AUC
Alberta Utilities Commission

Red Willow Solar Inc.

Red Willow Solar and Energy Storage Project

January 23, 2026

Alberta Utilities Commission
Decision 29258-D01-2026
Red Willow Solar Inc.
Red Willow Solar and Energy Storage Project
Proceeding 29258
Applications 29258-A001 to 29258-A003

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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 Executive summary

1. In this decision, the Alberta Utilities Commission approves applications from Red Willow Solar Inc. to construct and operate a 225-megawatt (MW) solar power plant, a 100-MW/200-megawatt-hour (MWh) energy storage facility (ESF) and the associated Birch 1075S Substation, collectively designated as the Red Willow Solar and Energy Storage Project.

2. The Red Willow Landowners Group (RWLG), County of Stettler No. 6 (Stettler County) and hosting landowners intervened in this proceeding. The RWLG and Stettler County both expressed concerns about the project. The RWLG requested that the Commission deny Red Willow Solar's applications or, if the Commission approves the project, include specific conditions as outlined in their submissions. Similarly, Stettler County submitted that it does not support approval of the project, but if the Commission approves the project, requested that the Commission include certain conditions of approval; it also suggested that the Commission clearly indicate where certain issues are either considered and decided by the Commission or are set aside for Stettler County to consider and decide in the development permit process for the project. The hosting landowners requested that the project be approved and identified certain project benefits.

3. The Commission has weighed the concerns raised by the RWLG and Stettler County against the benefits of the project and the mitigation measures proposed by Red Willow Solar. The Commission's reasons for finding the project to be in the public interest are set out in detail in this decision and summarized below:

- The Commission considers and will continue to consider municipal requirements. The Commission encourages Red Willow Solar to continue to work with Stettler County to facilitate the execution of the project.

- Fire risks associated with the ESF are limited and will be mitigated to an acceptable level by Red Willow Solar's monitoring systems and emergency response plan. The Commission requires Red Willow Solar to continually review and update the site-specific emergency response plan.

- Red Willow Solar has sufficiently demonstrated that agricultural impacts are adequately mitigated with the inclusion of the agrivoltaics plan, agricultural reporting and that any loss of agricultural use of the project lands will be reversible at the project end of life.

- Red Willow Solar is expected to reasonably manage project impacts to weeds and clubroot in consultation with Stettler County.

- The Alberta Environment and Protected Areas renewable energy referral report for the project determined that the project poses an overall moderate risk to wildlife and wildlife habitat. The Commission accepts that the project is appropriately sited with respect to most *Wildlife Directive for Alberta Solar Energy Projects* standards and finds the environmental impacts of the project to be reasonable considering the mitigations committed to and conditioned in this decision.

- The Commission accepts that Red Willow Solar's approach to reclamation is reasonable. Red Willow Solar is required to fully reclaim the project and bear the costs of doing so by providing security funds to the Government of Alberta.

- The project is predicted to comply with the permissible sound levels as defined in Rule 012: *Noise Control*. The Commission requires Red Willow Solar to conduct a post-construction comprehensive sound level survey to verify the project's compliance with Rule 012.

- The project is unlikely to have glare impacts to nearby roads and the Commission requires Red Willow Solar to promptly address complaints or concerns regarding glare impacts during the project operations and implement effective mitigation measures where necessary.

- Red Willow Solar's participant involvement program generally achieved the purposes of consultation and notification set out in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines*.[1]

4. Overall, the Commission finds that approval of the applications, as conditioned, and with the commitments made by Red Willow Solar, is in the public interest, having regard to the social, economic, environmental and other effects of the project.

2 Introduction

2.1 Summary of Red Willow Solar's applications

5. Red Willow Solar applied to construct and operate a 225-MW solar power plant, a 100-MW/200-MWh ESF and the associated Birch 1075S Substation, designated as the Red Willow Solar and Energy Storage Project.

6. The project will be located approximately 18 kilometres northeast of Stettler, Alberta, on approximately 386 hectares of agricultural land within the land locations indicated in Table 1.

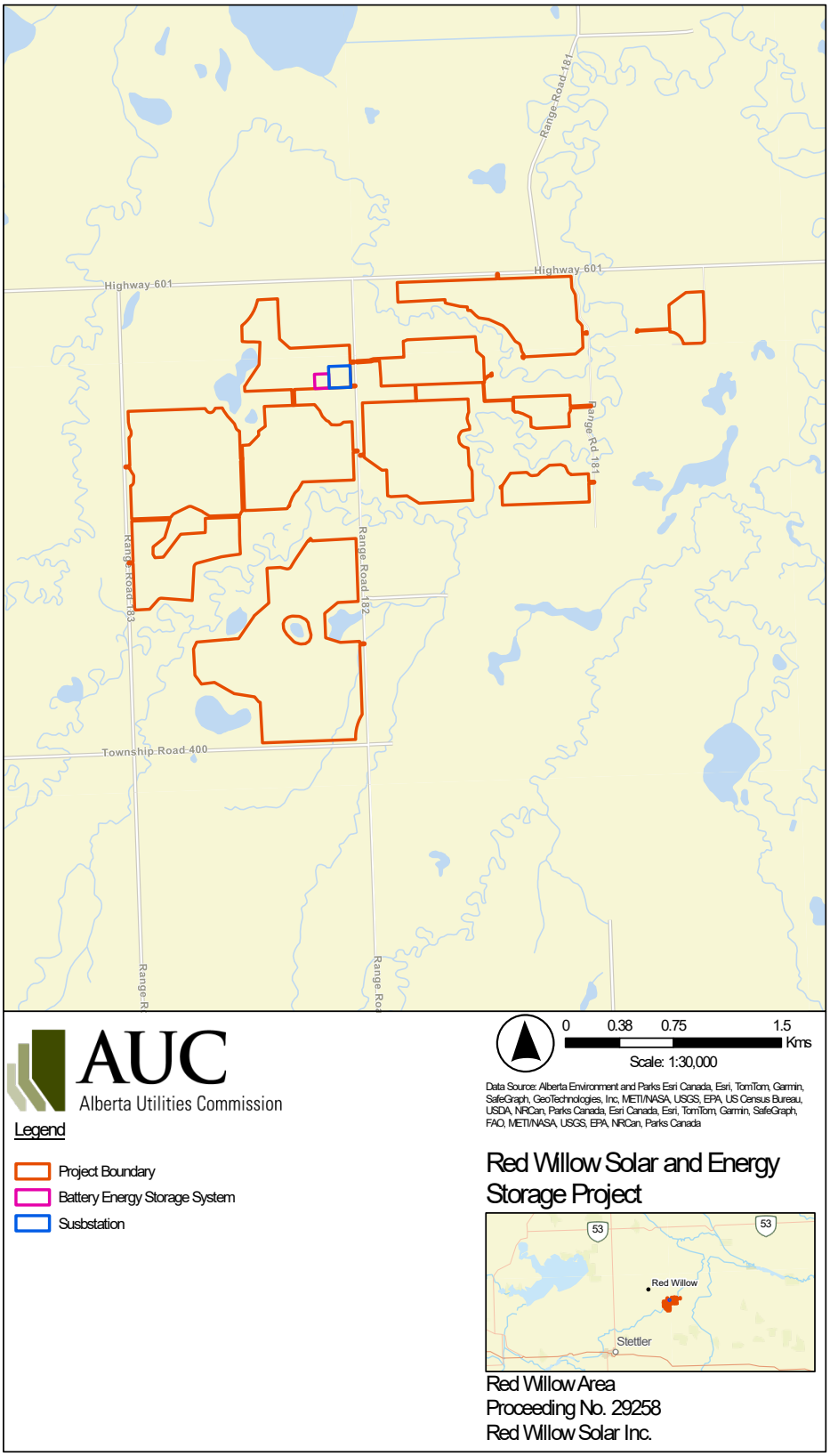
[1] On November 6, 2025, a new version of Rule 007 came into effect. Among other changes, the name of the rule was revised to Rule 007: *Facility Applications.*

Table 1. Red Willow Solar and Energy Storage Project legal land descriptions

Quarter	Section	Township	Range	Meridian
Northwest	12	40	18	4
Northeast	11	40	18	4
Northwest	11	40	18	4
Southeast	11	40	18	4
Southwest	11	40	18	4
Northeast	10	40	18	4
Southeast	10	40	18	4
Southwest	10	40	18	4
Northeast	3	40	18	4
Northwest	3	40	18	4
Southeast	3	40	18	4
Southwest	3	40	18	4

7. The project location is shown on the map in Figure 1.

Figure 1. Red Willow Solar and Energy Storage Project location



8. The power plant will consist of approximately 484,000 solar modules on fixed bifacial panels, with a total capability of 225 MW, attached to inverters and transformers. The power plant will also include an underground collector system, which will collect the electric energy generated by the solar modules and bring it to the Birch 1075S Substation. The collector substation will include 240-kilovolt (kV) and 34.5-kV equipment and buswork. The ESF will include lithium-ion battery storage units with a total capability of 100 MW and a storage capacity of 200 MWh.

9. Project construction is expected to start on June 1, 2027, with an expected in-service date of December 1, 2028.[2] Red Willow Solar requested an approval expiry date of July 1, 2032, to account for various regulatory processes, disruptions and uncertainties related to legislative and policy changes, tariff-related uncertainties and supply chain disruptions and potential procurement delays.[3]

10. Red Willow Solar submitted that the project would contribute to positive societal benefits, including clean energy generation, creation of employment and tax revenue, and an innovative agrivoltaics program in alignment with the stated goals of Alberta Agriculture and Irrigation. Red Willow expected an estimated direct employment impact of 180 person-years, most of which will occur during the construction phase. Red Willow estimated that the project will generate $5 million annually in direct GDP as well as employment for an estimated 10 people full-time for the duration of its operational life.[4] Red Willow Solar added that it has entered into an agreement with Ducks Unlimited Canada to provide financial support for an estimated 15 acres of voluntary wetland enhancement.[5]

11. Red Willow Solar also submitted that the project was sited to align with an optimized transmission planning approach.[6] The project is sited along an existing 240-kV transmission corridor that is being further reinforced by the Central East Transfer-out Transmission Development (CETO) project. Red Willow explained that siting the project along this transmission corridor will help to fulfil one of the Alberta Electric System Operator's (AESO) goals for the CETO Project which is to enable additional generation in the area and will minimize environmental and stakeholder impacts related to new development.

12. Red Willow Solar stated that applications will be submitted to the AUC in the future for approval to construct interconnection transmission facilities and to connect the power plant and transmission facilities to the Alberta Interconnected Electric System.[7] Red Willow Solar anticipates that the AESO will file a needs identification document application for the transmission facilities in June or July 2026.[8]

2.2 Interveners

13. The Commission issued a notice of applications in accordance with Rule 001: *Rules of Practice*. In response, the Commission received statements of intent to participate from hosting landowners, members of the RWLG and Stettler County. The Commission granted standing to

[2] Transcript, Volume 1, page 127, lines 9-16.
[3] Exhibit 29258-X0122, RedWillow_ProjectUpdate_ProceedingConcordanceLetter_20250521, PDF page 4.
[4] Exhibit 29258-X0199.1, RWSI Reply Evidence, PDF page 23.
[5] Transcript, Volume 3, page 381, lines 20-25 and page 382, lines 1-7.
[6] Exhibit 29258-X0122, RedWillow_ProjectUpdate_ProceedingConcordanceLetter_20250521, PDF pages 1-3.
[7] Exhibit 29258-X0004, FacilityApplication_RedWillow_Final, PDF page 2.
[8] Transcript, Volume 1, page 127, lines 13-17.

the hosting landowners and to some members of the RWLG. The Commission also permitted persons without standing to join the RWLG to participate in the proceeding and granted Stettler County full participation rights.[9]

14. The hosting landowners identified several project benefits, including that the project would help to keep their land in their family, assure yearly income and help sustain farming operations, provide taxes to the County, allow landowners to exert rights on their property, reduce farm emissions, and allow growth of the farm by adopting environmentally acceptable methods and modern machinery.

15. The RWLG raised concerns about and submitted evidence and argument on issues related to fire safety, emergency response, air emissions, agricultural impacts, pest and weed control, environmental and wetland impacts, noise, glare, impacts on viewscapes, property value impacts and consultation.

16. Stettler County raised concerns about and submitted evidence and argument on issues related to compliance with municipal planning documents, agricultural impacts, emergency response plan, noise, glare, visual impacts, cumulative impacts, site layout and direct access connection to county roads, weed and pest management, storm water management, reclamation and waste management plans.

3 The approval process for the project

17. In this section of the decision, the Commission describes the legal framework in which its decisions are made. First, the Commission explains its mandate and powers when considering facility applications. Then the Commission describes how it assesses the public interest. Finally, the Commission addresses how it considers municipal planning instruments in its public interest assessment.

3.1 What is the role of the Commission?

18. The Commission is an independent regulator responsible for considering applications for power plants, substations and ESFs in accordance with the legislative framework.[10] The Commission must consider whether the proposed project is in the public interest, having regard to its social, economic, environmental and other effects.[11]

19. The applicant bears the onus of demonstrating that approval of its project is in the public interest. Interveners may attempt to show that the applicant has not met its onus by demonstrating the effects of the project on their interests and explaining what a better balancing of the public interest might be. The Commission's role is to test and assess the evidence before it and engage in a multifaceted analysis established by the regulatory regime, to determine if the project should be approved, and if so, whether any conditions should apply.

[9] Exhibit 29258-X0079, AUC letter - Ruling on standing and motion concerning procedural matters and Exhibit 29258-X0082, AUC letter - Ruling on standing.
[10] *Hydro and Electric Energy Act*, sections 11, 13.01, 14, 15 and 19.
[11] *Alberta Utilities Commission Act*, Section 17.

20. On December 6, 2024, the *Electric Energy Land Use and Visual Assessment Regulation*[12] was enacted. The regulation was established to protect high-quality agricultural land, irrigable land and valued viewscapes from the impacts of electric energy generation development. Also, on June 4, 2025, the Government of Alberta issued the *Code of Practice for Solar and Wind Renewable Energy Operations*, effective May 31, 2025, which sets out the requirements for reclamation security provided directly to the government.

21. Both the *Electric Energy Land Use and Visual Assessment Regulation* and the *Code of Practice for Solar and Wind Renewable Energy Operations* came into effect after Red Willow Solar had filed its applications but before a decision was issued. The Commission addresses how it applies the *Electric Energy Land Use and Visual Assessment Regulation* and the *Code of Practice for Solar and Wind Renewable Energy Operations* in more detail, below.

3.2 How does the Commission assess the public interest?

22. 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 consider whether the proposed project is in the public interest, having regard to its social, economic, environmental and other effects.

23. As a starting point, a power plant application filed with the Commission must comply with Rule 007 and Rule 012. These rules provide a comprehensive set of requirements for a facility application.

24. The Commission also balances a variety of public interest considerations, taking into account the purposes of the *Hydro and Electric Energy Act* and the *Electric Utilities Act*. These statutes provide for the economic, orderly and efficient development of facilities and infrastructure, including power plants and ESFs, that are in the public interest. They also set out a framework for a competitive generation market, where decisions about whether and where to generate electricity are left to the private sector.[13]

25. 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, and on those more distant, such as the general population of Alberta.

26. 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.

3.2.1 How does the Commission consider municipal planning instruments?

27. Municipalities play a unique role in land use planning and have a strong interest in upholding local objectives. The Commission considers their land use authority and planning

[12] Government of Alberta Order-in-Council 368/2024.
[13] *Hydro and Electric Energy Act*, sections 2 and 3; *Electric Utilities Act*, Section 5.

instruments when determining if a project is in the public interest and values the insights municipalities can provide on the potential effects of projects including the regional context of their planning instruments.[14]

28. While the Commission considers municipal land use planning policies in making its public interest determination, its public interest mandate over the construction and operation of power plants is provincial in scope and it must conduct a balancing of the public interest of all Albertans at the provincial level.[15] This means that when the Commission considers municipal land use planning policies, it considers those policies as one part of the public interest assessment, which includes existing provincial laws, project impacts (social, economic and environmental effects), and compliance with Rule 007 and Rule 012.

29. Although the Commission endeavors to achieve consistency with municipal planning instruments, pursuant to sections 619 and 620 of the *Municipal Government Act*,[16] the Commission's decision on applications takes precedence over municipal planning instruments.[17] This approach aims to reduce regulatory burdens and ensures that issues heard and determined at the provincial level are not reheard at the municipal level.

4 Discussion and findings

30. The Commission has reviewed the applications and has determined that the information requirements specified in Rule 007 and Rule 012 have been met. The Commission considers the proposed power plant, substation and ESF to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act* and other applicable enactments, subject to the conditions described below.

31. In the following subsections, the Commission discusses its findings regarding Stettler County's concerns, fire risks and emergency response plan, agricultural impacts, environmental and wetland impacts, reclamation, noise impacts, solar glare impacts, visual impacts, property value and consultation.

4.1 What are Stettler County's concerns and how does the Commission consider them?

32. Stettler County stated that it does not support the approval of the project because it would detract from the desired character of the community, which includes maintaining a rural lifestyle and sense of community, supporting a rural-based agricultural economy, and preserving the rural qualities and agricultural characteristics of the landscape.

33. However, acknowledging that the Commission has the authority to decide whether to approve the project, the County submitted recommendations to help address its concerns.[18]

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[14] Decision 29712-D01-2025: Stettler Solar and Storage Project, October 27, 2025, paragraphs 27 and 28.

[15] The province-wide nature of the AUC's authority is discussed in AUC inquiry into the ongoing economic, orderly and efficient development of electricity generation in Alberta, Module A Report, January 31, 2024, paragraph 58.

[16] *Municipal Government Act*, sections 619 and 620.

[17] *Borgel v Paintearth (Subdivision and Development Appeal Board)*, 2020 ABCA 192, paragraph 22. This was affirmed most recently by the Court of Appeal of Alberta in *Canmore (Town of) v Three Sisters Mountain Village Properties Ltd*, 2023 ABCA 278, paragraphs 74 to 75.

[18] Exhibit 29258-X0169, County of Stettler No.6 Submission.

Further, Stettler County and Red Willow Solar came to an agreement concerning commitments that would address some of Stettler County's concerns. They filed a joint commitment letter requesting that if the Commission decides to approve the project, the approval should be subject to the agreed upon schedule of commitments. These commitments relate to agrivoltaics, certain municipal development permit related issues, emergency response and fire risk management, noise concerns, and weed control and vegetation planning.[19] Details of these commitments are discussed in the relevant sections of this decision.

34. The Commission appreciates these parties' commitment to good faith co-operation and to ensuring an efficient and expedient regulatory process. Early consultation, discussions, and commitments between Red Willow Solar and Stettler County enhanced hearing efficiency and assisted the Commission in establishing appropriate conditions to ensure the public interest is met.

35. With the schedule of commitments agreed upon, Stettler County's two main outstanding concerns relate to land use, including the desired agricultural character of the community and areas of overlapping jurisdiction between this proceeding and the municipal development permit process for the project. Concerns related to land use are addressed in Section 4.3, where the Commission discusses impacts to agricultural lands while the overlapping jurisdiction concerns will be addressed in this section.

36. In this section, the Commission discusses Stettler County's request that the Commission clearly indicate where certain issues are either considered and decided by the Commission or are set aside for Stettler County to consider and decide in the development permit process.

37. This request arises due to the operation of sections 619 and 620 of the *Municipal Government Act*. These provisions set out the intersection between the Commission's decision-making authority and municipal planning authority. Together these sections confirm that the Commission's provincial authority prevails over that of the municipalities and that conditions of a provincial approval will take precedence over any conflicting condition of a municipal development process.[20]

38. 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 Commission).[21] Sections 619 and 620 are therefore only engaged where it is necessary to resolve conflicts between the Commission's decisions and a municipality's planning instruments. Where there is no conflict between the two, both may apply. Similarly, where the Commission is of the view that a municipality can sufficiently

[19] Exhibit 29258-X0091, 2025 2 12 - Joint Letter on Commitments (fully executed).
[20] Decision 27652-D01-2023: Creekside Solar inc., July 14, 2023, paragraph 131.
[21] In *Canmore (Town of) v Three Sisters Mountain Village Properties Ltd.*, the Court of Appeal of Alberta provided the following commentary regarding the meaning of consistency: "[88] In short, both sides agreed that the term "consistency" in s. 619(2) of the MGA had to be interpreted broadly and purposively… It is not intended to be an exacting standard, but rather approached wholistically and with regard to what was considered and approved at the provincial level to ensure the legislation's purpose is achieved."

address identified risks and concerns within its planning authority, the Commission may defer to the municipal controls.[22]

39. In light of this context, the Commission recognizes Stettler County's request as an effort to facilitate a smooth development permit process and to ensure clarity particularly with respect to any potential appeal to the Land and Property Rights Tribunal.

40. In the schedule of commitments agreed upon by Stettler County and Red Willow Solar, the parties also requested that the following issues be considered and decided in Stettler County's development permit process:

(a) access locations and construction standards for approaches off County roads;

(b) crossing agreements involving any road allowances under County control;

(c) road use agreements relating to traffic-related impacts during the construction phase and during ongoing operations;

(d) setbacks required under the County of Stettler Land Use Bylaw;

(e) any signage and contact information to be posted on the site and site security provisions; and

(f) completion and implementation of a storm water management plan

(collectively, the Proposed Land-Use Planning Issues).[23]

41. Based on evidence presented in this proceeding, the Commission has determined that it is not necessary for it to consider and decide the Proposed Land-Use Planning Issues in order to fulfil its public interest mandate in this proceeding. The Commission is also satisfied that these issues can be addressed by Stettler County within its planning authority. Accordingly, the Commission defers the Proposed Land-Use Planning Issues to Stettler County to consider and decide in its development permit process.

42. Further, in its submission, Stettler County requested that, if the project is approved, the Commission provide a clear written acknowledgment that the following matters are left to the County to decide at the time that a development permit application is being processed:

i. Precise placement of buildings and internal access roads may be adjusted by the applicant and the County as part of the development permit approval process and during emergency response planning.

ii. Yards, setbacks and sightline requirements under the County of Stettler Land Use Bylaw and any variance requests that may be submitted by Red Willow Solar.

iii. Access locations and construction standards for approaches off County roads.

[22] See Decision 27842-D01-2024: Aira Wind Power Inc. – Aira Solar Project and Moose Trail 1049S Substation, Proceeding 27842, March 21, 2024, paragraph 33.

[23] Exhibit 29258-X0091, 2025 2 12 - Joint Letter on Commitments (fully executed).

iv. Road use agreements relating to traffic-related impacts during the construction phase and during ongoing operations and crossing agreement related to underground infrastructure.

v. Requirements related to the completion and implementation of a stormwater management plan.

vi. Any signage and contact information to be posted on the site and site security provisions.[24]

43. Most of these matters align with those outlined in the Proposed Land-Use Planning Issues. However, the following were not included in the Proposed Land-Use Planning Issues and are addressed below: (i) the precise placement of buildings; (ii) internal access roads for emergency response ingress and egress; and (iii) stormwater management plan.

44. The Commission acknowledges that factors such as precise building placement, internal access roads for emergency ingress and egress, and stormwater management may influence the project's final site layout, which is part of the Commission's project approval process, but are also issues intersecting Stettler County's development permit process.

45. The Commission has jurisdiction to approve or deny the siting of a power plant, having regard to the social, economic and environmental effects of the power plant. From this perspective, it is not reasonable to defer overall decisions regarding project layout and final site plan to the County as part of its development permit process. However, the Commission does not generally prescribe specific site layouts when determining whether to approve an application. Further, while the Commission requires a final project update, including the final site layout, to be filed and approved before construction begins, the final project update review process focuses on the project's overall social, economic, environmental and other impacts.

46. The scope of the Commission's review of a final project update is set out in Rule 007. For the final plant site layout, the permissible allowances include: (i) that the location of the solar array and substation(s) has not been relocated more than 100 metres from the approved location; and (ii) that any changes made to the layout of access roads and collector lines must be within the approved power plant boundary and must be accompanied by confirmation that the changes do not infringe on any wildlife habitat or any wildlife features, or alter any mitigation commitments. Accordingly, the Commission expects Red Willow Solar to work collaboratively with Stettler County during the development permit process to finalize the site design in a manner that is consistent with the allowances for the project's final project update as set out in Rule 007 and with the requirements set out in this decision. Within these constraints, the Commission accepts that Stettler County can address any residual issues related to precise building placement, internal access roads for emergency ingress and egress, and stormwater management as part of the development permit process.

47. To be clear, the Commission's approval of the project should not be construed as displacing the County's ability to enforce its requirements on matters such as road use and stormwater management, or to impose conditions as part of the development permit process. However, as discussed above, notwithstanding the County's jurisdiction over its development permit process, Stettler County's decision on the development permit application for the project

[24] Exhibit 29258-X0169, County of Stettler No.6 Submission, paragraphs 89-96.

must align with the decision and conditions imposed by the Commission in approving the project. Accordingly, the Commission imposes the following condition of approval:

a) Once Red Willow Solar Inc. has finalized its equipment selection for the power plant and energy storge facility, it must file a final project update with the Commission to confirm that the project has stayed within the final project update allowances for solar power plants and energy storage facilities specified in Rule 007: *Facility Applications*. Red Willow Solar must also provide an update on its development permit application status and discussions with Stettler County. The final project update must be filed at least 90 days prior to the start of construction.

4.2 What are the safety risks associated with the energy storage facility and how will they be addressed?

48. The RWLG raised safety risk concerns related to the ESF, including chemical exposure, potential fires and contamination, and air dispersion modelling of fire emissions. The RWLG retained Integrated Modelling Inc. (IntMod) to review Red Willow Solar's air quality dispersion modelling report, to complete an analysis and recommendations report on Red Willow Solar's hazard evaluation and emergency response planning for the project, and to complete an alternate dispersion modelling report.

49. Red Willow Solar retained SLR Consulting (Canada) Ltd. to conduct air quality dispersion modelling for the project, to respond to the RWLG's concerns and to review IntMod's recommendations for battery safety and air quality dispersion modelling.

50. For the reasons set out below, the Commission makes the following findings concerning the potential safety risks of the ESF: (i) the use of lithium iron phosphate (LFP) batteries mitigates some safety concerns associated with other battery chemistries; (ii) mitigation measures provided by Red Willow Solar are reasonable for safety and fire control; and (iii) both dispersion scenarios modelled by Red Willow Solar and the RWLG expert witnesses provide value to the Commission's public safety analysis.

4.2.1 How is fire risk impacted by the proposed battery chemistry?

51. In this section, the Commission will evaluate how the stability properties of the LFP battery technology proposed for the project ESF impact fire risk.

52. Red Willow Solar stated that it anticipates using Tesla Megapack 2 XL containers with LFP chemistry in weather-proof enclosures for the ESF. It stated that each enclosure is fully sealed to mitigate leakage, centrally controlled and individually temperature monitored with its own heating, ventilation and air conditioning system to provide optimum performance.[25]

[25] Exhibit 29258-X0007, Attachment F - 20240226_FINAL_Red Willow BESS Plume Dispersion Report.

53. The Commission is satisfied that the use of LFP batteries mitigates some safety concerns associated with other battery chemistries, because LFP battery units are resistant to fire propagation from one container to another. This finding is consistent with previous Commission decisions on ESFs, in which the Commission found the LFP battery chemistry to be more stable than other commercially available options and less likely to experience thermal runaway leading to a fire.[26]

54. The assessments and analysis conducted by Red Willow Solar and the discussion between the parties regarding ESF fire risks were premised upon the use of the Tesla Megapack 2 XL battery units. Given that the project equipment has not yet been finalized, if the battery unit vendor for the final project design is different than those described in the current applications, then such changes would require an amendment application in accordance with Rule 007. Accordingly, the Commission imposes the following condition:

b) Red Willow Solar Inc. shall select lithium iron phosphate batteries for the energy storage facility (ESF). If an alternate battery chemistry or vendor/manufacturer is selected, Red Willow Solar shall submit specifications such as the cell combustion phase duration and peak temperature to the Commission, along with confirmation that the alternate chemistry possesses better thermal stability than lithium iron phosphate, and an appropriate hazard mitigation analysis consistent with National Fire Protection Association (NFPA) 855. Red Willow Solar cannot proceed with construction of the ESF until it receives written approval from the Commission.

4.2.2 How has Red Willow Solar addressed the safety risks associated with the energy storage facility?

55. In this section, the Commission will discuss the mitigation measures and safety protocols proposed by Red Willow Solar.

56. The RWLG raised concerns about the emergency response plan (ERP) and whether it appropriately addresses the risks of ESF fires. Their concerns included how the ESF will be monitored; how a potential ESF fire would be put out by local responders; the size of the evacuation zone in an emergency; whether there is enough water supply in the area for first responders in the event of a fire; and project distance from emergency responders.

57. Red Willow Solar stated that the battery units will be monitored remotely for 24 hours a day, seven days a week, and will have two monitoring systems during operation: the Tesla operations centre and a commercial operator hired by Red Willow Solar. Red Willow Solar added that there will be on-call personnel sited within an appropriate response distance from the project. Regarding emergency response, Red Willow Solar indicated that its emergency notification protocols will be developed and outlined within the project-specific ERP and that the

[26] Previous decisions include Decision 29372-D01-2025: Neoen Renewables Canada Inc. – Sweetgrass Solar and Energy Storage Project, Proceeding 29372, Applications 29372-A001 to 29372-A003; Decision 28845-D01-2024: Warwick Gas Storage Ltd. – Warwick Battery Storage Facility, Proceeding 28845, Applications 28845-A001 and 28845-A002, June 11, 2024, PDF page 7; Decision 27971-D01-2023: Sunnynook Solar Energy Inc. – Sunnynook Solar + Energy Storage Project, Proceeding 27971, Applications 27971-A001 and 27971-A002, June 2, 2023, PDF pages 11-12; and Decision 27109-D01-2022: TA Alberta Hydro Inc. – WaterCharger Battery Storage Facility, Proceeding 27109, Application 27109-A001, November 3, 2022, PDF page 10.

ERP will be a living document and will be revised, as needed, in consultation with Stettler County.

58. Some of the commitments Red Willow Solar has made include staff training on emergency procedures as outlined in the finalized ERP; a final ERP to be prepared prior to project construction and to reflect the final layout and include updated figures and access points in consultation with Stettler County; and installing thermal monitoring imaging cameras at the project site with remote monitoring and external alarm and fire detection systems.[27]

59. In the previous section, based on the use of Tesla Megapack 2 XL containers with LFP chemistry, the Commission determined that fire risks associated with the ESF are limited. In this section, the Commission finds that the limited fire risk and other safety risks will be mitigated to an acceptable level by Red Willow Solar's monitoring systems and ERP, along with additional mitigations directed by the Commission.

60. As shown in Red Willow Solar's commitments, the Commission emphasizes that installation of a monitoring system that can automatically notify emergency response providers is essential for safety and fire risk control at the project ESF. The Commission imposes the following conditions of approval for the ESF:

c) Red Willow Solar Inc. shall install a remote monitoring and fire detection system that can be programmed to automatically notify the monitoring operations centre who in turn will immediately notify local emergency responders. Excluding emergency situations, the project energy storage facility will not be operated without a functional monitoring system.

d) Red Willow Solar Inc., and any subsequent operator, shall implement ongoing upgrades to improve the safety of the project energy storage facility, including but not limited to firmware and software enhancements, monitoring capability enhancements, process changes and safety standards as they are developed.

61. The Commission acknowledges that the ESF will be equipped with automated monitoring systems that are connected to sensors for each battery. However, the Commission considers that a thermal imaging camera that is independent of and does not rely on the monitoring systems embedded in the ESF would be an appropriate supplemental means of independently monitoring overall conditions at the facility. Specifically, thermal imaging cameras can monitor the ESF, while sensors and detectors proposed by Red Willow Solar monitor individual battery units or blocks. In summary, outdoor thermal cameras would provide an additional layer of monitoring at the site. Therefore, the Commission imposes the following condition:

e) Red Willow Solar Inc. shall install thermal imaging cameras at the energy storage facility site for continuous monitoring, and to the extent possible, shall integrate the cameras into its emergency response planning.

62. The Commission considers fire detection and response planning to be an integral part of mitigating fire risks associated with ESFs and is satisfied that Red Willow Solar can mitigate fire risks associated with the ESF and other emergency events to a satisfactory level through

[27] Exhibit 29258-X0208.01, RedWillowSolar+BatteryStorage_29258_CommitmentList_Final.

continuous and multiple monitoring systems and through continuous improvement of emergency response procedures in consultation with the Stettler County and local fire departments. However, given the RWLG's concerns and recommendations and that the ERP is in draft form, the Commission imposes the following conditions of approval for the power plant and ESF:

f) Red Willow Solar Inc. shall provide an updated project-specific emergency response plan to Stettler County and the Alberta Utilities Commission 90 days before commissioning.

g) Red Willow Solar Inc. shall continually, before and during construction and during operation, review and update the project-specific emergency response plan, and incorporate reasonable changes necessary to address concerns received from Stettler County and the local fire departments, and other interested stakeholders such as local landowners. All consultation and determination must consider the latest recommendations from the battery energy storage system manufacturer's emergency response guide. The updated plans are to be provided to Stettler County and the local fire departments.

h) Before the project commences operation, Red Willow Solar Inc. shall consult with Stettler County and the local fire departments about the necessity for on-site water storage, traffic signs and road barricades. If it is determined that on-site water storage, traffic signs and road barricades are required for emergency response purposes, Red Willow Solar shall pre-stage and make available on-site water storage, traffic signs and road barricades in response to an emergency at locations identified by Stettler County and the local fire departments. All consultation and determination must consider the latest recommendations from the battery energy storage system manufacturer's emergency response guide.

i) Before the project commences operation, Red Willow Solar Inc. shall develop and outline emergency notification protocols within the project-specific emergency response plan. In particular, Red Willow Solar shall consult with Stettler County and the local fire departments about automatic shelter-in-place notifications for nearby residents and implement the notification as instructed by the municipal districts and the local fire departments. All consultation and determination must consider the latest recommendations from the battery energy storage system manufacturer's emergency response guide.

j) When requested by local fire departments, Red Willow Solar Inc. shall provide on-site training and emergency equipment as required.

4.2.3 How does the air quality dispersion modelling impact the Commission's public safety analysis?

63. In this section, the Commission will discuss the reasonableness of the air quality dispersion modelling and how the modelling results impact its public safety analysis.

64. SLR conducted an air quality dispersion modelling assessment for the project, which concluded that all residents have significant setback when compared to the toxic endpoints for the project modelled case of a thermal runaway or fire event.[28] It added that in the event of a

[28] Exhibit 29258-X0007, Attachment F - 20240226_FINAL_Red Willow BESS Plume Dispersion Report.

thermal runaway or fire event, the *Alberta Ambient Air Quality Objectives* (AAAQO) may be exceeded for hydrogen fluoride (HF) and be a cause for health concerns for the nearest residence should stable atmospheric conditions and a low wind speed from the south occur. The SLR report predicted that the longest toxic endpoint limit for HF using the AAAQO analysis threshold would be 640 metres, using the ALOHA modelling software.

65. IntMod assessed a "worst-case emissions scenario" and compared to current health thresholds including Acute Exposure Guideline Levels (AEGL), and Immediately Dangerous to Health and Life (IDLH) thresholds for HF. The IntMod report concluded that the predicted maximum distance for HF using the AEGL-2 analysis threshold would be 735 metres. IntMod added that in its opinion, the distance to the IDLH value should be considered for an evacuation zone and recommended a distance of 735 metres, using the AEROMOD modelling software.

66. SLR and IntMod disagreed about the appropriate emission rates to use when modelling the aerial dispersion of HF from a thermal runaway or fire event at the project.

67. SLR provided analysis that was based on lower emission rates derived from a 2017 report prepared by DNV GL (DNV report) for the utility, Consolidated Edison. The emission rate values used by SLR are presented in Table 2 of the DNV report,[29] which provides the average release rate for battery materials. For hydrogen fluoride, this corresponds to a 30-minute release rate of 1.74×10^{-07} kg/s.[30] While Table 2 values likely form a useful lower bound of observed emission, it is unclear in the DNV report which exact battery tests were used to develop the Table 2 values. The test procedures included chamber testing of a variety of chemistries at the cell level between 1.2- and 200-ampere-hour capacity, and large-scale module-level testing ranging from 7.5- to 55-kilowatt-hour capacity. The chamber test procedures are explicit in noting that combustion gases were extracted and tested for the concentration of gases such as HF.[31] However, while the module testing describes the presence of test ports for sampling, the detailed test procedure makes no mention of gas sampling.[32] In addition, Table 2 is not referred to in the text of the DNV report, so there is no explanation of which test results were used to calculate those emission rates. As was argued, this lack of precision in the DNV report suggests that there are different plausible assumptions concerning the Table 2 emission rates, as indicated by the contrasting expert testimony during the hearing.

68. However, this uncertainty concerning emission rates does not necessarily lead to a need to reduce the weight given a particular air dispersion model. When considering air dispersion modelling for an unlikely event such as an ESF fire, the Commission's public interest weighing is necessarily informed by a range of possible failure scenarios. This is a balanced approach for modelling of fires where there is a degree of uncertainty given the current state of understanding of lithium battery combustion behaviour. The uncertainty in what level of gaseous emissions could result is reflected in the wide range of emission factors selected by modellers, as occurred in this proceeding. Modelling a range of possible scenarios, for example from the lowest to highest emission rates observed in a variety of tests, provides better understanding of potential outcomes. More importantly, the models suggest a range of potential toxic endpoints from a fire which may inform emergency response planning. Likewise, there are different modelling tools

[29] Exhibit 29258-X0088, Attachment 3_DNV2017, PDF page 35.
[30] Exhibit 29258-X0088, PDF page 35, Considerations for ESS Fire Safety, Revision 3, January 18, 2017.
[31] Exhibit 29258-X0088, PDF page 91-2, Appendix 3: Testing Plan and Approach, sections 13.4.1, 13.4.2.
[32] Exhibit 29258-X0088, PDF page 17, Section 4.2, and PDF page 96, Appendix 3: Testing Plan and Approach, Section 13.5.

used, each with different advantages and disadvantages for this specific emission scenario. Additionally, while such an ESF fire event may be similar to other industrial facility fires, the installation of ESF in rural locales means this is often the only or largest such facility proximate to residents. Although air dispersion modelling involves uncertainties, it is still considered important for understanding the potential impacts of ESF failure modes.

69. Between the two expert air dispersion reports and testimony at the hearing, the Commission gained a broader understanding of what hazard a serious ESF failure leading to flaming combustion represents for nearby residents and traffic on adjacent roadways. Despite the numerous differences in the approaches taken and assumptions made by SLR and IntMod, and the use of AAAQO and AEGL-2 limits to set endpoints, the endpoint distance for HF is similar: 640 metres by SLR and 735 metres by IntMod. That similarity is the result of SLR selecting AAAQO as the limiting metric, as the HF limit is much lower than the AEGL-2 used by IntMod. The Commission accepts the modelling results of both expert reports as reasonable in concluding that the potential outcomes of a lower-probability failure event have been adequately considered in the public interest assessment.

70. The closest two residences are approximately 613 and 878 metres from the boundary of the ESF, and the nearest roadway is about 219 metres.[33] Given the toxic endpoint distances resulting from SLR and IntMod modelling, this suggests that a serious ESF failure resulting in fire and production of hazardous gases may not present an immediate threat to life to the closest residences.

71. It is expected that the endpoint distances provided by SLR and IntMod should inform the development of the ERP including potential evacuation zones, first responder equipment posture, air testing requirements and the area requiring incident notification of nearby residents.

4.3 What are the impacts from the project to agricultural lands and how will they be mitigated?

72. In this section, the Commission discusses the project's impacts on agricultural lands. First, the Commission addresses impacts to agricultural lands within the project area and whether the project will comply with the *Electrical Energy Land Use and Visual Assessment Regulation*. Second, the Commission addresses impacts to surrounding agricultural lands, specifically, with respect to weeds and pests.

4.3.1 What are the impacts to agricultural land within the project area?

73. The RWLG raised concerns that the project will take productive agricultural land out of production and submitted that Red Willow Solar has not provided evidence showing its agrivoltaics plan for the Class 2 lands is designed to achieve 80 per cent agricultural productivity, as required under the Government of Alberta's *Guidelines to evaluate agricultural land for renewable generation*.

[33] Exhibit 29258-X0162.01, RWSI-RWL-2025JUL11-FinalResponses, PDF page 56. Residence to the north about 613 metres, residences to the northwest about 878 metres. Exhibit 29258-X0106, Digital spatial data, Range Road 182 is about 219 metres from the boundary of the ESF.

74. Stettler County also expressed similar concerns stating that it does not support the project as it does not consider the project's proposed conversion of agricultural lands to industrial use for power generation and storage to be consistent with the County's vision. Also, such change in land use detracts from the desired character of the local community, displaces too much potential agricultural production and offers few offsets to advance other local public policy interests.[34]

75. From the evidence presented by the RWLG and Stettler County, the Commission understands the interveners' concerns about the project impacts to agriculture to be the removal of lands from agricultural operations because of solar panel infrastructure, limitations on options for equipment and crops within the remaining acres and achieving agricultural productivity.

76. From another perspective, the hosting landowners explained that the consistent lease income from the project will help sustain and grow their overall agricultural operations. They also noted that it will help keep the land in the family so that they can continue their family's over 100-year tradition of farming in the area. Further, they submitted that the land will be available for future generations to farm after the project is decommissioned.[35]

4.3.1.1 How does the Commission consider concerns about the conversion of agricultural lands to other uses?

77. Stettler County provided a comprehensive submission, which included relevant excerpts from its Municipal Development Plan (MDP) and Land Use Bylaw (LUB).[36] The overarching policy document that guides the County's land use planning decisions is the County's MDP. The MDP sets out an overall vision regarding the type of physical setting and character that is desired by the County which is agricultural development and rural lifestyle.

78. Also, Stettler County provided a comprehensive perspective on its concerns and overall land use plans. The Commission found these submissions useful in its decision-making because they offered a clear and detailed view of the County's priorities and land use planning strategies.[37]

79. The Commission must consider the siting of the project taking into account Stettler County's position that a solar project on agricultural land does not fit within the desired character of the County, in addition to other impacts such as environmental impacts, glare and proximity to residences. These considerations must also be balanced against the benefits of the project, including the benefits to the overall agricultural operation of the hosting landowners and its location in proximity to the existing transmission corridor.

4.3.1.2 Will the project comply with the *Electrical Energy Land Use and Visual Assessment Regulation*?

80. On December 6, 2024, after Red Willow Solar filed its applications, the Government of Alberta enacted the *Electric Energy Land Use and Visual Assessment Regulation*.[38]

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34 Exhibit 29258-X0169, County of Stettler No.6 Submission, paragraphs 55 and 62.
35 Exhibit 29258-X0063, Statement of intent to participate; Exhibit 29258-X0064, Statement of intent to participate; and Exhibit 29258-X0065, Statement of intent to participate.
36 Exhibit 29258-X0169, County of Stettler No.6 Submission.
37 Exhibit 29258-X0169, County of Stettler No.6 Submission, Transcript Volume 2, PDF pages 31-46.
38 OIC 368/2024 (AB).

81. The *Electrical Energy Land Use and Visual Assessment Regulation*, which the Commission considered in making its decision, outlines requirements for power plants on high-quality agricultural land, irrigable lands, and within buffer zones and visual impact assessment zones. The *Electrical Energy Land Use and Visual Assessment Regulation* provides two agricultural productivity-related requirements for solar power projects on high-quality agricultural lands: (i) an agricultural impact assessment to be filed as part of the solar power project application; and (ii) a report confirming the agricultural productivity of the land to be filed within 36 months after the start of operations. In addition to detailing the expected effect of the proposed solar power project on agricultural productivity, an agricultural impact assessment must include measures demonstrating that the solar power project is designed to achieve coexistence with agricultural land use.[39]

82. Seventeen per cent of the project footprint is on Land Suitability Rating System (LSRS) Class 2 soils[40] and the Commission recognizes that LSRS Class 2 lands are considered high-quality agricultural lands under the *Electric Energy Land Use and Visual Assessment Regulation*. In Bulletin 2024-25, the Commission provided direction on how it would apply this regulation to proceedings currently before it, for which a decision had not yet been issued,[41] which is the case here.

83. Although Red Willow Solar's applications were filed before the enactment of the *Electric Energy Land Use and Visual Assessment Regulation*, the Commission remains mindful of the broader public policy implications of the regulation when considering the applications. The *Electric Energy Land Use and Visual Assessment Regulation* aims to ensure that solar power project proponents have an adequate approach to achieving the coexistence of agriculture and solar power generation on high quality agricultural lands.[42] Using the principles in the *Electric Energy Land Use and Visual Assessment Regulation*, consideration of agricultural impacts and mitigation measures is weighed against the 17 per cent project area, which is Class 2 land.

84. All arable acres within the project lands are currently, and typically, planted with annual crops. These lands have also previously been used to grow hay or have been left to pasture.[43] To demonstrate agricultural land use and solar power plant coexistence, Red Willow Solar submitted an agrivoltaics plan proposing haying and some berry production, with opportunities for more berry production subject to further assessment and consultation with the host landowners.[44]

85. Red Willow Solar's agrivoltaics plan proposes haying across most of the project footprint and where possible, annual crop production in areas outside of the fence,[45] which will retain a measure of agricultural production within the project lands. Also, the Commission understands

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39 *Electric Energy Land Use and Visual Assessment Regulation*, sections 4 and 5.
40 Exhibit 29258-X0109, RWSI Environmental Evaluation of Change at PDF page 31.
41 Bulletin 2024-25, Changes to interim information requirements for power plant applications, December 18, 2024.
42 Decision 28643-D01-2025: PACE Canada Development LP, on behalf of 2518365 Alberta Ltd. – Killam (Old Bear) Solar Farm, Proceeding 28643, Application 28643-A001, February 20, 2025, paragraph 14.
43 Exhibit 29258-X0118, RedWillow_AgrivoltaicsPlan_20250521, PDF page 8; Transcript, Volume 2, page 222, lines 9 to 12.
44 Exhibit 29258-X0199.01, RWSI Reply Evidence.
45 Exhibit 29258-X0118, RedWillow_AgrivoltaicsPlan_20250521.

that the agrivoltaics plan was prepared in consultation with one of the host landowners who is satisfied with the proposal and will be carrying out the work.[46]

86. In addition to the proposed agrivoltaics plan, Red Willow Solar committed to file with the Commission an annual agricultural report that documents the production realized from the agrivoltaics program no later than January 31 for the first three years of the agrivoltaics program and work with the landowner(s) to ensure they have access to the equipment needed to implement the agrivoltaics plan and may supplement the cost of acquiring new equipment, if needed, in consultation with the landowner(s).

87. Despite Red Willow Solar's applications being filed before the *Electric Energy Land Use and Visual Assessment Regulation* was enacted, Red Willow Solar demonstrated compliance with the *Electric Energy Land Use and Visual Assessment Regulation* requirements by filing an agrivoltaics plan and committed to agricultural reporting, including working with the hosting landowners to ensure access to appropriate equipment needed to implement the agrivoltaics plan.[47] Accordingly, the Commission finds these measures to be appropriate for the protection of high-quality agricultural lands and expects the committed measures are likely to exceed what is required under Bulletin 2024-25.

88. The Commission recognizes that the implementation of agrivoltaics in Alberta is relatively new and that acceptable practices will be re-evaluated over time as experience with agrivoltaics increases and technologies advance. Still, the Commission retains discretionary authority to impose conditions on projects to ensure the public interest is met.[48] Accordingly, the Commission imposes the following condition:

k) Red Willow Solar Inc. will file with the Commission an annual agricultural report that documents the production realized from the agrivoltaics program no later than January 31 for the first 36 months of the agrivoltaics program. Red Willow Solar will provide copies of the report to the Stettler County for its information.

89. On July 8, 2025, the Alberta Ministry of Agriculture and Irrigation released the *Guidelines to evaluate agricultural land for renewable generation*.[49] The Guidelines provide guidance and best practices to project developers, landowners and the AUC on agricultural productivity to demonstrate coexistence of high-agricultural land use and renewable power generation. While the Guidelines are not legislatively binding for the Commission's public interest assessment and were introduced after Red Willow Solar filed its applications, the Commission still considers its provisions when evaluating whether a project is designed to achieve coexistence with agricultural land use.

90. Red Willow Solar provided evidence assessing the project's potential impacts on agricultural productivity,[50] indicating that meaningful levels of agricultural production can be

[46] Transcript, Volume 2, page 227; Exhibit 29258-X0118, RedWillow_AgrivoltaicsPlan_20250521, PDF page 11).
[47] Exhibit 29258-X0208.01, RedWillowSolar+BatteryStorage_29258_CommitmentList_Final.
[48] See *Hydro and Electric Energy Act*, Section 19(1), *Alberta Utilities Commission Act*, Section 8.
[49] Government of Alberta. 2025. Guidelines to evaluate agricultural land for renewable generation. Edmonton. Alberta.
[50] Exhibit 29258-X0119, Red Willow Agricultural Productivity; Exhibit 29258-X0202, Attachment 3 - Class 2 Lands Agricultural Productivity.

maintained under the coexistence plan and supporting Red Willow Solar's commitment to implementing agrivoltaics and achieving effective coexistence.

91. Overall, the Commission is satisfied that Red Willow Solar's agrivoltaics plan for hay production demonstrates coexistence of the project with agricultural use of the Class 2 lands. It is expected that the Guidelines will inform the development of best management practices for the agrivoltaics plan, including the 80 per cent goal for agricultural productivity. Accordingly, the Commission is satisfied that the project will comply with the *Electric Energy Land Use and Visual Assessment Regulation.*

92. Subject to the condition above, the Commission is satisfied that any agricultural impacts to Class 2 lands are mitigated by Red Willow Solar's proposed agrivoltaics plan and the required agricultural reporting, including the overall benefits of the project.

4.3.2 Will Red Willow Solar adequately mitigate potential weed and pest issues?

93. The RWLG raised concerns about the spread of weeds from the project area to nearby farmlands and soil disturbance due to weed invasion. Stettler County indicated that its primary concern with respect to weed control and pest management is the protection of adjacent and area farming operations from the build up and potential spread of weeds and pests.

94. Red Willow Solar has described weed management within their agrivoltaics plan[51] and in their initial conservation and reclamation plan.[52] The Commission finds that these planning documents are sufficient to address the legal requirements to control noxious and eradicate prohibited noxious plant species as described in the *Weed Control Act*[53] and *Weed Control Regulation*.[54]

95. The weed control plans proposed by Red Willow Solar are initial and preliminary and the Commission appreciates the recommendations from the County[55] as practical and beneficial to improving the success of the weed and clubroot management on site.

96. The Commission accepts these recommendations[56] and expects Red Willow Solar to follow these recommendations which include:

- Conduct a baseline weed assessment prior to construction;
- Prepare a stand-alone weed control and vegetation management plan that includes input from the County of Stettler;
- The weed control and vegetation management plan will include details for clubroot management;
- The conservation and reclamation plan and the weed control and vegetation management plan will be provided to the County during municipal development permitting.

[51] Exhibit 29258-X0118, RedWillow_AgrivoltaicsPlan_20250521, PDF page 14.
[52] Exhibit 29258-X0011, Attachment J - Westbridge - Red Willow Solar - Initial C&R, PDF page 17.
[53] *Weed Control Act*.
[54] *Weed Control Regulation*.
[55] Exhibit 29258-X0169, County of Stettler No.6 Submission, PDF pages 20 and 21.
[56] Exhibit 29258-X0169, County of Stettler No.6 Submission, PDF pages 20 and 21.

97. The Commission imposes the following recommendation as a condition of approval:

l) Red Willow Solar Inc. shall submit the weed control and vegetation management plan to the Commission 30 days prior to the commencement of construction. This plan shall be accompanied by a cover letter that documents any correspondence with the Stettler County and mitigations that were recommended but not included.

98. The Commission recognizes the County's expertise and responsibilities in weed management and find that the recommendations provided above will improve the quality of the weed and pest management activities of Red Willow Solar.

4.4 What are the environmental impacts of the project and how will they be mitigated?

99. In this section, the Commission discusses the project's impacts to the environment with specific discussion about the risks to wetlands and watercourses. The Commission first assesses whether the project poses a significant environmental risk. Then, the Commission assesses whether encroachments into wetland setbacks in the project area are justified given the existing agricultural disturbances.

100. Overall, the Commission finds that while the project poses some risk to wetlands and watercourses, the potential impacts are less significant than the impacts of the regular agricultural disturbances that already occur on the project lands.

4.4.1 Does the project pose an unacceptable environmental risk?

101. In the following paragraphs the Commission will outline how the Alberta Utilities Commission considers the AEPA referral report in assessing the environmental risk of a project and how those risks have changed over the course of the proceeding.

102. The AEPA referral report includes a tiered risk ranking that communicates the assessed risk of a project to wildlife and wildlife habitat. This ranking is based on how closely a project aligns with the standards contained in the Wildlife Directive. For this project, AEPA has assigned an overall moderate risk because of wetland encroachments, watercourse encroachments, bird and fencing risks.[57] Red Willow Solar submitted that updates to the project made after the AEPA referral report was issued have reduced these impacts to wetlands and watercourses.[58]

103. The Commission accepts that the original risks to wetlands and watercourses have been reduced through updates to project siting, and the remaining impacts to wetlands and watercourses are less significant because of the existing agricultural disturbance.[59] Therefore, the Commission is satisfied that the project does not pose a significant environmental risk.

[57] Exhibit 29258-X0016, Attachment M - 20230705 EPA-FWS Referral Report_Red Willow Solar.
[58] Exhibit 29258-X0109, RedWillow_EnvironmentalEvaluationofChange_2025052.
[59] Exhibit 29258-X0031, AUC_Redwillow_AEPA_CoverLetter, PDF page 3.

4.4.2 Is encroachment into wetland setbacks justified by existing agricultural disturbance?

104. During the hearing, the Commission heard evidence that the project area has been continuously cultivated for many years, and these cultivation activities have impacted wetlands.[60] This was also observed by the Commission during the site visit.

105. The Commission also heard evidence that agricultural wetlands retain value as wildlife habitat and have been documented with levels of biodiversity comparable to higher quality wetlands.[61] The Commission generally agrees with this finding, but notes that the research presented indicates a statistically significant reduction in biodiversity and evidence that agricultural wetlands have distinct physiochemical characteristics from higher quality wetlands.[62] Based on this evidence, the Commission is satisfied that agriculture changes wetlands from their native state.

106. While existing disturbance does not automatically result in encroachments into wetland setbacks being reasonable, the Commission finds that in this case, the encroachment into wetland setbacks in the project area for the wetlands listed in Appendix A of Exhibit 29258-X0109 (PDF pages 43 to 48) is justified due to the extent and intensity of the existing agricultural disturbance and the reduction of this disturbance during the project operations.[63]

107. Due to the existing cultivated conditions in the project area, the Commission is satisfied that the wetland boundary and associated setback area have a reduced function for wildlife habitat and variance to the standards of the *Wildlife Directive for Alberta Solar Energy Projects* is acceptable. The Commission did not find the research outcomes from Rooney et al. compelling enough to consider these agricultural wetlands as critical wildlife habitat to a degree that a full 100-metre setback was appropriate. Accordingly, the Commission is satisfied that the proposed encroachments into wetland setbacks are justified given the existing agricultural disturbance.

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

m) Red Willow Solar Inc. shall submit an annual post-construction monitoring survey report to Alberta Environment and Protected Areas no later than January 31 of the year following the mortality monitoring period and submit the post construction monitoring survey report and Alberta Environment and Protected Areas' post-construction monitoring response letter to the Commission no later than March 31 of the year following the mortality monitoring period. Following Bulletin 2025-17, a minimum of one year of annual post-construction monitoring is required for the Red Willow Solar project. Any additional reporting and response letters, if required by Alberta Environment and Protected Areas, shall be filed on or before the same date every subsequent year

[60] Transcript, Volume 2, page 228, lines 1 to 17.
[61] Transcript, Volume 1, page 53, lines 6 to 11.
[62] Exhibit 29258-X0236, X0236_ATC 06 - Rooney et al 2014, PDF pages 42 and 43.
[63] Transcript, Volume 2, page 236, lines 11 to 21.

pursuant to Section 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

4.5 Is Red Willow Solar's approach to reclamation security sufficient?

109. The Commission expects applicants to fully reclaim projects and to bear the costs of doing so. Applicants are required to explain how they will ensure that sufficient funds are available at a project's end of life to cover the cost of decommissioning and reclamation.

110. Effective May 31, 2025, applicants for wind and solar energy projects in Alberta – including Red Willow Solar – must obtain a registration under the *Environmental Protection and Enhancement Act*.[64] One of the requirements to obtain registration, set out in the *Code of Practice for Solar and Wind Renewable Energy Operations*, is to provide reclamation security either to: (i) the Government of Alberta; or (ii) landowners as part of a negotiated agreement, as long as the Commission considers that security adequate; or (iii) a combination of the two options.

111. Red Willow Solar has chosen to provide security directly to the government for the project.[65] This means that the Commission will not assess the adequacy of Red Willow Solar's proposed reclamation security under the *Code of Practice for Solar and Wind Renewable Energy Operations*, and that the Commission can be reasonably assured that funds will be available to reclaim the project at its end of life. The Commission accordingly imposes the following condition of approval:

n) Red Willow Solar Inc. must provide security to the Government of Alberta in accordance with the *Code of Practice for Solar and Wind Renewable Energy Operations* and otherwise comply with all conditions and terms of Red Willow Solar's registration with respect to the Red Willow Solar and Energy Storage Project.

112. Based on the information provided, the Commission accepts that Red Willow Solar's approach to reclamation is sufficient for the purposes of satisfying the Commission that the approval of the project is in the public interest.

4.6 Is noise from the project expected to comply with Rule 012?

113. Red Willow Solar retained BBA Consultants to complete a noise impact assessment (NIA) for the project in accordance with Rule 012, which was updated to reflect the project revisions.[66] The NIA predicted that noise from the project will comply with permissible sound levels (PSLs) set out in Rule 012 and that the project is not expected to have low-frequency noise issues. Red Willow Solar also submitted confidential manufacturer acoustic test reports for the project inverter-transformer station model and battery unit model to support the determination of sound power levels in the NIA.

114. The RWLG expressed concerns about noise from the construction and operation of the project and retained Henk de Haan from dBA Noise Consultants Ltd. (dNCL) to review

[64] *Code of Practice for Solar and Wind Renewable Energy Operations*, Government of Alberta, Effective May 31, 2025.
[65] Exhibit 29258-X0154, RWSI-AUC-2025JUL11_Response_20250725, PDF page 7.
[66] Exhibit 29258-X0001, Attachment L - Noise Impact Assessment. Exhibit 29258-X0104, RedWillow_Updated Noise Impact Assessment.

Red Willow Solar's NIA for the project and the manufacturer acoustic test reports for the project equipment.

115. In this section, the Commission finds that Red Willow Solar's NIA meets the requirements of Rule 012 and accepts the conclusion of the NIA that noise from the project will comply with Rule 012. As part of its approval, the Commission requires Red Willow Solar to conduct a post-construction comprehensive sound level (CSL) survey at receptors R1 and R10 to verify project compliance. The Commission also expects Red Willow Solar to uphold its commitment to follow mitigation measures recommended in Rule 012 to manage construction noise.

4.6.1 Does the project noise impact assessment meet the requirements of Rule 012 and is the project expected to comply with Rule 012?

116. The RWLG retained dNCL to review the project's NIA. dNCL expressed the following concerns about noise mitigation, nighttime operation, manufacturer test reports, sound directivity and tonality:

- The NIA modelled a U-shape barrier for the project substation main power transformer as a mitigation measure so that the project would achieve compliance. However, the location and dimensions of barriers do not align with the drawing of the project substation.

- In the NIA, fans for the battery units at the ESF were assumed to operate at 50 per cent of the maximum fan speed during the nighttime. However, the project would be non-compliant with the nighttime PSL at R1, R2 and R10 if the fans were to operate at full speed.

- The manufacturer test report for the project inverter-transformer station model did not account for the transformer. Also, the sound power levels in the manufacturer data for the battery unit model does not reflect the actual full-load operation. Therefore, the NIA underestimates the noise levels generated by these major sound sources for the project.

- Based on the manufacturer test results, the project inverter-transformer stations display directivity (i.e., noise emissions that vary with direction from the source). The quietest side should be oriented towards nearby receptors.

- Inverter-transformer stations and the battery units have the potential to create audible tonal noise for nearby receptors. Tonal noise is typically considered as more annoying than regular broadband noise.

117. In Red Willow Solar's reply evidence, BBA updated the noise model for the NIA to incorporate some of dNCL's recommendations.[67] In particular, BBA redesigned the noise barrier for the substation main power transformer to align with the drawing of the project substation. Red Willow Solar committed to install an acoustic barrier at the project substation based on the

[67] Exhibit 29258-0196, Attachment 7 - BBA Reply to dBA Report.

most up-to-date NIA (i.e., either the NIA in the current proceeding or the NIA for the final project update) to achieve project compliance with Rule 012.[68]

118. Given that the project design has not yet been finalized, the Commission expects Red Willow Solar to submit an updated NIA among the final project update that details any new or additional mitigation measures required for the project to achieve compliance with Rule 012.

119. The Commission imposes the following condition of approval for the power plant, ESF and substation:

o) Before the project commences operations, Red Willow Solar Inc. shall implement the noise mitigation measures recommended in the project's most up-to-date noise impact assessment, or alternative mitigation measures that meet or exceed the acoustic specifications described in the most up-to-date noise impact assessment. On or before the date the project commences operations, Red Willow Solar shall file a letter with the Commission detailing the noise mitigation measures it has implemented.

120. With respect to the ESF's nighttime operation, BBA explained that the fans for the battery units are assumed to operate at 50 per cent of the maximum speed during the nighttime to reflect operational realities and to reduce noise impact on assessed receptors.

121. The Commission finds that this assumption is critical for the project to achieve compliance with Rule 012. The Commission also acknowledges Red Willow Solar's commitment to limit the fan speed to 50 per cent through firmware settings. As such, the Commission imposes the following condition of approval for the ESF:

p) Red Willow Solar Inc. shall operate the fans for the battery units at the energy storage facility at no higher than 50 per cent of the maximum fan speed during the nighttime. Within one year after the project commences operations, Red Willow Solar shall file a letter with the Commission confirming that it has limited the fan speed for the battery units during the nighttime to 50 per cent of the maximum fan speed. The letter shall also detail how Red Willow Solar can accurately predict, monitor and control the fans' nighttime operation to ensure the fans for the battery units are operating no higher than 50 per cent of the maximum speed.

122. With respect to manufacturer test reports, Red Willow Solar confirmed with the inverter-transformer station manufacturer that noise contributed from the transformers is negligible. Nevertheless, BBA established sound power levels of the transformers using a theoretical formula. Red Willow Solar also confirmed with the battery unit manufacturer that the sound power level listed in the test report represents the actual operating sound power level of a battery unit.

123. The Commission accepts that the test reports provided by the manufacturers are the best available data source for determining sound power levels from the project inverter-transformer stations and battery units, and that the process BBA used to determine sound power levels for the project equipment is reasonable and acceptable. In the NIA for the final project update, the Commission expects Red Willow Solar to use the most up-to-date manufacturer data and

[68] Exhibit 29258-X0208.01, RedWillowSolar+BatteryStorage_29258_CommitmentList_Final.

confirm with the manufacturers that the tested sound data reflect the representative operation conditions of the project equipment.

124. With respect to sound directivity, BBA explained that it modelled the inverter-transformer stations as omnidirectional point sources because it is a conservative assumption that generally overestimates sound levels compared to directional sources. Red Willow Solar confirmed that it will consider directivity and equipment orientation during the final project design to mitigate noise impacts on nearby receptors.

125. In the NIA for the final project update, the Commission requires Red Willow Solar to incorporate directivity for the inverter-transformer stations based on the final project design. Therefore, the Commission imposes the following condition of approval for the power plant:

q) During detailed engineering and design, Red Willow Solar Inc., wherever practical, shall orient each inverter-transformer station with the side emitting less noise towards the nearest receptor(s). In the noise impact assessment for the final project update, Red Willow Solar shall confirm which inverter-transformer stations have been oriented with the less noisy side towards nearby receptor(s), and if it is not practical to implement such orientation for some inverter-transformer stations, provide an explanation.

126. With respect to tonality, BBA submitted that dBC-dBA values for the project were predicted to be below 20 dB criteria; therefore, no further tonality analysis is warranted based on the available data and Rule 012 requirements. BBA added that although manufacturer data for the inverter-transformer station model may exhibit tonal components in a controlled test environment, these results do not indicate that such tonal noise would be prominent or exceed permissible thresholds at receptors.

127. The Commission finds that BBA conducted a reasonable tonality evaluation for the project and concluded that there will be no tonal noise associated with low frequencies. At this time, the Commission does not require Red Willow Solar to conduct further tonality assessment; however, if the Commission receives a complaint about tonal noise from a nearby resident after the project is in operation, the Commission may require Red Willow Solar to evaluate tonality for all audible frequencies and implement mitigation as may be necessary.

128. Overall, the Commission finds that Red Willow Solar's NIA meets the requirements of Rule 012 and accepts the conclusion of the NIA that, with the implementation of the proposed mitigation measures, noise from the project will comply with Rule 012. Further, the Commission is satisfied that project-related low frequency noise conditions (including tonality) are not expected.

4.6.2 Should a post-construction noise survey be conducted for the project?

129. dNCL recommended that Red Willow Solar conduct a post-construction comprehensive sound level (CSL) survey at receptors R1, R2 and R10 to verify project compliance. Similarly, the County recommended that Red Willow Solar conduct a post-construction CSL survey for the project and provide a copy of the survey report to the County for information purposes.

130. Red Willow Solar committed to conduct the CSL survey at Receptor R1. BBA does not believe other receptors are required for the survey, because Receptor R1 is closest to the project and as such, the survey results at R1 are expected to be sufficient to confirm compliance with

Rule 012. Nevertheless, Red Willow Solar agreed to conduct the post-construction CSL survey at additional receptor locations if required by the Commission.[69]

131. The nighttime cumulative sound level from the mitigated project is predicted to be 40.2 dBA at the most affected receptor, R1. This sound level is compliant with the nighttime PSL of 40 dBA, but with a zero-compliance margin.[70] Given this, the Commission has determined that a post-construction CSL survey should be conducted to verify compliance with Rule 012 once the project commences operation.

132. Receptors R2 and R10 are predicted to have nighttime cumulative sound levels of 37.9 dBA and 38.3 dBA respectively. With the 2.1-dBA and 1.7-dBA compliance margins, these receptors are considered not ideal receptors. However, in circumstance of this proceeding, the Commission finds that it is reasonable to include receptors R2 and R10 in the CSL survey, because: (i) the RWLG expressed concerns about noise impacts; (ii) based on dNCL's review, receptors R1, R2 and R10 would be non-compliant if the fans at the ESF operate at the full speed; and (iii) Red Willow Solar agrees to conduct the post-construction CSL survey at additional receptors if required by the Commission.

133. The Commission observes that receptors R2 and R10 are located close to each other, and they have similar distances and similar directions from the project. For these reasons, it is likely the existing acoustic environment at these two receptors is similar and that future noise levels from project operations will also be similar. As such, the Commission finds there would be little value in collecting post-construction CSL data at both locations. Compared to R2, R10 is located closer to the project with a higher predicted nighttime cumulative sound level. If sound levels at R10 are demonstrated to be compliant with Rule 012, it would be reasonable to assume that project noise at R2 is also compliant. As such, the Commission finds that R10 would be the better monitoring location for the purposes of testing project compliance.

134. Based on the above analysis, the Commission imposes the following condition of approval for the power plant, ESF and substation:

r) Red Willow Solar Inc. shall conduct a post-construction comprehensive sound level (CSL) survey, including an evaluation of low-frequency noise, at receptors R1 and R10. The post-construction CSL survey must be conducted under representative conditions and in accordance with Rule 012: *Noise Control*. Within one year after the project commences operations, Red Willow Solar shall file a report with the Commission presenting measurements and summarizing the results of the post-construction CSL survey.

135. The Commission will review the CSL survey and approve the survey results in accordance with Rule 012. The CSL survey report and the Commission's decision on it will be available to the public in the AUC's eFiling System.

136. Notwithstanding that this information will be publicly available on the eFiling System, the Commission considers the County's request that Red Willow Solar provide it with a copy of

[69] Exhibit 29258-X0208.01, RedWillowSolar+BatteryStorage_29258_CommitmentList_Final.

[70] Compliance margin is permissible sound level minus cumulative sound level. Rule 012 allows predicted cumulative sound levels to be rounded to the nearest whole number before comparing to the applicable permissible sound level.

the survey report for information purposes to be reasonable. Accordingly, the Commission expects Red Willow Solar to provide a copy of the survey report to the County.

4.6.3 How will Red Willow Solar Inc. manage construction noise?

137. The RWLG also expressed concerns about noise impacts from project construction. dNCL recommended Red Willow Solar implement mitigation measures to reduce noise impacts from construction activities, which include broadband noise backup beepers and noise screens for pile driving.

138. Red Willow Solar committed to follow mitigation measures in Rule 012 to manage construction noise. In particular, Red Willow Solar confirmed that it will advise nearby residents of any construction activities that may result in significant noise and adjust construction schedules appropriately to minimize impacts.[71]

139. The Commission expects Red Willow Solar will uphold its commitment to implement construction noise mitigation measures from Rule 012. More specifically, the Commission expects Red Willow Solar to conduct noise-generating construction activities between the hours of 7 a.m. and 10 p.m. (i.e., daytime) and to promptly respond to noise complaints associated with project construction and mitigate construction noise wherever feasible. The Commission also expects Red Willow Solar to consider the mitigation measures that dNCL recommended for construction, where appropriate.

4.7 What are the glare impacts from the project and how will they be mitigated?

140. In this section, the Commission finds that glare impacts from the project are limited and will be mitigated to an acceptable level.

141. The RWLG expressed concerns about glare from the project solar panels and requested that the Commission require Red Willow Solar to promptly address any complaints or concerns regarding solar glare from the project and report them to the Commission.[72] The RWLG did not retain an expert witness on glare.

142. Red Willow Solar retained Maskwa Environmental Consulting to complete a solar glare assessment (SGA) for the project, which was updated to reflect the project revisions.[73] Maskwa identified six dwellings and six roads within 800 m of the project as receptors for the SGA and confirmed that no aerodrome was identified within 4,000 m of the project. The project solar panels will have an anti-reflective coating and be mounted on a fixed-tilt racking system. Without mitigation, the project is predicted to have some yellow glare[74] within the critical field

[71] Exhibit 29258-X0208.01, RedWillowSolar+BatteryStorage_29258_CommitmentList_Final.
[72] Exhibit 29258-X0171, A RWLG_Group Submissions.
[73] Exhibit 29258-X0008, Attachment G - Solar Glare Assessment Report. Exhibit 29258-X0108, RedWillow_Updated Solar Glare Assessment.
[74] The glare assessment used a colour-coded classification system from the Federal Aviation Administration to assess solar glare from the project. The classification system consists of three categories for glare effects, which are described with three colours (green, yellow and red):
- 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.

of view (FOV)[75] for two local roads (i.e., Township Road 400 and Range Road 182) and at one dwelling.

143. In areas where there was anticipated yellow glare within the critical FOV for route receptors, the SGA modelled visual barriers in the form of existing and proposed supplemental vegetation as mitigation. Specifically, the assessment modelled a number of three/four-metre-tall existing and supplemental vegetation barriers along portions of Township Road 400 and Range Road 182 and along the boundary of a wetland on the southwest of the project.

144. The results of the modelling indicated that predicted glare at potentially impacted receptors can be substantially mitigated using existing and proposed supplemental vegetation barriers. With mitigation, the project is predicted to have zero yellow glare within the critical FOV for route receptors, and to have no glare in any level at dwellings.

145. Red Willow Solar committed to install supplemental three/four-metre-tall barriers/screening along portions of Township Road 400 and Range Road 182. Red Willow Solar also confirmed that it will implement additional mitigation measures (e.g., additional barriers/screening, solar panels with textured glass), if glare is determined to be an issue during the project operation.[76]

146. Rule 007 effective between March 28, 2024, and November 5, 2025, applies to this project. However, the Commission notes that Maskwa proactively considered the new requirements about glare modelling in the draft blackline Rule 007 published by the Commission for consultation on March 24, 2025, and ultimately adopted on November 6, 2025. Maskwa used the appropriate parameters to model glare on route and dwelling receptors, applied the limits for acceptable glare levels as specified in the blackline Rule 007, and demonstrated the effectiveness of the proposed mitigation measures via modelling.

147. Given that the project design has not yet been finalized, the Commission expects Red Willow Solar to submit an updated solar glare assessment among the final project update to detail any new or additional mitigation measures required for the project to achieve compliance with Rule 007.

148. The Commission imposes the following condition of approval for the power plant:

s) Before the project commences operations, Red Willow Solar Inc. shall implement the mitigation measures recommended in the project's most up-to-date solar glare assessment. On or before the date the project commences operations, Red Willow Solar shall file a letter with the Commission detailing the glare mitigation measures it has implemented.

149. In addition, the Commission requires Red Willow Solar to promptly address complaints or concerns from stakeholders regarding glare. Therefore, the Commission imposes the following condition of approval for the power plant:

[75] Field of view (FOV) in glare modelling is measured horizontally from the centreline of the road and represents the angle within which a driver is assumed to be sensitive to glare. A 15-degree FOV is used to represent the critical region where a driver's vision will be most focused (i.e., critical FOV).

[76] Exhibit 29258-X0208.01, RedWillowSolar+BatteryStorage_29258_CommitmentList_Final.

t) Red Willow Solar Inc. shall promptly address any complaints or concerns regarding glare from the project. Red Willow Solar shall file a report with the Commission detailing any glare complaints/concerns during the first year of project operation, as well as Red Willow Solar's response to the complaints/concerns. In particular, the report shall specify if mitigation measures have been implemented in response to the complaint/concern. Red Willow Solar shall file this report no later than 13 months after the project becomes operational.

150. Given Red Willow Solar's commitment and the conditions the Commission imposes in this section, particularly with respect to the glare mitigation, the Commission finds that glare impacts from the project are minimal. With the implementation of the mitigation measures, the Commission is satisfied that the project is not expected to create hazardous glare conditions for drivers on nearby transportation routes or have an unacceptable glare effect on residential receptors.

4.8 What are the impacts on viewscape and property value?

151. Members of the RWLG raised concerns about the unsightliness of the solar module arrays and their potential to affect the resale values of their lands, and they fear the project will prohibit them from enjoying the views they currently enjoy. Some members of the RWLG suggested that if the project is permitted to proceed, they are concerned with destruction of the rural character of the area.

152. The project is not located within a visual impact assessment zone under *Electric Energy Land Use and Visual Assessment Regulation*. Therefore, a visual impact assessment as defined in the regulation is not required.[77]

153. While a visual impact assessment is not required, Red Willow Solar retained Green Cat Renewables (GCR) to prepare visual simulations with respect to the project. The analysis simulated views of the project to provide a representation of the visual appearance and scale on the surrounding landscape, focusing on visual impacts to roadways. Red Willow Solar has also committed to ongoing engagement with landowners regarding potential visual screening to mitigate visual impacts.

154. The Commission accepts that the visualizations conducted by Red Willow Solar demonstrate representative and reasonable visual impacts from the project. The Commission acknowledges that power plant developments alter the landscape and may result in visually unattractive impacts for nearby residents.

155. With respect to property value impacts and rental value concerns, the Commission accepts that change to viewscapes is one factor that may influence an individual's perception of the area as a place to reside or rent. The Commission accepts that there can be a negative public perception of the project's effects on viewscapes, and this may translate into a negative effect on property value for some properties.

[77] *Electric Energy Land Use and Visual Assessment Regulation*, Section 7(2) and Section 8.

156. As with all impacts associated with the project, impacts on viewscapes and the potential for a negative impact on property value will be balanced against the project's public benefits in the Commission's ultimate public interest assessment.

4.9 Was Red Willow Solar's consultation adequate?

157. Members of the RWLG raised concerns regarding the adequacy of consultation for the project, stating that the consultation radius was not made clear and that it should be expanded.[78] Some RWLG members stated that no one came to their home to discuss the project, but that they received a phone call and their questions were not sufficiently answered.[79]

158. Red Willow Solar submitted that it conducted extensive outreach with stakeholders throughout project development and that it engaged with parties from the active mailing list, regularly sharing information about project development.

159. During its participant involvement program (PIP), Red Willow Solar sent out project-specific information packages to stakeholders in January to October 2023, and then in Stage 2, sent out additional information packages as well as follow-up letters and an AUC brochure in November to December 2023.[80] Red Willow Solar also provided a letter in its May 21, 2025, post-abeyance project update of consultation activities between July 2024 and April 2025.[81]

160. The Commission acknowledges that some stakeholders may prefer face-to-face discussions, and that consultation will not always address every individual's concern to their satisfaction. However, the Commission notes that Red Willow Solar maintains a commitment to open dialogue and to engage with stakeholders throughout construction and operation for the life of the project.

161. The Commission accepts that Red Willow Solar's PIP was conducted in accordance with both the substance and spirit of Rule 007. The Commission finds that that Red Willow Solar made reasonable efforts to inform stakeholders of the project, address their concerns, and identify options for mitigation.

5 Conclusion

162. In accordance with Section 17 of the *Alberta Utilities Commission Act*, the Commission finds that approval of the project is in the public interest having regard to its social and economic effects and its effects on the environment.

163. Given that the Commission found that the project will result in some negative impacts, the Commission must weigh these impacts against the project's overall public benefits to determine whether the project is in the public interest.

[78] Exhibit 29258-X0030, Lee Ostiguy Separate SIP letter_Sept 2024, Exhibit 29258-X0037, Letter from Barry & Terryl Haner, and Exhibit 29258-X0040, Letter from James Trent Haner.
[79] Exhibit 29258-X0041, Statement of intent to participate, Colby Miles.
[80] Exhibit 29258-X0002, Attachment O1 - Participant Involvement Program Report Final.
[81] Exhibit 29258-X0105, RedWillow_ParticipantInvolvementProgramUpdate_20250521.

164. Some of the project benefits indicated by the hosting landowners and Red Willow Solar include:

- Assure yearly income of the hosting landowners; help sustain farming operations, reduce farm emissions, allow growth of the farm by adopting environmentally acceptable methods and modern machinery.
- Clean energy generation.
- Creation of an estimated direct employment impact of 180 person-years and the estimated generation of $5 million annually in direct GDP.
- An innovative agrivoltaics plan.
- Financial support to Ducks Unlimited for wetland enhancement.
- Siting along the CETO Project corridor to use the existing grid infrastructure and to align with an optimized transmission planning approach.

165. Overall, for the reasons outlined in this decision, and subject to the conditions in Appendix C, the Commission finds that Red Willow Solar has satisfied the requirements of Rule 007 and Rule 012, and that the negative impacts associated with the project are acceptable given the conditions imposed and mitigations required.

6 Decision

166. Under sections 11, 13.01(1) and 19 of the *Hydro and Electric Energy Act*, the Commission approves applications 29258-A001 and 29258-A002 and grants Red Willow Solar Inc. the approval set out in Appendix 1 – Power Plant and Energy Storage Facility Approval 29258-D02-2026, to construct and operate the Red Willow Solar and Energy Storage Project.

167. Under sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 29258-A003 and grants Red Willow Solar Inc. the approval set out in Appendix 2 – Substation Permit and Licence 29258-D03-2026, to construct and operate the Birch 1075S Substation.

168. The appendixes will be distributed separately.

Dated on January 23, 2026.

Alberta Utilities Commission

(original signed by)

Matthew Oliver, CD
Panel Chair

(original signed by)

Maureen Higgins
Acting Commission Member

Appendix 1 – Proceeding participants

Name of organization (abbreviation) Company name of counsel or representative
Bennet Jones LLP Jessica Kennedy Erin Allison **Red Willow Solar Inc.** Margaret McKenna
Hosting Landowners L. MacQuarrie B. Fletcher J. Fletcher E. Fletcher H. Fletcher
Ackroyd LLP Richard Secord **Red Willow Landowners Group (RWLG)** L. Ostiguy C. Miles B. Penosky S. Chapman J. Haner Lorne and Linda Haner S. Harink
Stettler County Criag Teal

Alberta Utilities Commission **Commission panel** Matthew Oliver, CD, Commission Member Maureen Higgins, Acting Commission Member **Commission staff** Olapeju Anozie (Commission counsel) Alyssa Marshall (Commission counsel) Fatiha Rezwan Derek Rennie Joan Yu

Appendix 2 – Oral hearing – registered appearances

Name of organization (abbreviation) Name of counsel or representative	Witnesses
Red Willow Solar Inc. J. Kennedy, Bennet Jones LLP, counsel E. Allison, Bennet Jones LLP, counsel	M. McKenna X. Qiu J. Bauman M. Sveen H. Yazdanpanahi K. Lipinski G. Doll
Hosting Landowners L. MacQuarrie B. Fletcher	
Red Willow Landowner Group R. Secord, Ackroyd LLP, counsel	L. Ostiguy B. Haner C. Miles B. Penosky S. Chapman C. Wallis M. Polivka J. Binding
Stettler County C. Teal	

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 29258-D01-2026 that require subsequent filings with the Commission and will be included as conditions of Approval 29258-D02-2026:

a) Once Red Willow Solar Inc. has finalized its equipment selection for the power plant and energy storge facility, it must file a final project update with the Commission to confirm that the project has stayed within the final project update allowances for solar power plants and energy storage facilities specified in Rule 007: *Facility Applications*. Red Willow Solar must also provide an update on its development permit application status and discussions with Stettler County. The final project update must be filed at least 90 days prior to the start of construction.

b) Red Willow Solar Inc. shall select lithium iron phosphate batteries for the energy storage facility (ESF). If an alternate battery chemistry or vendor/manufacturer is selected, Red Willow Solar shall submit specifications such as the cell combustion phase duration and peak temperature to the Commission, along with confirmation that the alternate chemistry possesses better thermal stability than lithium iron phosphate, and an appropriate hazard mitigation analysis consistent with National Fire Protection Association (NFPA) 855. Red Willow Solar cannot proceed with construction of the ESF until it receives written approval from the Commission.

f) Red Willow Solar Inc. shall provide an updated project-specific emergency response plan to Stettler County and the Alberta Utilities Commission 90 days before commissioning.

k) Red Willow Solar Inc. will file with the Commission an annual agricultural report that documents the production realized from the agrivoltaics program no later than January 31 for the first 36 months of the agrivoltaics program. Red Willow Solar will provide copies of the report to the Stettler County for its information.

l) Red Willow Solar Inc. shall submit the weed control and vegetation management plan to the Commission 30 days prior to the commencement of construction. This plan shall be accompanied by a cover letter that documents any correspondence with the Stettler County and mitigations that were recommended but not included.

m) Red Willow Solar Inc. shall submit an annual post-construction monitoring survey report to Alberta Environment and Protected Areas no later than January 31 of the year following the mortality monitoring period and submit the post construction monitoring survey report and Alberta Environment and Protected Areas' post-construction monitoring response letter to the Commission no later than March 31 of the year following the mortality monitoring period. Following Bulletin 2025-17, a minimum of one year of annual post-construction monitoring is required for the Red Willow Solar project. Any additional reporting and response letters, if required by Alberta Environment

and Protected Areas, shall be filed on or before the same date every subsequent year pursuant to Section 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

o) Before the project commences operations, Red Willow Solar Inc. shall implement the noise mitigation measures recommended in the project's most up-to-date noise impact assessment, or alternative mitigation measures that meet or exceed the acoustic specifications described in the most up-to-date noise impact assessment. On or before the date the project commences operations, Red Willow Solar shall file a letter with the Commission detailing the noise mitigation measures it has implemented.

p) Red Willow Solar Inc. shall operate the fans for the battery units at the energy storage facility at no higher than 50 per cent of the maximum fan speed during the nighttime. Within one year after the project commences operations, Red Willow Solar shall file a letter with the Commission confirming that it has limited the fan speed for the battery units during the nighttime to 50 per cent of the maximum fan speed. The letter shall also detail how Red Willow Solar can accurately predict, monitor and control the fans' nighttime operation to ensure the fans for the battery units are operating no higher than 50 per cent of the maximum speed.

q) During detailed engineering and design, Red Willow Solar Inc., wherever practical, shall orient each inverter-transformer station with the side emitting less noise towards the nearest receptor(s). In the noise impact assessment for the final project update, Red Willow Solar shall confirm which inverter-transformer stations have been oriented with the less noisy side towards nearby receptor(s), and if it is not practical to implement such orientation for some inverter-transformer stations, provide an explanation.

r) Red Willow Solar Inc. shall conduct a post-construction comprehensive sound level (CSL) survey, including an evaluation of low-frequency noise, at receptors R1 and R10. The post-construction CSL survey must be conducted under representative conditions and in accordance with Rule 012: *Noise Control*. Within one year after the project commences operations, Red Willow Solar shall file a report with the Commission presenting measurements and summarizing the results of the post-construction CSL survey.

s) Before the project commences operations, Red Willow Solar Inc. shall implement the mitigation measures recommended in the project's most up-to-date solar glare assessment. On or before the date the project commences operations, Red Willow Solar shall file a letter with the Commission detailing the glare mitigation measures it has implemented.

The following are conditions of Decision 29258-D01-2026 that do not require subsequent filings with the Commission:

c) Red Willow Solar Inc. shall install a remote monitoring and fire detection system that can be programmed to automatically notify the monitoring operations centre who in turn will immediately notify local emergency responders. Excluding emergency situations, the project energy storage facility will not be operated without a functional monitoring system.

d) Red Willow Solar Inc., and any subsequent operator, shall implement ongoing upgrades to improve the safety of the project energy storage facility, including but not limited to firmware and software enhancements, monitoring capability enhancements, process changes and safety standards as they are developed.

e) Red Willow Solar Inc. shall install thermal imaging cameras at the energy storage facility site for continuous monitoring, and to the extent possible, shall integrate the cameras into its emergency response planning.

g) Red Willow Solar Inc. shall continually, before and during construction and during operation, review and update the project-specific emergency response plan, and incorporate reasonable changes necessary to address concerns received from Stettler County and the local fire departments, and other interested stakeholders such as local landowners. All consultation and determination must consider the latest recommendations from the battery energy storage system manufacturer's emergency response guide. The updated plans are to be provided to Stettler County and the local fire departments.

h) Before the project commences operation, Red Willow Solar Inc. shall consult with Stettler County and the local fire departments about the necessity for on-site water storage, traffic signs and road barricades. If it is determined that on-site water storage, traffic signs and road barricades are required for emergency response purposes, Red Willow Solar shall pre-stage and make available on-site water storage, traffic signs and road barricades in response to an emergency at locations identified by Stettler County and the local fire departments. All consultation and determination must consider the latest recommendations from the battery energy storage system manufacturer's emergency response guide.

i) Before the project commences operation, Red Willow Solar Inc. shall develop and outline emergency notification protocols within the project-specific emergency response plan. In particular, Red Willow Solar shall consult with Stettler County and the local fire departments about automatic shelter-in-place notifications for nearby residents and implement the notification as instructed by the municipal districts and the local fire departments. All consultation and determination must consider the latest recommendations from the battery energy storage system manufacturer's emergency response guide.

j) When requested by local fire departments, Red Willow Solar Inc. shall provide on-site training and emergency equipment as required.

n) Red Willow Solar Inc. must provide security to the Government of Alberta in accordance with the *Code of Practice for Solar and Wind Renewable Energy Operations* and otherwise comply with all conditions and terms of Red Willow Solar's registration with respect to the Red Willow Solar and Energy Storage Project.

t) Red Willow Solar Inc. shall promptly address any complaints or concerns regarding glare from the project. Red Willow Solar shall file a report with the Commission detailing any glare complaints/concerns during the first year of project operation, as well as Red Willow Solar's response to the complaints/concerns. In particular, the report shall specify if mitigation measures have been implemented in response to the complaint/concern. Red Willow Solar shall file this report no later than 13 months after the project becomes operational.