AUC
Alberta Utilities Commission

Foothills Solar GP Inc.

Foothills Solar Project

April 20, 2023

Alberta Utilities Commission
Decision 27486-D01-2023
Foothills Solar GP Inc.
Foothills Solar Project
Proceeding 27486
Applications 27486-A001 and 27486-A002

April 20, 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

Contents

List of figures

1 Decision summary

1. In this decision, the Alberta Utilities Commission denies applications from Foothills Solar GP Inc. to construct and operate a 150-megawatt solar power plant, designated as the Foothills Solar Power Plant, and a substation, designated as the Prairie Sun 1037S Substation.

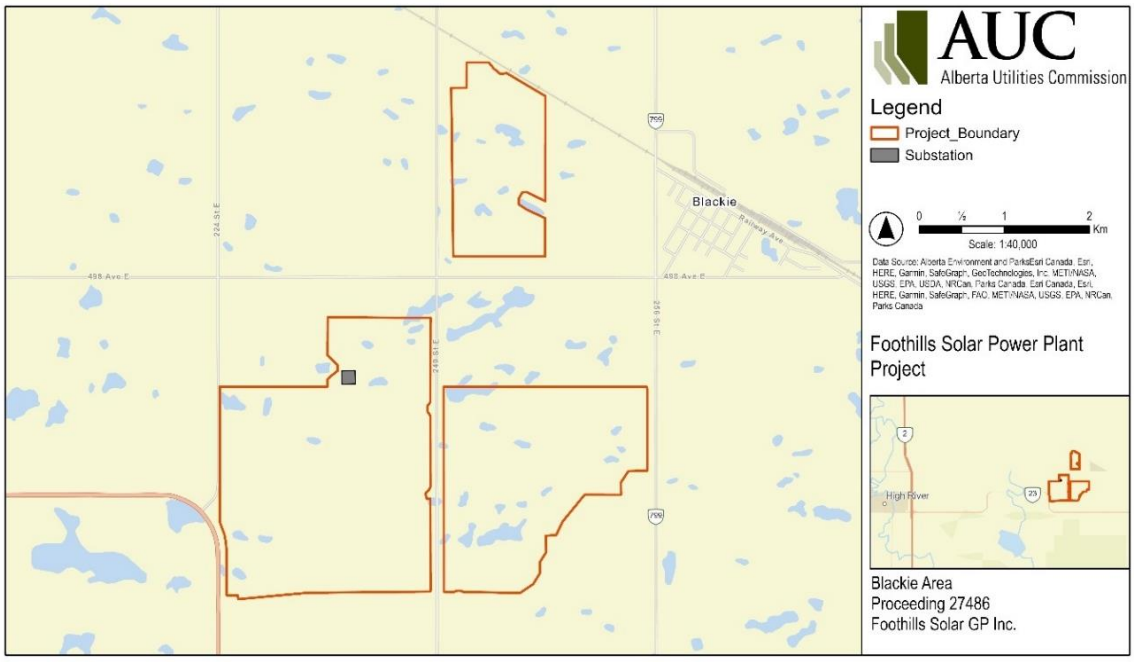
2 Introduction

2.1 Application details

2. Foothills Solar GP Inc. (Foothills Solar) applied to construct and operate a solar power plant that would generate up to 150 megawatts (MW), designated as the Foothills Solar Power Plant and a substation, designated as the Prairie Sun 1037S Substation (collectively referred to as the Foothills Solar Project or the project). Foothills Solar Limited Partnership, by its general partner Foothills Solar, is a wholly owned subsidiary of Elemental Energy Renewables Inc.

3. The project is located on privately owned cultivated and hay pastureland in Foothills County, west and southwest of Blackie. The project's operational footprint would be approximately 1,500 acres, with a solar panel surface area of approximately 270 to 300 acres. The project area is shown in the following figure:

Figure 1. The proposed Foothills Solar Project area



4. The Foothills Solar Project would consist of up to approximately 435,000 ground-mounted photovoltaic panels and would include inverter/transformer stations and access roads. The layout was designed using Longi LR5 bifacial monocrystalline solar panels mounted onto a single-axis tracker racking system that would change the orientation of the panels throughout the day to track the sun. Foothills Solar stated that the final selection of solar panels and associated equipment would be made prior to construction.

5. The Prairie Sun 1037S Substation would be located in the northeast quarter of Section 10, Township 19, Range 27, west of the Fourth Meridian. It would include two 138/34.5-kilovolt (kV), 140-megavolt ampere (MVA) transformers, one 138-kV circuit breaker, an operations building and associated substation equipment.

6. Foothills Solar's applications, reply evidence and undertaking responses included the following:

- A main applications document that contained Foothills Solar's responses to the AUC's application requirements.[1]
- A participant involvement program report that detailed consultation with stakeholders within 400 metres of the project, and notification to stakeholders within 800 metres of the project and within Blackie.[2]
- A noise impact assessment for the project, prepared by Green Cat Renewables Canada Corporation (Green Cat).[3]
- A glare hazard analysis for the project, prepared by Green Cat.[4]
- An environmental evaluation prepared by McCallum Environmental Ltd. (McCallum Environmental), which discussed the potential effects of the project within its footprint and the surrounding area.[5]
- An environmental protection plan, which would serve as a field guide to outline the application of mitigation measures for the protection of valued ecosystem components in the project area and to ensure regulatory compliance during construction, operations, and reclamation at the project.[6]
- A conservation and reclamation plan[7] prepared by Foothills Solar Limited Partnership and certified by McCallum Environmental, in accordance with the *Conservation and Reclamation Directive for Renewable Energy Operations*.[8] The conservation and reclamation plan would serve as a field guide to ensure successful conservation and reclamation of soils and vegetation components at interim phases and project end of life.

1 Exhibit 27486-X0019, Foothills Solar AUC Application.
2 Exhibit 27486-X0004, Appendix 4 - Participant Involvement Program Summary.
3 Exhibit 27486-X0013, Appendix 13 - Noise Impact Assessment.
4 Exhibit 27486-X0008, Appendix 8 - Glare Hazard Analysis.
5 Exhibit 27486-X0005, Appendix 5 - Environmental Evaluation.
6 Exhibit 27486-X0011, Appendix 11 - Environmental Protection Plan.
7 Exhibit 27486-X0012, Appendix 12 - Conservation and Reclamation Plan.
8 Alberta Environment and Parks, September 14, 2018.

- A renewable energy referral report for the project from Alberta Environment and Parks Fish and Wildlife Stewardship (AEP)[9] dated May 17, 2022, and correspondence with AEP.[10]

- A report summarizing regional bird fatality patterns at photovoltaic solar facilities in Alberta and a memorandum responding to intervener evidence related to bird mortality, collision risk and the lake effect hypothesis prepared by Western EcoSystems Technology, ULC (WEST).[11]

- A discussion on the project's cumulative effects, prepared by McCallum Environmental.[12]

- A bird dispersal literature review prepared by McCallum Environmental that included previous studies and discussed the effectiveness of post-construction bird deterrents.[13]

- A summary of the use of artificial intelligence in monitoring bird interactions with solar energy facilities.[14]

- A summary of bird impacts and mitigations for transmission lines prepared by McCallum Environmental.[15]

- A memo prepared by McCallum Environmental and a report prepared by WSP Canada Inc. (WSP) responding to groundwater concerns raised in the proceeding.[16]

- A visual impact assessment for the project[17] and visualizations of the project from multiple viewpoints, prepared by Green Cat.[18]

- A report by Telford Land & Valuations Inc. regarding potential property value impacts of the project.[19]

- A draft emergency response plan, prepared by Foothills Solar Limited Partnership.[20]

- A list of commitments that Foothills Solar made over the course of the proceeding.[21]

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9 On October 24, 2022, the Alberta Environment and Parks (AEP) was renamed the Ministry of Environment and Protected Areas (AEPA). 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 AEPA.

10 Exhibit 27486-X0014, Appendix 14 - AEP FWS Referral Report, Exhibit 27486-X0009, Appendix 9 - AEP Information Requests and Responses, and Exhibit 27486-X0010, Appendix 10 - AEP Project Update Letter.

11 Exhibit 27486-X0084, Appendix A - Alberta Regional Solar Fatality Analysis and Exhibit 27486-X0264, Appendix B - Expert Report and Curriculum Vitae of Karl Kosciuch of Western Ecosystems Technology.

12 Exhibit 27486-X0089, Appendix F - Cumulative Effects Discussion.

13 Exhibit 27486-X0086, Appendix C - Bird Dispersal Literature Review.

14 Exhibit 27486-X0085, Appendix B - ANL Avian Solar Interactions.

15 Exhibit 27486-X0087, Appendix D - Transmission Line Bird Collisions.

16 Exhibit 27486-X0088, Appendix E - Groundwater Discussion and Exhibit 27486-X0258.01, Appendix D - Expert Report and Curriculum Vitae of Alyssa Barker of WSP Canada Inc.

17 Exhibit 27486-X0133, Foothills Solar Project - Visual Impact Assessment V3.0.

18 Exhibit 27486-X0134 to Exhibit 27486-X0140.

19 Exhibit 27486-X0257, Appendix C - Expert Report and Curriculum Vitae of Rob Telford of Telford Land & Valuation Inc.

20 Exhibit 27486-X0007, Appendix 7 - Emergency Response Plan.

21 Exhibit 27486-X0324, Foothills Solar GP Inc. - Response to Undertaking 10 - Appendix U10.

7. Foothills Solar planned to commence project construction in the summer of 2023 and energize the project by the end of 2024.

2.2 Interveners

8. The Commission issued a notice of hearing in accordance with Rule 001: *Rules of Practice*. The following parties filed statements of intent to participate opposing the project and were granted standing or participation rights[22] in the proceeding:

- The Frank Lake Concerned Citizens group (FLCC).
- Foothills County.
- Greg Wagner, volunteer caretaker of Frank Lake Important Bird and Biodiversity Area (Frank Lake IBA).
- Calgary Field Naturalists' Society (Nature Calgary).
- Canadian Wildlife Service, Environment and Climate Change Canada.

9. The FLCC consists of individuals and families who own and occupy lands near the project, other concerned citizens, and the Alberta Wilderness Association. The group requested that the Commission deny the applications. In the alternative, if the Commission decided to approve the project, the FLCC recommended conditions of approval to the project. The FLCC submitted evidence and argument on topics including Foothills Solar's corporate transparency, environmental impacts, property value impacts, use of agricultural land, reclamation and decommissioning, groundwater impacts, glare and glint, visual impacts, and noise impacts.

10. Foothills County is the municipality in which the project would be located and it owns land east of the project. Foothills County submitted evidence and argument explaining that it believed the project does not meet the requirements of the County's Agricultural Land Use District of its Land Use Bylaw and its Municipal Development Plan. Further, Foothills County raised concerns with decommissioning and reclamation of the land if the project was approved and the loss of the use of high quality agricultural lands. It requested that the project not be approved within the Foothills County's East District at its current location. If the Commission decided to approve the project in the East District, Foothills County requested that the project be relocated to land to the north of Frank Lake. Foothills County also requested additional conditions to be included in the approval if the project was approved.

11. G. Wagner is the volunteer caretaker for the Frank Lake IBA and a wildlife biologist who opposed the project. G. Wagner submitted evidence and argument about the project's potential impacts on Frank Lake and requested conditions be imposed on the project if it is approved. G. Wagner's submissions were supported by Nature Calgary.

12. Canadian Wildlife Service, Environment and Climate Change Canada stated that it is concerned with the proximity of the project to Frank Lake due to the significance of Frank Lake for migratory birds and the potential for solar power plants to resemble water bodies. It recommended that the project be located several miles further away from the proposed location

[22] Exhibit 27486-X0106, AUC letter - Ruling on standing.

or at an alternate site with lower risk to migratory birds. Other than filing a statement of intent to participate, it did not participate in the proceeding.

13. As a result of these statements of intent to participate, the Commission held an oral hearing to consider the project.

14. The Commission also received a statement of intent to participate from Cold Lake First Nations indicating that they have partnered with Elemental Energy on the project and support approval of the project. Cold Lake First Nations added that there are significant economic and environmental benefits to the project; however, they did not participate further in the proceeding.

3 The approval process for the Foothills Solar Project

15. In this section of the decision, 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. Second, the Commission describes how it assesses the public interest.

3.1 The role of the Commission

16. The Commission is an independent, quasi-judicial agency of the province of Alberta. 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 cross-examine each other's witnesses to test the evidence as well as providing argument; however, unlike a court, the Commission has no inherent powers. Its powers are conferred on it by the provincial legislature and set out in legislation. 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 matters requiring it to assess and balance a variety of public interest considerations.

17. 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.

3.2 How the Commission assesses the public interest

18. The Commission holds hearings 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.

19. As a starting point, a power plant application filed with the Commission must comply with Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines* and Rule 012: *Noise Control*.

20. 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.

21. 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. The Commission assesses impacts such as glare, noise and property values on landowners as it balances the public interest considerations.

22. The existence of applicable regulatory standards and guidelines, including those from other municipal, provincial and federal authorities, and a proponent's adherence to these standards are important elements in deciding if potential adverse impacts are acceptable. 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.[23]

3.2.1 The public interest and municipal planning instruments

23. The Commission and its predecessors have consistently held that it must have regard for a municipality's land use authority and planning instruments when deciding if approval of a project is in the public interest. In Decision 2001-101, the Alberta Energy and Utilities Board found that land use planning instruments are "relevant to the Board's consideration because they indicate from the municipality's perspective, the nature of the past, present, and future uses of a proposed site or lands in close proximity to a site."[24] More recently, in Decision 24266-D01-2020, the Commission stated "[t]he Commission considers that a municipality's land use authority and the land use regime established under its bylaws form part of its overall determination of whether approval of a project is in the public interest."[25]

24. The AUC's decision making authority and municipal planning authority intersect at sections 619 and 620 of the *Municipal Government Act*. Section 619 provides that decisions of the Commission (and some other provincial regulatory bodies) prevail over any municipal

[23] 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 12.

[24] Alberta Energy and Utilities Board Decision 2001-101: AES Calgary ULC - 525-MW Natural Gas-Fired Power Plant, Application 2001113, December 11, 2001, PDF page 8.

[25] Decision 24266-D01-2020: East Strathmore Solar Project Inc. – East Strathmore Solar Project, Proceeding 24266, Application 24266-A001, September 25, 2020, page 12, paragraph 67.

planning instrument. Section 620 is similar; it confirms the statutory precedence of conditions in an AUC approval over any condition of a development permit that conflicts with it.

25. The purpose of Section 619 was described in a recent decision of the Court of Appeal of Alberta:

> The purpose of s 619 is to reduce regulatory burden and increase administrative efficiency and consistency. Section 619 achieves this by granting paramountcy to decisions of certain provincial bodies, to ensure projects are not blocked at the municipal level for issues already considered and approved at the provincial level.[26]

26. Sections 619 and 620 do not displace a municipality's planning and development decision-making authority. Rather, those sections provide that Alberta municipalities must exercise that authority in a way that is consistent with AUC-issued licences, permits, approvals and other authorizations (the exception being that a municipality cannot consider in a hearing any issue that was already decided by the AUC).

27. The Commission emphasizes that reliance on sections 619 and 620 is only required when it is necessary to resolve conflicts between AUC decisions and municipal planning instruments. Those provisions also recognize that, where there is no conflict between the two, both may apply. Depending on the circumstances, the Commission may defer to the municipal controls in place if it is of the view that such controls can sufficiently address identified risks and concerns.

28. The Commission is mindful that Alberta municipalities have a statutory, public interest mandate that is similar to its own. The planning and development provisions of the *Municipal Government Act* are set out in Part 17 of that act. Section 617 (which is in Part 17) provides that one of the purposes of that part, and the regulations and bylaws made under that part, is to "achieve the orderly, economical and beneficial development, use of land and patterns of human settlement…without infringing on the rights of individuals for any public interest except to the extent that is necessary for the overall greater public interest." This provision is similar to subsection 2(b) of the *Hydro and Electric Energy Act*, which states that one of the purposes of that act is "to provide for the economic, orderly and efficient development and operation, in the public interest, of … the generation … of electric energy in Alberta." At a high level, both acts encourage the economic and orderly development of Alberta's landscape. What distinguishes these public interest mandates is the lens through which each is viewed; a focused, regional or local perspective for municipalities and a broader, provincial perspective for the AUC.

29. Having regard to the foregoing, it is helpful to the Commission when municipalities appear before it to provide additional context into the regional lens through which its planning instruments were enacted. This provides the Commission with insight into the public processes that contributed to the instruments and the local concerns or issues that are specifically reflected in the relevant planning instruments.

3.2.2 The public interest and the honour of the Crown

30. As an authorized government entity, the Commission is empowered to decide questions of law and constitutional issues, and to make decisions that are in the public interest. As a result, it has special obligations to consider the honour of the Crown and reconciliation whenever these

[26] *Borgel v Paintearth* (Subdivision and Development Appeal Board), 2020 ABCA 192, paragraph 22.

are raised by the parties and are relevant to determining the public interest, and to provide in its decisions an analysis of the impact of such principles upon the orders made. Accordingly, the Commission will consider if its decision on the project could bear on the public interest benefit of achieving reconciliation between the Crown and Indigenous peoples.

4 Discussion and findings

31. In this section of the decision, the Commission first considers the potential project benefits for Cold Lake First Nations. It then addresses the effects of the project on the environment and wildlife, including wildlife habitat within and near to the Frank Lake IBA. Finally, it provides general observations on power plants' decommissioning and reclamation plans.

4.1 Cold Lake First Nations

32. Chief Kelsey Jacko of Cold Lake First Nations submitted a letter in which he stated that Elemental Energy had partnered with Cold Lake First Nations on the project and they supported approval of the project.[27] Chief Jacko stated that the project would provide substantial environmental and economic benefits for Albertans and an opportunity for Cold Lake First Nations to participate in the renewable energy sector through an ownership stake in the project that would result in long-term economic and capacity building benefits. However, as stated above, Cold Lake First Nations did not participate in the hearing and no party raised the honour of the Crown or reconciliation as a relevant issue. Moreover, nothing about the project or Cold Lake First Nations' private contractual entitlement to acquire part ownership of the project indicates that the honour of the Crown is at stake in this proceeding. The project is proposed for privately owned land in Treaty 7 territory. Cold Lake First Nations are not Treaty 7 First Nations and they did not indicate that the project lands were used or accessed by their members for traditional uses or other purposes.[28]

33. Both Foothills Solar and Chief Jacko identified the ownership opportunity afforded to Cold Lake First Nations as the primary benefit that was expected to accrue to the First Nations. Although job and contracting opportunities were also identified, Foothills Solar could not quantify those at this stage of the project, and in any case, those opportunities appeared to be incidental to the ownership interest that was available to Cold Lake First Nations.

34. The Commission notes that Cold Lake First Nations' ownership stake in the project has not yet crystallized and is dependent on the First Nations deciding to exercise the option they have to become a partner in the project.[29] Although Foothills Solar was not prepared to characterize Cold Lake First Nations' potential ownership as a contingent interest, it is clear that the First Nations are not yet committed to the project as an owner and have not decided if they will exercise their right to become an owner.

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[27] Exhibit 27486-X0099, Cold Lake First Nations Statement of Intent Foothills Solar Project AUC Proceeding 27469 Aug 29, 2022.

[28] This is an important distinction from the circumstances of *AltaLink Management Ltd v Alberta (Utilities Commission)*, 2021 ABCA 342 AltaLink. In that case, the First Nations' ownership interests in transmission line assets were acquired as a consequence of the transmission line being routed through their reserve lands.

[29] Transcript, Volume 3, page 543.

35. In these circumstances, approval of the project would secure Cold Lake First Nations an opportunity to become part owner of a renewable energy project. Cold Lake First Nations did not provide detailed information about the benefits that project ownership would provide the First Nations; however, the Commission accepts Foothills Solar's evidence that job and contracting opportunities would arise. With that basic understanding of the arrangements between Foothills Solar and Cold Lake First Nations, the Commission considers that approval of the project could result in some positive socioeconomic benefits for Cold Lake First Nations, should they decide to exercise their right to become a co-owner of the project, and a commensurate potential to facilitate reconciliation between the Crown and Cold Lake First Nations as Indigenous peoples.

4.2 Environment and wildlife

36. In this section of the decision, the Commission first provides background on some of the environmental information on the record of the proceeding and the AEP referral report for the project. Then it examines issues related to siting the project within the Frank Lake IBA and general wetland impacts within the project boundary. Finally, the Commission provides a conclusion of its findings on environmental and wildlife issues.

4.2.1 Background

37. Foothills Solar retained McCallum Environmental to prepare the environmental evaluation and environmental protection plan for the project, it retained WSP to conduct a further evaluation on potential impacts to groundwater, and it retained WEST to provide expert advice and summaries on the lake effect hypothesis. In addition, Foothills Solar submitted an AEP referral report for the project, discussed below.

38. The environmental evaluation concluded that the overall residual effects of the project are not predicted to be significant and that the potential adverse effects associated with the project can be mitigated with standard mitigation measures, industry best management practices and site- and species-specific mitigation. It specifically concluded that the potential for residual effects to birds were considered to be of a medium risk, moderate effect, and unlikely to occur, but had levels of uncertainty as residual effects relied on further study during post-construction monitoring.

39. The FLCC raised concerns that the project would be sited in an area that is an internationally recognized environmentally important area and home to large amounts of wildlife, including sensitive and threatened species. It questioned whether there is adequate protection for wildlife species and the environment. The FLCC retained Cliff Wallis of Cottonwood Consultants Ltd. To prepare a report that addressed these concerns.

40. G. Wagner raised concerns about adding the project's potential impacts on Frank Lake to the existing human impacts to the Frank Lake IBA. In addition, he provided an overview of conservation efforts, the significance of Frank Lake, and the history of the area. G. Wagner's submissions were supported by Nature Calgary. G. Wagner was a credible, helpful witness with extensive knowledge of biology and the area. G. Wagner provided material and relevant information about the Frank Lake area based on his 11 years of experience as the Frank Lake IBA Volunteer Caretaker and his 40 years of experience as a professional biologist and natural resource manager.

4.2.2 AEP referral report

41. AEP's assessment of a project's environmental effects is reflected in a renewable energy referral report, which takes into account AEP's *Wildlife Directive for Alberta Solar Energy Projects* (the Directive)[30] and other related AEP guidelines and standards. A referral report provides an independent review conducted by a wildlife professional, with experience assessing the environmental impacts of solar projects in Alberta. The Commission, when assessing a project's environmental effects, takes into account the referral report. In the Commission's view, a relevant factor when assessing the information included in a referral report is that:

> i. AEP is responsible for the overall management and regulation of wildlife in Alberta, including establishing policies, directives, guidelines and similar administrative procedures (collectively, wildlife policies) under the *Wildlife Act* and the *Environmental Protection and Enhancement Act*. The legislation and wildlife policies include responsibilities for the designation, protection and recovery of wildlife, including endangered animals and other sensitive species, and wildlife habitat. The legislation and wildlife policies apply to the potential impacts caused by the construction and operation of wind and solar power plants.[31]
>
> ii. The role of … AEP… is to ensure that the development of solar energy projects include appropriate consideration and mitigation of potential negative effects on Alberta's wildlife and wildlife habitat.[32]

42. In the project's referral report, AEP found that the project has an overall risk ranking of moderate risk. A low risk was determined for wetlands and wildlife habitat, riparian wildlife and habitat, raptor nests, and sharp-tailed grouse. A moderate risk was determined for breeding birds and fencing. AEP found that the overall risk to birds was high due to the siting of project infrastructure within the Frank Lake IBA, a high diversity and abundance of species at risk, overall high migratory bird activity, and an abundance of wildlife features.[33]

4.2.3 The Frank Lake Important Bird and Biodiversity Area

43. The impact of project infrastructure on the Frank Lake IBA is one of the central issues in this proceeding. In this section of the decision, the Commission evaluates:

- The direct and indirect impacts to the Frank Lake IBA, and the wildlife it supports, by assessing the significance of the Frank Lake IBA.
- Whether siting the project within the Frank Lake IBA is in accordance with the Directive.
- What the lake effect hypothesis is and whether it is a reasonable concern.
- The project's potential environmental effects on the Frank Lake IBA.

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30 *Wildlife Directive for Alberta Solar Energy Projects*, Alberta Environmental and Parks, effective October 4, 2017.

31 Bulletin 2018-04: Roles and responsibilities of the Alberta Utilities Commission and Alberta Environment and Parks for applications to construct and operate wind and solar power plants, March 8, 2018.

32 *Wildlife Directive for Alberta Solar Energy Projects*, Alberta Environment and Parks, effective October 4, 2017, PDF page 1.

33 Exhibit 27486-X0009, Appendix 9 - AEP Information Requests and Responses; and Exhibit 27486-X0014, Appendix 14 - AEP FWS Referral Report.

- Whether Foothills Solar's proposed mitigation measures are adequate to mitigate the project's impacts to the Frank Lake IBA and wildlife if monitoring results in higher than acceptable mortalities.

44. As a result of this evaluation, the Commission finds that approval of the project is not in the public interest.

4.2.3.1 What is the significance of the Frank Lake IBA?

45. The provincial significance of Frank Lake was thoroughly documented through the filing of evidence and in discussions during the hearing. The lake provides multiple benefits to humans; however, this decision primarily focuses on impacts to birds due to the potential for direct mortalities detailed below. The lake's designation as an Important Bird Area reflects the abundance of birds using the Frank Lake IBA relative to other areas of the province. G. Wagner completed an analysis of historical bird observations from the eBird database and provided evidence that 256 bird species, including 60 species at risk, are known to visit the lake.[34] McCallum Environmental's migratory bird studies corroborated that birds are abundant in the area with an observed total of 24,383 individuals including multiple species at risk in ample numbers. Waterfowl, shorebirds, and water birds were the largest bird species groups documented.[35] A discussion of why these species groups are of particular concern at solar facilities is included below.

46. Additionally, G. Wagner detailed the value birds provide to humans in this area including tourism, hunting, photography, education, and noted that the area was one of Canada's most popular birding destinations. All parties, including AEP, Foothills Solar, the FLCC and G. Wagner agreed about the importance of the area for breeding and migrating birds.

47. The IBA Program is an international conservation initiative co-ordinated by BirdLife International, a global partnership of conservation organizations recognized by AEP. IBA Canada is the national arm of the IBA Program and co-ordinates a science-based initiative to identify, conserve, and monitor a network of sites that provide essential habitat for Canada's bird populations. IBA Canada stated that Frank Lake is considered the most important wetland in southwestern Alberta for breeding water birds.[36] G. Wagner added that Frank Lake has been managed by Ducks Unlimited Canada since 1975 and it has undergone multiple municipal, provincial, national and international conservation efforts. Given the abundance of evidence before it, the Commission recognizes that Frank Lake is a significant and important environmental feature within the province of Alberta.

4.2.3.2 Is siting within the Frank Lake IBA in accordance with the Directive?

48. The Directive includes Best Management Practice (BMP) 200.1.1, which states:

> The solar energy project should not occur within 1000m of a wetland based Important Bird Area (IBA) as per IBA Canada (http://www.ibacanada.ca).[37]

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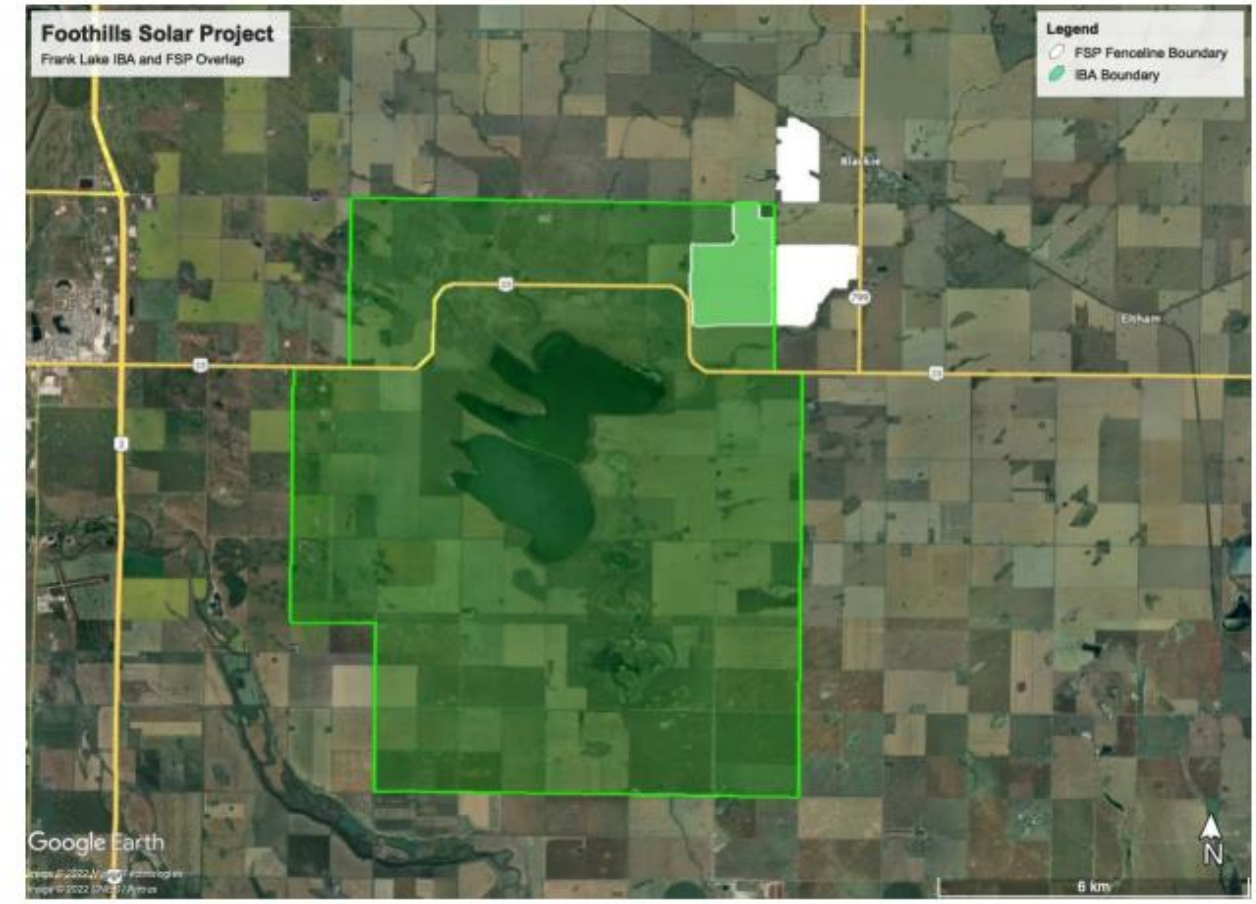
34 Exhibit 27486-X0182, Written Evidence from Greg Wagner - Main Report and Tables, PDF page 24.
35 Exhibit 27486-X0005, Appendix 5 - Environmental Evaluation, PDF pages 32-36 and 93.
36 Exhibit 27486-X0182, Written Evidence from Greg Wagner - Main Report and Tables, PDF page 11.
37 *Wildlife Directive for Alberta Solar Energy Projects*, Alberta Environment and Parks, effective October 4, 2017, PDF page 7.

49. Many parties expressed their opinions about how much weight the Commission should give the BMPs within the Directive. The Directive provides the following about the BMPs:

> Best Management Practices (BMPs) [are] practices that may assist in the planning and location of activities. BMPs are designed to inform the proponent of desired practices while planning and operating in Alberta. BMPs are provided for information and consideration in the planning of solar energy projects to support better conservation and protection of wildlife and wildlife habitat. All BMPs are preceded by "200"… It is the responsibility of the proponent to ensure that the Standards are implemented and that BMP's are given consideration and implemented where practical for the solar energy project.[38]

50. The Frank Lake IBA boundary provided by IBA Canada is shown in the figure below relative to the proposed project area. Foothills Solar and the FLCC agreed that approximately 50 per cent of the project is directly sited within the Frank Lake IBA, and approximately 80 per cent of the project is sited within the Directive-recommended 1,000-metre setback from the IBA boundary.

Figure 2. The Frank Lake IBA boundary and the Foothills Solar Project boundary[39]



[38] *Wildlife Directive for Alberta Solar Energy Projects*, Alberta Environment and Parks, effective October 4, 2017, PDF page 5.

[39] Exhibit 27486-X0005, Appendix 5 - Environmental Evaluation, PDF page 23. This figure represents the Foothills Solar project area in relation to the Frank Lake IBA boundary. The figure does not show the additional 1 km buffer associated to BMP 200.1.1 of the Directive. The project boundary also was modified slightly through the course of the proceeding.

51. The methods used in the delineation of the Frank Lake IBA boundary were challenged by McCallum Environmental, which submitted that the project was sited 1,006 metres from the Frank Lake wetland high water mark in accordance with Standard 100.1.8 of the Directive. Standard 100.1.8 of the Directive states that:

> The solar energy project must not occur within 1000m of a named lake as per NRCAN (2016).[40]

52. McCallum Environmental and Foothills Solar were of the opinion that the Frank Lake IBA boundaries were arbitrarily chosen and that the use of township roads for delineation was problematic and not based on ecological attributes.[41]

53. Conversely, G. Wagner testified that the Frank Lake delineation was not arbitrarily chosen because all included habitats played important roles in the overall life cycle of migrating and nesting birds and that each habitat was needed for their success. He stated that even though the cultivated lands are not necessarily used for nesting, they do play an important role in feeding migrators. C. Wallis agreed with G. Wagner's statements that no one habitat fulfils all needs for these birds and while cultivation is typically a preferential place for constructing solar facilities, the close proximity to Frank Lake makes this an exception.

54. The Commission accepts that the existing boundary for the Frank Lake IBA, as provided by IBA Canada, is justifiable given that it considered the overall life cycle of birds. The Commission uses this boundary in its consideration of whether the project adheres to setbacks recommended in the Directive, and whether the project is likely to adversely impact wildlife and wildlife habitat.

55. AEP and the AUC consider initial site selection to be the foremost means of projects reducing their potential for environmental impacts. The Directive states:

> Appropriate site selection at the landscape level is the first and most critical factor in preventing significant negative effects on wildlife. …A well-sited solar energy project is one that minimizes impact on wildlife and wildlife habitat and limits the need for mitigation measures (Tsoutsos et al. 2005, Northrup and Wittemyer 2013). … If preliminary information for a potential site indicates a high risk to wildlife (i.e. presence of native grasslands, wetlands, or records of sensitive species, etc.), alternate locations should be sought.[42]

56. In the Commission's consideration of the weight to apply to the Directive's BMPs, the Commission acknowledges that BMPs are recommendations to reduce the potential to effect the environment. BMPs are interpreted as parties should not conduct a harmful practice. This is in contrast to standards, which are interpreted as parties cannot conduct a harmful practice. It is the Commission's view that if applicants propose deviations from BMPs and standards, these deviations should be appropriately justified, mitigated, and minimized as much as reasonably practicable.

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[40] *Wildlife Directive for Alberta Solar Energy Projects*, Alberta Environment and Parks, effective October 4, 2017, PDF page 7.

[41] Exhibit 27486-X0005, Appendix 5 - Environmental Evaluation, PDF pages 22-26.

[42] *Wildlife Directive for Alberta Solar Energy Projects*, Alberta Environment and Parks, effective October 4, 2017, PDF page 6.

57. Given that approximately 80 per cent of the project is sited within the 1,000-metre Directive-recommended setback, consideration of the likelihood and severity of environmental impacts that may occur and the mitigation measures that may reduce or prevent these impacts is further analyzed in the following sections.

4.2.3.3 What is the lake effect hypothesis and is it a reasonable concern?

58. In consideration of the potential environmental impacts to the Frank Lake IBA, a key issue was the potential for direct bird mortalities from collision with photovoltaic solar panels. The parties in the proceeding indicated that the unexpected discovery of stranded and dead birds near some solar facilities has been historically observed and research has found a potential for higher mortalities of aquatic habitat birds (e.g., common loon, sora, eared grebes). The theory that solar panels may attract aquatic habitat birds and as a result increase mortality has been termed "the lake effect hypothesis."

59. The AEP referral report and interveners raised concerns with the potential impact of the lake effect hypothesis. The Directive, issued in 2017, states:

> At [photovoltaic] facilities, the primary mortality risk to avian wildlife is through direct collision with solar collectors or stranding following impact (Kagan et al. 2014, Huso et al. 2016, Walston Jr. et al. 2016). Waterbirds have increased susceptibility to collisions, potentially explained by the "lake effect" hypothesis, where solar collectors attract birds due to similarity between polarized light reflected off of panels when compared with light reflecting off water (Horvath et al. 2006, 2010, Kagan et al. 2014). It is currently unknown if the "lake effect" hypothesis is applicable in Alberta because most of the research on the topic has been conducted in Europe and the United States so further studies are necessary in Alberta.[43]

60. WEST provided a summary of Alberta bird mortality at photovoltaic solar facilities in its report titled *Alberta Regional Solar Fatality Analysis*. WEST's Dr. Karl Kosciuch offered evidence that the lake effect is an idea that is still being investigated, and that the most current data summary relating to southern Alberta photovoltaic facilities shows low mortality rates in comparison to other mortality sources.[44] G. Wagner recognized that Dr. Kosciuch had greater expertise in the subject matter of the lake effect hypothesis; however, G. Wagner was of the opinion that current studies of solar facilities showed higher aquatic habitat bird mortality and that the causation of these mortalities was unknown.[45] All experts agreed that there is historical evidence of mortalities occurring on photovoltaic facilities, that causation was not fully understood, and that Frank Lake has a higher density of birds relative to typical locations in Alberta.

61. Dr. Kosciuch was a well-qualified, credible and helpful witness in regard to bird mortality and the lake effect hypothesis. Dr. Kosciuch provided evidence that the lake effect hypothesis may not be applicable to all solar facilities and concluded, "[o]verall, there are no data to better suggest that the [Foothills Solar Project] represents high risk to water obligate birds than to suggest it does not represent high risk."[46] However, Dr. Kosciuch also concluded that

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43 *Wildlife Directive for Alberta Solar Energy Projects*, Alberta Environment and Parks, effective October 4, 2017, PDF pages 3-4.

44 Exhibit 27486-X0084, Appendix A - Alberta Regional Solar Fatality Analysis, PDF pages 13 and 14.

45 Transcript, Volume 6, pages 1034-1035, lines 11-14.

46 Exhibit 27486-X0084, Appendix A - Alberta Regional Solar Fatality Analysis, PDF pages 14.

much was still unknown as to probability and causation of mortality and stated that no statistical models were capable of predicting the number of fatalities that could occur at photovoltaic facilities. In the analysis of bird fatalities at photovoltaic solar facilities in Alberta, Dr. Kosciuch stated that the proximity to Frank Lake is unique to the Foothills Solar Project and, "aquatic habitat bird exposure at the [Foothills Solar Project] will likely be higher than at any other facility examined in the dataset."[47]

62. The Commission understands Dr. Kosciuch's evidence to be more indicative of a general risk assessment than predictive as to numbers of fatalities that could occur at Alberta photovoltaic facilities. While the Commission acknowledges the lake effect hypothesis may not apply, likewise there is not sufficient evidence to conclude it does not apply. The Commission determines that the Frank Lake IBA is not the place to test this due to the significance of the Frank Lake IBA. More work is needed with AEP to update conclusions of whether the lake effect hypothesis holds merit in Alberta and whether there are certain circumstances (e.g., proximity to major water bodies) that pose greater risk.[48] The Commission presumes that AEP will continue to monitor this issue and provide guidance in due course for Alberta in an updated directive.

63. In any event, given the current lack of conclusive evidence on the existence and applicability of the lake effect hypothesis, combined with the significance of Frank Lake to migratory birds and breeding water birds, the Commission finds that the lake effect hypothesis remains a concern for this area.

4.2.3.4 What are the potential environmental effects from the Foothills Solar Project on the Frank Lake IBA?

64. In addition to concerns about the lake effect hypothesis discussed above, interveners suggested that additional environmental impacts could be caused by the project within the Frank Lake IBA. G. Wagner and C. Wallis stated that environmental impacts could occur to the Frank Lake IBA from increases in predation, contamination, non-native species introduction, increased nesting of common ravens, bird electrocution, and habitat loss and degradation.

65. The project's cumulative impacts to the Frank Lake IBA were discussed by all involved experts. McCallum Environmental submitted that potential ongoing threats to Frank Lake included dredging, drought, intensified management, industrial pollution, introduced species, and tourism.[49] G. Wagner submitted that in addition to these impacts, the Frank Lake IBA saw positive and negative human impacts from hunting, conservation management, water fluctuation and effluent, and was particularly concerned with mortalities attributed to transmission lines over the lake. Further, G. Wagner was concerned approval of this facility may invite further encroachment by infrastructure on the Frank Lake IBA. Given the above, the Commission recognizes that there are existing human impacts to Frank Lake that are likely negatively impacting wildlife and the Frank Lake IBA.

66. G. Wagner included a literature summary on transmission line mortality studies, which found mortalities in the range of 18 birds/km/year to 931 birds/km/year. G. Wagner also summarized existing mortality estimates and collision data for Frank Lake and concluded that

[47] Exhibit 27486-X0084, Appendix A - Alberta Regional Solar Fatality Analysis, PDF pages 13.
[48] Transcript, Volume 4, pages 722-724.
[49] Exhibit 27486-X0005, Appendix 5 - Environmental Evaluation, PDF page 25.

transmission line mortalities may have an elevated risk at Frank Lake given the abundance of birds and the limited maneuverability of waterbirds. In addition, he provided an estimate of current bird mortalities at Frank Lake from transmission lines based on data provided by AltaLink Management Ltd. This analysis showed the potential for mortalities in the range of 1,375 birds/year to be currently occurring due to transmission lines and a potential increase of 200 birds/year if transmission lines were constructed as a result of the Foothills Solar Project.[50]

67. McCallum Environmental responded to G. Wagner's submission questioning the overall methodology and the absence of background data. Using a different methodology, McCallum Environmental estimated the existing transmission line bird mortality at Frank Lake to be 983 birds/year with an additional 143 birds/year if the Foothills Solar Project's connecting transmission lines were constructed. McCallum Environmental determined that if the Foothills Solar Project was built, transmission lines at Frank Lake would account for an overall bird population reduction of 0.32 per cent (0.28 per cent existing and 0.04 per cent additional). McCallum Environmental's overall professional opinion was that caution should be applied to collision estimates and that there is no evidence to suggest significant effects to Frank Lake bird populations are occurring due to transmission lines.[51] However, the Commission does not necessarily agree with this determination. Given the data provided, 0.32 per cent equates to almost one in 300 birds being impacted by collisions with powerlines. Additionally, percentages and ratios are devoid of context without the total populations they are being applied to. In the case of Frank Lake IBA, which all parties agreed had relatively high numbers of birds for Alberta, this 0.32 per cent equates to higher overall mortalities in comparison to if the project had been sited in an area with lower populations of birds.

68. The Commission acknowledges that the analyses from McCallum Environmental and G. Wagner may not be fully accurate due to limitations in data and standardized methodologies. All experts were in some degree of agreement that cumulative impacts studies were relatively difficult, and that existing direct and indirect negative impacts[52] were already affecting the Frank Lake IBA. Furthermore, transmission line bird mortality estimates only represent a portion of the potential human caused mortalities occurring in the area and both parties' studies had multiple unknowns which limited the accuracy of these studies. Therefore, the Commission has determined that existing human disturbances to Frank Lake are unknown but likely occurring and development near Frank Lake holds higher environmental risks.

69. As there are higher numbers of birds naturally occurring at Frank Lake, a higher number of bird mortalities are expected than if the project was sited in an area farther from such a provincially important bird area. Given the proximity of the Foothills Solar Project to the Frank Lake IBA, the significance of Frank Lake to migratory birds and breeding water birds, the abundance and diversity of birds and waterbirds at risk in the area, the remaining concern about the lake effect hypothesis and existing direct and indirect negative impacts, the Commission finds that there is a reasonable risk for the project to cause significant adverse environmental impacts.

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50 Exhibit 27486-X0182, Written Evidence from Greg Wagner - Main Report and Tables, PDF pages 54 to 59.

51 Exhibit 27486-X0265, Appendix C -Expert Report and Curriculum Vitae of Robert McCallum of McCallum Environmental Ltd, PDF pages 30 to 33.

52 Reductions in bird populations from transmission line collision would represent a direct impact. Reductions in bird populations from infrastructure causing increased predation (e.g., more hunting perches and predator nesting opportunity) would represent indirect impacts.

4.2.3.5 Is Foothills Solar able to adequately mitigate the project's impacts to the Frank Lake IBA and wildlife?

70. Foothills Solar proposed mitigation measures to mitigate the project's potential impacts to the Frank Lake IBA and wildlife. Foothills Solar committed to post-construction mortality monitoring in accordance with Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*. In addition, Foothills Solar committed to the use of artificial intelligence camera system monitoring and the inclusion of second-year background studies on undeveloped lands if adjusted bird mortality estimates were higher than acceptable.[53]

71. The Commission acknowledges that this level of post-construction monitoring is more intensive than what is often proposed for typical solar projects and appreciates these additional measures Foothills Solar was willing to commit to. Further, the Commission recognizes that the proposed post-construction monitoring would offer further understanding of the lake effect hypothesis in Alberta. Although the proposed post-construction monitoring could signal the need for additional mitigation, it would not serve as a means of preventing and mitigating mortalities. While the Commission does wish to further understand the risk that solar projects pose to birds, the immediate concern for the Foothills Solar Project is the potential for unacceptable levels of bird mortality to occur.

72. Post-construction mitigation options were proposed by Foothills Solar for a scenario if unacceptable levels of bird mortality were determined by AEP during its evaluation of post-construction monitoring reports. These mitigation measures focused on the use of strike diverters on powerlines, and poles with flagging for bird deterrence, and contrasting lines on the project's photovoltaic panels. A bird dispersal literature review was provided by McCallum Environmental describing the effectiveness of the proposed post-construction mitigation techniques.

73. The Commission accepts that strike diverters are a tested and well-studied means of reducing collision mortality with powerlines, as did G. Wagner.[54] However, the Commission believes that there are several issues with the other mitigation measures proposed for mitigating unacceptable levels of mortality from photovoltaic infrastructure. For example, the literature review supplied by McCallum Environmental showed that multiple species were not deterred by poles with flagging and the Commission is of the opinion that success rates were not high enough or tested thoroughly enough for reliance on this mitigation to effectively reduce impacts to birds within the project area as a result of the proximity to the Frank Lake IBA.[55] Further, adding contrasting lines on solar panels as a means of mitigation was withdrawn by Foothills Solar due to issues with panel suppliers' agreements, though Foothills Solar indicated that the solar panels are manufactured with a contrasting border. Therefore, the Commission determines that the proposed post-construction mitigation measures may not be effective in reducing mortalities, should higher numbers of mortalities be detected during post-construction monitoring.

[53] Exhibit 27486-X0091, 2022.08.10 27486 AUC IR round 1 - Foothills Solar, PDF pages 1-4.
[54] Exhibit 27486-X0182, Written Evidence from Greg Wagner - Main Report and Tables, PDF pages 58-59.
[55] Exhibit 27486-X0086, Appendix C - Bird Dispersal Literature Review.

4.2.4 General wetland impacts within the project boundary

74. In this part of the decision, the Commission will discuss general impacts to wetlands, not including Frank Lake.

75. The Commission accepts that the project's siting would avoid all direct impacts to seasonal or higher class wetlands (Class III+) and that all higher class wetland buffers would be avoided with the exception of eight buffers. The Commission is satisfied with the reduced risk for work in these buffers since AEP has reviewed these buffer encroachments in the referral report and determined a low wetland risk based on the pre-cultivated nature of these lands and the mitigations proposed.[56]

76. The FLCC outlined additional issues with the project's potential impacts to Class I and Class II wetlands. Specifically, C. Wallis raised concerns with encroachment of ephemeral (Class I) water bodies and temporary (Class II) wetlands and the methodology used for their associated surveys.[57]

77. The Commission finds that the project's impacts to wetlands, other than Frank Lake, within the project boundary would be acceptable. Foothills Solar planned to implement the AEP required 100-metre setback from most seasonal and higher class wetlands (Class III+), and mitigation measures have been provided. Furthermore, AEP determined a low risk ranking for wetlands, the Alberta Wetland Classification System does not recognize ephemeral water bodies as wetlands,[58] and Foothills Solar would be required to follow the *Alberta Wetland Policy* and the Alberta *Water Act*.

4.2.5 Environmental conclusion

78. The Commission has determined that the impacts of the project on the Frank Lake IBA and the social and environmental values that it represents are unacceptable. The project has the potential to create a high mortality risk to birds and the bird habitat provided in the Frank Lake IBA. The Commission acknowledges that studies provided by Dr. Kosciuch show some evidence that the lake effect hypothesis may not have merit or be relevant in Alberta, but the science is not settled yet on this point. Further, AEP has not made a final determination on this issue. Based on the referral report's ranking of the project as a high risk to birds, the generally agreed upon importance of the Frank Lake IBA, the siting of 80 per cent of the project within the Frank Lake IBA setback, the lack of conclusive evidence regarding the lake effect hypothesis, the existing human pressures on Frank Lake, and the limited ability to mitigate the project effects (post-construction) if significant mortalities are detected, the Commission finds the project poses an unacceptably high risk to the environment and is not in the public interest. As a result of this finding, the Commission has not decided on other aspects of the project, including noise impacts, visual impacts, property value impacts, groundwater impacts, public safety and Foothills Solar's participant involvement program.

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56 Exhibit 27486-X0014, Appendix 14 - AEP FWS Referral Report, PDF page 3.
57 Exhibit 27486-X0164, Appendix E - Evidence of Cliff Wallis.
58 Exhibit Alberta Wetland Classification System, Alberta Environment and Sustainable Resource Development, effective June 1, 2015.

4.3 Decommissioning and reclamation

79. The FLCC and Foothills County raised concerns with Foothills Solar's decommissioning and reclamation plans.

80. As noted above, the Commission finds that it is unnecessary to decide this issue because it has determined that approval of the project is not in the public interest because of its environmental impacts. However, the Commission will provide general observations on the decommissioning and reclamation of generation projects because of the frequency in which this issue has been arising in recent proceedings.

81. The Commission emphasizes that a clear understanding of how a proponent intends to finance and approach the decommissioning and reclamation of its generation project is an important consideration when deciding if approval of the project is in the public interest. All Albertans, including hosting landowners, must be assured that reasonable measures are in place to ensure that project proponents have the means and capability to address the end-of-life liability for their generation projects. The more information that a proponent can share with the AUC and stakeholders regarding the ultimate reclamation liability for a project, and the means by which it intends to address that liability, the better.

82. It would have been helpful to the Commission if Foothills Solar had been more forthcoming regarding the terms and conditions of its landowner agreements that address security and reclamation. While the Commission recognizes that some aspects of such agreements may be commercially sensitive, it is of the view that it is incumbent upon project proponents to provide sufficient information to allow the AUC to understand, in some detail, how it will meet its decommissioning and reclamation obligations.

83. The Commission also observes that Rule 001: *Rules of Practice* contemplates confidential treatment of commercially sensitive information. To the extent that project proponents may feel constrained from sharing any terms of their lease agreements relating to security, decommissioning and reclamation, those concerns may be addressed through a confidential process.

5 Conclusion

84. As discussed in Section 3.2, 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 locally affected members of the public. The Commission must also consider if its decision on the project could bear on the public interest benefit of achieving reconciliation between the Crown and Indigenous peoples.

85. Foothills Solar submitted that the project would be in the public interest for a variety of reasons, including reduced greenhouse gas emissions and other local economic benefits, and the Commission found that approval of the project could result in some positive socioeconomic benefits for Cold Lake First Nations and a commensurate potential to facilitate reconciliation between the Crown and Cold Lake First Nations as Indigenous peoples. However, the potential for the project to result in high bird mortalities, and the impacts of the project on the Frank Lake IBA and the social and environmental values that it represents are unacceptable. As a

result, the Commission is not satisfied that the overall benefits of the project outweigh its negative impacts. The Commission finds that approval of the applications is not in the public interest and therefore denies the applications.

6 Decision

86. The Commission finds that approval of the applications is not in the public interest. In accordance with sections 11, 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission denies the applications.

Dated on April 20, 2023.

Alberta Utilities Commission

(original signed by)

Carolyn Dahl Rees
Chair

(original signed by)

Renée Marx
Commission Member

(original signed by)

Vera Slawinski
Commission Member

Appendix A – Proceeding participants

Name of organization (abbreviation) **Company name of counsel or representative**
Foothills Solar GP Inc. (Foothills Solar) Terri-Lee Oleniuk Scott Birse
Calgary Field Naturalists' Society (Nature Calgary) John McFaul
Canadian Wildlife Service, Environment and Climate Change Canada David Stepnisky
Cold Lake First Nations Heather Bishop
Foothills County Daryl Bennett
Frank Lake Concerned Citizens (FLCC) Richard Secord Ifeoma Okoye Susanne Calabrese
Frank Lake Important Bird and Biodiversity Area (Frank Lake IBA) Greg Wagner
Alberta Utilities Commission Commission panel Carolyn Dahl Rees, Chair Renée Marx, Commission Member Vera Slawinski, Commission Member Commission staff Alison Sabo (Commission counsel) Gary Perkins (Commission counsel) JP Mousseau (Commission counsel) Allan Anderson Fatiha Rezwan Joan Yu Glenn Harasym

Appendix B – Oral hearing – registered appearances

Name of organization (abbreviation) Name of counsel or representative	Witnesses
Foothills Solar GP Inc. (Foothills Solar) Terri-Lee Oleniuk Scott Birse	Dan Eaton Liam Wolfe Robert McCallum Karl Kosciuch Alasdair Warnock Cameron Sutherland Robert Telford Alyssa Barker
Frank Lake Concerned Citizens (FLCC) Richard Secord Ifeoma Okoye Susanne Calabrese	Cliff Wallis Brian Gettel James Farquharson Brad Salter Pamela Kearsey Amy Marcotte Chad Scott Lacey Jo Cosgrave Darcy Elliot Katie Sherwood Blake Barnert
Foothills County Daryl Bennett	Heather Hemingway Thomas Jensen
Frank Lake Important Bird and Biodiversity Area (Frank Lake IBA)	Greg Wagner