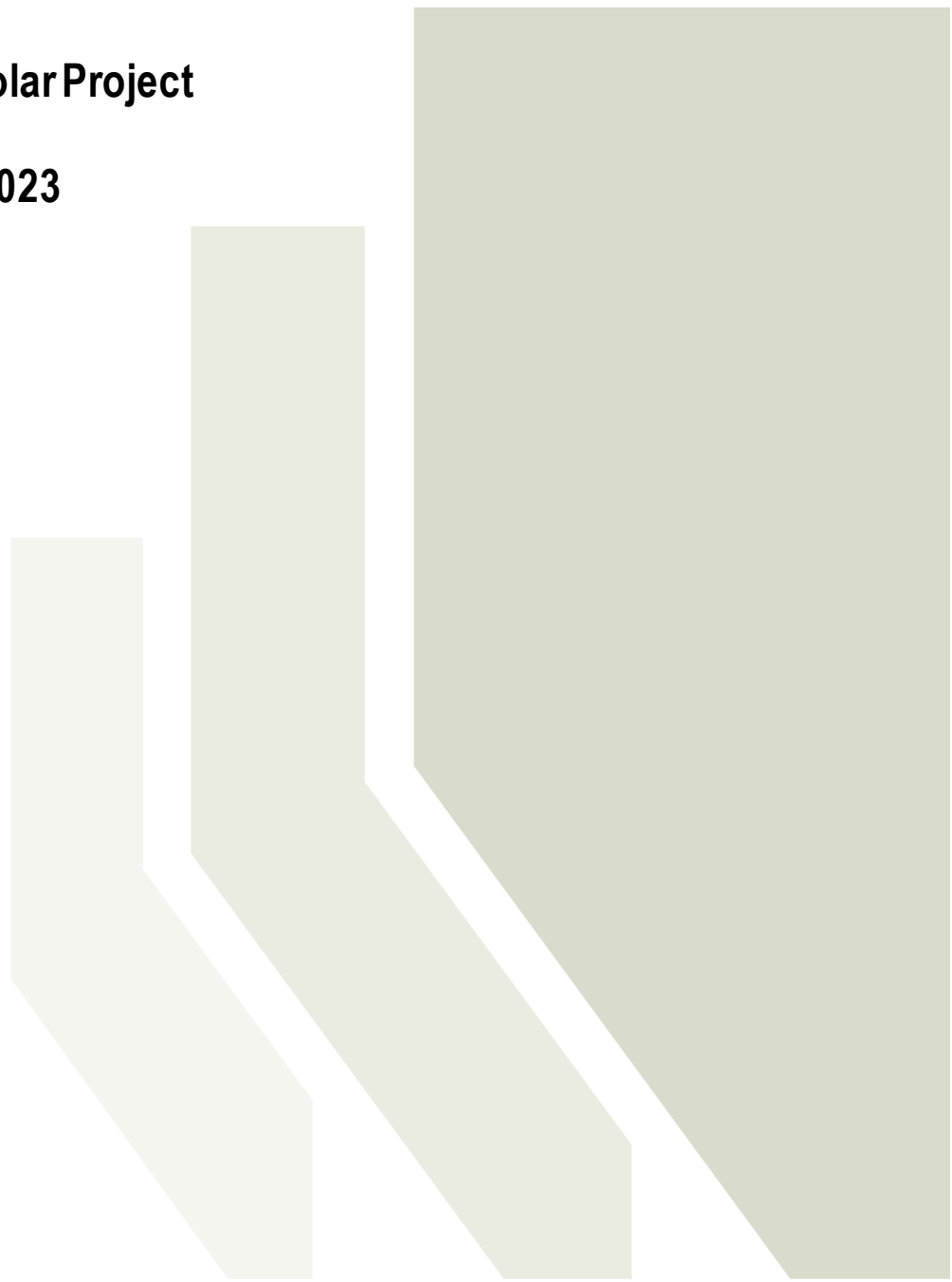




Acestes Power ULC

Duchess Solar Project

March 29, 2023



Alberta Utilities Commission

Decision 27903-D01-2023

Acestes Power ULC

Duchess Solar Project

Proceeding 27903

Applications 27903-A001 and 27903-A002

March 29, 2023

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The Commission may, no later than 60 days from 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.

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1 Decision summary

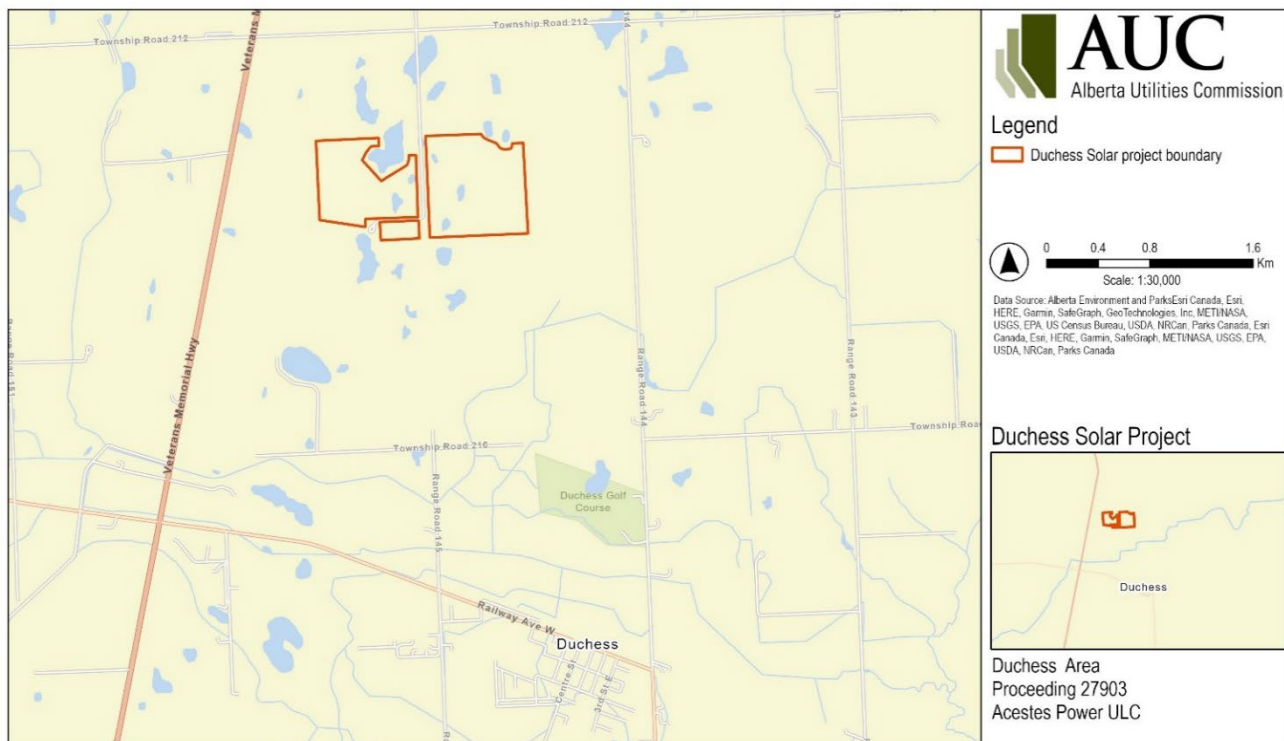
1. In this decision, the Alberta Utilities Commission approves applications from Acestes Power ULC, to construct and operate a 19.8-megawatt (MW) power plant, designated as the Duchess Solar Project, located on private cultivated land, approximately 2.4 kilometres north of the town of Duchess.

2 Applications

2. Acestes filed applications with the Commission for approval to construct and operate the Duchess Solar Project (the project). The project would include approximately 65,492 bifacial solar photovoltaic modules on a single-axis tracking system, inverter/transformer stations, underground collector lines that connect to a switchgear building, and an internal road network.

3. The project area is located on 320 acres of private cultivated land, in the southeast quarter of Section 7 and the southwest quarter of Section 8, Township 21, Range 14, west of the Fourth Meridian, as shown on the map in Figure 1. Acestes stated that the power plant would connect to the FortisAlberta Inc. electric distribution system.

Figure 1. Duchess Solar Project location



4. Acestes' applications included:
 - A participant involvement program summary, which detailed consultation and notification with stakeholders within 800 metres of the project.¹
 - An environmental evaluation for the project 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.²
 - A renewable energy referral report from Alberta Environment and Parks Fish and Wildlife Stewardship (AEP),³ which ranked the project with an overall “low” risk.⁴
 - A solar glare assessment report which stated that the project was not predicted to create red or yellow glare with the exception that yellow glare was predicted along Township Road 212 for approximately 0.3 per cent of the daytime annually.⁵
 - A noise impact assessment (NIA), which predicted that noise from the project will comply with Rule 012: *Noise Control*.⁶
 - Correspondence from FortisAlberta Inc. indicating that it is prepared to connect the project, pending final execution of an interconnection agreement.⁷
 - A *Historical Resources Act* approval.⁸
5. Acestes stated that with the preliminary project schedule, the project construction is set to start in September 2023, and commercial operations will begin in September 2024.
6. The Commission issued a notice of applications and no submissions were received in response to the notice.

3 Findings

7. 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.
8. 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, Hydro Developments and Gas Utility Pipelines* have been

¹ Exhibit 27903-X0005, Appendix D – 2022-12-18 Duchess Solar PIP Report_FINAL.

² Exhibit 27903-X0007, Appendix F – Duchess Solar Power Project_AUC_EE_221219-3.

³ On October 24, 2022, the Ministry of Environment and Parks 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.

⁴ Exhibit 27903-X0012, Appendix K – 20221021 AEP-FWS Referral Report_Duchess.

⁵ Exhibit 27903-X0010, Appendix I – 20221208 RWDI 2301172 Solar Glare Duchess Solar.

⁶ Exhibit 27903-X0011, Appendix J – 20221206 RWDI 2301172 REP Noise Duchess Solar Project NIA.

⁷ Exhibit 27903-X0008, Appendix G – Letter of Non-Objection to AUC – 660000903.

⁸ Exhibit 27903-X0013, Appendix L – Signed_HRA_Response.

met. Additionally, the Commission finds that Acestes' participant involvement program satisfied the requirements of Rule 007.

3.1 Environment

9. An environmental evaluation (EE) was completed by McCallum Environmental Ltd., which stated that the project is to be sited on cultivated land with no native grassland being directly affected by the project. There are several wetlands and wetland setbacks impacted by the project.

10. McCallum and Bear Tracks Environmental Services (2015) Ltd. completed the renewable energy project submission report for AEP, which outlined the environmental impacts from the project and the mitigations to be implemented by the applicant.

11. An AEP referral report was received on October 22, 2022, with an overall "low" risk ranking to wildlife and wildlife habitat, based on the project siting, limited wildlife use in the area, and commitments made by Acestes to mitigate and monitor wildlife impacts. However, the AEP determined the risk to wetlands and wetland wildlife was high, the risk to wildlife from project fencing was moderate, and the overall risk to birds was also moderate.

3.1.1 Wetlands and wetland wildlife

12. The project's operational footprint will be within 100 metres of six Class III wetlands and two Class IV wetlands. The project is within the Sensitive Amphibian Range; however, McCallum stated there was no evidence of sensitive amphibians in wetlands within 100 metres of the project. AEP are concerned that gaps in amphibian survey coverage may have resulted in missed detections of sensitive amphibians within the project area. In response to related Commission information requests, Acestes stated that the amphibian surveys conducted at Duchess Solar were within the established survey protocols, stipulated within the AEP *Sensitive Species Inventory Guidelines (2013)*.

13. Acestes committed to repeating amphibian field surveys in 2023 to support or refute the previous results, and stated that if additional mitigation is required following a review of the 2023 survey results, AEP will be consulted, and the Commission will be updated once that work is completed. These studies are scheduled to be done by June 2023, assuming suitable conditions for detection are present.

14. Three ephemeral water bodies and six Class II wetlands (temporary marshes) will be directly affected by the project. Due to this disturbance, Acestes will submit an application under the *Water Act* and will not proceed with construction until the necessary approvals are received.

15. In response to information requests, Acestes elaborated on its field methodology for wetland classification, and stated that all wetlands within the project footprint were physically visited and were classified and delineated based on physical properties observed at suspected wetland locations including soil (e.g., presence of mottling or gleying) and vegetation properties (i.e., presence of hydrophilic vegetation).

16. "The Wildlife Directive for Alberta Solar Energy Projects" (the Directive) states that a solar energy project must not occur within 100 m of any permanent or semi-permanent wetlands (Class III+). However, the Directive recognizes that each project is unique and may require an adaptive approach. The Directive does not preclude alternative mitigation identified by the AEP

wildlife biologist and solar energy project developers. In this case the Commission will accept Acestes wetland setback given the degree of cultivation immediately surrounding wetlands at the project, and due to the fact that no amphibian species were observed within 100 metres of the project, Acestes has committed to repeating amphibian surveys and will apply additional mitigation if needed in consultation with AEP and the Commission. The Commission imposes the following condition of approval:

- a. Acestes Power ULC will take steps to avoid work within 100 metres of Class III+ wetlands during the amphibian breeding and dispersal period and that for any work completed within the 100-metre setback that cannot avoid that period, a qualified wildlife biologist will be onsite to monitor all work during that period.

3.1.2 Project fencing

17. Regarding fencing, there is a Class IV semi-permanent wetland, WL08, located on the northern boundary of the project. AEP are concerned that the proposed fenceline around WL08 would create a pocket which may cause an increased risk of animal entrapment. Acestes stated that redesigning the fenceline to go around WL08 would not be possible because Acestes does not have access to the lands to the north of the quarter section. Acestes stated that construction of the fence through wetland WL08 would infringe on the wetland setback and therefore the current fence design around WL08 to the south is the preferred option.

18. The Commission understands the limitations associated with alternate fence alignments around or through wetland WL08. To limit the risk of wildlife entrapment to the extent practicable, the Commission encourages Acestes to modify the fence alignment to the south of WL08 to optimize the use of straight lines and square corners.

3.1.3 Overall risk to birds

19. A moderate risk ranking was assigned to the overall risk to birds by AEP because of the high levels of migratory bird activity detected during the project migratory bird surveys. Although there are wetlands and cultivated fields throughout the project area, no large congregations of birds were observed in these areas. Furthermore, the project does not interact with any wildlife features (e.g., raptor nests) and is sited away from high value breeding bird habitat.

20. The Commission understands that post-construction monitoring will inform any adaptive management requirements in consultation with AEP, including additional measures to mitigate risk to birds, if required.

3.1.4 Post-construction monitoring

21. 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. Acestes Power ULC shall submit an annual post-construction monitoring report to Alberta Environment and Protected Areas – Fish and Wildlife Stewardship and the Commission no later than January 31 of the year following the mortality monitoring period, and on or before the same date every subsequent year for which

Alberta Environment and Protected Areas requires surveys pursuant to subsection 3(3) of *Rule 033: Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

3.2 Solar glare

22. The solar glare assessment identified 14 dwellings and five transportation routes as receptors. Acestes' consultant confirmed that no aerodromes were identified within four kilometres of the project boundary.

23. The glare assessment indicated that if the project uses a resting angle of three degrees, then yellow glare would be prevented at all receptors, except Township Road 212. It is predicted that when the project uses a resting angle of three degrees, Township Road 212 may receive up to 809 minutes of yellow glare per year and the other receptors will receive no yellow glare but may receive some green glare.⁹ Acestes' consultant explained that the duration of glare that a driver will experience would be less than the predicted levels, because the driver is typically travelling through the area instead of being still on the road.

24. In response to a Commission information request, Acestes confirmed that it will use a resting angle of three degrees for the project solar panels, as modelled in the glare assessment, and explained that it will reassess the glare impacts if there are any changes to the resting angle.

25. The Commission accepts the conclusion in the solar glare assessment that the project is not likely to have the potential to create hazardous glare conditions for the dwellings or roads assessed. In addition, the Commission notes that a nearby road may experience yellow glare from the project. The Commission requires that any glare issues associated with the project that may arise be addressed by Acestes in a timely manner. Therefore, the Commission imposes the following condition of approval:

- c. Acestes Power ULC 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 the first year of operation, as well as Acestes' response to the complaints or concerns. Acestes shall file the report no later than 13 months after the project becomes operational.

26. The Commission notes that the predictions and associated conclusion in the solar glare assessment report were premised upon the use of an anti-reflective coating on the project solar panels. Therefore, the Commission imposes the following condition of approval:

- d. Acestes Power ULC shall use an anti-reflective coating on the project solar panels.

27. The Commission notes that Acestes has not finalized the equipment selection for the project. Consequently, the Commission imposes the following condition of approval:

- e. Once Acestes Power ULC has finalized its equipment selection and project layout, it must file a final project update to the Commission to confirm that the project has stayed within the final project update allowances for solar power plants as specified in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System*

⁹ The 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.

Designations, Hydro Developments and Gas Utility Pipelines, and it must also reassess the glare impacts if the final project update uses a resting angle different than three degrees. The final project update must be filed at least 90 days prior to the start of construction.

28. The Commission finds the NIA for the project meets the requirements of Rule 012 and accepts the conclusion of the NIA that noise from the project will be compliant with permissible sound levels set out in Rule 012 for daytime and nighttime periods.

3.3 Emergency response plan and participant involvement program

29. The Commission accepts the site-specific emergency response plan (ERP) that was submitted. Acestes stated that local first responders have a copy of the ERP and no comments were received.

30. Acestes completed a participant involvement program for the project. The participant involvement program included personal consultation with stakeholders within 400 metres of the project. Acestes stated that there are no residences within 800 metres of the project boundary. A project newsletter was mailed out in November 2022, and shortly after, a project update letter was issued. Acestes stated that no questions were received from NAV CANADA, Transport Canada, or the County of Newell. Acestes confirmed that no questions or concerns were raised by the two landowners within the consultation radius.

31. The Commission considers the applications to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

4 Decision

32. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves Application 27903-A001 and grants Acestes Power ULC the approval set out in Appendix 1 – Power Plant Approval 27903-D02-2023, to construct and operate the Duchess Solar Project.

33. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 27903-A002 and grants Acestes Power ULC the order set out in Appendix 2 – Connection Order 27903-D03-2022, to connect the Duchess Solar Project to the FortisAlberta Inc. distribution system.

34. The appendices will be distributed separately.

Dated on March 29, 2023.

Alberta Utilities Commission

(original signed by)

John McCarthy
Acting Commission Member

Appendix A – 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 27903-D01-2023 that require subsequent filings with the Commission and will be included as conditions of Power Plant Approval 27903-D02-2023:

- Acestes Power ULC shall submit an annual post-construction monitoring report to Alberta Environment and Protected Areas – Fish and Wildlife Stewardship and the Commission no later than January 31 of the year following the mortality monitoring period, and on or before the same date every subsequent year for which Alberta Environment and Protected Areas requires surveys pursuant to subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.
- Once Acestes Power ULC has finalized its equipment selection and project layout, it must file a final project update to the Commission to confirm that the project has stayed within the final project update allowances for solar power plants as specified in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines*, and it must also reassess the glare impacts if the final project update uses a resting angle different than three degrees. The final project update must be filed at least 90 days prior to the start of construction.
- Acestes Power ULC 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 the first year of operation, as well as Acestes' response to the complaints or concerns. Acestes shall file the report no later than 13 months after the project becomes operational.

The following are conditions of Decision 27903-D01-2023 that do not require subsequent filings with the Commission:

- Acestes Power ULC will take steps to avoid work within 100 metres of Class III+ wetlands during the amphibian breeding and dispersal period and that for any work completed within the 100-metre setback that cannot avoid that period, a qualified wildlife biologist will be onsite to monitor all work during that period.
- Acestes Power ULC shall use an anti-reflective coating on the project solar panels.