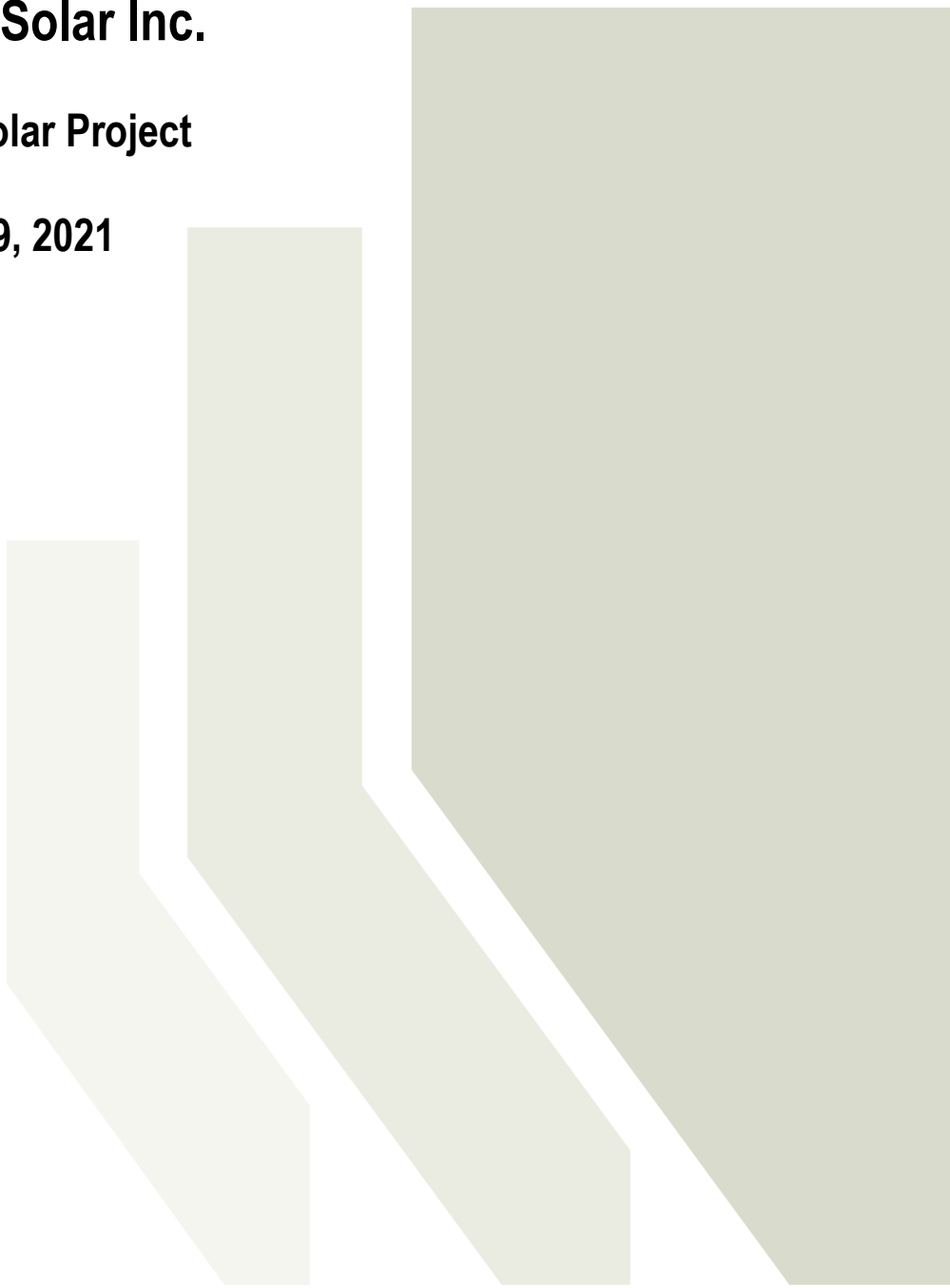




Dunmore Solar Inc.

Dunmore Solar Project

September 9, 2021



Alberta Utilities Commission

Decision 26485-D01-2021

Dunmore Solar Inc.

Dunmore Solar Project

Proceeding 26485

Applications 26485-A001 and 26485-A002

September 9, 2021

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The Commission may, no later than 60 days of the date of this decision and without notice, correct typographical, spelling and calculation errors and other similar types of errors and post the corrected decision on its website.

1 Decision summary

1. In this decision, the Alberta Utilities Commission approves applications from Dunmore Solar Inc. to construct and operate the Dunmore Solar Project, which consists of a 216-megawatt solar power plant, designated as the Dunmore Solar Power Plant, and the Dunmore 1011S Substation. For the reasons that follow, the Commission finds that approval of the project is in the public interest having regard to the social, economic, and other effects of the proposed facilities, including their effect on the environment.

2 Applications

2. Dunmore Solar Inc. (Dunmore) filed applications with the Commission for approval to construct and operate the Dunmore Solar Power Plant and the Dunmore 1011S Substation (collectively, the Dunmore Solar Project or the project). The applications were registered on April 23, 2021, as applications 26485-A001 and 26485-A002.

3. The Dunmore Solar Power Plant is anticipated to have approximately 515,136 solar photovoltaic modules, each with a power rating of 500 watts, mounted on a fixed-tilt racking system, 82 inverter/transformer stations, each with a power rating of 2.5 megavolt amperes, an underground 34.5-kilovolt (kV) collector system, a fence and access roads.¹ The final make and model of the components have not been finalized. The Dunmore Solar Power Plant would have a total generating capability of 216 megawatts for delivery to the Alberta Interconnected Electric System.

4. The Dunmore 1011S Substation would increase the voltage from the collector voltage of 34.5 kV to the transmission system voltage of 138 kV. Major equipment at the substation would include: a 138/34.5-kV step-up transformer with a maximum power rating of 240 megavolt amperes, a 138-kV circuit breaker, two 138-kV-15-megavolt ampere reactive capacitor banks, a control building and a fence.²

5. Dunmore stated that the interconnection point to the Alberta Interconnected Electric System would be to the AltaLink Management Ltd. double-circuit 138-kV Transmission Line 876L approximately 60 metres east of the project substation fence, and interconnection of the project to the Alberta Interconnected Electric System would be the subject of a future application from AltaLink.³

¹ Exhibit 26485-X0019, Dunmore Solar Project AUC Application April 2021. PDF pages 17, 23 and 24.

² Exhibit 26485-X0001.01, Attachment A - Draft Power Plant Approval and Draft Substation Approval.

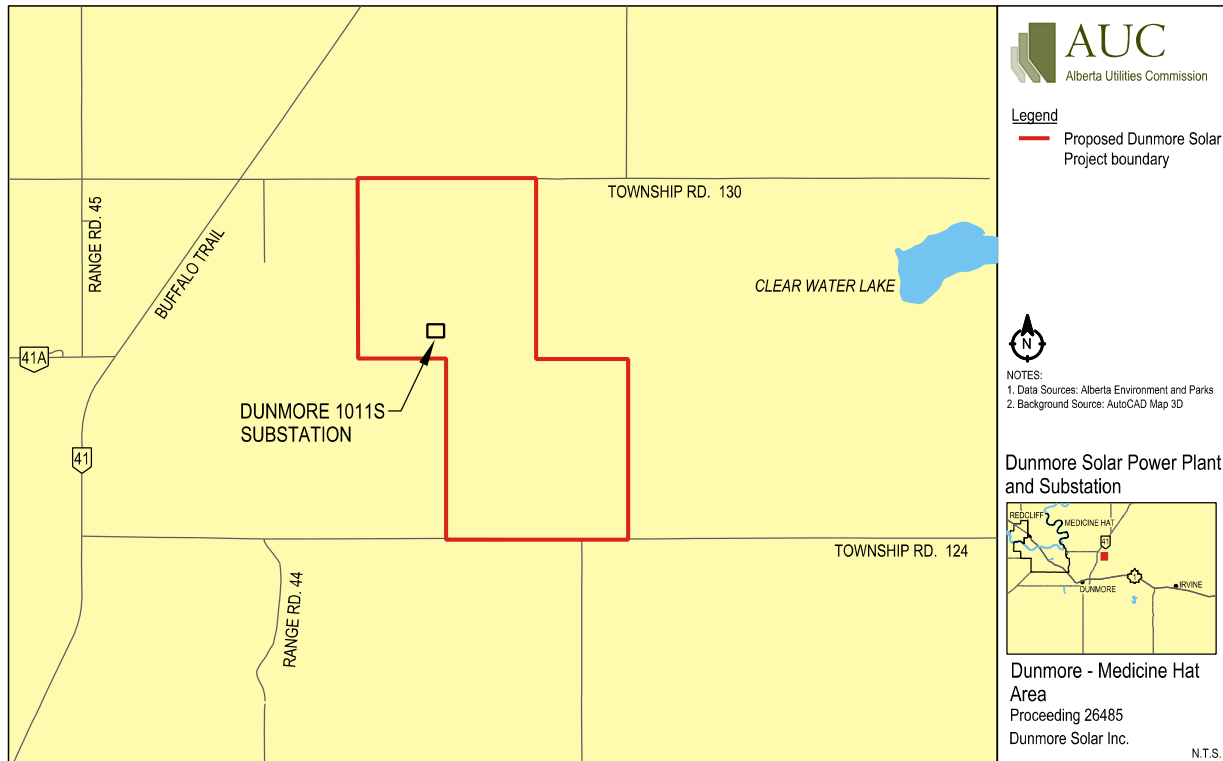
³ Exhibit 26485-X0019, Dunmore Solar Project AUC Application April 2021. PDF pages 14 and 26.

6. As shown in Figure 1, the project would be situated on 623 acres of privately owned agricultural land across eight quarter sections. The project would be located approximately 10 kilometres northeast of the hamlet of Dunmore and 13 kilometres east of the city of Medicine Hat in Cypress County, Alberta, within portions of Township 12, Range 4, west of the Fourth Meridian. Specifically, the project area would cover the following sections:⁴

Quarter section	Section	Township	Range	Meridian
NE and SE	33	12	4	W4M
NW and SW	34	12	4	W4M
NW, NE, SE and SW	27	12	4	W4M

7. The Dunmore 1011S Substation would be located on the southeast quarter of Section 33, Township 12, Range 4, west of the Fourth Meridian.

Figure 1: Dunmore Solar Project location



8. Dunmore’s applications included:

- A participant involvement program, which detailed consultation with stakeholders within 800 metres of the project and notification to stakeholders within 2,000 metres of the project.⁵
- A copy of the renewable energy project submission that Dunmore filed with Alberta Environment and Parks (AEP), which described baseline environmental conditions and associated surveys or studies, identified potential environmental impacts from the project and described mitigation to prevent or limit those impacts.⁶

⁴ Exhibit 26485-X0019, Dunmore Solar Project AUC Application April 2021, PDF page 7.

⁵ Exhibit 26485-X0002, Attachment B1 - Participant Involvement Program (PIP) Report.

⁶ Exhibit 26485-X0004, Attachment C - Renewable Energy Project Submission.

- A renewable energy referral report dated April 14, 2021, from AEP Fish and Wildlife Stewardship, which ranked the project an overall low risk to wildlife and wildlife habitat.⁷
- An environmental protection plan, which outlined environmental protection measures that Dunmore committed to undertaking during the construction and operation phases of the project.⁸
- A noise impact assessment (NIA), which concluded that the project would comply with permissible sound levels set out in Rule 012: *Noise Control*.⁹
- A solar glare assessment, which predicted that glare from the project is not likely to have the potential to create hazardous glare conditions for nearby dwellings, transportation routes and flight paths.¹⁰
- *Historical Resources Act* approval dated May 12, 2021.¹¹
- A layout for the project power plant¹² and a single-line diagram and a layout for the project substation.¹³
- A functional specification from the Alberta Electric System Operator, which set out the technical specifications related to the design, construction, development and commissioning of the project's connection with the Alberta Interconnected Electric System.¹⁴
- Manufacturer datasheets for the currently proposed project solar modules and transformer/inverter units.¹⁵

9. Dunmore confirmed that it would develop an emergency response plan including fire preparedness and response that would take into consideration the rural, wildland fire setting and the electrical operating conditions associated with solar photovoltaic modules. Dunmore stated that its emergency response plan will be developed in a manner consistent with the *Cypress County Fire Master Plan*¹⁶ and that it will circulate the emergency response plan to the Cypress County Fire Emergency Services Department and ensure any feedback is incorporated.

10. Dunmore indicated that construction activities are planned to commence in February 2022 and construction is scheduled to be complete by February 2023, with a planned in-service date of May 1, 2023.¹⁷

⁷ Exhibit 26485-X0006, Attachment E - AEP Renewable Referral Report.

⁸ Exhibit 26485-X0007, Attachment F - Environmental Protection Plan.

⁹ Exhibit 26485-X0011, Attachment J - Noise Impact Assessment.

¹⁰ Exhibit 26485-X0012, Attachment K - Glare Hazard Assessment.

¹¹ Exhibit 26485-X0010, Attachment I - Heritage Resources Act Approval.

¹² Exhibit 26485-X0013, Attachment L - Preliminary Layout.

¹³ Exhibit 26485-X0015, Attachment N - Substation Single Line Diagram; Exhibit 26485-X0016, Attachment O - Substation Layout.

¹⁴ Exhibit 26485-X0017, Attachment P - Functional Specifications.

¹⁵ Exhibit 26485-X0018, Attachment Q - Preliminary Component Datasheets.

¹⁶ Cypress County Fire Master Plan, November 2016,

http://cypress.municipalwebsites.ca/Editor/images/2018/Residents/Services/Fire_Master_Plan.pdf

¹⁷ Exhibit 26485-X0030, Dunmore Solar Project - IR Responses to AUC June 2021, PDF page 19.

11. The Commission issued a notice of applications and provided the notice to certain stakeholders, including three Indigenous groups: Blood Tribe, Piikani Nation and Siksika Nation.
12. The Commission received statements of intent to participate from two landowners, Stan Weiss and Dayna Felesky. The Commission granted standing to S. Weiss, and to D. Felesky and her business Felesky Cattle Co. Ltd., and scheduled a hearing to consider their concerns. No other persons requested standing in the proceeding.
13. On August 18, 2021, S. Weiss and D. Felesky (on behalf of herself and Felesky Cattle Co. Ltd.) each filed a letter with the Commission stating that they wished to formally withdraw their objections to the project. S. Weiss and D. Felesky stated that their concerns had been addressed by Dunmore, and that no further AUC process or conditions are necessary in order to address their concerns.¹⁸ On August 19, 2021, the Commission cancelled the proposed hearing.

3 Discussion and findings

14. For the reasons outlined below, the Commission finds that approval of the project is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.
15. The Commission has reviewed the applications and has determined that the information requirements specified in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments* have been met. Additionally, the Commission finds that Dunmore's participant involvement program satisfied the requirements of Rule 007. Except for statements of intent to participate from S. Weiss and D. Felesky, the Commission received no submissions in response to its notice of applications. S. Weiss and D. Felesky (on behalf of herself and the Felesky Cattle Co. Ltd.) confirmed that Dunmore has addressed their concerns and withdrew their objections to the project.
16. With respect to Indigenous consultation, Dunmore contacted three Indigenous groups by email and telephone: Blood Tribe, Piikani Nation and Siksika Nation. None of these Indigenous groups expressed concerns about the project. Dunmore also consulted with the Aboriginal Consultation Office, which indicated the consultation process with the Aboriginal Consultation Office would not apply unless Crown lands were impacted or the project required an approval from the province. Furthermore, Dunmore received confirmation from AEP regarding potential *Water Act* requirements for the project that "a referral to the Aboriginal Consultation Office for a recommendation on First Nations consultation is not required in this case."¹⁹
17. The Commission finds the environmental impacts of the project to be acceptable, taking into account AEP's risk assessment, described below, and the mitigations to be implemented by Dunmore.
18. AEP ranked the project an overall low risk to wildlife and wildlife habitat, based on project siting, limited wildlife use in the area, and commitments made by the applicant to mitigate and monitor wildlife impacts. Specifically, AEP ranked the project a low risk to wildlife entrapment, wildlife mortality and wildlife features, and it ranked the project a high risk to

¹⁸ Exhibit 26485-X0046, Withdrawal Letter; Exhibit 26485-X0047, Withdrawal Letter.

¹⁹ Exhibit 26485-X0030, Dunmore Solar Project - IR Responses to AUC June 2021, PDF page 6.

wetlands. Furthermore, Dunmore has committed to implementing the mitigations set out in the environmental protection plan and those mitigations have been reviewed and accepted by AEP in the renewable energy referral report.

19. AEP ranked the project a high risk to wetlands and noted that the project would be constructed over six seasonal wetlands (Class III) and would not comply with the 100-metre setbacks for four seasonal (Class III) and one semi-permanent (Class IV) wetlands, and the alternative mitigations proposed by Dunmore would not protect wetland habitat from permanent loss. AEP further explained that “[i]t is unlikely that sensitive amphibians will use wetlands that have been cultivated through in the past for breeding habitat.”²⁰ In addition, AEP noted that Dunmore was unable to conduct surveys for sensitive amphibians as appropriate rainfall requirements were not met. Dunmore committed to conducting sensitive amphibian surveys at all seasonal and semi-permanent wetlands prior to construction and notifying AEP of the results.

20. AEP noted that Dunmore has committed to a number of alternative mitigations during construction within the 100-metre wetland setbacks, including (i) construction will be conducted during frozen ground conditions, (ii) construction will occur outside of sensitive amphibian periods from April 1 to August 31, (iii) silt fences will be erected around all wetlands, and (iv) an experienced wildlife biologist will be on site during construction to monitor for amphibian presence and relocate amphibians as required.

21. In its responses to a Commission information request, Dunmore stated that it has conducted extensive wetland, amphibian and wildlife field studies, which found all wetlands dry and free of sensitive amphibians. In 2021, following significant rainfall, Dunmore noted that wetlands were still found free of standing water. Dunmore emphasized that no amphibians were detected during visual and auditory surveys and the habitat quality provided by the previously and continuously cultivated wetlands in the project area is low. Dunmore reiterated that it has committed to implementing extensive mitigations, as specified in the referral report. Furthermore, Dunmore submitted it has completed appropriate field wetland assessments and intends to submit a *Water Act* application for impacted wetlands to further mitigate or compensate for direct and indirect effects that may occur to wetlands as required by the *Water Act* permitting process, including implementation of any additional mitigations provided by AEP.²¹

22. The Commission notes that the results of Dunmore’s field studies are consistent with AEP’s conclusion that it is unlikely that sensitive amphibians will use wetlands that have been cultivated through in the past for breeding habitat. The Commission finds that Dunmore has committed to conducting construction activities that will occur within the 100-metre wetland setback outside of the amphibian breeding period (April 1st to August 31st). Additionally, Dunmore has committed to conducting sensitive amphibian surveys at all seasonal and semi-permanent wetlands prior to construction and to notify AEP of the results. The Commission also finds Dunmore’s commitment to further mitigating or compensating for direct and indirect effects that may occur to wetlands as required by the *Water Act* is reasonable in this circumstance.

23. Dunmore did not submit an initial renewable energy operations conservation and reclamation plan (C&R Plan) as set out in AEP’s *Conservation and Reclamation Directive for Renewable Energy Operations*. Dunmore explained that “[r]ather than submit an initial C&R Plan closely followed by the final version, Dunmore will complete the final C&R Plan for

²⁰ Exhibit 26485-X0006, Attachment E - AEP Renewable Referral Report, PDF page 7.

²¹ Exhibit 26485-X0039, Dunmore Solar Project - Round 2 IR Responses to AUC June 2021, PDF page 3.

the Project, which will be uploaded to the Commission e-filing system by September 30, 2021.”²² Accordingly, the Commission imposes the following condition of approval:

- a. Dunmore Solar Inc. shall complete the initial renewable energy operations conservation and reclamation plan as set out in Alberta Environment and Park’s *Conservation and Reclamation Directive for Renewable Energy Operations*, and file it with the Commission by October 31, 2021.

24. Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants* requires approval holders to submit annual post-construction monitoring survey reports to AEP and the Commission. Therefore, the Commission imposes the following condition of approval:

- b. Dunmore Solar Inc. shall submit an annual post-construction monitoring survey report to Alberta Environment and Parks (AEP) and the Commission within 13 months of the project becoming operational, and on or before the same date every subsequent year for which AEP requires surveys pursuant to Subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

25. Dunmore retained Green Cat Renewables Canada Corporation to assess solar glare from the project. The solar glare assessment indicated that the project’s solar panels would be mounted on a racking system with a fixed-tilt angle of 20 degrees and assumed that the project would use anti-reflective coating on the solar panels. Green Cat Renewables identified five dwellings, two transportation routes (Highway 41 and Township Road 124), and two flight paths at a private unregistered aerodrome as receptors. The Commission notes that the predicted solar glare results were premised upon the use of an anti-reflective coating on the project’s solar panels. Accordingly, the Commission imposes the following condition of approval:

- c. Dunmore Solar Inc. shall use anti-reflective coating on the project solar panels.

26. Green Cat Renewables’ solar glare assessment predicted that nearby dwellings would receive up to 2,573 minutes of yellow glare per year,²³ Township Road 124 would receive up to 1,712 minutes of yellow glare per year²⁴, and Highway 41 and flight paths at the private aerodrome would not receive glare from the project.²⁵ Dunmore provided a copy of the solar glare assessment to Cypress County, Alberta Transportation and the owner of the aerodrome. None of these parties raised objections or expressed concerns about the solar glare assessment. The Commission requires that any glare issues associated with the project that arise be addressed by Dunmore in a timely manner. Accordingly, the Commission imposes the following condition of approval:

- d. Dunmore 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 Dunmore’s response to the complaints or concerns. Dunmore shall file this report no later than 13 months after the project becomes operational.

²² Exhibit 26485-X0030, Dunmore Solar Project - IR Responses to AUC June 2021, PDF page 13.

²³ 2,573 minutes is approximately equivalent to 42.9 hours or 1.8 days.

²⁴ 1,712 minutes is approximately equivalent to 28.5 hours or 1.2 days.

²⁵ 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.

27. Dunmore retained Green Cat Renewables to conduct an NIA for the project. The NIA indicated that major sound sources of the project power plant are 82 inverter/transformer stations, and the major sound source of the project substation is a high-voltage transformer. Sound power levels of the project inverters and transformers were established based on manufacturer data and theoretical formula. Predicted cumulative sound levels at noise receptors were compared with applicable permissible sound levels to assess the project compliance with Rule 012. The Commission finds that the NIA report submitted by Dunmore meets the requirements of Rule 012 and accepts the conclusion of that report that noise from the project will comply with the permissible sound levels established by that rule.

28. The Commission notes that Dunmore has not finalized its selection of equipment for the project, including solar modules, inverters and transformers. Consequently, the Commission imposes the following condition of approval:

- e. Once Dunmore Solar Inc. has made its final selection of equipment for the project, it must file a letter with the Commission that identifies the make, model, and quantity of the equipment and, if the equipment layout has changed, provide an updated site plan. This letter must also confirm that the finalized design of the project will not increase the land, noise, glare or environmental impacts beyond the levels approved in this decision. This letter is to be filed no later than one month before construction is scheduled to begin.

4 Decision

29. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves Application 26485-A001 and grants Dunmore Solar Inc. the approval set out in Appendix 1 – Approval 26485-D02-2021 – September 9, 2021, to construct and operate the Dunmore Solar Power Plant (Appendix 1 will be distributed separately).

30. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 26485-A002 and grants Dunmore Solar Inc. the approval set out in Appendix 2 – Permit and Licence 26485-D03-2021 – September 9, 2021, to construct and operate the Dunmore 1011S Substation (Appendix 2 will be distributed separately).

Dated on September 9, 2021.

Alberta Utilities Commission

(original signed by)

Douglas A. Larder, QC
Vice-Chair

(original signed by)

Neil Jamieson
Commission Member

Appendix A – Summary of Commission conditions of approval

This section is intended to provide a summary of all conditions of approval for the convenience of readers. In the event of any difference between the directions and 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 26485-D01-2021 that require subsequent filings with the Commission and will be included as conditions of Power Plant Approval 26485-D02-2021:

- Dunmore Solar Inc. shall complete the initial renewable energy operations conservation and reclamation plan as set out in Alberta Environment and Park's *Conservation and Reclamation Directive for Renewable Energy Operations*, and file it with the Commission by October 31, 2021.
- Dunmore Solar Inc. shall submit an annual post-construction monitoring survey report to Alberta Environment and Parks (AEP) and the Commission within 13 months of the project becoming operational, and on or before the same date every subsequent year for which AEP requires surveys pursuant to Subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.
- Once Dunmore Solar Inc. has made its final selection of equipment for the project, it must file a letter with the Commission that identifies the make, model, and quantity of the equipment and, if the equipment layout has changed, provide an updated site plan. This letter must also confirm that the finalized design of the project will not increase the land, noise, glare or environmental impacts beyond the levels approved in this decision. This letter is to be filed no later than one month before construction is scheduled to begin.

The following are conditions of Decision 26485-D01-2021 that do not or may require a subsequent filing with the Commission:

- Dunmore 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 Dunmore's response to the complaints or concerns. Dunmore shall file this report no later than 13 months after the project becomes operational.
- Dunmore Solar Inc. shall use anti-reflective coating on the project solar panels.