



Acestes Ventures Ltd.

Vulcan Solar Project

February 22, 2019

Alberta Utilities Commission

Decision 23645-D01-2019

Acestes Ventures Ltd.

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Proceeding 23645

Applications 23645-A001 and 23645-A002

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1 Decision summary

1. In this decision, the Alberta Utilities Commission must decide whether to approve applications from Acestes Ventures Ltd. to construct and operate a 25-megawatt solar power plant designated as the Vulcan Solar Project. After consideration of the record of the proceeding, and for the reasons outlined in this decision, 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.

2 Introduction

2. Acestes Ventures Ltd. (Acestes) filed applications with the AUC for approval to construct and operate a 25-megawatt (MW) solar photovoltaic power plant (the project), and to connect it to the distribution system. The project would be located approximately 3.5 kilometres southeast of Vulcan, Alberta. The applications were filed pursuant to sections 11 and 18 of the *Hydro and Electric Energy Act*, and registered on June 11, 2018, as applications 23645-A001 and 23645-A002.

3. The applications were initially submitted without an Alberta Environment and Parks' (AEP) Wildlife Renewable Energy Referral Report (the referral report) as required by Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*. The proceeding was placed in abeyance until the referral report was submitted.¹ On August 7, 2018, Acestes submitted the referral report from AEP.

4. The Commission issued a notice of application in accordance with Section 7 of Rule 001: *Rules of Practice* on September 7, 2018. Two parties who were opposed to the project filed statements of intent to participate in response to the notice.

5. On October 11, 2018, the Commission determined that both parties had standing and that a hearing would be held. A notice of hearing was issued on November 2, 2018, stating that a hearing was scheduled for January 22, 2019. An information session was also held in Vulcan on November 19, 2018.

¹ Exhibit 23645-X0017, AUC acknowledgment letter to Acestes Ventures Ltd., June 14, 2018.

6. On November 26, 2018, one party withdrew their statement of intent to participate.² On November 30, 2018, Acestes provided a letter signed by the remaining party indicating that he had agreed to withdraw his statement of intent to participate.³

7. The Commission issued a notice of hearing cancellation on December 19, 2018, as both parties with standing had withdrawn their objections.

3 Applications

8. Acestes stated that the project would be located on the northwest quarter of Section 22, Township 16, Range 24, west of the Fourth Meridian, approximately 3.5 kilometres southeast of Vulcan. The project location would encompass approximately 160 acres of cultivated land. Acestes stated that the location was chosen primarily for its proximity to the existing Vulcan 255S Substation.

9. The project would include solar panels mounted on fixed tilted racks, access roads, collector lines, a perimeter fence, inverters, step-up transformers and an operations and maintenance building.

10. The project would consist of approximately 103,000 solar modules with a net generation capacity of approximately 25 megavolts ampere. The collector lines would be located underground. Acestes anticipates that selection of the specific make and model of the solar panels and transformers would be finalized by December 2019. In response to an information request, Acestes confirmed that the total net-to-grid generation capacity would not exceed 25 megavolts ampere.⁴

11. Acestes stated that the project would be interconnected to the FortisAlberta Inc. electric distribution system through two 25-kilovolt distribution feeders. In response to an information request, Acestes confirmed that both interconnection points would be located in the northwest quarter of Section 22, Township 16, Range 24, west of the Fourth Meridian.⁵

12. In response to a stakeholder's concern, Acestes committed to locating the interconnection on the west side of the project and to requesting that FortisAlberta Inc. keep the distribution line off the stakeholder's property.⁶

13. Acestes anticipated that construction would commence in the fall of 2019 and that the project would be completed in the fall of 2020.

14. Acestes stated that it had conducted a participant involvement program in accordance with Rule 007, including consulting with stakeholders within 800 metres and notifying stakeholders within 2000 metres of the project. Acestes also conducted an open house regarding the project on November 15, 2017.

² Exhibit 23645-X0030, Scobie SIP withdrawal, November 26, 2018.

³ Exhibit 23645-X0031, Lundgren Letter removal of SIP, November 30, 2018.

⁴ Exhibit 23645-X0021, Vulcan Solar IR1 Responses, PDF page 3, September 14, 2018.

⁵ Exhibit 23645-X0034, Vulcan Solar IR2 Responses, PDF page 3, January 28, 2019.

⁶ Exhibit 23645-X0031, Lundgren Letter re Removal of SIP, November 30, 2018.

15. Acestes stated that it had responded to stakeholders' comments regarding concerns over the distribution line required to connect the project, tree removal, the surface water management plan, weed control, noise and traffic impacts. During its public consultation process, Acestes committed to using temporary construction fencing and providing the surface water management plan to interested stakeholders.

16. Acestes retained RWDI AIR Inc. (RWDI) to prepare a noise impact assessment for the project, which was submitted in support of its applications to the Commission. The noise impact assessment used KACO Inverters and reference transformers derived using theoretical calculations based on power ratings, speed, dimensions and capacities provided by Acestes as noise sources.

17. RWDI stated that the nearest residence was 820 metres east of the project. The cumulative sound level at that location was expected to be 45 dBA during daytime hours and 36 dBA during nighttime hours. These levels are within the permissible sound levels of 50 dBA daytime and 40 dBA nighttime stipulated in Rule 012: *Noise Control*.

18. The referral report indicated that the project would have a low risk to wildlife features as the project would be sited entirely on cultivated land and avoid lakes, permanent watercourses and valley breaks. The project was also sited to avoid the house, nest and den of species-of-management concern.

19. No sharp-tail grouse leks survey were conducted. The referral report indicated that the area was not suitable for sharp-tailed grouse leks due to the area being cultivated.

20. During the migration surveys conducted by Acestes, the most commonly observed species were the Canada goose, snow goose and horned lark, which are listed as secure and are abundant in the project area. Four species-of-management concern were observed, including the long-billed curlew, northern harrier, prairie falcon and Swainson's hawk. AEP Wildlife Management (WM) conducted a bird risk assessment based on the migration and breeding bird data conducted by Acestes and determined that most species observed were currently listed as secure and no species at risk were observed.

21. AEP WM expects that the wildlife mortality risk would be low because the project is small and sited on previously-disturbed land with limited wildlife use. If mortality is found to be higher than predicted, Acestes has committed to mitigating wildlife mortality by measures that could include the use of avian deterrents, white gridlines on solar panels, increased spacing between solar arrays, or other mitigation that is deemed appropriate following consultation and agreement with AEP WM.

22. Acestes included weed management as part of its environmental protection plan. Acestes stated that prevention is paramount to an effective weed management program, and that it would minimize the potential for weed introduction by seeding all disturbed areas with landowner approved seed mixes. Acestes stated that it would solicit surrounding landowners for their participation in a co-operative weed management program. Weed management would combine chemical, mechanical and natural controls as required. Acestes would also ensure that weed control methods are approved by Vulcan County prior to construction.

23. Acestes retained Integrated Sustainability Consultants Ltd. to conduct a surface water management plan, in which it concluded that post-development changes to the project site's surface run-off flow would decrease by less than 1.5 per cent. If necessary, Acestes would implement erosion and sediment control during and immediately after construction activities, which could include silt fences or straw bale barriers and vegetated filter strips.

24. Acestes stated that during decommissioning of the project it would de-energize the facility, remove above-ground and below-ground infrastructure, reclaim surface soils and reseed or replant. Acestes would also monitor the reclamation.

25. In response to an information request, Acestes provided a solar glare analysis report (the glare report)⁷ for the project. The glare report analyzed 10 observation points and indicated that at eight of those observation points the project could reflect solar glare that had the potential to cause a temporary after-image if the observer stared directly at the source of the glare. The glare report stated that the glare would be similar in magnitude to what might be observed from a smooth body of water. All eight observation points that would experience solar glare would experience it for less than 25 minutes per day. The glare report assumed that the solar panel modules would have an anti-reflective coating.

26. The glare report also stated that the United States Federal Aviation Administration studied pilots' impairment due to solar glare. Study participants reported slight to moderate impairment when a glare source was within 50 degrees of the centre of their field of vision. Glare outside of 50 degrees of a pilot's line of sight is not considered a risk.

27. The glare report concluded that the project would not result in solar glare occurring within 50 degrees of the line of travel for vehicles on Highway 23. In response to an information request, Acestes confirmed that Alberta Transportation had been provided with the glare report and that Acestes would be required to obtain a Roadside Development Permit from Alberta Transportation prior to construction.⁸

28. Trains travelling northbound on a railroad west of the project would be subject to solar glare from the project within 50 degrees of the line of travel. In response to an information request, Acestes provided the solar glare report to the railroad owner, Canadian Pacific Limited, and confirmed that Canadian Pacific Limited had no concerns.⁹

29. The project was granted *Historical Resources Act* clearance on May 1, 2018.

⁷ Exhibit 23645-X0034, Vulcan Solar IR2 Responses, Attachment 1.

⁸ Exhibit 23645-X0037, Update to AUC – Alberta Transportation, February 12, 2019.

⁹ Exhibit 23645-X0036, Vulcan Solar IR3 Responses, PDF page 3, February 11, 2019.

4 Findings

30. The Commission has determined that its requirements with respect to the technical, siting, emissions, environmental and noise aspects of the project have been met. Acestes conducted a participant involvement program and there are no outstanding public or industry objections or concerns.

31. The Commission notes that the *Conservation and Reclamation Regulation* was recently amended to specifically address the reclamation of solar projects in Alberta. The effect of these amendments is that “renewable energy operations,” which include solar plants, are now expressly subject to the reclamation obligations set out in Section 137 of the *Environmental Protection and Enhancement Act*. Operators of renewable energy projects are now required to obtain a reclamation certificate at the project’s end of life. The reclamation process is administered by AEP pursuant to the *Conservation and Reclamation Directive for Renewable Energy Operations*, which provides more detailed information on conservation and reclamation planning and reclamation certificate requirements for renewable energy operators in Alberta.

32. The Commission is satisfied that the noise impact assessment demonstrates that the cumulative sound levels for the project are below the daytime and nighttime permissible sound levels set out in Rule 012. However, final design and equipment for the project has not yet been completed. Consequently, any approval of the project would require Acestes to submit documentation that demonstrates that the project remains in compliance with permissible sound levels if the final equipment selection differs from what was used in the base reference case for the noise impact assessment.

33. The Commission expects Acestes to control weeds and plant diseases as described in the application and in accordance with the *Weed Control Act* and the *Agricultural Pests Act*.

34. The Commission accepts the conclusion of the glare report that solar glare from the panels will not result in lasting health impacts on individuals. However, it notes the report’s finding that an observer’s vision could still be temporarily affected by an after-image from solar glare.

35. The Commission acknowledges there are currently no standards or regulations in place related to public safety associated with solar glare. No affected stakeholders submitted concerns to the Commission in response to the notice of application and no affected party given a copy of the glare report submitted concerns.

36. Having regard for the foregoing, the Commission approves the application subject to the following conditions:

- (a) Once Acestes 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, an updated site plan. This letter must also confirm that the finalized design of the project will not increase the land, noise and environmental impacts from what was approved for the base reference case by the Commission. This letter is to be filed no later than one month before construction is scheduled to begin.

- (b) Acestes shall abide by all of the requirements, recommendations, and directions outlined by AEP WM in its Renewable Energy Referral Report and any requirements and commitments outlined in the final version of its post-construction wildlife monitoring and mitigation plan and environmental protection plan as accepted and reviewed by AEP WM.
- (c) Acestes shall carry out site-specific, post-construction monitoring surveys for a minimum of three years after the project is operational, or for such further period recommended by AEP in accordance with the *Wildlife Directive for Alberta Solar Energy Projects*. A report summarizing the results of these surveys is to be submitted annually to AEP and to the Commission along with any correspondence from AEP summarizing its views on the report. Acestes must employ an experienced wildlife biologist as defined in the *Wildlife Directive for Alberta Solar Energy Projects* to conduct its post-construction monitoring.
- (d) Following completion of the post-construction wildlife monitoring program, Acestes must communicate to AEP the corrected mortality rates for birds and other wildlife, the discovery of any carcasses of species at risk (as this term is defined in the *Wildlife Directive for Alberta Solar Energy Projects*) near solar panels or associated project infrastructure during operation or maintenance and, if required, implement any new mitigation measures that AEP may recommend to prevent or reduce further mortalities.
- (e) Following completion of the post-construction wildlife monitoring program, Acestes will promptly notify AEP of any discovery of a provincial or federal threatened or endangered species carcass that may be attributable to the project or that might be observed near project infrastructure during operation and maintenance activities.
- (f) Acestes shall apply anti-reflective coating to the solar panels used.
- (g) Acestes must promptly report to the Commission any complaints or concerns it receives, or is made aware of, regarding solar glare from the project.
- (h) Acestes must obtain a Roadside Development Permit from Alberta Transportation prior to construction.

37. Based on the foregoing and subject to the above-noted conditions, the Commission considers the project to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

5 Decision

38. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants Acestes Ventures Ltd. the approval set out in Appendix 1 – Power Plant Approval 23645-D02-2019 – February 22, 2019 (Appendix 1 will be distributed separately).

39. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves the interconnection and grants Acestes Ventures Ltd. the connection order set out in Appendix 2 – Connection Order 23645-D03-2019 – February 22, 2019 (Appendix 2 will be distributed separately).

Dated on February 22, 2019.

Alberta Utilities Commission

(original signed by)

Anne Michaud
Vice-Chair

(original signed by)

Patrick Brennan
Acting Commission Member

(original signed by)

Merete Heggelund
Acting Commission Member

Appendix A – Summary of Commission directions with required deliverables

This section is provided for the convenience of readers. In the event of any difference between the directions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

- (1) Once Acestes 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, an updated site plan. This letter must also confirm that the finalized design of the project will not increase the land, noise and environmental impacts from what was approved for the base reference case by the Commission. This letter is to be filed no later than one month before construction is scheduled to begin.
- (2) Acestes shall carry out site-specific, post-construction monitoring surveys for a minimum of three years after the project is operational, or for such further period recommended by AEP in accordance with the *Wildlife Directive for Alberta Solar Energy Projects*. A report summarizing the results of these surveys is to be submitted annually to AEP and to the Commission along with any correspondence from AEP summarizing its views on the report. Acestes must employ an experienced wildlife biologist as defined in the *Wildlife Directive for Alberta Solar Energy Projects* to conduct its post-construction monitoring.