public safety are expected to result from construction and operation of the Project.

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<sup>161</sup> Ex. EC-5 at 95 (SPAA).

<sup>162</sup> Ex. EERA-8 at 131 (EA).

<sup>163</sup> Ex. EERA-4 at 44 (Supplemental EA).

<sup>164</sup> Ex. EERA-4 at 44 (Supplemental EA).

<sup>165</sup> Ex. EERA-4 at 50 (Supplemental EA).

<sup>166</sup> Ex. EERA-8 at 116 and 119 (EA).

<sup>167</sup> Ex. EERA-8 at 120 (EA).



167. Section 4.3.29 of the Draft Site Permit contains conditions to address public safety. In accordance with those conditions, Elk Creek will provide educational materials to landowners adjacent to the 2023 Land Control Area and, upon request, to interested persons about the Project and any restrictions or dangers associated with the Project. Elk Creek will also provide any necessary safety measures such as warning signs and gates for traffic control or to restrict public access. In addition, Elk Creek will submit the location of all underground facilities to Gopher State One Call after construction is completed. Elk Creek will keep records of compliance with Section 4.3.29 of the Draft Site Permit and will provide them to Department of Commerce of Commission staff upon request.<sup>168</sup>

## C. Land-based Economies

### 1. Local Economy

168. The Project will result in both short- and long-term benefits to the local economy. Local contractors and suppliers will be used for portions of the construction, and total wages and salaries paid to contractors and workers in Rock County.<sup>169</sup> Several commenters at the public hearing noted that the Project is expected to result in well-paying construction jobs in the area.<sup>170</sup>

169. Landowners that own portions of the Land Control Area will receive lease payment annually for the life of the Project or will receive a sales price for the sale of their land to Elk Creek.<sup>171</sup>

170. In addition to the creation of jobs and personal income, the Project will pay an Energy Production Tax to the local units of government of approximately \$380,000 annually or approximately 9.5 million over 25 years.<sup>172</sup>

### 2. Agriculture

171. The majority of the 2023 Land Control Area is in agricultural use, comprising 1,461.8 acres (96.1 percent). Developed land uses comprise 49.1 acres (3.2 percent) of the 2023 Land Control Area. Forested or shrubland comprises a combined 10.7 acres (0.7 percent) of the 2023 Land Control Area.<sup>173</sup>

172. Up to approximately 1,161.3 acres of agricultural land will be taken out of agricultural production where the fenced portion of the Project is located.<sup>174</sup> A 360-acre portion of the land currently under lease that will not be utilized by the Project will be excluded from the area leased by Elk Creek during the operation of the Project. The underlying landowner can then continue to farm the area released from the lease for the life of the Project.<sup>175</sup>

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<sup>168</sup> EERA-7 (EERA Hearing Comments and Proposed Draft Site Permit).

<sup>169</sup> Ex. EC-5 at 54 (SPAA).

<sup>170</sup> *E.g., See generally*, Pub. Hr'g Tr., GS Docket, eDockets Document No. [20208-165804-02](#), Luverne 1:00 p.m. Public Hearing Transcript (Luverne 1:00pm Tr.) (Feb. 12, 2024).

<sup>171</sup> Ex. EERA-8 at 98 (EA).

<sup>172</sup> Ex. EC-8 (Morandi Testimony).

<sup>173</sup> Ex. EC-5 at 56 (SPAA).

<sup>174</sup> Ex. EC-5 at 4 (SPAA).

<sup>175</sup> Ex. EC-5 at 4 (SPAA).

173. In lieu of agricultural production, landowners will receive lease payments or the purchase price for the sale of their property to Elk Creek.<sup>176</sup>

174. The presence of the Project will not significantly impact the agricultural land use or general character of the area. Impacts to the 1,161.3 acres of agricultural land within the Project's Preliminary Development Area would reduce the amount of agricultural land in the County by less than one percent.<sup>177</sup>

### 3. Prime Farmland

175. The United States Department of Agriculture defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water).<sup>178</sup>

176. Minn. R. part 7850.4400, subp. 4 prohibits use of more than 0.5 acre of prime farmland per MW of net generating capacity for sites where large generating plants are located, unless no feasible and prudent alternative exists.<sup>179</sup>

177. There will be direct impacts to agriculture from the Project through the use of 885 acres of prime farmland and 256.6 acres of prime farmland if drained taken out of production for the life of the Project. Minn. R. part 7850.4400, subp. 4 would allow 80 acres of prime farmland for the Project unless there is no feasible and prudent alternative.<sup>180</sup>

178. After Elk Creek submitted the Original Application, EERA and the Department of Agriculture developed a guidance document to assist developers when evaluating potential solar sites relative to the feasible and prudent language in the rule.<sup>181</sup> The guidance document is meant to assist developers in defining feasible and prudent in relation to siting alternatives in light of the dual mandates in Minnesota to advance solar energy production and protect prime farmland and due to the inherent difficulties in avoiding prime farmland. The guidance advises applicants to explain how they chose the region in which their site is located, how they selected their specific site and whether any alternatives exist near the chosen site that avoid prime farmland.<sup>182</sup>

179. Elk Creek explored Rock County for a solar project based on the high solar resource in the southwestern portion of Minnesota together with a supportive community and the positive experiences Elk Creek's parent company, NG Renewables, formally known as Geronimo Energy, had while developing the Prairie Rose Wind Farm in Rock County.<sup>183</sup> The annual average daily total solar resource near the Project is among the highest in the state of Minnesota.<sup>184</sup>

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<sup>176</sup> Ex. EC-5 at 54 (SPAA); Ex. EERA-8 at 98 (EA).

<sup>177</sup> Ex. EERA-4 at 53 (Supplemental EA).

<sup>178</sup> Ex. EERA-4 at 52 (Supplemental EA).

<sup>179</sup> Ex. EERA-4 at 15 (Supplemental EA).

<sup>180</sup> Ex. EC-5 at 11 (SPAA).

<sup>181</sup> Ex. EERA-8 at 68 (EA); *See also* Solar Energy Production and Prime Farmland (May 19, 2020) Available online at <https://mn.gov/cera/web/project-file/11367/>.

<sup>182</sup> Ex. EERA-8 at 68 (EA).

<sup>183</sup> Ex. EC-5 at 11 (SPAA).

<sup>184</sup> Ex. EERA-8 at 70 (EA).

180. Elk Creek identified Magnolia substation as a potential interconnect location in Rock County because of its available capacity to interconnect the Project to the transmission system, a general lack of environmental constraints and the presence of adequate roads for access to a site and relatively flat unobstructed terrain in the vicinity of the substation to maximize the utilization of the solar resource.<sup>185</sup>

181. Elk Creek then met with landowners within approximately five miles of the Magnolia substation to gauge whether there was enough interest from relatively contiguous landowners in voluntarily participating in the Project. This distance was selected to account for transmission interconnect efficiency, which is essential to successful Project development. Siting the Project in close proximity to an existing substation allows Elk Creek to make efficient use of existing equipment, minimize line loss and avoid the need for large transmission construction. Elk Creek ultimately signed leases and/or purchase options with landowners that owned relatively flat, unobstructed, generally contiguous parcels of land, with limited environmental constraints directly adjacent to the Magnolia substation that were willing to host Project facilities.<sup>186</sup>

182. Elk Creek examined the soils located even farther from the substations than the initial five-mile selection criteria described above and determined that a larger radius would not have resulted in decreased prevalence of prime farmland, while the increased distance would increase the necessary interconnection infrastructure. Prime farmland, and its sub-categories, are mapped throughout Rock and Nobles County except along larger waterway drainages comprised of floodplains and wetlands and a bedrock outcropping associated with Blue Mounds State Park in Rock County, which is a prohibited site.<sup>187</sup> In Rock County, 91 percent of the soils are classified as prime farmland.<sup>188</sup> Accordingly, there is no alternative site or area in the either county, let alone within an area within five miles of the Magnolia substation, that is conducive to solar development of approximately 1,161 acres that is not defined as prime farmland.<sup>189</sup>

183. No alternative sites were proposed for study during the scoping period and EERA did not identify any reasonable alternatives to Elk Creek Solar's proposed site.<sup>190</sup>

184. Therefore, there is no feasible and prudent alternative available to Elk Creek, including near the Magnolia substation or otherwise in Rock or Nobles County to construct the Project and not impact prime farmland.<sup>191</sup> A continued finding that there is no feasible and prudent alternative to the Project is consistent with the Commission's Order issuing the 2020 Site Permit and other decisions for large solar generating systems sited in prime farmland due to the fact that areas surrounding the Project substation also contain similar amounts of prime farmland as the proposed site.<sup>192</sup>

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<sup>185</sup> Ex. EC-5 at 11 (SPAA).

<sup>186</sup> Ex. EC-5 at 11 (SPAA).

<sup>187</sup> Ex. EC-5 at 13-14 (SPAA).

<sup>188</sup> Ex. EC-5 at 13 (SPAA).

<sup>189</sup> Ex. EC-5 at 13 (SPAA).

<sup>190</sup> Ex. EERA-4 at 2 (Supplemental EA).

<sup>191</sup> Ex. PUC-1 at 4 (Order Issuing Site Permit).

<sup>192</sup> Ex. EC-5 at 14 (SPAA); *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).

185. Elk Creek has developed an Agricultural Impact Mitigation Plan (“AIMP”) and a Vegetation Management Plan (“VMP”) to identify measures that Elk Creek and its contractors can take to avoid, repair and/or mitigate for potential negative agricultural impacts from the construction, operation, and eventual decommissioning of the Project; these plans outline measures designed to ensure the land may be returned to future agricultural usages following the closure and decommissioning of the Project.<sup>193</sup>

186. Elk Creek developed its AIMP in coordination with the Minnesota Department of Agriculture.<sup>194</sup>

187. Sections 4.3.1, 4.3.2, 4.3.3, 4.3.9, 4.3.10, 4.3.11, 4.3.16, 4.3.17, 4.3.18, 4.3.19, 4.3.20, and 4.3.21 of the Draft Site Permit are all conditions that address agricultural related issues associated with the Project.

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

188. In 2019, Elk Creek’s consultant, Area M Consulting (“Area M”) conducted a Phase I culture resources investigation of the 2020 Land Control Area.<sup>195</sup> No previously recorded archaeological or historic sites, historic architectural resources, or previous cultural resources inventories were noted within one-half mile of the Land Control Area.<sup>196</sup> Area M conducted a Phase I field inventory of the Land Control Area in April and May 2019 and did not identify any cultural resources during the survey.<sup>197</sup>

189. Area M submitted the Phase I inventory report to the Minnesota State Historic Preservation Office (“SHPO”). In a letter dated July 3, 2019, SHPO concurred with Area M’s recommendation that the Project would not affect historic properties listed in or eligible for listing in the National Register of Historic Places (“NRHP”).<sup>198</sup> The construction and operation of the Project will not impact historic properties listed in, eligible for, or potentially eligible for listing in the NRHP.<sup>199</sup>

190. In May 2023, to fully capture the 2023 Land Control Area, Tetra Tech conducted additional Phase I cultural resources field inventory of the 545 acres in the southern unit not previously surveyed.<sup>200</sup> Tetra Tech’s field inventory identified one post-Contact artifact scatter in the southern unit (Site 21RK0107).<sup>201</sup>

191. Tetra Tech submitted the Phase I inventory addendum report for the Amendment Land Control Area to SHPO on October 9, 2023, and the SHPO responded November 22, 2023,

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<sup>193</sup> Ex. EC-5 at Appendix D (SPAA); Ex. EERA-4 at 15 (Supplemental EA).

<sup>194</sup> Ex. EC-5 at 58 (SPAA).

<sup>195</sup> Ex. EC-5 at 64 (SPAA).

<sup>196</sup> Ex. EC-5 at 64 (SPAA).

<sup>197</sup> Ex. EC-5 at 64 (SPAA).

<sup>198</sup> Ex. EC-5 at 64 (SPAA).

<sup>199</sup> Ex. EC-5 at 64 (SPAA).

<sup>200</sup> Ex. EERA-4 at 56 (Supplemental EA).

<sup>201</sup> Ex. EERA-4 at 56 (Supplemental EA).

that the documentation provided was insufficient to determine if the site (Site 21RK0107) was eligible for listing in the NRHP.<sup>202</sup>

192. Elk Creek Solar will not develop the area where the post-Contact artifact scatter (Site 21RK0107) was observed.<sup>203</sup>

193. Section 4.3.23 of the Draft Site Permit requires Elk Creek to make every effort to avoid impacts to identified archaeological and historic resources. If a resource is encountered, Elk Creek shall contact and consult with SHPO and Office of the State Archaeologist (“OSA”). Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize Project impacts consistent with SHPO and OSA requirements. In addition, before construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties are found. If human remains are found during construction, Elk Creek shall immediately halt construction at such location and promptly notify local law enforcement and OSA. Construction at such location shall not proceed until authorized by local law enforcement or OSA.

## **E. Natural Environmental**

### **1. Wildlife**

194. The resident wildlife species in the Land Control Area are representative of game and non-game fauna accustomed to agricultural habitats.<sup>204</sup>

195. Given the agricultural nature of the Land Control Area, impacts to the current wildlife inhabiting the area are expected to be temporary and minimal.<sup>205</sup>

196. Under Section 8.12 of the Sample Site Permit, Elk Creek will be required to report any wildlife injuries and fatalities to the Commission on a quarterly basis.

### **2. Vegetation**

197. The majority of the land area within the Land Control Area is cultivated agricultural land.<sup>206</sup>

198. No native prairie was identified in the Land Control Area during surveys conducted by Elk Creek.<sup>207</sup>

199. The primary impact from construction of the Project would be the removal of existing vegetation to accommodate the Project. The degree of impact would depend on the type and amount of vegetation affected, the rate at which the vegetation would regenerate after construction (restoration), and whether periodic vegetation maintenance would be conducted

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<sup>202</sup> Ex. EERA-4 at 56 (Supplemental EA).

<sup>203</sup> Ex. EERA-4 at 56 (Supplemental EA).

<sup>204</sup> Ex. EERA-8 at 72 (EA).

<sup>205</sup> Ex. EERA-8 at 74 (EA).

<sup>206</sup> Ex. EC-5 at 78 (SPAA).

<sup>207</sup> Ex. EC-5 at 86 (SPAA).

during operation. Secondary effects from disturbances to vegetation could include increased soil erosion, increased potential for the introduction and establishment of invasive and noxious weed species, and a temporary local reduction in available wildlife habitat.<sup>208</sup>

200. The preliminary layout of the Project minimizes tree clearing, with two isolated trees within the southern unit planned to be removed.<sup>209</sup>

201. Section 4.3.14 of the Draft Site Permit provides that Project facilities will not be placed in native prairie unless addressed in a Prairie Protection and Management Plan and shall not be located in areas enrolled in the Native Prairie Bank Program. This section further requires Elk Creek to prepare a Prairie Protection and Management Plan in consultation with MDNR if native prairie is identified within the site boundaries.

202. Section 4.3.16 of the Draft Site Permit requires implementation of site restoration and management practices that provide for native perennial vegetation and foraging habitat beneficial to gamebirds, songbirds, and pollinators.

203. Elk Creek has developed a VMP to identify measures that Elk Creek and its contractors will utilize to guide site preparation, installation of prescribed seed mixes, management of invasive species and noxious weeds, and control of erosion/sedimentation. The VMP includes seeding and management measures needed to establish long-term perennial vegetation on the site during operation of the Project.

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

204. Construction of the facilities will disturb up to 1,161.3 acres. As with any ground disturbance, construction of the Project has the potential for soil compaction, erosion, and sedimentation. Construction may require some amount of grading to provide a level surface for the solar arrays. Additional soil impacts will result from the installation of direct-embedded piers that support the solar arrays.<sup>210</sup>

205. Based on the electrical configuration, impacts to soils will differ. The above-ground collection configuration would have least amount of soil impacts because only a small portion of the DC and AC collection would be trenched into the ground. The hybrid collection system will have the more soil impacts than the above-ground system, but less than the below-ground system.<sup>211</sup>

206. Elk Creek will obtain a National Pollutant Discharge Elimination System (“NPDES”) permit to discharge stormwater from construction facilities from MPCA. Best management practices (“BMPs”) will be used during construction and operation to protect topsoil and adjacent resources and to minimize soil erosion. In addition, a Stormwater Pollution

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<sup>208</sup> Ex. EERA-8 at 86 (EA).

<sup>209</sup> Ex. EERA-4 at 69 (Supplemental EA).

<sup>210</sup> Ex. EC-5 at 72–73 (SPAA).

<sup>211</sup> Ex. EC-5 at 73 (SPAA).

Prevention Plan (“SWPPP”) will be developed prior to construction that will include BMPs such as silt fencing, revegetation plans, and management of exposed soils to prevent erosion.<sup>212</sup>

207. There is one domestic well within the Land Control Area.<sup>213</sup> If the well has not been capped, Elk Creek will cap the well in accordance with state regulations during construction.<sup>214</sup>

208. Impacts to geologic and groundwater resources are not anticipated. Elk Creek has developed an AIMP to identify measures that Elk Creek and its contractors can take to avoid, repair and/or mitigate for potential negative soil impacts from the construction, operation, and eventual decommissioning of the Project.<sup>215</sup>

#### 4. Surface Water and Wetlands

209. Elk Creek identified surface water and floodplain resources for the Project area by reviewing U.S. Geological Survey (“USGS”) topographic maps, National Wetlands Inventory (“NWI”) maps and Minnesota Public Waters Inventory (“PWI”) maps together with a field wetland delineation.<sup>216</sup> In August 2023, Tetra Tech prepared a wetland delineation report which identified five palustrine emergent wetland areas and three streams within the 2023 Land Control Area.<sup>217</sup>

210. The Project will not require the appropriation of surface water or permanent dewatering. Temporary dewatering may be required during construction for electrical trenches. Project facilities have the potential to impact surface water runoff and cause sedimentation; however, these impacts are expected to be minimal. The Project will not impact known floodplain areas.<sup>218</sup>

211. Approximately 0.03 acres of delineated wetlands would be impacted by access road construction, primarily due to site access crossings of the wetlands from public roads. In addition, approximately 45 feet of fence intersects delineated wetland; however, impacts would be limited to the location of fence posts in the wetland, which would be minimized to the extent possible. Elk Creek will coordinate with both the U.S. Army Corps of Engineers (“USACE”) and by the local government unit (“LGU”) prior to construction for wetland impacts.<sup>219</sup>

212. Elk Creek has preliminarily designed 28 stormwater drainage basins within existing low-lying areas to help control runoff during rain events.<sup>220</sup>

213. Section 4.3.13 of the Draft Site Permit limits impacts to public waters resources and requires construction in wetland areas during frozen ground conditions to minimize impacts,

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<sup>212</sup> Ex. EERA-4 at 66 (Supplemental EA).

<sup>213</sup> Ex. EC-5 at 67 (SPAA).

<sup>214</sup> Ex. EC-5 at 67–68 (SPAA).

<sup>215</sup> Ex. EC-5 at Appendix D (SPAA).

<sup>216</sup> Ex. EC-5 at 75–76 (SPAA).

<sup>217</sup> Ex. EC-5 at 76 (SPAA); Ex. EERA-4 at 67 (Supplemental EA).

<sup>218</sup> Ex. EERA-4 at 63–64, 66–67 (Supplemental EA).

<sup>219</sup> Ex. EC-5 at 77 (SPAA).

<sup>220</sup> Ex. EC-5 at 76 (SPAA).

to the extent feasible. If construction in the winter is not possible, wooden or composite mats shall be used to protect wetland vegetation.

## 5. Air and Water Emissions

214. Temporary short-term air quality impacts would occur during the construction phase of the Project. Once operational, the Project would not generate criteria pollutants or carbon dioxide.<sup>221</sup>

215. Short-term air emissions during the construction phase of the Project are anticipated as a result of vehicle exhaust from the construction equipment and from vehicles traveling to and from facility locations as well as fugitive dust emissions due to travel on unpaved roads and limited amounts of excavation that may be needed for foundations (either for inverter boxes, or in some limited cases, the array piers).<sup>222</sup>

216. When necessary, dust from construction traffic will be controlled using standard construction practices such as watering of exposed surfaces, covering of disturbed areas, and reduced speed limits at each facility. Emission from construction vehicles will be minimized by keeping construction equipment in a good working order.<sup>223</sup>

## 6. Solid and Hazardous Wastes

217. Potential hazardous materials within the 2023 Land Control Area are typical of agricultural uses and may include contamination from petroleum products (diesel fuel, gasoline, natural gas, heating oil, lubricants, and maintenance chemicals), pesticides and herbicides. The proposed Project would generate solid waste during construction including construction debris such as scrap wood, plastics, cardboard, and scrap metals. Petroleum products would also be present on site, such as oil and fuel. Operation of the Project is not expected to generate significant quantities of solid and hazardous waste materials. Small quantities of hydraulic oil, lube oil, grease, and cleaning fluid will be maintained and stored at the operations and maintenance building, and as these fluids are replaced the waste products will be handled and disposed of through an approved disposal firm as required by regulations.<sup>224</sup>

218. If any wastes, fluids, or pollutants are generated during any phase of the operation of the Project, they will need to be handled, processed, treated, stored, and disposed of through a waste disposal firm.<sup>225</sup>

219. PV solar panels are nearly entirely encapsulated in glass and aluminum, which are not hazardous materials. The PV solar panels do, however, contain small amounts of metals that are, by themselves, characterized as hazardous materials by the United States Environmental Protection Agency (“EPA”). Each of the manufacturers being considered by Elk Creek to provide PV solar panels completes EPA testing and has determined that no hazardous materials (including arsenic, barium, cadmium, chromium, lead, mercury, selenium, or silver) leached from the tested

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<sup>221</sup> Ex. EERA-8 at 40 (EA); Ex. EERA-4 at 58–59 (Supplemental EA).

<sup>222</sup> Ex. EERA-8 at 40 (EA); Ex. EERA-4 at 58–59 (Supplemental EA).

<sup>223</sup> Ex. EERA-8 at 40 (EA); Ex. EERA-4 at 58–59 (Supplemental EA).

<sup>224</sup> Ex. EERA-8 at 56-57 (EA).

<sup>225</sup> Ex. EERA-8 at 58 (EA).



products resulting in leachate concentrations above the EPA’s regulatory thresholds. Accordingly, the risk to the environment from the contents of the PV solar panels will be minimal. If a PV solar panel is broken at the Project, the broken pieces and the remainder of the panel will be recycled or disposed of and replaced, thereby further reducing the risk for hazardous materials contained in the PV solar panels to leach into the environment.<sup>226</sup>

220. Section 4.3.26 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 4.3.27 of the Sample Site Permit requires Elk Creek to take all appropriate precautions against pollution of the environment and makes Elk Creek responsible for compliance with all laws applicable to the generation, storage, transportation, clean up, and disposal of all wastes generated during construction and restoration of the site.

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

221. Section 7 of the Endangered Species Act (“ESA”) requires that all federal agencies consider and avoid, if possible, adverse impacts to federally listed threatened or endangered species or their critical habitats, which may result from their direct, regulatory, or funding actions.<sup>227</sup>

222. Elk Creek contacted USFWS and MDNR and their respective data bases to review the Project for threatened and endangered species and unique habitats.<sup>228</sup>

223. Natural Heritage Information Systems (“NHIS”) data noted that two state-listed fish species (i.e., the Topeka shiner and plains topminnow) are found within one mile of the 2023 Land Control Area.<sup>229</sup> No perennial streams, including the stream named Elk Creek are located within the 2023 Land Control Area and therefore direct impacts to these species are not anticipated.<sup>230</sup>

224. According to Elk Creek’s review of the USFWS Information for Planning and Consultation (“IPaC”) tool, there are three species that are listed as threatened or endangered under the federal ESA: northern long-eared bat (“NLEB”), Topeka shiner, and western prairie fringed orchid, one species proposed for listing as endangered (tricolored bat), and one candidate species (monarch butterfly) that may be present within the 2023 Land Control Area.<sup>231</sup> In addition, there is designated critical habitat for the Topeka shiner in Rock County, located adjacent the Land Control Area.<sup>232</sup> Impacts to the three ESA listed species and the Topeka shiner critical habitat are not anticipated.<sup>233</sup>

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<sup>226</sup> Ex. EC-12 (Morris Testimony).

<sup>227</sup> Ex. EC-2 at 68 (Site Permit Application).

<sup>228</sup> Ex. EERA-4 at 72 (Supplemental EA).

<sup>229</sup> Ex. EERA-8 at 10 (EA); Ex. EERA-4 at 72–74 (Supplemental EA).

<sup>230</sup> Ex. EERA-8 at 72 (EA); Ex. EC-5 at 76 (SPAA).

<sup>231</sup> Ex. EERA-4 at 72–73 (Supplemental EA).

<sup>232</sup> Ex. EERA-4 at 73 (Supplemental EA).

<sup>233</sup> Ex. EERA-4 at 72–75 (Supplemental EA).

225. Sections 4.3.14, 4.3.16, and 5.1 of the Draft Site Permit identify conditions to monitor and mitigate the Project’s potential impacts on rare and unique natural resources.

## **XI. SITE PERMIT CONDITIONS**

226. The Draft 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.

227. Many of the conditions contained in the 2020 Site Permit can be met by the current Project.

228. On June 2, 2023, the Applicant requested that the Commission consider the following amendments to the 2020 Site Permit.

Cover Page: The Applicant requests that the nameplate capacity of the Elk Creek Solar Project be updated to 160 MW; the townships be updated to Vienna and Magnolia Townships, Rock County, Minnesota; the expiration date for the permit be updated to 30 years from the date of the amended Site Permit issuance, and the issuance date be updated to match the date the amendment is approved.

Section 1: The Applicant requests that the nameplate capacity of the solar project be updated to 160 MW and the townships listed are updated to Vienna and Magnolia Townships, Rock County, Minnesota.

Section 2: The Applicant requests that the nameplate capacity of the solar project be updated to 160 MW and the township, range, and section information be updated as follows.<sup>234</sup>

a. Rock County, Vienna Township:

i. T103N, R44W, Sections 27, 34, and 35

b. Rock County, Magnolia Township:

i. T102N, R44W, Section 3

Section 2.1: The Applicant requests that the description of associated facilities to include only the on-site below-ground and hybrid combination of above-ground and below-ground electrical collection and communication lines, and up to five weather stations.

Section 3: The Applicant requests that the acreage of the designated site be updated to an approximately 1,161-acre area within the 1,522-acre 2023 Land Control Area.

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<sup>234</sup> Ex. EC-5 at 1 (SPAA) at 3-4.

Section 4.3: The Applicant requests that the name of the application be updated to Elk Creek Solar Application for a Site Permit Amendment dated June 2, 2023.

229. On February 26, 2024, EERA submitted comments recommending modifications to Elk Creek’s draft decommissioning plan and summarizing the proposed amendments to the 2020 Site Permit.<sup>235</sup>

230. Elk Creek supports EERA’s proposed amendments to the 2020 Site Permit as identified in the Draft Site Permit<sup>236</sup> with the following additional modifications:

Cover Page: The Applicant requests that the townships be updated to Vienna and Magnolia Townships, Rock County.

The Permittee is authorized by this site permit to construct and operate an up to ~~80~~ 160 MW alternating current nameplate capacity solar energy conversion system and associated facilities in Vienna and Magnolia Townships, Rock County, Minnesota. The solar energy generating system and associated facilities shall be built and operated within the site identified in this permit and as portrayed in the official site maps, and in compliance with the conditions specified in this permit.

Section 2: The Applicant requests that the townships be updated to Vienna and Magnolia Townships.

## **2 Project Description**

The project is an up to ~~80~~ 160 MW alternating current (“AC”) nameplate capacity solar energy conversion facility in Vienna Township and Magnolia Township, Rock County, Minnesota.

Section 2.1: The Applicant requests that the description of associated facilities to include only the on-site below-ground and hybrid combination of above-ground and below-ground electrical collection, together with an above-ground or below-ground electrical collection feeder lines between the northern lobe of the Project and the Project substation and above-ground and below-ground communication lines.

### **2.1 Associated Facilities**

In addition to the photovoltaic solar panels, associated facilities include racking; inverters, security fencing, a Project substation, gravel access roads, an operations and maintenance building, on site below ground, ~~above ground~~ or a hybrid combination of above ground and below ground electrical collection and communication lines, above ground or below ground electrical collection feeder lines and up to ~~two~~ five weather stations.

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<sup>235</sup> Ex. EERA-7 (EERA Comments)

<sup>236</sup> Ex. EERA-7 at Attachment A (EERA Comments)

Section 3: The Applicant requests that the acreage of the designated site be updated to an approximately 1,161-acre area within the 1,522-acre 2023 Land Control Area.

### **3 Designated Site**

The site designated by the Commission for the Elk Creek Solar Project is the site depicted on the site maps attached to this permit. The project would be constructed on approximately ~~68+~~ 1,161 acres of leased and purchased land within the ~~976~~1,522-acre 2023 Land Control Area.

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

### **CONCLUSIONS OF LAW**

1. Any of the forgoing Findings of Fact more properly designated as Conclusions of Law are hereby adopted as such.
2. The Commission has jurisdiction over the site permit amendment applied for by Elk Creek for the up to 160 MW AC proposed Project pursuant to Minn. Stat. § 216E.03.
3. The Project is exempt from certificate of need requirements because Elk Creek is an independent power producer.
4. Elk Creek's Site Permit Amendment Application is appropriately evaluated under Minnesota Rule 7850.4900's site-permit-amendment process as modified in the Commission's October 10, 2023, Order Approving a Site-Permit Amendment Process.
5. Elk Creek has substantially complied with the procedural requirements of Minn. Stat. Ch. 216E and Minn. R. Ch. 7850.
6. The Commission has complied with the procedural requirements of Minn. Stat. Ch. 216E and Minn. R. Ch. 7850.
7. Public hearings were conducted on February 12, 2024 (in-person) and February 13, 2024 (remote-access). Proper notice of the public hearings was provided, and the public was given an opportunity to speak at the hearings and to submit written comments.
8. The Commission has the authority under Minn. Stat. § 216E.03 to place conditions in a LEPGP site permit.
9. The site permit amendment contains a number of important mitigation measures and other reasonable conditions.
10. It is reasonable to amend the 2020 Site Permit to include the changes identified in the Draft Site Permit with the additional modifications to the Cover Page and Sections 2, 2.1, and 3 proposed by Elk Creek and as set forth in paragraph 230 of the Findings of Fact above.

11. There is no feasible or prudent alternative to the Project under Minn. R. part 7850.4400, subp. 4.

12. The Project, with the permit conditions revised as set forth above, satisfies the site permit criteria for an LEPGP in Minn. Stat. § 216E.03 and meets all other applicable legal requirements.

13. 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.

14. 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 Commission shall amend Elk Creek Solar, LLC's site permit authorizing it to construct and operate the up to 160 MW AC Elk Creek Solar Project in Rock County, and that the permit include the amendments to the 2020 Site Permit as set forth in paragraph ten of the Conclusions above.