



Solar Krafte Utilities Inc. and Beargrass Solar Inc.

**Brooks Solar Farm Project Amendment, Time Extension and
Approval and Permit and Licence Transfer**

November 6, 2023

Alberta Utilities Commission

Decision 27916-D01-2023

Solar Krafte Utilities Inc. and Beargrass Solar Inc.

Brooks Solar Farm Project Amendment, Time Extension and
Approval and Permit and Licence Transfer

Proceeding 27916

Applications 27916-A001 and 27916-A002

November 6, 2023

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Eau Claire Tower

1400, 600 Third Avenue S.W.

Calgary, Alberta T2P 0G5

Telephone: 310-4AUC (310-4282) in Alberta

1-833-511-4AUC (1-833-511-4282) outside Alberta

Email: info@auc.ab.ca

Website: www.auc.ab.ca

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1 Decision summary

1. In this decision, the Alberta Utilities Commission approves in part an application from Solar Krafte Utilities Inc. to amend, construct, and operate a power plant project, designated as the Brooks Solar Farm, subject to conditions, and finds that it is not in the public interest to approve the construction and operation of the Brooks Solar Farm within the project layout on the north half of Section 18, Township 18, Range 15, west of the Fourth Meridian (north half of Section 18). The Commission also approves an application to transfer the Brooks Solar Farm approval and the Zachary 997S Substation permit and licence from Solar Krafte Utilities Inc. to Beargrass Solar Inc. (Beargrass Solar), and grants a time extension of the deadline to construct the Brooks Solar Farm and Zachary 997S Substation.

2 Introduction

2.1 Application details

2. Pursuant to Approval 26435-D03-2022¹ and Permit and Licence 26435-D02-2022,² Solar Krafte Utilities Inc. has approval to construct and operate a 360-megawatt (MW) solar power plant, designated as the Brooks Solar Farm (the project), and the associated Zachary 997S Substation (the substation). The approved but not yet constructed project and substation will be located in the county of Newell, Alberta, approximately 6.5 kilometres west of the city of Brooks.

3. The project and substation were initially approved in Decision 26435-D01-2022 (the approved project).³ In Decision 26435-D01-2022, the Commission found that it was not in the public interest to approve the construction and operation of the project on Section 24, Township 18, Range 16, west of the Fourth Meridian (Section 24) due to negative environmental impacts to the large area of native grassland in that section, and therefore excluded construction and operation of the project on Section 24 from the approval.⁴ Based on the evidence available in Proceeding 26435, the Commission also found that the north half of Section 18 did not qualify as native grassland and approved the construction and operation of the project on that section.⁵

¹ Power Plant Approval 26435-D03-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Application 26435-A001, May 25, 2022.

² Substation Permit and Licence 26435-D02-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Application 26435-A002, May 18, 2022.

³ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022.

⁴ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022, at paragraphs 57, 155, 164, 167.

⁵ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022, at paragraphs 58, 66, 84, 164-165, 167.

4. On December 22, 2022, Solar Krafte filed an application, Application 27916-A001, with the Commission for approval to amend, construct and operate the Brooks Solar Farm, under sections 11 and 19 of the *Hydro and Electric Energy Act* (the 2022 amendment). Among other changes, the 2022 amendment application revised the layout of the original project area to include approximately 165 acres of additional land immediately west of and abutting the original project area.⁶

5. On March 10, 2023, Beargrass Solar and Solar Krafte filed an application with the Commission requesting that, if the Commission approved Application 27916-A001, the resulting Brooks Solar Farm approval be issued to Beargrass Solar, and that the Zachary 997S Substation permit and licence be transferred to Beargrass Solar (the transfer application).⁷

6. On March 30, 2023, the Commission granted an interim extension of Approval 26435-D03-2022 and Permit and Licence 26435-D02-2022, pursuant to subsection 8(5) of the *Alberta Utilities Commission Act*, until a final decision was made on the applications.⁸

7. On May 29, 2023, two weeks before the scheduled oral hearing to determine the amendment application, Solar Krafte updated the design of the 2022 amendment (the 2023 amendment).⁹ The main difference is that in the 2023 amendment, Solar Krafte no longer includes 165 acres of additional project land proposed in the 2022 amendment. In addition, the 2023 amendment proposed the use of new technology for the solar photovoltaic modules and inverter/transformer stations, revised the approved project layout to reflect the new technology and reduced the total generating capability to 295.13 MW from 360 MW.¹⁰ The proposed project layout in the 2023 amendment is not the same as the originally approved project layout or the project layout proposed in the 2022 amendment application.

8. Solar Krafte submitted that these changes, the 2023 amendment, represented the final project update to the approved project.

9. The Commission determined that the 2023 amendment did not fall within the allowances for a final project update defined in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines*, and established a written hearing process to consider the 2023 amendment.¹¹

10. In addition to the Commission's consideration of the 2023 amendment, on July 5, 2023, the Commission also initiated a narrowly scoped review of its original Decision 26435-D01-2022 on the question of whether the north half of Section 18 within the project footprint qualifies as native grassland, and if so, whether it is in the public interest to approve the construction and operation of the Brooks Solar Farm on these lands. The Commission indicated that the review would be conducted as part of Proceeding 27916, and updated the written hearing process to include further process steps relevant to the determination of the review. Further, the Commission

⁶ Exhibit 27916-X0001, Solar Krafte Brooks Solar Farm Amendment Application.

⁷ Exhibit 27916-X0062, Application 27916-A002 and Exhibit 27916-X0059, Solar Krafte Correspondence with AUC (Adding RWE Affiliate as Applicant, March 7, 2023).

⁸ Exhibit 27916-X0077, AUC letter - Interim time extension.

⁹ Exhibits 27916-X0126 to Exhibit 27916-0133 and Exhibit 27916-X0135.

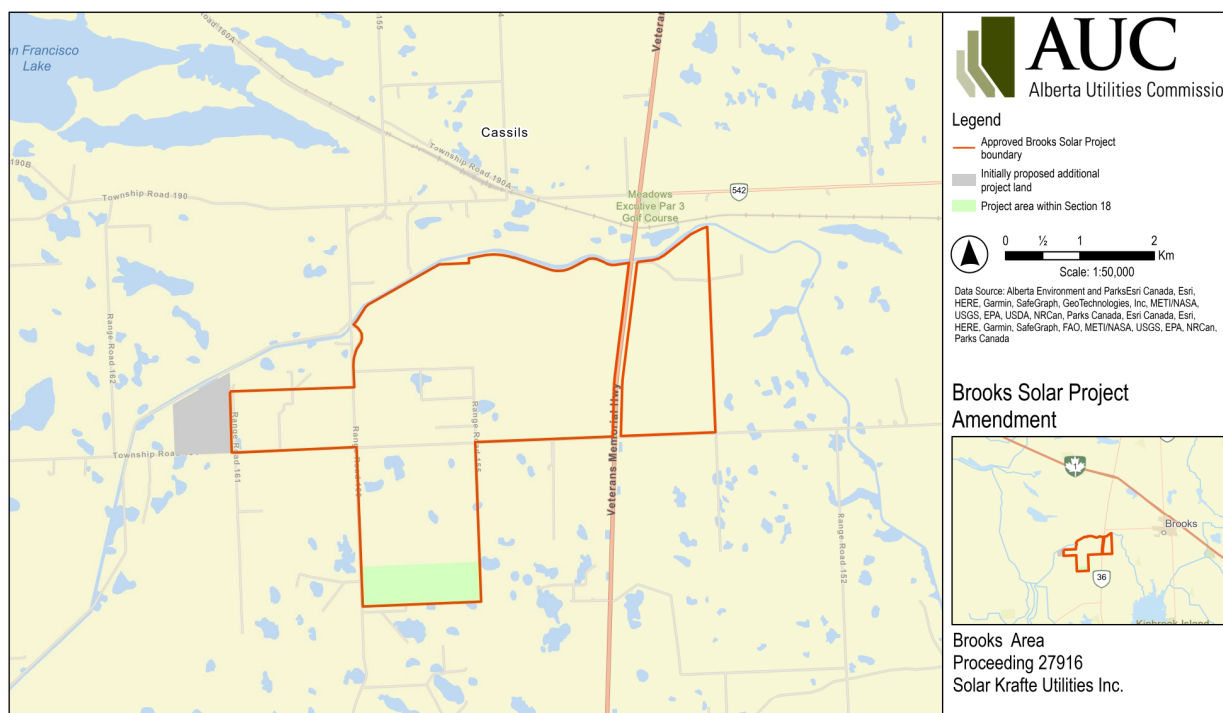
¹⁰ Exhibit 27916-X0126, Solar Krafte Final Project Update & Motion For Disposition, PDF page 2.

¹¹ Exhibit 27916-X0141, AUC letter - Ruling on the Solar Krafte Utilities Inc. motion to dispose of the proceeding.

suspended Approval 26435-D03-2022 on the north half of Section 18 only, until the Commission-initiated review is determined.¹²

11. The map below shows the proposed location of the updated project in the 2023 amendment, including the project footprint within the north half of Section 18 (in green) that is subject to the Commission-initiated review.

Figure 1. Amended Brooks Solar Farm (2023 amendment)



12. Solar Krafte submitted that the 2023 amendment will not increase the land, noise and environmental impacts from what was originally approved in Proceeding 26435.¹³ It stated that the overall project benefits include clean, renewable power without emissions or waste; locally sourced employment; municipal tax revenue; locally sourced supplies and services; and energy diversification within Alberta.¹⁴

13. Solar Krafte’s applications and evidence included the following key components:

- A copy of the referral report amendment letter for the 2022 amendment, dated September 28, 2022, from Alberta Environment and Protected Areas (AEPA).^{15, 16}
- A letter that requested the Commission transfer the power plant approval and substation permit and licence to Beargrass Solar, with an effective date to coincide with the date the

¹² Exhibit 27916-X0165, Commission-initiated review and updated process schedule.

¹³ Exhibit 27916-X0126, Solar Krafte Final Project Update & Motion For Disposition, PDF page 2.

¹⁴ Exhibit 27916-X0178, Solar Krafte Brooks Solar Farm Written Argument, PDF page 13, Paragraph 50.

¹⁵ On October 24, 2022, Alberta Environment and Parks (AEP) was renamed the Ministry of Environment and Protected Areas. Any references to AEP in Rule 033: *Post-approval monitoring requirements for wind and solar power plants* and elsewhere that relate to forward-looking obligations or commitments between the applicant and AEP should be interpreted as meaning Alberta Environment and Protected Areas (AEPA).

¹⁶ Exhibit 27916-X0013, Attachment 12 – AEP Amendment Letter.

Commission approves the transfer application, should the Commission approve the application.¹⁷

- A copy of Beargrass Solar’s Certificate of Status (Alberta).¹⁸
- A copy of the 2023 amendment project information package that Solar Krafte sent to stakeholders to inform them about the proposed changes to the project in the 2023 amendment.¹⁹
- An environmental evaluation memo, which assessed environmental impacts of the 2023 amendment and concluded that the 2023 amendment layout does not present a significant environmental impact.²⁰
- A noise impact assessment (NIA) update memo, which predicted the updated project in the 2023 amendment will be compliant with Rule 012: *Noise Control*.²¹
- A solar glare assessment for the 2023 amendment, which concluded that the updated project in the 2023 amendment is not likely to have the potential to create hazardous glare conditions for the assessed transportation routes, dwellings and unregistered helipad flight paths.²²
- Solar Krafte’s evidence on impacts from the 2023 amendment to wetland setbacks, native grasslands and wildlife features.²³
- Solar Krafte’s evidence on the issue of whether the north half of Section 18 qualifies as native grassland.²⁴

14. Based on a construction start date of September 1, 2023, Solar Krafte expected a construction completion date of October 31, 2024, and for the project to commence commercial operation on November 30, 2024.²⁵

2.2 Interveners

15. The Commission issued a notice of amendment application on January 23, 2023. The members of Cassiope 2 Group (C2G) submitted statements of intent to participate, and the Commission granted standing to C2G and its members who expressed concerns about

¹⁷ Exhibit 27916-X0059, Solar Krafte Correspondence with AUC (Adding RWE Affiliate as Applicant, March 7, 2023).

¹⁸ Exhibit 27916-X0060, Attachment 1 – Certificate of Status (Beargrass Solar Inc).

¹⁹ Exhibit 27916-X0133, Appendix 8 – Brooks Solar Farm Stakeholder Update Letter (May 26, 2023).

²⁰ Exhibit 27916-X0132, Appendix 7 – Ausenco Environmental Memo.

²¹ Exhibit 27916-X0131, Appendix 5 – Green Cat NIA Update Memo.

²² Exhibit 27916-X0135, Appendix 6 – Green Cat Glare Hazard Analysis.

²³ Exhibit 27916-X0162, Attachment A – Green Cat Renewables Brooks Solar Farm Amendment, Proceeding 27916.

²⁴ Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence.

²⁵ Exhibit 27916-X0133, Appendix 8 – Brooks Solar Farm Stakeholder Update Letter (May 26, 2023), PDF page 2.

environmental effects, including project impacts to native grassland, wetland and wildlife, glare, noise, consultation, and the emergency response plan.²⁶

16. On July 17, 2023, the Eastern Irrigation District (EID), the owner of the lands in the north half of Section 18, filed a statement of intent to participate requesting that the Commission allow it to file argument regarding those lands.²⁷ The Commission granted the request.²⁸ In its argument, the EID raised concerns about the economic impacts that would result if the Commission were to deny the north half of Section 18 for project development.

17. No interveners opposed the transfer application.

2.3 Written hearing including a narrowly scoped review of Decision 26435-D01-2022

18. The Commission held a written hearing to consider the application for the 2023 amendment, concluding on August 14, 2023. The record of the proceeding was closed on the same day.²⁹ The registered proceeding participants can be found in [Appendix A](#) of this decision.

19. During the written hearing, on June 20, 2023, C2G submitted evidence regarding the 2023 amendment, which included a new vegetation assessment utilizing quantitative calculations for species composition (quantitative assessment) on the north half of Section 18. C2G's quantitative assessment showed that portions of these lands qualified as native grassland.³⁰ After reviewing C2G's evidence, on July 5, 2023, the Commission exercised its discretion and initiated a review of Decision 26435-D01-2022 on the question of whether the north half of Section 18 qualified as native grassland. In its previous decision, the Commission found that based on the qualitative evidence on its record, the north half of Section 18 did not qualify as native grassland.

20. On July 28, 2023, in response to the Commission's decision to review its original native grassland finding, Solar Krafte completed a detailed quantitative vegetation assessment as described in *Conservation Assessments in Native Grasslands*³¹ within the north half of Section 18, which also identified native grassland.³²

21. In the following sections of this decision, the Commission provides its findings on the applications and the decision review. The Commission begins with a discussion of the legislative and evidentiary frameworks that guide its decision-making. The Commission then discusses specific concerns and factors that it has considered. A central issue is whether the north half of Section 18 qualifies as native grassland. Concerns and issues raised by C2G and the EID are discussed in Section 4 of this decision.

²⁶ Exhibit 27916-X0049, AUC letter - Ruling on standing; Exhibit 27916-X0066, AUC letter - Ruling on standing of Cassiope 2 Group; Exhibit 27916-X0071, AUC letter - Ruling on standing of Abe Banman; Exhibit 27916-X0097, AUC letter - Ruling on standing of Brad Biette, Karen Getz, Jessica Getz, and Jennifer Getz.

²⁷ Exhibit 27916-X0169, EID Letter to the AUC re Brooks Solar Farm Review Decision on the N18.

²⁸ Exhibit 27916-X0170, AUC letter - Ruling on standing of Eastern Irrigation District.

²⁹ Exhibit 27916-X0187, AUC letter - Application Complete.

³⁰ Exhibit 27916-X0149, Appendix D – Evidence of Cliff Wallis_000160, PDF page 41.

³¹ Alberta Environment and Parks. 2018. *Conservation Assessments in Native Grasslands*. June 2018. Edmonton. Alberta.

³² Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence, PDF page 9.

3 Commission's consideration of the applications

22. In this section, the Commission describes the legal landscape in which its decisions are made. First, the Commission explains its mandate and powers when considering a power plant application. Then, the Commission describes how it assesses the public interest, including how this assessment is performed in the context of an amendment application.

3.1 The role of the Commission

23. The Commission is an independent, quasi-judicial agency of the province of Alberta. The Commission's powers are conferred on it by the provincial legislature and set out in legislation. As a quasi-judicial agency, the Commission is similar in many ways to a court when it holds hearings and makes decisions. Like a court, the Commission bases its decisions on the evidence before it and allows interested parties to question each other's witnesses to test the evidence as well as provide argument. Unlike a court proceeding, the Commission's proceedings are not matters between two or more competing parties to determine who wins and who loses. Instead, the Commission deals with specialized subject matter requiring it to assess and balance a variety of public interest considerations.

24. The applicant has the onus to demonstrate that approval of its application is in the public interest. Parties who may be directly and adversely affected by the Commission's approval of the application may attempt to show how the applicant has not met its onus. These parties may do so by bringing evidence of the effects of the project on their own private interests and explaining how the public interest may be better served by accommodating their private interests, and they may use the evidence filed by all parties to the proceeding to argue what a better balancing of the public interest might be. It is the Commission's role to test the application and the concerns raised about the project to determine whether approval is in the public interest.

25. The Commission recognizes that responding to an application requires a person's time and resources. In order to alleviate this burden, the Commission makes funding available to local interveners to enable them to hire legal representation, consultants and experts to assist with their participation.

3.2 The Commission's assessment of the public interest in this proceeding

26. The Commission holds written or oral proceedings to determine an outcome that meets the public interest mandate set out in its enabling legislation. When the Commission receives an application to construct and operate a power plant, Section 17(1) of the *Alberta Utilities Commission Act* is engaged. This provision states that, in addition to any other matters it may or must consider, the Commission must give consideration to whether the proposed project is in the public interest, having regard to the social and economic effects of the project and its effects on the environment.

27. The Commission must also take into consideration the purposes of the *Hydro and Electric Energy Act* and the *Electric Utilities Act*. These statutes provide for economic, orderly and efficient development of facilities and infrastructure, including power plants, in the public interest, and set out a framework for a competitive generation market, where decisions about whether and where to generate electricity are left to the private sector. When the Commission

conducts a public interest assessment of a power plant application, it does not consider the economics of the project or if there is a need by consumers for the electricity it will provide.³³

28. Conducting a public interest assessment requires the Commission to assess and balance the competing elements of the public interest in the context of each specific application before it. Part of this exercise is an analysis of the nature of the impacts associated with a particular project, and the degree to which the applicant has addressed these impacts. Balanced against this is an assessment of the project's potential public benefits. The assessment includes the positive and adverse impacts of the project on those nearby, such as landowners.

29. The Commission has previously affirmed that the public interest will be largely met if an application complies with existing regulatory standards and the project's public benefits outweigh its negative impacts.³⁴

30. As a starting point, a power plant application filed with the Commission must comply with Rule 007 and Rule 012: *Noise Control*, and a transfer application must comply with Rule 007 and Section 23 of the *Hydro and Electric Energy Act*.

31. In applications such as the present one, where the applicant seeks to amend its previously approved project, the Commission's public interest consideration focuses on the incremental effects associated with the proposed amendment. In the ordinary course, an amendment application does not reopen an approval, allow for reconsideration of the project as a whole, or create an opportunity to relitigate issues previously decided and not affected by the proposed amendment, or advance evidence or arguments that could have been considered in the original proceeding.

32. The Commission also considers the public interest when considering applications to transfer approvals with respect to a power plant and licences and permits with respect to transmission facilities.

3.3 The Commission's exercise of its review powers in this proceeding

33. Notwithstanding the above, the Commission is authorized by Rule 016: *Review of Commission Decisions* to review any of its decisions on its own motion at any time for any reason. In this proceeding, the Commission determined that exceptional circumstances exist and there are compelling reasons to review Decision 26435-D01-2022 on the narrow question of whether the north half of Section 18 qualifies as native grassland, and if so, whether it is in the public interest to approve the construction and operation of the project on the north half of Section 18.³⁵ Specifically, the Commission received evidence concerning the potential incremental effects of the 2023 amendment on the north half of Section 18 based on a new vegetation assessment utilizing methods with quantitative calculations for species composition (quantitative assessment). The quantitative assessment is more detailed than the evidence concerning native grassland in the north half of Section 18 filed in the original proceeding, and raised concerns for the Commission as to whether or not the north half of Section 18 is native

³³ *Hydro and Electric Energy Act*, RSA 2000, c H-16, Section 3(1)(c).

³⁴ Alberta Energy and Utilities Board Decision 2001-111: EPCOR Generation Inc. and EPCOR Power Development Corporation - 490-MW Coal-Fired Power Plant, Application 2001173, December 21, 2001, PDF page 11.

³⁵ Exhibit 27916-X0165, Commission-initiated review and updated process schedule.

grassland, in particular given that C2G's and Solar Krafte's qualified experts were in significant disagreement on the issue.

34. In determining the review question, the Commission will first assess whether it will vary its finding in Decision 26435-D01-2022 that the north half of Section 18 does not qualify as native grassland. Next, the Commission will perform a public interest assessment in light of that finding (whether or not it is varied). Given that Solar Krafte has applied for an amendment to the approved project, the Commission will assess whether it is in the public interest to approve the construction and operation of the 2023 amendment on the north half of Section 18.

4 Amendment to Brooks Solar Farm

35. The Commission has reviewed the 2023 amendment in Application 27916-A001 and has determined that the information requirements specified in Rule 007 have been met.

36. The Commission finds that construction and operation of the project on the north half of Section 18 is not in the public interest; however, it also considers the remainder of the project, as amended, to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*, subject to the conditions described below, and subject to conditions that remain in effect from the previous approval. The Commission's approval of the 2023 amendment is also premised on its understanding that commitments made by Solar Krafte are binding and will be treated as such.

37. In this section, the Commission first addresses the environmental impacts of the project on wildlife and wildlife habitat. The Commission also addresses concerns raised by the EID regarding the north half of Section 18. Finally, the Commission addresses other concerns raised by C2G, including noise, glare, consultation and the emergency response plan.

4.1 Native grassland

38. In Decision 26435-D01-2022, the Commission noted that all of the evidence concerning native grassland in the north half of Section 18 was qualitative and therefore it could not accurately quantify the grassland composition (i.e., percentage of native and non-native cover).³⁶ Notwithstanding these noted shortcomings, the Commission did find, based on the evidence before it, that the north half of Section 18 did not qualify as native grassland.³⁷

39. In the current proceeding, Cliff Wallis, C2G's expert witness on environmental matters, submitted a new quantitative vegetation field assessment. After reviewing C. Wallis's quantitative vegetation field assessment, the Commission temporarily suspended the power plant approval for the north half of Section 18 and initiated a review of Decision 26435-D01-2022 on the narrow question of whether the lands qualified as native grassland.³⁸

³⁶ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022, paragraph 62.

³⁷ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022, paragraph 66.

³⁸ Exhibit 27916-X0165, Commission-initiated review and updated process schedule.

40. Evidence presented by C2G indicated that the project footprint portions in the north half of Section 18 qualify as native grassland.³⁹ This observation was subsequently confirmed in evidence provided by Solar Krafte, though Solar Krafte disagreed as to the extent and quality of the native grassland cover in the north half of Section 18.⁴⁰ Based on the evidence provided by C2G and Solar Krafte, the Commission finds that portions of the north half of Section 18 within the project boundary qualify as native grassland. The impact of project infrastructure on this native grassland within the north half of Section 18 is one of the central issues in this proceeding.

4.1.1 What is the project's impact on the north half Section 18?

41. The Commission accepts the definitions for native grassland provided in the *Rangeland Health Assessment for Grassland, Forest, & Tame Pasture*⁴¹ as authoritative and these definitions are consistent with the *Wildlife Directive for Alberta Solar Energy Projects* (the Directive). Native grasslands are “an area of prairie in which natural vegetation consist primarily of perennial grasses. The native species composition must be greater then 30%.”⁴²

42. For the reasons that follow, the Commission finds that the north half of Section 18 is functional native grassland and that the project causes a high negative impact to native grassland habitat on this area.

43. C2G expressed concerns that portions of the project will impact native grassland and specifically noted the mischaracterization of these areas as tame pasture.⁴³ C2G adopted the recommendations of C. Wallis that “Solar Krafte follow native grassland avoidance requirements in the standards of the Wildlife Directive for Alberta Solar Energy Projects.”⁴⁴

44. On behalf of C2G, Steven Tannas of Tannas Conservation Services Ltd. conducted rangeland health assessments (a quantitative vegetation assessment described in the *Rangeland Health Assessment for Grassland, Forest & Tame Pasture*⁴⁵) within the north half of Section 18 on April 18, 2023. S. Tannas observed two distinct native grassland communities within the north half of Section 18 and noted these observations were aligned with desktop grassland vegetation inventory maps for the north half of Section 18.⁴⁶ This evidence indicates that both native grassland and modified grassland conditions exist in the north half of Section 18 and C2G asserts that a healthy native grassland condition is predominant within the north half of Section 18.

³⁹ Exhibit 27916-X0149, Appendix D – Evidence of Cliff Wallis_000160, PDF page 41.

⁴⁰ Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence_000183, PDF page 11.

⁴¹ Adams, B.W., G. Ehlert, C. Stone, M. Alexander, D. Lawrence, M. Willoughby, D. Moisey, C. Hincz, A. Burkinshaw, J. Richman, K. France, C. DeMaere, T. Kupsch, T. France, T. Broadbent, L. Blonski, A.J. Miller. 2016. *Rangeland Health Assessment for Grassland, Forest and Tame Pasture*. AEP, Rangeland Resource Stewardship Section. Fifth Edition.

⁴² Government of Alberta. 2017. *Wildlife Directive for Alberta Solar Energy Projects*. October 4, 2017. PDF page 9.

⁴³ Exhibit 27916-X0114, Cassilope 2 Group Submissions_000123, PDF page 9.

⁴⁴ Exhibit 27916-X0114, Cassilope 2 Group Submissions_000123, PDF page 10.

⁴⁵ Adams, B.W., G. Ehlert, C. Stone, M. Alexander, D. Lawrence, M. Willoughby, D. Moisey, C. Hincz, A. Burkinshaw, J. Richman, K. France, C. DeMaere, T. Kupsch, T. France, T. Broadbent, L. Blonski, A.J. Miller. 2016. *Rangeland Health Assessment for Grassland, Forest and Tame Pasture*. AEP, Rangeland Resource Stewardship Section. Fifth Edition.

⁴⁶ Exhibit 27916-X0117, Appendix C - Evidence of Cliff Wallis_000126, PDF page 109.

45. In response to the Commission's request for additional evidence,⁴⁷ Solar Krafte retained Daniel Busemeyer of Stantec Consulting Ltd. to conduct vegetation assessments within the north half of Section 18 in accordance with the *Conservation Assessments in Native Grasslands* guidelines.⁴⁸ D. Busemeyer identified survey transects intersecting native grassland, transects intersecting grasslands with a modified state containing greater than 70 per cent exotic species (less than 30 per cent native species), and transects intersecting both grassland states; these surveys provided the basis for the Solar Krafte's mapped polygons of native and tame grasslands within the north half of Section 18.⁴⁹ The mapping of both native and tame grasslands areas within the north half of Section 18 is the basis of Solar Krafte's opinion that the north half of Section 18 is fragmented habitat due to historical land use.

46. The Commission notes that Solar Krafte documented 41.5 hectares (ha) (102.5 acres)⁵⁰ of native grassland which is approximately 65 per cent of the area within the project fenceline.⁵¹ The presence of native grassland within the north half of Section 18 is not contested by either Solar Krafte or C2G.

47. Solar Krafte submitted that the native grassland area impacted by the project is limited to areas directly covered by solar panels and presents a ground cover ratio (0.31) to calculate these impacted areas.⁵² The Commission does not accept this as a reasonable estimate of project impacts.

48. Solar Krafte made similar arguments in the original proceeding with respect to Section 24. The Commission remains of the opinion that the science behind the Directive requires consideration of the full impact as a result of a solar project sited on native grassland, and that consideration of the impacts should not be limited to the surface area of land permanently and physically disturbed and land beneath the project solar panels.⁵³ In particular, the Commission accepts that AEPA's statements concerning Section 24 are also applicable to the north half of Section 18, including that, "from a biological perspective, the entire area within the Project fence will no longer be functional native habitat so the entire fenced area will be impacted."⁵⁴ The Commission also accepts AEPA's explanation that this was because the addition of photovoltaic (PV) panels, fences and other above-ground infrastructure would change the species assemblage and limit the ability of some wildlife to successfully breed, forage or shelter in the area.⁵⁵ The Commission finds that the project impacts both 22.6 ha of tame (modified) grassland and 41.5 ha of native grassland in the north half of Section 18. On this

⁴⁷ Exhibits 27916-X0165 and 27916-X0167.

⁴⁸ Alberta Environment and Parks. 2018. *Conservation Assessments in Native Grasslands*. June 2018. Edmonton, Alberta. PDF page 56.

⁴⁹ Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence_000183, PDF page 9.

⁵⁰ Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence_000183, PDF page 2.

⁵¹ Exhibit 27916-X0184, C2G Argument final, PDF page 15.

⁵² Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence_000183, PDF page 3.

⁵³ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022, paragraph 31.

⁵⁴ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022, paragraph 27, citing Exhibit 26435-X0116, AEP-FWS Amendment Letter Brooks Solar_Solar Krafte_2021-11-01, PDF page 4.

⁵⁵ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022, PDF page 13.

basis, the Commission also finds that the 7.6 ha of native grassland that Solar Krafte submitted it would impact does not reflect the full impact as a result of the project.⁵⁶

49. The Commission understands that multiple historical impacts have occurred within the north half of Section 18 and these impacts (apparent in imagery and evidenced in the collected vegetation data by exotic species⁵⁷) have diminished the health and extent of native grasslands in the north half of Section 18. Quantitative data detailing the extent of historical impacts to grassland health has been reported by C. Wallis as indicating that the north half of Section 18 is primarily healthy with limited unhealthy areas (where unhealthy components contain less than 30 per cent native species).⁵⁸

50. Impacts to native grassland habitat were rated as high risk to wildlife and wildlife habitat by AEPA. In the Commission's view, the inclusion of a 70 per cent exotic species threshold for determination of native grassland in the *Conservation Assessments in Native Grasslands* guidelines indicates that AEPA considered the issue of impacts in the assessment of native grasslands and has nevertheless determined that native grassland with existing impacts, may still be classified as native grassland. The Commission agrees with this determination. Consistent with prior decisions, the Commission is not persuaded that the level of impact of the project on native grasslands is considered lower because the north half of Section 18 is fragmented by current and historic land uses.⁵⁹

51. The Commission accepts C. Wallis's opinion that the north half of Section 18 presents functional native grassland,⁶⁰ an opinion that is supported by the reported presence of breeding individuals of Baird's sparrow and Sprague's pipit (i.e., species that require large blocks of high value native grassland habitat).⁶¹

52. There are very limited studies on the impacts of solar development on grassland habitat and species. However, from the record of the proceeding the Commission has identified the following possible negative impacts to grassland habitat and species in the project area:

- Direct loss or alteration of native plant species arising from construction and operations. Indirect effects on native plant species resulting from competition with invasive species and microclimatic changes under the panels.⁶²
- Changes to the plant species composition and community structure in native grasslands.⁶³

⁵⁶ Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence_000183, PDF page 5.

⁵⁷ Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence_000183, PDF page 10.

⁵⁸ Exhibit 27916-X0117, Appendix C - Evidence of Cliff Wallis_000126, PDF page 109.

⁵⁹ Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence_000183, PDF page 4.

⁶⁰ Exhibit 27916-X0117, Appendix C - Evidence of Cliff Wallis_000126, PDF page 109.

⁶¹ Exhibit 27916-X0007, Attachment 6 – Environmental Evaluation, PDF page 32.

⁶² Exhibit 27916-X0184, C2G Argument final, PDF page 23.

⁶³ Exhibit 27916-X0184, C2G Argument final, PDF page 23.

- Direct mortality due to construction and operations due to impacts with infrastructure and during vegetation management (i.e., collisions with solar panels and mowing).⁶⁴
- Indirect mortality to grassland species due to potential increases in predator habitat and reductions in prey or palatable plant species.⁶⁵
- Changes in species assemblages in area and unknown impacts on grassland species ability to breed, forage and shelter.⁶⁶
- Avoidance or exclusion of wildlife from native grassland due to solar infrastructure.⁶⁷

53. Accordingly, even if this area of native grassland is impacted by historical land uses, and even if some of the species currently using the habitat continue to do so after the project is built, the Commission finds that there is a high risk of significant negative effects to wildlife if the project is sited on the native grassland in the north half of Section 18.

4.1.2 Is Solar Krafte able to adequately mitigate the impact to native grassland?

54. In this section, the Commission will discuss evidence provided in both the current proceeding and the original Proceeding 26435. Within these proceedings, the Commission finds that Solar Krafte is not able to adequately mitigate the high risk to native grassland habitat in the north half of Section 18 posed by the project.

55. Avoidance of siting project infrastructure in areas of native grassland is the most critical factor in preventing significant negative effects on wildlife.⁶⁸ In Proceeding 26435, AEPA's amendment letter stated that, given the nature of the impacts, there is little ability to mitigate the negative consequences of the project on Section 24 without a change in siting.⁶⁹ As noted above, the Commission is of the view that AEPA's comments concerning Section 24 in the original proceeding⁷⁰ are equally applicable to the north half of Section 18 in this proceeding.

56. The Commission reviewed the studies provided by Green Cat Renewables Canada Corporation, Solar Krafte's environmental permitting consultant, and is not persuaded that those studies provide relevant evidence concerning possible changes to the habitat present in the north half of Section 18, being native grasslands within the dry mixed-grass natural subregion of Alberta.⁷¹ Most of the literature studies provided by Green Cat within Exhibit 27916-X0172

⁶⁴ Exhibit 27916-X0007, Attachment 6 – Environmental Evaluation, PDF page 35.

⁶⁵ Exhibit 27916-X0117, Appendix C - Evidence of Cliff Wallis_000126, PDF page 37.

⁶⁶ Exhibit 26435-X0116, AEP-FWS Amendment Letter_Brooks Solar_Solar Krafte_2021-11-01, PDF page 4; Exhibit 27916-X0117, Appendix C - Evidence of Cliff Wallis_000126, PDF page 37.

⁶⁷ Exhibit 27916-X0117, Appendix C - Evidence of Cliff Wallis_000126, PDF page 37.

⁶⁸ Wildlife Directive for Alberta Solar Energy Projects, Alberta Environmental and Parks, PDF page 4.

⁶⁹ Exhibit 26435-X0116, AEP-FWS Amendment Letter_Brooks Solar_Solar Krafte_2021-11-01, PDF page 4.

⁷⁰ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022.

⁷¹ Exhibit 27916-X0172, Attachment A – Brooks Solar Farm Native Grassland Reply Evidence_000183, PDF page 4.

report impacts to vegetation within tame pasture,⁷² agricultural^{73, 74} or within developed areas⁷⁵ and none of these reports are in the dry mixed-grass natural subregion of Alberta.

57. Green Cat referenced literature that indicated solar arrays may have a positive impact on plant growth; however, the Commission finds that there is insufficient evidence on the record to demonstrate that Solar Krafte is able to mitigate the potential changes to native grassland, or that the potential changes would present a favourable improvement to the condition of native grasslands in the north half of Section 18.

58. Likewise, the studies provided by Green Cat concerning impacts to birds were generic and highlighted general trends in the utilization of solar infrastructure. No study specifically addressed the impacts from solar infrastructure on birds that primarily utilize native grassland habitats for breeding (e.g., Sprague's pipit). One study provided by Green Cat, which appears to address native grassland impacts in South Africa's Northern Cape does not report positive changes to wildlife communities due to PV development, but rather shows a decrease in species richness (number of species) and species density (number of birds per hectare) compared to the boundary and adjacent untransformed landscape of the PV facility.⁷⁶

59. The Commission acknowledges that Solar Krafte's commitment to re-seed both tame grassland and native grassland areas in the north half of Section 18 may improve the extent and health of native grassland in the north half of Section 18 upon facility closure; however, the Commission finds that the project may cause an unacceptable impact during construction and operations such that, while the potential exists for it to still biologically function, the native grassland would be less functional in an essential way, or not functional, for the sensitive species that rely on native grassland for suitable habitat. The Commission is not persuaded that Solar Krafte's proposed mitigation measures are adequate to reduce the environmental impacts on native grassland in the north half of Section 18 to an acceptable level.

4.1.3 Concerns raised by the Eastern Irrigation District regarding the north half of Section 18

60. The EID is the owner of approximately 3,592 acres of the original project lands, including Section 24 and the north half of Section 18. The EID expressed concerns related to the potential impacts of a Commission decision that it is not in the public interest to approve the construction and operation of the project on the north half of Section 18.⁷⁷

61. The EID submitted that its position, as a statutorily created provider of irrigation services to other landowners, has a material impact on the public interest. In particular, the EID

⁷² Adeh, E.H., J. S. Selker, and C.W. Higgins. 2018. Remarkable agrivoltaic influence on soil moisture, micrometeorology and water-use efficiency. *PLoS One*. 12.

⁷³ Choi, C.S., J. Macknick, Y. Li, D. Bloom, J. McCall and S. Ravi. 2023. Environmental co-benefits of maintaining native vegetation with solar photovoltaic infrastructure. *Earth's Future*. 11 (6).

⁷⁴ Sturchio, M.A., J. E. Macknick, G.A. Barron-Gafford, A. Chen, C. Alderfer, K. Condon, O.L. Hajeck, B. Miller, B. Pauletto, J. A. Siggers, I.J. Slette, A.K. Knapp. 2022. Grassland productivity responds unexpectedly to dynamic light and soil water environments induced by photovoltaic arrays. *Ecosphere*. 13(12).

⁷⁵ DeVault, T.L., T.W. Seamans, J.A. Schmidt, J.L. Belant, B.F. Blackwell. 2014. Bird Use of Solar Photovoltaic Installations at US Airports: Implications for Aviation Safety. USDA National Wildlife Research Centre – Staff Publications. 1418.

⁷⁶ Visser, E., V. Perold, S. Ralston-Paton, A.C. Cardenal, P.G. Ryan. 2019. Assessing the impacts of a utility-scale photovoltaic solar energy facility on birds in Northern Cape, South Africa. *Renewable Energy*. 133.

⁷⁷ Exhibit 27916-X0179, Written Submissions of the Eastern Irrigation District.

highlighted the potential beneficial impacts of the revenues that the EID receives from leasing its lands including:

- Supporting its mandate to maintain, operate and expand its irrigation works for the benefit of various water users, such as farmers, ranchers, wetlands, recreational users of Lake Newell, Rolling Hills and Crawling Valley, the City of Brooks, and other industries within the county of Newell.
- Donating funds for community initiatives that benefit members of the public.
- The generation of returns for the province of Alberta and the EID from investments in the EID's related activities.

62. The EID argued that it would lose significant lease revenues over the life of the project should the Commission find that it is not in the public interest to approve the construction and operation of the project on the north half of Section 18. It submitted that this would be a material impact on it as a private landowner.

63. Further, the EID expressed concerns that the Commission has placed little or insufficient weight on the right of a private property owner to use their land as they see fit, including putting native grassland to other uses. In support of this argument, the EID noted the Commission's statements in the original decision that the South Saskatchewan Regional Plan does not change or alter private property rights.⁷⁸

64. C2G did not dispute that a private landowner such as the EID has the right to make decisions regarding the use of its lands; however, it submitted that landowner rights are subject to laws and regulations, including the Directive and the environmental protection laws.⁷⁹ With respect to potential economic impacts on the EID, C2G submitted that removing the north half of Section 18 from the project will make this land available for C2G members for grazing, and any loss of revenue by the EID will be mitigated by the revenue that it could generate from leasing this land to C2G members and other landowners.⁸⁰

4.1.4 Summary

65. The Commission finds that there are areas of native grassland in the north half of Section 18, and that the potential impacts of the project on those areas are comparable to the Commission's determination of the potential impacts to Section 24 in the original decision, namely high risks to wildlife and wildlife habitat. The Commission has also determined that Solar Krafte's proposed mitigation measures are inadequate to reduce the potential environmental impacts to wildlife and wildlife habitat to an acceptable level. The Commission considers that avoidance in siting the project on the north half of Section 18 is the only effective way to reduce the risk to an acceptable level in the circumstances.

⁷⁸ Exhibit 27916-X0179, Written Submissions of the Eastern Irrigation District at PDF page 8, citing Decision 26435-D01-2022 at paragraphs 54-56.

⁷⁹ Exhibit 27916-X0184, C2G Argument final, PDF page 32.

⁸⁰ Exhibit 27916-X0184, C2G Argument final, PDF page 34.

66. The Commission acknowledges the beneficial impacts to the EID of siting the project on the north half of Section 18, however, weighing the negative environmental impacts with the social, economic, and other effects of the updated project in 2023 amendment, the Commission finds that it is not in the public interest to approve construction and operation of the project on the north half of Section 18.

4.2 Wetlands

67. In this section, the Commission discusses the project's incremental impacts on wetlands and amphibians and finds that impacts can be appropriately mitigated by Solar Krafte's adherence to the commitments it has made and by the conditions imposed by the Commission below.

68. The Directive recommends a 100-metre setback from Class III+ wetlands.⁸¹ The original project proposed no encroachments into Class III+ wetland setbacks, but the 2022 amendment contains seven encroachments into Class III+ wetland setbacks. These encroachments constitute 5.4 per cent of the total area of wetland setbacks present within the project boundary.⁸² As the Commission found that it was not in the public interest to approve the construction and operation of the power plant on the north half of Section 18, this section of the decision will only consider the six encroachments that are not located on the north half of Section 18.

69. In the referral report amendment letter for the 2022 amendment, AEPA updated the wetland risk for the project from moderate to high due to the presence of encroachments into Class III+ wetland setbacks and the associated risk that building in wetland setbacks poses to amphibians.⁸³ While there is no referral report amendment letter for the 2023 amendment, under the AEPA *Renewable Energy Risk Framework*, the Commission assumes the 2023 amendment would retain a wetland risk ranking of high based on the six encroachments that the Commission is considering.⁸⁴

70. Solar Krafte committed to mitigations aimed at reducing impacts of the 2023 amendment to wetlands, wetland habitat and amphibians. Key mitigation measures included:⁸⁵

- Complete avoidance of construction activities within the wetland boundary of Class III+ wetlands.
- The use of boring for collector line installation under Class III+ wetlands and associated 100-metre setbacks.
- Compliance with the Alberta *Water Act* approvals and notifications process.
- The use of best management practices for spill prevention and spill response.

⁸¹ Alberta Environment and Parks. 2017. *Wildlife Directive for Alberta Solar Energy Projects*. October 4, 2017. PDF page 7.

⁸² Exhibit 27916-X0162, Attachment A – Green Cat Renewables Brooks Solar Farm Amendment, PDF pages 10 and 11.

⁸³ Exhibit 27916-X0013, Attachment 12 – AEP Amendment Letter, PDF page 3; Exhibit 26435-X0091, AEP Referral Report_Brooks Solar_Solar Krafte_2021-06-28, PDF pages 8 and 9.

⁸⁴ Alberta Environment and Protected Areas, 2023, *Renewable Energy Risk Framework*, PDF page 8.

⁸⁵ Exhibit 27916-X0144, Information Response (Round 4) (Solar Krafte Brooks Solar Farm Amendment), PDF page 7.

- The use of silt fences to impede amphibian migration into the construction area.
- Trying to schedule activities outside the breeding and dispersal period for sensitive amphibians (i.e., April 15 to September 30).
- If work needs to occur within the breeding and dispersal period for sensitive amphibians, an experienced wildlife biologist will conduct a visual amphibian surveys to determine if any amphibians are present within the wetland setback prior to construction, and relocate amphibians if any are identified during the visual amphibian surveys.⁸⁶

71. The above wetland mitigations were reviewed by AEPA in its 2022 report, which stated that “mitigation commitments will reduce some of the impacts to wetland habitat and wildlife; however, there is still a risk of mortality to sensitive amphibians (e.g., toads) during ground disturbance within the wetland setbacks because they may be hibernating underground.”⁸⁷

72. To address AEPA concerns for amphibian disturbance, Solar Krafte proposed one additional mitigation: to schedule activities within wetland setbacks to avoid frozen ground conditions when overwintering sensitive amphibians would be present.⁸⁸ However, this commitment to schedule activities within wetland setbacks to avoid frozen ground conditions contradicts commitments above to schedule activities to avoid the breeding and dispersal period. The Commission finds that work during frozen conditions poses the lowest risk to amphibians and therefore imposes the conditions detailed in paragraph 75.

73. C. Wallis recommended adhering to the full 100-metre setbacks from all Class III+ wetlands. C. Wallis also stated that amphibian surveys should be required prior to the commencement of construction due to the location of the project within the Sensitive Amphibian Range, and that temporary wetlands and some ephemeral water bodies may support sensitive amphibians including Great Plains Toad and Plains Spadefoot Toad.⁸⁹

74. The Commission accepts that because the project is located in the Sensitive Amphibian Range, there may be a risk to sensitive amphibians within the wetlands and related setbacks, especially the Class 3+ wetlands. However, the seven encroachments to Class 3+ setbacks represent only 5.4 percent of the total area of wetland setbacks and the commitments and conditions described in the following paragraphs, go some way in mitigating the risk of mortality to sensitive amphibians. Further reductions to wetland encroachment has occurred from the denial of the project in the north half of Section 18.

75. As described in paragraph 70 above, Solar Krafte has committed to implement a number of mitigation measures designed to reduce the risk to sensitive amphibians. The Commission notes that Solar Krafte proposed a mitigation measure to conduct visual amphibian surveys and amphibian relocation when work in wetland setbacks could not be scheduled outside of frozen conditions. The Commission does not approve this mitigation measure as it may not suitably reduce the risks to amphibians. As described below, construction may only occur in frozen conditions. The Commission finds the other mitigation measures that Solar Krafte committed to

⁸⁶ Exhibit 27916-X0014, Attachment 13 – Environmental Protection Plan, PDF page 26.

⁸⁷ Exhibit 27916-X0013, Attachment 12 – AEP Amendment Letter, PDF page 3.

⁸⁸ Exhibit 27916-X0186, Solar Krafte Final Reply Argument, PDF pages 3 and 4.

⁸⁹ Exhibit 27916-X0117, Appendix C - Evidence of Cliff Wallis, PDF pages 3 and 52.

(described in paragraph 70) are acceptable. In addition to those commitments, the Commission imposes the following conditions:

- a. The 100-metre Class III+ wetland setback boundaries must be fully demarcated by a qualified professional (i.e., professional Alberta land surveyor) to prevent accidental equipment entry.
- b. Construction within 100-metre Class III+ wetland setbacks may only occur during frozen conditions.
- c. A qualified environmental professional with stop work authority must be present during all construction work within 100-metre Class III+ wetland setbacks to ensure that:
 - c1. All reasonable efforts are made to use low impact construction methods (e.g., screw piles) within the 100-metre Class III+ wetland setbacks. Stripping, grading and filling must not occur within these setbacks.
 - c2. All reasonable efforts are made to prevent unintentional soil impacts (e.g., rutting, compaction, spills, etc.) from occurring within 100-metre Class III+ wetland setbacks to reduce risks to hibernating amphibians.
- d. Due to the potential for amphibians to migrate outside of wetland setbacks, a qualified environmental professional with stop work authority must incidentally monitor (non-formal surveys) for sensitive amphibians outside the 100-metre Class III+ wetland setbacks when constructing in the breeding and dispersal period (i.e., April 15 to September 30).
- e. To reduce risks to sensitive amphibians during operational activities, herbicides will not be utilized within 100-metre Class III+ wetland setbacks.
- f. To confirm that there are no major risks to sensitive amphibians during mechanical vegetation management (e.g., mowing) within 100-metre Class III+ wetland setbacks, a qualified environmental professional must conduct visual amphibian surveys prior to vegetation control within 100-metre Class III+ wetland setbacks.

76. The Commission accepts that Solar Krafte's commitments (summarized in paragraph 70) to adhere to its proposed mitigation measures and the above conditions of approval will serve to reasonably limit the risks to wetland habitat and sensitive amphibian disturbance to an acceptable degree.

4.3 Ferruginous hawk nest

77. In this section, the Commission discusses the proposed project amendment's incremental impacts on ferruginous hawks and finds that the potential impacts on ferruginous hawks from the project can be mitigated to a reasonable level of risk.

78. In the original Proceeding 26435, Solar Krafte sited the project solar panels outside of the then active 1,000-metre setbacks from two ferruginous hawk nests (nests FEHA1/FEHA2). Solar Krafte submitted that nest FEHA1 was observed as inactive for more than two years (1,000-metre setback no longer required) and nest FEHA2 is no longer present. Consistent with

Standard 100.2.4 of the Directive,⁹⁰ Solar Krafte provided updated surveys for wildlife features in 2022, and a new active ferruginous hawk nest was identified within the project boundary approximately 100 metres west of Highway 36 (nest FEHA3).⁹¹

79. Solar Krafte submitted the 2022 project amendment including this new ferruginous hawk nest to AEPA, and AEPA provided a renewable energy amendment letter that reassessed the risk of the amendment to breeding raptors from low to high. AEPA explained that the increase in risk is a result of the layout infringing over half of the new 1,000-metre setback from nest FEHA3 and because mitigation measures cannot remove the risk of disturbance to the breeding raptors.⁹²

80. C2G expressed concerns with project infrastructure being sited within this active 1,000-metre nest setback and requested that Solar Krafte be required to obey Standard 100.2.3 of the Directive, which requires setback restrictions for all wildlife features and habitat detected during surveys. C2G argued that the Commission should not approve the siting of any infrastructure within the AEPA required setback. Alternately, if such siting is approved, C2G argued that Solar Krafte should be required to follow the recommendations of C. Wallis.⁹³ To address C2Gs concerns about ferruginous hawks, Solar Krafte committed to the following mitigation measures:

- Construction activities within the 1,000-metre setback will be scheduled outside of the restricted activity period of March 15 to July 15.
- Prior to initiating construction activities outside of the restricted activity period, an experienced wildlife biologist will observe the nest to confirm it is not active.
- The nest will be monitored biweekly between March and July for each of the three years of post-construction monitoring and results included in the annual post-construction monitoring reports.
- Solar Krafte will construct a nesting platform near the FEHA1 or former FEHA2 nest location to entice nesting where the previously proposed project infrastructure was removed to reduce impacts to breeding raptors when these nests were active.
- Surveys will be kept current as required until the project is commissioned and AEPA will be notified of any new wildlife feature interactions with the project.⁹⁴

81. Solar Krafte submitted that nest FEHA3 will retain its active designation, and a 1,000-metre setback until June 1 of the second year of inactivity.⁹⁵ It also indicated that the nest structure itself will not be directly affected by the 2023 amendment.

⁹⁰ Alberta Environment and Parks. 2017. *Wildlife Directive for Alberta Solar Energy Projects*. October 4, 2017, PDF page 9.

⁹¹ Exhibit 27916-X0007, Attachment 6 – Environmental Evaluation, PDF page 32; Exhibit 27916-X0047, Attachment 1 – Figure, Wetlands and Wildlife Features.

⁹² Exhibit 27916-X0013, Attachment 12 – AEP Amendment Letter, September 28, 2022, PDF page 2.

⁹³ Exhibit 27916-X0149, Appendix D – Evidence of Cliff Wallis, PDF page 58.

⁹⁴ Exhibit 27916-X0186, Solar Krafte Final Reply Argument, PDF page 4.

⁹⁵ Exhibit 27916-X0007, Attachment 6 - Environmental Evaluation Stantec, December 2022, PDF page 32.

82. The Commission considers that the mitigations measures provided by Solar Krafte in paragraph 80 are largely consistent with the recommendations of C. Wallis. Given Solar Krafte's mitigation commitments, the Commission does not consider it necessary to require that all infrastructure be sited outside of the newly discovered nest FEHA3 setback. The Commission also recognizes the project siting challenges associated with raptor nesting behaviours given that raptors' selection of nesting locations change from year to year and are not always predictable. Further, the Commission acknowledges Solar Krafte's efforts to mitigate risk by (i) previously revising the project layout to remove all infrastructure from former ferruginous hawk nest setbacks (i.e., nests FEHA1/FEHA2); (ii) avoiding siting infrastructure within the former FEHA1/FEHA2 nest setbacks which provides open ground for hunting and (iii) committing to construct a nesting platform that may attract nesting away from project infrastructure.

83. The Commission notes C. Wallis's submission that nest FEHA3 was active in spring 2023,⁹⁶ which extends the active designation of the nest setback to at least June 1, 2025. Therefore, in addition to Solar Krafte's commitments listed in paragraph 80, the Commission imposes the following condition of approval:

- g. To reduce the risk of nest abandonment during construction, if nest FEHA3 is deemed active, any activities conducted within 1,000 metres of nest FEHA3 require the oversight of an experienced wildlife biologist who is responsible for monitoring and providing guidance to construction crews.

84. Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants* requires approval holders to submit to AEPA and the AUC annual post-construction monitoring survey reports. The Commission imposes the following condition of approval to replace Condition 4a of Approval 26435-D03-2022:

- h. Solar Krafte Utilities Inc. shall submit a post-construction monitoring survey report to Alberta Environment and Protected Areas (AEPA) and the Commission no later than December 31 of the year following the mortality monitoring period, and on or before the same date every subsequent year for which AEPA requires surveys pursuant to subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

85. The Commission finds that the risk to ferruginous hawks can be reasonably mitigated by Solar Krafte's adherence to its committed mitigation measures and to the additional conditions imposed by the Commission above. The Commission expects that Solar Krafte will uphold its commitments to reduce impacts to ferruginous hawk nests and work with AEPA over the life of the project should any mortalities or mortality rates of concern be identified.

4.4 Other concerns raised by C2G

86. Members of C2G expressed concerns about potential noise impacts from the construction and operation of the project. C2G retained James Farquharson of FDI Acoustics Inc. to provide expert evidence on the noise impact of the 2023 amendment.

⁹⁶ Exhibit 27916-X0149, Appendix D – Evidence of Cliff Wallis, PDF page 57.

87. J. Farquharson questioned the adequacy of the NIA submitted by Solar Krafte and recommended Solar Krafte be required to file a construction noise management plan with the Commission, and to conduct a post-construction sound monitoring survey to verify compliance, should the Commission approve the project update.⁹⁷

88. With respect to project construction, Solar Krafte explained that the impacts relating to construction noise have not changed from what was considered in the original decision. Therefore, Solar Krafte recommended the Commission not require Solar Krafte to develop a construction noise management plan specifically for the 2023 amendment. With respect to project operation, Solar Krafte submitted that the NIA predicted the project update will comply with Rule 012. Therefore, Solar Krafte recommended the Commission not require Solar Krafte to conduct a post-construction noise survey.⁹⁸

89. The Commission finds the NIA for the 2023 amendment meets the requirements of Rule 012 and considers that compared to predicted cumulative sound levels from the NIA for the approved project, the 2023 amendment would result in negligible changes in terms of sound levels at the receptors.⁹⁹ The Commission agrees that there has been no incremental increase in potential noise impacts from project operation that were considered in the original decision.

90. The Commission notes that C2G and its noise expert, J. Farquharson, recommended that Solar Krafte conduct a post-construction noise survey. The Commission finds that the updated project in the 2023 amendment is expected to be compliant with the permissible sound levels as set out in Rule 012. The Commission finds that the NIA used conservative assumptions and approaches in the noise model and notes that the NIA predicted that nighttime cumulative sound level at the most affected receptor, R22 is 39.0 dBA, which is one dBA less than the nighttime permissible sound level. On this basis, the Commission has determined that it is unnecessary to order a post-construction sound survey to verify project compliance. Upon receiving complaints from residents about noise impacts from the project construction or operation, the Commission would conduct an investigation based on Section 5 of Rule 012, which provides a protocol for noise complaints.

91. In the original decision, the Commission found that Solar Krafte's construction noise management plan for the approved project would be generally compliant with Section 2.11 of Rule 012.¹⁰⁰ The Commission expects Solar Krafte to adhere to the commitments described at paragraph 145 of Decision 26435-D01-2022. On this basis, the Commission has determined that Solar Krafte is not required to develop a construction noise management plan specifically for the 2023 amendment.

⁹⁷ Exhibit 27916-X0153, Appendix B - Evidence of James Farquharson, PDF page 4; and Exhibit 27916-X0184, C2G Argument final, PDF pages 7-8.

⁹⁸ Exhibit 27916-X0178, Solar Krafte Brooks Solar Farm Written Argument, PDF pages 5 and 6.

⁹⁹ Exhibit 26435-X0106, Attachment 7 – Green Cat Renewables Noise Impact Assessment Update Letter; Exhibit 27916-X0131, Appendix 5 – Green Cat NIA Update Memo.

¹⁰⁰ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022, paragraph 146.

92. C2G members also expressed concerns about potential glare impacts from the project on drivers who use nearby roads, including Antelope Creek Road and Township Road 184.

93. The glare assessment for the project update predicted the potential for yellow glare¹⁰¹ at residences and roads adjacent to the project, but predicted there will be no potential for yellow glare if the project implements a minimum resting angle of four degrees during backtracking periods.¹⁰² Solar Krafte committed to implement the resting angle limitation as indicated in the glare assessment.

94. The Commission finds that compared to the predicted glare from the approved project in original Proceeding 26435, the 2023 amendment is predicted to have increased glare impacts at the assessed receptors.¹⁰³ However, the glare assessment for the 2023 amendment concluded that with implementation of a four-degree resting angle limit, the 2023 amendment is predicted to generate zero glare to receptors. Therefore, the Commission finds that Solar Krafte's commitment to configure the project solar panels to use a resting angle greater than or equal to four degrees during backtracking periods will sufficiently mitigate the incremental glare effects of the updated project in the 2023 amendment.

95. Further, the Commission imposes the following conditions of approval to replace conditions 4b and 4c of Approval 26435-D03-2022:

- i. Solar Krafte Utilities Inc. shall file a report with the Commission detailing any complaints or concerns it receives or is made aware of regarding solar glare from the project during its first year of operation, as well as its response to the complaints or concerns. In particular, the report shall describe consultation with Alan Jones about glare mitigation for his helipad. Solar Krafte Utilities Inc. shall file this report no later than 13 months after the project becomes operational.
- j. Solar Krafte Utilities Inc. shall use anti-reflective coating on the project solar panels.

96. In addition, C2G expressed concerns about consultation efforts and the emergency response plan for the project. Solar Krafte argued that these concerns are focused on the project generally, rather than the project update specifically.

97. The Commission agrees with Solar Krafte, and considers that these concerns were fully addressed in the original Decision 26435-D01-2022. The Commission expects Solar Krafte to adhere to the commitments described in paragraph 118 of Decision 26435-D01-2022.

¹⁰¹ The solar glare assessment used colour codes to categorize effects of glare to a person's eyes. Green glare: glare with low potential for temporary after-image; Yellow glare: glare with potential for temporary after-image; Red glare: glare with potential for permanent eye damage.

¹⁰² The project solar panels will use a single-axis tracking system that includes a backtracking function. During backtracking period (i.e., near sunrise or sunset when the sun is at low elevation angles), the trackers will gradually tilt away from the sun back toward horizontal. Resting angle is an angle measured from flat ground or horizon to solar panel, which is the angle the solar panels rest at during backtracking period.

¹⁰³ Exhibit 26435-X0014, Attachment 12 – Green Cat Solar Glare Hazard Analysis Report; Exhibit 26435-X0107, Attachment 8 – Green Cat Renewables Solar Glare Hazard Analysis Report Update; Exhibit 26435-X0193, Attachment 1 - Solar Glare Hazard Analysis Report (Solar Krafte-AUC-2022MAR11-001); Exhibit 27916-X0135, Appendix 6 – Green Cat Glare Hazard Analysis.

Additionally, the Commission imposes the following condition of approval to replace Condition 4d of Approval 26435-D03-2022:

- k. Solar Krafte Utilities Inc. shall provide the Commission a confirmation letter regarding its emergency response plan no later than 30 days before the commencement of construction. The letter shall confirm that Solar Krafte Utilities Inc. has developed a site-specific emergency response plan in accordance with requirements of the County of Newell and in consultation with local first responders, and Solar Krafte Utilities Inc. has incorporated input from interested stakeholders and local residents and provided a copy of the final plan to the County of Newell, the Cassilope Group and the Cassilope 2 Group.

4.5 Conclusion on the amendment application

98. In Section 4.1 of this decision, the Commission found that the north half of Section 18 presents functional native grassland, that the potential impacts to that native grassland create a high risk to wildlife and wildlife habitat, and that there are inadequate mitigation measures proposed to reduce these environmental impacts to an acceptable level. After weighing the negative environmental impacts with the social, economic and other effects of related to the portion of the project that is proposed to be sited on the north half of Section 18, the Commission determined that it is not in the public interest to approve construction and operation of the project on the north half of Section 18.

99. In the remainder of the conclusion, the Commission summarizes its findings concerning the portions of the 2023 amendment that are not sited on the north half of Section 18 and applies the legislative scheme in light of those findings. In doing so, the Commission weighs the benefits of the project against its negative impacts.

100. In accordance with Section 17 of the *Alberta Utilities Commission Act*, in addition to any other matters it may or must consider, the Commission must consider whether approval of the project is in the public interest having regard to its social and economic effects and effects on the environment. The Commission considers that the public interest will be largely met if an application complies with existing regulatory standards and the project's public benefits outweigh its negative impacts, including those experienced by discrete members of the public.

101. In Section 4.2, the Commission noted that the proposed project layout would infringe the AEPA required 100-metre setback from a number of seasonal and higher-class wetlands (Class III+); however, the Commission found that with the application of mitigations and subsequent conditions imposed by the Commission, the project impacts to wetland habitat and sensitive amphibians is reduced to an acceptable degree.

102. In Section 4.3, the Commission found that the risk to ferruginous hawks can be reasonably mitigated if Solar Krafte adheres to its commitments and to the ferruginous hawk-related conditions imposed by the Commission. The Commission expects that Solar Krafte will uphold its commitments to reduce impacts to ferruginous hawk nests and work with AEPA over the life of the project should any mortalities of concern be identified.

103. In Section 4.4, the Commission found that the 2023 amendment does not have any incremental noise impacts as compared to the approved project and remains assured that

Solar Krafte will generally be in compliance with Rule 012 on the basis that it expects Solar Krafte to adhere to the commitments it made in Proceeding 26435.

104. Additionally, while the Commission found that the 2023 amendment would result in incremental glare impacts, the Commission found that these impacts can be appropriately mitigated if Solar Krafte adheres to its commitment to configure the project solar panels to use a resting angle greater than or equal to four degrees during backtracking periods and to the glare-related conditions of approval imposed by the Commission.

105. Lastly, the Commission found that other concerns raised by C2G, including the emergency response plan and consultation, were addressed in the original decision. The Commission expects Solar Krafte to adhere to the commitments it made in Proceeding 26435 and to the related conditions of approval imposed by the Commission.

106. The Commission must weigh project impacts against the project's public benefits, in order to determine whether the project is in the public interest. The original Decision 26435-D01-2022 acknowledges the interests of the project, including its ability to generate emissions-free electricity, to contribute to the diversification of Alberta's energy resources and to create local tax revenues and job opportunities.¹⁰⁴ Solar Krafte reiterated those project benefits in the current proceeding.

107. Overall, for the reasons outlined in this decision and subject to the conditions in Appendix B, the Commission finds that Solar Krafte has satisfied the requirements of Rule 007 and Rule 012, and that for the portions of the project that are not located on the north half of Section 18, the negative impacts of the project can be mitigated to an acceptable degree and are outweighed by the benefits of the project.

108. Solar Krafte submitted that the project construction would be complete by October 31, 2024, which requires a time extension to the approved construction completion date. The Commission finds that the time extension is of a minor nature, and that no person is directly and adversely affected and no significant adverse environmental impact will be caused by the time extension.

5 Transfer application

109. The Commission has reviewed Application 27916-A002 and has determined that the information requirements specified in Rule 007 have been met.

110. The Commission notes that Beargrass Solar Inc. is incorporated under the *Business Corporations Act*, and has demonstrated that it is eligible to hold the power plant approval, substation permit and licence in its name, in accordance with the requirements of Section 23 of the *Hydro and Electric Energy Act*.

¹⁰⁴ Decision 26435-D01-2022: Solar Krafte Utilities Inc. – Brooks Solar Farm, Proceeding 26435, Applications 26435-A001 and 26435-A002, May 18, 2022, at paragraph 163.

111. The Commission grants the approval transfer application. As a result, all the conditions of approval described above and also summarized in Appendix B will refer to Beargrass Solar. The Commission's approval of the transfer application is also premised on its understanding that commitments made by Solar Krafte are binding on Beargrass Solar and will be treated as such.

6 Zachary 997S Substation

112. The Commission notes that Permit and Licence 26435-D02-2022 required that the construction of the Zachary 997S Substation be completed by March 31, 2023.¹⁰⁵ On March 30, 2023, the Commission granted an interim time extension of the construction deadline in Permit and Licence 26435-D02-2022 until a final decision was made on the applications in this proceeding.¹⁰⁶

113. Section 8 of Rule 007 requires that an application for a time extension to complete the construction of a substation be made pursuant to Section 19 of the *Hydro and Electric Energy Act*. Solar Krafte did not file an application for a time extension to complete the construction of the Zachary 997S Substation.

114. Nevertheless, pursuant to Section 8(5)(d) of the *Alberta Utilities Commission Act*, the Commission finds it just and proper to grant a time extension of the construction deadline in Permit and Licence 26435-D02-2022 until October 31, 2024, that is, the same construction deadline imposed in Power Plant Approval 27916-D02-2023. In making this determination, the Commission is satisfied that the time extension is of a minor nature, and that no person is directly and adversely affected and no significant adverse environmental impact will be caused by the time extension.

7 Decision

115. Pursuant to Section 23 of the *Hydro and Electric Energy Act*, the Commission approves Application 27916-A002 to transfer the power plant approval and substation permit and licence to Beargrass Solar Inc.

116. Pursuant to sections 11 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 27916-A001 in part and grants Beargrass Solar Inc. the approval set out in Appendix 1 – Power Plant Approval 27916-D02-2023 to alter, construct and operate the Brooks Solar Farm, but excludes the construction and operation of the power plant facilities on the north half of Section 18.

117. The Commission extends the construction completion date for the substation, and grants Beargrass Solar Inc. the permit and licence set out in Appendix 2 – Substation Permit and Licence 27916-D03-2023 to construct and operate the Zachary 997S Substation.

118. The Commission directs Beargrass Solar Inc. to provide the total generating capability of the project without the portion on the north half of Section 18, no later than November 8, 2023.

¹⁰⁵ Substation Permit and Licence 26435-D02-2022, Proceeding 26435, Application 26435-A002, May 18, 2022.

¹⁰⁶ Exhibit 27916-X0077, AUC letter - Interim time extension.

119. The appendixes will be distributed separately, but Appendix 1 – Approval 27916-D02-2023 will not be issued until Beargrass Solar Inc. provides the total generating capability of the project without the portion on the north half of Section 18, as directed above.

Dated on November 6, 2023.

Alberta Utilities Commission

(original signed by)

Douglas A. Larder, KC
Vice-Chair

(original signed by)

Dennis Frehlich
Acting Commission Member

Appendix A – Proceeding participants

[\(return to text\)](#)

Name of organization (abbreviation) Company name of counsel or representative
Solar Krafte Utilities Inc. Jeff Thachuk
Cassiope 2 Group Richard Secord Ifeoma Okoye Selina Sahota
Eastern Irrigation District Gavin Fitch
Alberta Utilities Commission Commission panel Douglas A. Larder, KC, Vice-Chair Dennis Frehlich, Acting Commission Member Commission staff Rob Watson (Commission counsel) Alyssa Marshall (Commission counsel) Joan Yu Brittney Sammons Glenn Harasym Derek Rennie

Appendix B – Summary of Commission conditions of approval in the decision

This section is intended to provide a summary of all conditions of approval specified in the decision for the convenience of readers. Conditions that require subsequent filings with the Commission will be tracked as directions in the AUC's eFiling System. In the event of any difference between the conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

The following are conditions of Decision 27916-D01-2023 that require subsequent filings with the Commission and will be included as conditions of Power Plant Approval 27916-D02-2023:

- h. Beargrass Solar Inc. shall submit a post-construction monitoring survey report to Alberta Environment and Protected Areas (AEPA) and the Commission no later than December 31 of the year following the mortality monitoring period, and on or before the same date every subsequent year for which AEPA requires surveys pursuant to subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.
- k. Beargrass Solar Inc. shall provide the Commission a confirmation letter regarding its emergency response plan no later than 30 days before the commencement of construction. The letter shall confirm that Beargrass Solar Inc. has developed a site-specific emergency response plan in accordance with requirements of the County of Newell and in consultation with local first responders, and Beargrass Solar Inc. has incorporated input from interested stakeholders and local residents and provided a copy of the final plan to the County of Newell, the Cassilope Group and the Cassilope 2 Group.

The following are conditions of Decision 27916-D01-2023 that do not or may require subsequent filings with the Commission:

- a. The 100-metre Class III+ wetland setback boundaries must be fully demarcated by a qualified professional (i.e., professional Alberta land surveyor) to prevent accidental equipment entry.
- b. Construction within 100-metre Class III+ wetland setbacks may only occur during frozen conditions.
- c. A qualified environmental professional with stop work authority must be present during all construction work within 100-metre Class III+ wetland setbacks to ensure that:
 - c1. All reasonable efforts are made to use low impact construction methods (e.g., screw piles) within the 100-metre Class III+ wetland setbacks. Stripping, grading and filling must not occur within these setbacks.
 - c2. All reasonable efforts are made to prevent unintentional soil impacts (e.g., rutting, compaction, spills, etc.) from occurring within 100-metre Class III+ wetland setbacks to reduce risks to hibernating amphibians.

- d. Due to the potential for amphibians to migrate outside of wetland setbacks, a qualified environmental professional with stop work authority must incidentally monitor (non-formal surveys) for sensitive amphibians outside the 100-metre Class III+ wetland setbacks when constructing in the breeding and dispersal period (i.e., April 15 to September 30).
- e. To reduce risks to sensitive amphibians during operational activities, herbicides will not be utilized within 100-metre Class III+ wetland setbacks.
- f. To confirm that there are no major risks to sensitive amphibians during mechanical vegetation management (e.g., mowing) within 100-metre Class III+ wetland setbacks, a qualified environmental professional must conduct visual amphibian surveys prior to vegetation control within 100-metre Class III+ wetland setbacks.
- g. To reduce the risk of nest abandonment during construction, if nest FEHA3 is deemed active, any activities conducted within 1,000 metres of nest FEHA3 require the oversight of an experienced wildlife biologist who is responsible for monitoring and providing guidance to construction crews.
- i. Beargrass Solar Inc. shall file a report with the Commission detailing any complaints or concerns it receives or is made aware of regarding solar glare from the project during its first year of operation, as well as its response to the complaints or concerns. In particular, the report shall describe consultation with Alan Jones about glare mitigation for his helipad. Beargrass Solar Inc. shall file this report no later than 13 months after the project becomes operational.
- j. Beargrass Solar Inc. shall use anti-reflective coating on the project solar panels.