



TA Alberta Hydro Inc.

WaterCharger Battery Storage Facility

November 3, 2022

Alberta Utilities Commission

Decision 27109-D01-2022

TA Alberta Hydro Inc.

WaterCharger Battery Storage Facility

Proceeding 27109

Application 27109-A001

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Eau Claire Tower

1400, 600 Third Avenue S.W.

Calgary, Alberta T2P 0G5

Telephone: 310-4AUC (310-4282) in Alberta

1-833-511-4AUC (1-833-511-4282) outside Alberta

Email: info@auc.ab.ca

Website: www.auc.ab.ca

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1 Decision summary

1. In this decision, the Alberta Utilities Commission approves the application from TA Alberta Hydro Inc. to construct and operate a power plant, designated as the WaterCharger Battery Storage Facility.

2 Introduction

2.1 Application details

2. TA Alberta Hydro Inc. (TA Hydro) filed an application with the AUC to construct and operate the 180-megawatt (MW) WaterCharger Battery Storage Facility (the project). The project is located in the southeast quarter of Section 13, Township 26, Range 6, west of the Fifth Meridian, approximately 15 kilometres west of the town of Cochrane. The project area is approximately four hectares (nine acres) of land owned by TA Hydro's parent corporation TransAlta Corporation, as shown in the following figure.

Figure 1. Proposed WaterCharger Battery Storage Facility



2.2 Interveners

3. The Commission issued a notice of application and a notice of hearing. The Commission received nine statements of intent to participate that expressed opposition to the project. The Commission ruled that the Cottage Club Community Group and Stoney Nakoda Nations and Stoney Nakoda Land Management Ltd. (collectively, Stoney Nations) met the test for standing, and they were granted full participation rights.¹

4. The Cottage Club is a residential development located north of the Ghost dam and south of Highway 1A, on the northeast shore of the Ghost Lake reservoir near the point where the Ghost River flows into the reservoir. The Cottage Club Community Group stated that when the development is fully complete there will be 340 homes. The group expressed concerns related to fire and health risks, emergency response planning, increased traffic and dust, TA Hydro's public consultation program, and property value impacts. It requested that the project be situated in a different location that was suited to industrial development. The Cottage Club Community Group also raised concerns about the quality of the electric power the project would deliver to the Alberta Interconnected Electric System (AIES).

5. The Stoney Nakoda Nations (Stoney Nations) stated that they are comprised of the Bearspaw First Nation, Chiniki First Nation and Wesley/Goodstoney First Nation. They are First Nations with rights under Treaty 7 and they are Aboriginal peoples of Canada within the meaning of Section 35 of the *Constitution Act, 1982*. The Stoney Nations' reserve lands include Indian Reserves 142, 143 and 144, which they stated are located adjacent to the project area. They also stated that they were concerned that the project would impact their current use of lands and resources for traditional purposes, including their riparian rights to the waters and riverbeds of the Bow River and their rights to the water power in the Bow River. The Stoney Nations stated that the payments they receive for hydroelectricity generated at the Ghost dam ("water power rental payments") should increase as a result of the project.

6. Stoney Nakoda Land Management Ltd. (SNLML) is a corporation that is wholly owned by the Stoney Nations. SNLML stated that it owns land within the 800-metre notification area for the project, and that Highway 1A access to the project area from the west runs through some of the SNLML lands. It indicated that it has concerns about the potential impacts of the project on its lands.

7. The Stoney Nations and SNLML participated in this proceeding together, with the same legal counsel from Rae and Company. Except where otherwise indicated, a reference in this decision to the Stoney Nations includes a reference to the SNLML.

8. Michael Kelly, who stated that he is a former Environment, Health and Safety director for TransAlta, was granted limited participation rights in relation to his concerns about the adequacy of the protective measures adopted by TA Hydro to ensure the safe operation of the Ghost dam and dike, in particular the movement of vehicles and heavy equipment associated with the project. He was given permission to question TA Hydro's witnesses on these matters during the hearing. However, he did not respond to the Commission's hearing process letter and did not appear at the virtual oral hearing or participate further in the proceeding. The Commission has

¹ Exhibit 27109-X0065, AUC Ruling on standing; Exhibit 27109-X0096, AUC letter – Second ruling on standing, scope of water management issues and process schedule; Exhibit 27109-X0113, AUC ruling on standing of Cottage Club Community Group.

therefore considered the concerns he identified in his statement of intent to participate² in light of the written and oral evidence given by TA Hydro and its witnesses in the course of the proceeding.

3 Legislative and evidentiary framework

3.1 Legislative regime for energy storage facilities

9. TA Hydro applied to the Commission pursuant to sections 11 and 18 of the *Hydro and Electric Energy Act* to have the project approved as a power plant. It stated that the project would be charged directly from TA Hydro's adjacent Ghost hydro generation plant in a behind-the-fence configuration, and would discharge energy to the AIES through AltaLink Management Ltd.'s Ghost 20S Substation. TA Hydro stated that a separate application to connect the project to the AIES would be filed in 2022.

10. Under the *Hydro and Electric Energy Act*, "power plant" is defined as facilities for the generation and gathering of electric energy from any source. Under the *Electric Utilities Act*, "generating unit" means the component of a power plant that produces, from any source, electric energy and ancillary services, and includes a share of certain associated facilities that are necessary for the safe, reliable and economic operation of the generating unit, which may be used in common with other generating units.

11. Although the *Hydro and Electric Energy Act* and *Electric Utilities Act* do not presently address a battery energy storage facility as a power plant or a generating unit,³ the Commission considers that the project, as proposed, is intended to function as a power plant. Both acts provide that a power plant or generating unit can produce electric energy from any source. All power plants convert energy from one type to another; for example, hydro generation plants convert the energy of water in motion into electric energy. A battery energy storage facility, when discharging, converts chemical energy to electric energy. Chemical energy that is stored in a battery facility that was originally derived from electric energy sourced from a hydro generator does not change the fact that the storage facility, when discharging, is generating or producing electric energy from the battery modules. The Commission is therefore satisfied that the project meets the definition of a power plant under the *Hydro and Electric Energy Act*.

12. The Alberta Electric System Operator (AESO) has specific rules⁴ for the technical and operational requirements of a battery energy storage facility, for example, voltage regulating system requirements and power quality requirements including flicker limits. The Commission agrees with TA Hydro that the Cottage Club Community Group's concerns about the quality of the electric power the project would deliver to the AIES is a matter that is within the AESO's authority, and that any such concerns should be addressed by the AESO based on information that is responsive to the AESO's technical requirements.

² Exhibit 27109-X0048, System generated PDF.

³ The *Electricity Statutes (Modernizing Alberta's Electricity Grid) Amendment Act, 2022* amends the *Alberta Utilities Commission Act*, the *Electric Utilities Act* and the *Hydro and Electric Energy Act* with provisions that define and address an "energy storage facility" and an "energy storage resource." The act has not been proclaimed in force.

⁴ ISO Rule 502.13 Battery Energy Storage Facility Technical Requirements; ISO Rule 502.14 Battery Energy Storage Facility Operating Requirements.

13. The Commission has determined that the application includes the information required under the Commission's Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines*, including the information requirements for battery storage facilities. The Commission notes that there are no outstanding industry objections or concerns with the project, and the AESO has not indicated to the Commission that it has concerns.

3.2 The public interest test and the role of evidence in a proceeding

14. When the Commission receives an application to construct and operate a power plant, Section 17(1) of the *Alberta Utilities Commission Act* is engaged. This provision states that, in addition to any other matters it may or must consider, the Commission must give consideration to whether the proposed project is in the public interest, having regard to the social and economic effects of the project and its effects on the environment. The Commission must also take into account the purposes of the *Hydro and Electric Energy Act* and the *Electric Utilities Act*, which include the development of an electric generation sector guided by competitive market forces.⁵ The Commission considers that the public interest will be largely met if an application complies with existing regulatory standards, and the project's public benefits outweigh its negative impacts.⁶

15. In Decision 26214-D01-2021, the Commission described its role as a decision maker with the authority delegated to it by statute, and the central role that evidence has in the Commission's decision-making process:

16. The Commission is an independent, quasi-judicial agency of the province of Alberta. As a quasi-judicial agency, the Commission is similar in many ways to a court when it holds hearings and makes decisions. Like a court, the Commission bases its decisions on the evidence before it and allows interested parties to cross-examine each other's witnesses to test the evidence. However, unlike a court, the Commission has no inherent powers. Its powers are conferred on it by the provincial government and set out in legislation. Unlike a court proceeding, the Commission's proceedings are not matters between two or more competing parties to determine who wins and loses. Instead, the Commission deals with specialized subject matters requiring it to assess and balance a variety of public interest considerations.

...

21. The applicant has the onus to demonstrate that approval of its application is in the public interest. Parties who may be directly and adversely affected by the Commission's approval of the application may show how the applicant has not met its onus. These parties may do so by bringing evidence of the effects of the project on their own private interests and explaining how the public interest may be better served by accommodating their private interests, and they may use the evidence filed by all parties to the proceeding to argue what a better balancing of the public interest might be. It is the Commission's role to test the application to determine whether approval is in the public interest.⁷

⁵ *Hydro and Electric Energy Act*, RSA 2000 c H-16, ss 2, 3; *Electric Utilities Act*, SA 2003, c E-5.1, s 5.

⁶ Energy and Utilities Board Decision 2001-111: EPCOR Generation Inc. and EPCOR Power Development Corporation - 490-MW Coal-Fired Power Plant, Application 2001173, December 21, 2001, PDF page 12.

⁷ Decision 26214-D01-2022: Buffalo Plains Wind Farm Inc., Buffalo Plains Wind Farm, Proceeding 26214, Applications 26214-A001 and 26214-A002, February 10, 2022.

16. These comments apply to the Commission's decision-making in this proceeding, including that the Commission weighs all of the written evidence that was filed by the participants and the oral evidence and argument that was given during the hearing when it assesses the public interest. The Commission's public interest decision is arrived at by balancing the beneficial and detrimental aspects of the project, as informed by the relative strengths and weaknesses of the evidence and argument provided by each of the participants in support of their respective positions.

4 Discussion and findings

17. The following sections of this decision provide a discussion of the evidence in this proceeding and the Commission's findings on the concerns expressed by the Cottage Club Community Group, Stoney Nations and M. Kelly, as described in Section 2.2 of this decision.

4.1 Fire risk, health and safety and emergency response plan

18. The risk of a battery fire caused by a thermal runaway event⁸ was a central issue in this proceeding. In this section, the Commission first considers the chemistry of the proposed battery storage units, the safety features of the project design and the likelihood of a fire at the project site. Then, the Commission considers the potential impacts on air quality, health and safety in the event of a battery fire at the proposed facility. Finally, the Commission considers the need for emergency response plans to mitigate the adverse impacts to health and safety of the nearby residents and general public if such an event occurs.

4.1.1 Fire risk

19. In this section, the Commission assesses the likelihood of a battery fire at the proposed project site by considering the battery chemistry/technology and the safety design features of the project.

20. The project application proposed to use lithium iron phosphate (LFP) batteries. TA Hydro stated during the hearing that the project would only use LFP batteries. In comparison with lithium nickel manganese cobalt (NMC) batteries, TA Hydro and the Cottage Club Community Group agreed that LFP batteries are a better and safer technology. Dr. Stephen Ramsay from Calvin Consulting Group Ltd., the expert witness of TA Hydro, explained that LFP batteries are difficult to ignite and would burn much more slowly than other types of lithium-ion batteries, such as the NMC batteries which are used at other battery storage projects and have been reported in the media as having experienced significant fires.

21. Michael Heier, one of the Cottage Club Community Group's two main witnesses and representatives, argued that the cause of most of the battery fires that he researched were not related to the type of batteries, but were directly related to human error in the installation and commissioning phase, instead of during operation. TA Hydro responded that the project was designed with safety features that reduce the potential for a fire and to suppress fire, including: fire-rated walls and doors in the battery containers, a liquid cooling system for battery cells, on-site control system and alarms; gas and smoke detection and internal dry aerosol-based fire

⁸ Transcript, Volume1, page 58: Thermal runaway is a type of behavior where the temperature of the battery increases due to some sort of malfunction or abnormal operation of the system. The temperature increases in the battery, and that allows it to get to the point where it can essentially spontaneously combust.

suppression systems; and real-time remote monitoring and support. TA Hydro also proposed to install heating, ventilation and air conditioning systems to maintain safe operating temperatures. To further mitigate the risk of a battery fire, TA Hydro indicated that it would have a long-term services agreement with the battery suppliers to support the long-term reliable and safe operation of the project, including annual operations and maintenance training. The Commission also notes that TA Hydro indicated that failure caused by damage during shipping and construction can be addressed through thorough inspection and care during installation to prevent faulty equipment from being installed, as well as routine (inspection) maintenance, and the Commission expects TA Hydro to take these steps.

22. TA Hydro stated that the project was also designed to meet National Fire Protection Association (NFPA) 855 – *Standard for the Installation of Stationary Energy Storage Systems*, and to meet Underwriters Laboratories 9540A *Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems*. TA Hydro asserted that in order for a thermal runaway event that results in a fire to occur, there would have to be coincidental failures of both the UL9540A certification and the battery management system. It added that in the event of a control system failure, TA Hydro would manually shut down the battery storage facility.

23. The Cottage Club Community Group stated that battery storage technology is new. M. Heier testified that manufacturers, users, code-writers, first responders and regulators are all trying to figure out battery technology, and that the entire battery storage industry is in beta testing mode.⁹ When he was questioning TA Hydro’s witnesses, M. Heier suggested that one definition of beta testing was the opportunity for real users to use a product in a production environment, which would then uncover any bugs or issues before general use of the product commenced. He added that TA Hydro has limited experience installing the proposed battery storage facility. TA Hydro responded that it has constructed and is operating its WindCharger battery project in the Pincher Creek area using NMC technology, and that facility was one of the first battery storage facilities in Alberta. TA explained that LFP technology was not commercially available for utility-scale projects at the time the WindCharger project was constructed.

24. Dr. Ramsay stated that there is sufficient experience with LFP batteries being used in a wide range of products, and that these were properly beta tested. He used the Segway as an example of a LFP battery powered product. He acknowledged that while a Segway is not a megawatt-scale product, battery storage energy systems/facilities are an aggregation of smaller components which are added together in order to build the capacity required. He explained that the battery storage design standards through NFPA, IEC and other organizations involve compartmentalizing and breaking the batteries into units, which provides confidence that the same principles that apply to small-scale battery products apply to larger scale battery facilities.

25. The Cottage Club Community Group stated that LFP batteries only have a commercial operation history of 12 to 18 months. It indicated that most of the battery incidents that it researched took place within the first three years of their operation, and probably half of them took place in the first year of operation.

⁹ Transcript, Volume 2, page 390, lines 5-15.

26. TA Hydro provided a list of 32 utility-scale LFP battery facilities in operation, ranging from one MW to 100 MW.¹⁰ Of these facilities, 26 were installed between 2019 and 2022. Two LFP battery facilities in Illinois, each with 19.8-MW capacity, had been in operation since 2015. Two other LFP battery facilities in the U.S., each with a 31.5-MW capacity, had been in operation since 2014 and 2016, respectively. The two largest LFP facilities, each with a 100-MW capacity, were installed in October 2021 in Texas. None of these battery facilities has been reported in the media as having experienced significant fires.

27. TA Hydro provided a graphic that was originally produced in 2021 Bloomberg NEF's *Global Energy Storage Outlook*, which illustrated that 49 per cent of global lithium-ion batteries in 2021 were LFP batteries. The graphic also shows that more than half of the lithium-ion battery installations were forecasted to be LFP batteries in each year for the next nine years, i.e., between 2022 and 2030.

28. The Commission understands that the project will have some degree of risk of fire. This is not fatal to the proposal: all outdoor industrial activities in which heat and combustible substances are, or can be, present together pose a fire risk. The Commission's responsibility under Section 17 of the *Alberta Utilities Commission Act* is to weigh all of the relevant benefits and detriments (i.e., risks) of a proposed project to determine if approval of the project is in the public interest. In assessing the fire risk posed by the project, the Commission has taken into account the likelihood of fire occurring, the measures that will be implemented to identify and respond to any risk of fire or actual fire, and the potential impacts should a fire in fact occur.

29. The Commission acknowledges that LFP chemistry, including the energy storage units proposed for use by TA Hydro, is part of an evolving technology. The Commission accepts that based on the record, LFP battery storage technology represents an improvement in safety from the NMC battery storage technology whose failures were identified and described by the Cottage Club Community Group. The Commission observes that battery storage technologies have evolved rapidly in recent years, even though LFP battery technology was initially developed in the 1990s. Large utility-scale LFP battery storage facilities, such as the Bat Cave and North Fork facilities in Texas, have been in operation for approximately one year. The Commission also observes that LFP technology is becoming the predominant lithium-ion battery technology, and that none of the utility-scale battery fires identified by the parties were attributed to LFP batteries.

30. The Commission is satisfied that the risk of fire at the project is further mitigated by the project design and maintenance features that TA Hydro has incorporated into the project. For example, the project has design elements that help prevent a thermal runaway, including on-site monitoring, control systems and alarms, remote monitoring and support on a 24 hours-a-day and seven days-a-week basis. In addition, the project will incorporate extra spacing between battery containers and will comply with international standards and codes for the design, installation and testing of battery storage systems. TA Hydro committed to having a long-term services agreement with the battery manufacturer to provide preventative maintenance, annual operation and maintenance training, and periodic software, firmware updates and patches.

31. Having regard for the combination of the LFP chemistry and the safety features incorporated into the project, the Commission finds that the likelihood of a fire at the project is

¹⁰ Exhibit 27109-X0142, TA Alberta Hydro – Undertaking Response 1.

reasonably mitigated such that the project would not pose an unacceptable fire risk to persons present at the project or located nearby. The Commission imposes the following as conditions of approval:

- TA Hydro shall only use lithium iron phosphate batteries in the project.
- TA Hydro shall implement any upgrades made available by the battery manufacturer, supplier, installer or any service provider engaged by TA Hydro that are intended to improve the safety of the project, including but not limited to training, firmware and software enhancements, monitoring capability enhancement, process changes and safety standards, as they are developed and made available to TA Hydro.

32. The Commission considers it reasonable to require TA Hydro to maintain adequate insurance coverage throughout the life of the project. TA Hydro confirmed in an information request response to the Commission that it would maintain reasonable insurance coverage that is sufficient to protect against any reasonably foreseeable liabilities. Consequently, the Commission imposes the following additional condition of approval:

- TA Hydro shall at all times during the construction and operation of the project, maintain insurance coverage that is sufficient to protect against any reasonably foreseeable third-party liabilities.

4.1.2 Health risks of potential airborne contaminants in the event of a fire

33. Dr. Ramsay stated that the materials in LFP batteries are less toxic than those in other types of lithium-ion batteries, some of which contain cobalt and other hazardous substances. He said that in LFP batteries the air contaminants of concern were hydrogen fluoride and carbon monoxide.

34. To evaluate the potential health impacts to nearby residents in the event of a battery fire, Dr. Ramsay prepared an air quality dispersion modelling and risk assessment. The modelling was performed on two shortlisted potential LFP battery vendors, and took into account local wind data, groundcover, terrain influences, on-site building influences and the location of the closest residences. The assessment concluded that all predicted air quality concentrations beyond the TransAlta property line, at the closest residences and at the recreational area, would comply with the *Alberta Ambient Air Quality Objectives* (AAAQOs).

35. The assessment specifically concluded that the “immediately dangerous to life or health values” (IDLH) established by the American Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH) for hydrogen fluoride and carbon monoxide would not be exceeded at or beyond the project site fence line. Dr. Ramsay stated that hydrogen fluoride concentrations, which is the substance of main concern in a LFP battery fire, was predicted to be 2.2 micrograms per cubic metre at the TransAlta property line and this value was about one-half of the AAAQO of 4.9 micrograms per cubic metre.

36. To perform the plume modelling, Dr. Ramsay indicated that he obtained meteorological data, including but not limited to wind data, from Alberta Environment and Parks (AEP) Weather Research and Forecasting Meteorological Data Repository. The resulting wind rose (wind direction and wind speed frequency) diagram indicated that the dominant winds are west-southwest winds along the Bow River valley. The Cottage Club Community Group argued

that they are situated both downwind and at a higher elevation from the project site, and so are at greater risk than what was depicted in the diagram. Dr. Ramsay stated that the assessment was completed using five years of hourly wind data for all wind directions and wind speed combinations that occur in the area.

37. Dr. Ramsay emphasized that the dispersion modelling depicted the worst-case scenario. The modelling assumed that 10 per cent of cells within a battery module would be burning at any given time, even though recent major battery fires had between 0.5 and two per cent of fuel involved simultaneously. Dr. Ramsay indicated that the lower burn rate is associated with LFP battery fires while the higher burn rate is associated with NMC battery fires. The modelling also assumed a peak emission rate and continuous burning, even though actual emissions would be zero before and after the fire.

38. The Cottage Club Community Group argued that the wind in the area frequently gusts between 70 and 90 kilometres per hour, not at 30 kilometres per hour as was assumed in the predicted worst-case scenario in the assessment report. Dr. Ramsay explained that based on the Gaussian plume equation, wind speed is in the denominator, which means that higher wind speeds result in a lower concentration of emissions.

39. The Cottage Club Community Group stated that the modelling did not account for thermal inversions, and that the thermal inversions that frequently occur in the area would increase contaminant concentrations at their location. TA Hydro stated that the plume modelling incorporates temperature inversion scenarios; e.g., the worst-case scenario at the property line is a temperature inversion scenario.

40. The Cottage Club Community Group stated that other large-scale LFP battery storage projects are located far away from populations, and it asked that the project be moved further away from its community.

41. The Cottage Club Community Group stated that TA Hydro provided the air quality dispersion modelling and risk assessment report on June 10, 2022, in response to their information requests and the direction from the Commission, which left no time for them to do anything with the report. The Commission notes that it issued the notice of hearing and held a virtual information session for the project on May 16, 2022, and May 25, 2022, respectively. Both the notice and the information session indicated that interveners with standing can submit expert reports to support their participation in the hearing and that local intervener funding may be available to assist their participation. The Cottage Club Community Group did not file dispersion modelling or risk assessment evidence, and it did not request funds or additional time for the purpose of obtaining that kind of evidence once TA Hydro provided its air quality dispersion modelling and risk assessment report.

42. The Commission finds that the air emission modelling and risk assessment that was conducted by Dr. Ramsay followed the Alberta *Air Quality Model Guideline*. The Cottage Club Community Group did not challenge Dr. Ramsay's qualifications as an air emission and risk assessment expert, and it did not demonstrate that the assessment he conducted and report he provided had errors or for any other reason should not be relied upon. The Commission notes that Dr. Ramsay's report is the only expert evidence received. The Commission is satisfied that reasonable conservatism was applied in Dr. Ramsay's plume modelling and risk assessment, such as the 10 per cent combustion rate, maximum emission rate

and continuous burning, and that the report and its conclusions can be relied upon by the Commission.

43. The Commission accepts that the risk assessment predicted contaminant concentrations at the fenceline of the project and TransAlta's property line that were below IDLH, and these locations are much closer to the emission source than the closest residence (approximately 340 metres northwest of the project site). At the closest residences and at the recreational area, the assessment concluded that all predicted air quality concentrations would comply with the AAAQOs. The Commission considers that health and safety risks in the event of a fire can be further minimized through TA Hydro's emergency response plan (ERP), which is discussed in the following section.

4.1.3 Emergency response plan

44. The Cottage Club Community Group was concerned that it had not been provided with a site-specific ERP and stated that there is no specific training available to the local firefighters to deal with a battery fire.¹¹ The Stoney Nations indicated that they would participate in the development of an ERP. They asked the Commission to require TA Hydro, as a condition of any approval, to employ three members of the Stoney Nations who would act as liaisons in emergency response planning and would communicate project-related incidents to the community in an appropriate manner.

45. TA Hydro committed to work with the County of Rocky View in developing the site-specific ERP for the project and identifying training requirements, including vendor-specific safety recommendations once the battery manufacturer is selected. TA Hydro also stated that it intends to incorporate the site-specific ERP to the existing emergency response plan for the Ghost hydro site.

46. TA Hydro stated that the County of Rocky View's fire chief recently toured the project site and had a discussion with TA Hydro in which he indicated that the bigger risk to the project was a fire propagating toward the facility that was ignited elsewhere, such as a brush fire approaching the facility, and not a fire that ignited in the batteries. To address this concern, TA Hydro stated that it would put a firebreak around the facility and include the risk of a wildfire in its ERP. It also stated that the Bow River acts as a 100-metre-wide natural firebreak between the Cottage Club development and battery facility.

47. TA Hydro stated that the fire chief also indicated that there is a mutual aid agreement with the Town of Cochrane and the Municipal District of Bighorn. TA Hydro committed to contacting Emergency Services at both locations regarding the ERP. TA Hydro stated that partially because of the proposed project, the fire chief indicated that he had just attended a conference of fire chiefs where battery storage facilities and the fire risk associated with those facilities were discussed at great length.

48. The Commission understands that TA Hydro has not provided an ERP for the project to the public because it has not yet selected the battery vendor, and without knowing the selected batteries, any ERP would not be specific to the actual energy storage units on site. TA Hydro

¹¹ Exhibit 27109-X0123, Summary discussion of Research Discovery process, PDF page 6.

committed to engaging the County of Rocky View in the development of a site-specific ERP, and providing training to local first responders if required.

49. The Commission considers that a site-specific ERP that is developed with input from the local community, the Stoney Nations, the municipality and first responders is essential to reduce and address the risk of a fire that starts in or moves into the project. Therefore, the Commission imposes the following as conditions of approval:

- TA Hydro must submit its site-specific emergency response plan, the final project layout and an updated air quality plume dispersion modelling and risk assessment to the Commission once the final vendor and make of the batteries are selected. This information must be provided at least 90 days prior to construction commencement.
- TA Hydro must develop its site-specific emergency response plan in consultation with local fire departments, the Cottage Club condominium corporation, interested Cottage Club Community Group members, representatives of the Stoney Nakoda Nations and Stoney Nakoda Land Management Ltd., and other interested stakeholders who indicate a desire to participate. The site-specific emergency response plan must incorporate specific requirements from the local fire departments, such as including wildfire risk and installing firebreaks surrounding the project site, and incorporate any other relevant protective measures that emerge from the analysis of recent battery energy storage system fire incidents. TA Hydro must offer to provide any training program identified or required in the site-specific emergency response plan to local first responders.
- TA Hydro shall continually update and improve its emergency response program including its corporate and site-specific emergency response plans, and make any changes required to incorporate input received from local fire departments on mitigation measures and other related requirements, and from the Cottage Club condominium corporation, interested Cottage Club Community Group members, representatives of the Stoney Nakoda Nations and Stoney Nakoda Land Management Ltd., and other interested stakeholders. The updated plans are to be provided to local fire departments.

4.2 Increased traffic and dust

50. The Cottage Club Community Group raised concerns about increased traffic and dust as a result of vehicle traffic related to the project. The Stoney Nations also expressed concerns about poorer air quality as a result of increased traffic. They stated that they were concerned about increased emissions, noise and water pollution from vehicle traffic related to the project.

4.2.1 Increased traffic

51. The Cottage Club Community Group was concerned with the increased industrial traffic on nearby roads and at the intersection of Highway 1A and Range Road 60, which is the entrance to the Cottage Club, to TransAlta's Hydro dam, power plant and proposed battery installation. It stated that Alberta Transportation should have been contacted by TA Hydro so that it could review the speed limits at the intersection and the length of the merge lanes on/off Highway 1A to safely accommodate more industrial traffic in the area.

52. TA Hydro responded that increased traffic and temporary road closures would occur only during construction. It stated that there would be about 10 transport truck trips per day to deliver batteries over the course of a few weeks, and 60 to 80 individuals would be travelling to the site during peak staffing. TA Hydro committed to notifying the Cottage Club community in advance of the delivery of wide or large loads.

53. TA Hydro stated that vehicles used for transportation of materials will obey all speed limits posted by Alberta Transportation or otherwise imposed under the *Traffic Safety Act* on the entirety of the route, including off-site portions of the route. It also stated that the applicable speed limit on the access road of 30 kilometres per hour, and the applicable speed limit over the spillway bridge of 15 kilometres per hour, would be enforced.

54. TA Hydro stated that a permit from Alberta Transportation is not required because the project is more than 800 metres away from a highway and more than 300 metres from a provincial road allowance. It added that the battery vendor and other large equipment vendors would perform transportation studies (e.g., turning radius, bridge overpasses), for which they would engage Alberta Transportation and other jurisdictions that may be concerned with the transportation of the batteries and other large equipment. TA Hydro committed to developing a road usage plan in conjunction with the County of Rocky View.

55. The Commission accepts that increased vehicle traffic related to the project would be temporary and moderate in nature, and would occur mainly during project construction. The Commission acknowledges that TA Hydro has committed to working with the County of Rocky View to develop a road usage plan and that vehicle operators will be required to follow posted or imposed speed limits on the entire route, including on TransAlta-owned roadways and the spillway bridge. The Commission is satisfied that the concerns associated with increased traffic and speed limits have been reasonably addressed by TA Hydro.

4.2.2 Increased dust and vehicle emissions

56. The Stoney Nations expressed concerns about cumulative impacts on air quality as a result of emissions from increased vehicular traffic. The Stoney Nations asked the Commission to require TA Hydro, as a condition of any approval, to develop and implement a plan for the Stoney Nations to monitor construction and to address the Stoney Nations' construction-related environmental concerns. This plan would be developed in consultation with the Stoney Nations.

57. TA Hydro's witnesses stated that the project will be staffed primarily with existing employees from the Ghost dam and TA Hydro does not expect any significant increase in traffic during the operational phase of the project. The Commission understands that any material increase in air emissions will be from additional vehicle and equipment traffic during construction. Due to the temporary nature of such impacts (a few weeks, depending on the final project design and number of battery modules required), and the relatively small increase in traffic volumes at a location that is adjacent to a provincial highway and near Canadian Pacific Railway's mainline, the Commission accepts that the risk of cumulative impacts on air quality is not significant.

58. John and Donna Hargreaves, members of the Cottage Club Community Group, did not appear at the hearing but raised concerns with increased dust as a result of increased traffic. They requested that TA Hydro regularly apply dust suppression on the gravel road that provides vehicle access to the project.

59. TA Hydro stated that the dust suppressant it applied on the gravel in the summer of 2021 was effective and that it plans to reapply the product. The Cottage Club Community Group agreed that the coating/suppressant that TA Hydro used worked relatively well for a period of time. TA Hydro stated that it would evaluate other potential dust control measures to better limit dust during construction, and that it would deploy dust mitigation measures as necessary. It also stated that it would likely require the construction contractor to use watering trucks in conjunction with the dust suppressant or the sealant used on the road.

60. Although the Stoney Nations stated that they had concerns about pollution from project-related vehicle traffic affecting their members and local air and water quality, no evidence was provided to substantiate these concerns. TA Hydro stated that it was committed to continuing consultations with the Stoney Nations, and to attempting to address their concerns in those discussions. The Commission is satisfied with that commitment and does not see a need to impose the condition requested by the Stoney Nations.

61. TA Hydro has committed to apply dust suppressant. The Commission finds that the proper application of suppressant is likely to manage dust from increased vehicle traffic at acceptable levels. Therefore, the Commission imposes the following condition for the approval:

- TA Hydro shall apply dust suppressant at least annually on the gravel road owned by TransAlta, and must monitor the effectiveness of the suppressant product and make changes to its dust control program as needed to respond to dust or roadway conditions, including applying effective dust suppression during the busiest time of construction.

4.3 Dam safety

62. In his statement of intent to participate, Michael Kelly indicated his concerns about the adequacy of the protective measures adopted by TA Hydro to ensure the safe operation of the Ghost dam and dike. He was concerned that the movement of heavy construction equipment and heavy lithium batteries over the Ghost dam could result in structural failure of the dam and earthen dike, which would flood large portions of Cochrane, Bearspaw and Calgary. He also stated that no geophysical tests have been conducted to ensure the integrity of the Ghost dam and dike. He suggested that an independent assessment on dam safety should be conducted.

63. TA Hydro stated that it is required under the *Water Act* to hire a third party to complete a safety assessment of the Ghost dam every five years, and that the most recent assessment was conducted in 2021 by Wood Engineering. TA Hydro indicated that dam safety is regulated by AEP, and that AEP visits the Ghost dam site every year to conduct an annual visual inspection. TA Hydro also stated that it provides AEP with a variety of regular reports on the dam, on a schedule that ranges from annually to every five years. TA Hydro also indicated that it conducts weekly inspections, an annual engineering assessment comprising four quarterly assessments of the structure, and one or two additional annual inspections when required.

64. TA Hydro stated that it completed an engineering assessment of the concrete structure and spillway bridge deck over the dam in 2021, in accordance with Canadian Highway Bridge Design Code. This assessment confirmed that the bridge is suitable for current CL625-rated loads. The assessment concluded that the load capacity of the bridge is the limiting segment of the access route, and that no risk to the earthen dam exists from a vehicle that is rated to safely pass over the bridge. TA Hydro confirmed that all vehicle traffic crossing the bridge would comply with weight and size restrictions.

65. The Commission finds that TA Hydro appears to have a reasonable schedule, as overseen by AEP (now Alberta Environment and Protected Areas¹²), to inspect the condition of the dam and dike, including for the reports that are required by Alberta Environment and Protected Areas and the independent dam safety assessment that occurs every five years. TA Hydro's 2021 engineering assessment demonstrated the compliance of loading requirements for the Ghost dam and dike, and that the facility supported CL625-rated loads. The Commission acknowledges TA Hydro's commitment to comply with applicable weight, size and speed restrictions during construction of the project. However, the Commission notes that TA Hydro did not contact AEP, the regulatory body for dam safety at the time the project applications were prepared, to provide or seek information specific to the proposed project. Consequently, the Commission imposes the following as a condition of approval:

- TA Hydro shall discuss the WaterCharger Battery Storage Facility with Alberta Environment and Protected Areas and address any dam safety concerns that it may raise. TA Hydro must submit a summary of the discussion to the Commission, including any mitigation measures required or recommended by Alberta Environment and Protected Areas, not less than 60 days before the heavy trucks start transporting large project equipment to the site.

4.4 Consultation

66. The Cottage Club Community Group stated that TA Hydro had not talked to the community as a whole; instead, TA Hydro took a "divide and conquer" approach in which most of the conversations were very divisive. The Cottage Club Community Group also stated that its town hall meeting requests were rejected. TA Hydro responded that it was unable to host the requested town hall meeting due to insufficient availability of its staff to attend when the meeting was requested on two weeks' notice and would occur on a holiday weekend.

67. The Cottage Club Community Group argued that TA Hydro had minimized them during the process, which was demonstrated in part by the fact that the residential development did not even appear on TA Hydro's project maps. TA Hydro provided examples during the hearing that showed that the Cottage Club development was not treated as a single household but that individual owners were notified and consulted as required. It also stated that several of the maps it filed clearly show the development as a number of individual lots and not as a single parcel.¹³

68. Todd Achen from the Cottage Club Community Group testified that TA Hydro should have consulted every resident of the development because all lot owners also own a share of the common property within the condominium development, and some of the common property is located less than 400 meters from the project site. TA Hydro stated that it consulted with those who were authorized to speak on behalf of the condominium corporation.

69. Keri Davis from the Cottage Club Community Group asked TA Hydro why it was not obligated to inform her about the project.¹⁴ TA Hydro stated that its participant

¹² Pursuant to O.C. 362/2022, issued on October 24, 2022, the Minister of Environment and Protected Areas was designated as having responsibility for the *Water Act*, which includes the dam and canal safety provisions under Part 6 of the *Water (Ministerial) Regulation*, AR 205/98. References in this decision to Alberta Environment and Parks or to Alberta Environment and Protected Areas are to what is essentially the same ministry, under the name that it had at the time.

¹³ Transcript, Volume 2, pages 362 to 368.

¹⁴ Exhibit 27109-X0146, Davis letter to AUC.

involvement program relied on land titles searches dated September 30, 2021, and refreshed on November 16, 2021, and that the title for her lot was not issued in her name until June 2, 2022. TA Hydro added that it met with the Cottage Club Community Group members, including K. Davis, on June 22, 2022, to discuss the air quality dispersion modelling and risk assessment report.

70. The Commission finds that TA Hydro has satisfied the notice and consultation requirements of Rule 007. It made efforts to engage stakeholders, as required under Rule 007, including providing participation packages, making phone calls, sending emails, having a project webpage, holding meetings that included an online public meeting, doing door knocking and having a dedicated phone line and email address for public queries. The initial project information package was sent to participants on October 6, 2021, with project updates being sent in November and December of 2021. In addition to notifying residents within 800 metres of the project, TA Hydro provided notification to an additional 42 residences of the Cottage Club community that are outside the 800-metre notification boundary. The Commission believes that TA Hydro made a reasonable effort to engage with K. Davis, given that she acquired her interest in the Cottage Club development in June 2022, well after most of the participant involvement program had been completed.

71. The Commission is satisfied that TA Hydro has engaged and will continue to engage with concerned residents. For example, it met with the Cottage Club Community Group members on June 22, 2022, to review the air dispersion modelling and risk assessment. However, the Commission acknowledges that an effective consultation program may not ultimately resolve all landowner concerns. To ensure the involvement of concerned residents and Indigenous groups in the development of a site-specific ERP, the Commission reiterates that TA Hydro must engage the Cottage Club condominium corporation, interested members of the Cottage Club Community Group and the Stoney Nations when developing its site-specific ERP, as described in Section 4.1.3 of this decision.

4.5 Property values

72. The Cottage Club Community Group asserted that the project would place the residents in harm's way and thereby pose a significant risk of decreasing the value of their properties. It stated that home and financial investment in the community would be at elevated risk of loss from the effects of uncontrollable battery fires. However, it did not provide any expert evidence or an evaluation report to support its concerns about a loss of property values.

73. The Commission observes that the Cottage Club development is adjacent to an existing industrial development, i.e., the Ghost hydro facility and AltaLink Management Ltd.'s transmission lines and substation. In fact, the certificates of title for the lots in the Cottage Club development are subject to a restrictive covenant that not only gives notice of the existence of the adjacent Ghost hydro facility, it prohibits the owners of Cottage Club lots from using their lands in a way that interferes with the ownership, use, occupation or operation of the Ghost hydro facility or the associated lands owned by TransAlta.¹⁵ The Cottage Club Community Group's witnesses acknowledged that their development was next to the hydro generation facility, which by the terms of the restrictive covenant they were deemed to have accepted, but they stated that

¹⁵ See the discussion on the restrictive covenant in the Commission's standing ruling in Exhibit 27109-X0113, AUC ruling on standing of Cottage Club Community Group.

the risks posed by that facility were not the same as the risks of living near the proposed battery storage facility and they emphasized that they did not accept those risks.

74. The Commission ruled previously that it was not persuaded that the restrictive covenant was intended to apply to the proposed battery storage project or the lands upon which it would be located for the purpose of determining standing. But the fact is that any assessment of the project's impact on property values in the Cottage Club development would have to account for the existence of the Ghost hydro facility that is immediately adjacent to the development, and it would not assess the project's impact as though it was to be built on a greenfield site.

75. Further, the Commission has consistently stated that property valuation is a complex and technical matter that is influenced by a wide variety of contextual and circumstantial factors.¹⁶ The Commission notes that the Cottage Club Community Group's concerns about diminished property values were not supported by any expert opinion evidence. In accordance with the Commission's well-established practice, it cannot make a finding on property value impacts without expert evidence that is specific to the particular properties. No such information was provided in this proceeding. Accordingly, the Commission cannot make any finding on property value impacts attributable to the project. Given the location of the existing hydro generation facility the Commission is also not prepared to assume or infer that such impacts could result from the project.

4.6 Environmental impacts

76. TA Hydro submitted an environmental evaluation for the project that was prepared by Matrix Solutions Inc. The evaluation concluded that the residual effects (i.e., effects post-implementation of the recommended environmental mitigation) anticipated for each valued ecosystem component assessed are not significant (i.e., the overall effect is not measurable and/or is reversible). TA Hydro also submitted an environmental protection plan prepared by Matrix which outlines environmental protection measures and commitments to avoid or reduce potential effects to the environment during the construction and operation of the project.

77. TA Hydro committed to completing wildlife sweeps prior to commencing construction, and to mowing grasslands outside of the breeding bird period to reduce the risk of impact to migratory birds. It confirmed during the hearing that snake hibernacula surveys were completed in 2022, during the appropriate survey window, and that no snake hibernacula were identified. TA Hydro committed to notifying and working with AEP if a sensitive feature or species is identified, and to adhering to applicable setbacks and timing restrictions.

78. None of the interveners filed an environmental evaluation or technical information about the anticipated impact of the project on wildlife or wildlife habitat. No intervener questioned TA Hydro's witnesses on environmental impacts during the hearing.

79. The Stoney Nations stated that they were concerned about the environmental impacts of the project, in particular the impact of noise on wildlife and avian species, the effect of the project on fish passage along the Bow River and pollution from project-related traffic. The Stoney Nations asked the Commission to require TA Hydro, as a condition of any approval, to determine appropriate mitigation of noise levels from the project, including the impact of noise

¹⁶ Decision 2011-436: AltaLink Management Ltd. and EPCOR Distribution & Transmission Inc, Heartland Transmission Project, Proceeding 457, Application 1606609, November 1, 2011, PDF page 24, paragraph 87.

on wildlife populations and avian species, and to determine appropriate mitigation measures for impacts on fish passage along the Bow River.

80. In relation to the concerns expressed by the Stoney Nations about the environmental affects of the project and the approval conditions requested, the Commission provides the following observations about the Stoney Nations' participation in the hearing. The Stoney Nations were granted full participation rights in this proceeding, which included the opportunity to file written evidence and give oral evidence, to issue information requests to TA Hydro and to question TA Hydro's witnesses during the hearing, and to provide oral argument at the conclusion of the hearing.

81. The Stoney Nations issued information requests to TA Hydro, responded to information requests from TA Hydro and the Commission, questioned TA Hydro's witnesses and gave oral argument at the conclusion of the oral hearing. The only written evidence filed by the Stoney Nations was an affidavit from William Snow, who is the Stoney Nations' Acting Director of Consultation. His affidavit addressed the Stoney Nations' legal and constitutional rights in a general sense, and it explained the water power rights that were held or asserted by the Stoney Nations. The Stoney Nations did not provide any witnesses to give oral evidence, and they did not ask TA Hydro's witnesses any questions about TA Hydro's environmental evaluation report or environmental protection plan, its noise impact assessment, its historical resource impact assessment report or the air quality dispersion modelling and risk assessment report that TA Hydro filed. TransAlta and the Stoney Nations acknowledged that a cultural study is being conducted, however, no report, summary or initial conclusions from that study was provided. The Commission's consideration of the Stoney Nations' concerns about the environmental effects of the project and the approval conditions they requested must be understood within the context of that evidentiary background.

82. The Commission accepts TA Hydro's conclusions that the project will not have significant impacts on wildlife or wildlife habitat. AEP was consulted on the project and provided feedback pertaining to wildlife survey and monitoring methodologies, and mitigation measures. TA Hydro did not report any concerns or outstanding issues from AEP. The Commission understands that an AEP-issued renewable energy referral report is generally not a requirement for battery storage projects and is not required for the project. The Commission finds that TA Hydro's commitments and the other planned mitigation and commitments proposed in the environmental evaluation and environmental protection plan will adequately protect wildlife and wildlife habitat in the project area.

83. The environmental evaluation described an unnamed watercourse adjacent to the south of the project site that would channel water in the event of a water release from the emergency spillway. During the hearing, TA Hydro clarified that the potential for the unnamed watercourse to be a source that floods the project site, thereby presenting potential ground instability and contamination issues, is extremely unlikely. TA Hydro supported its conclusion with evidence that the occurrence of water in the spillway is less than one in 5,000 years or one in 10,000 years, the project is setback approximately 25 metres from the slope, the unnamed water course is at least several metres lower in elevation than the project site, and that if there was a release of water the duration would not be long enough for erosion to impact the project site. The Commission finds that the risks of flooding or erosion from the unnamed spillway was adequately considered in the siting and design of the project, and the risks are extremely low and therefore acceptable.

84. TA Hydro filed a historic resource impact assessment for the project, which stated that the investigations conducted for the assessment did not result in the identification of any previously unreported historic resource sites, and that no previously recorded archaeological sites were revisited. TA Hydro also filed a *Historical Resources Act* approval from Alberta Culture and Status of Women for the project.

85. In response to information requests from the Commission, the Stoney Nations expressed concerns about the potential cumulative impacts of fluctuations in the water levels of Ghost Lake reservoir and the Bow River. Based on supplemental information provided by TA Hydro pertaining to water management of the Bow River and TA Hydro's confirmation that the project will have no material impact to how water levels in the Ghost Lake reservoir are managed under existing licences overseen by AEP, the Commission ruled¹⁷ that Bow River flows are regulated by AEP and that concerns about changes in the water levels of Ghost Lake reservoir and in Bow River flows downstream of the Ghost dam are outside the scope of this proceeding. The Commission encouraged the Stoney Nations to address their concerns about water flows and levels with AEP.

86. In its statement of intent to participate, the Stoney Nations indicated that because TA Hydro's environmental evaluation did not list any wells that are located on the Stoney Indian Reserves and did not consider the project's potential impact on groundwater and water wells, the report should be considered to be incomplete. TA Hydro stated that its consultant, Matrix, investigated water wells within one kilometre of the project by searching AEP's water well information database and pulling active groundwater diversion licences. It stated that those water well records did not identify wells owned or operated by or for the Stoney Nations. The Commission requested additional details about these concerns from the Stoney Nations; however, no information pertaining to water wells on Stoney Nations' land or how the project may impact groundwater was provided.

87. The Commission believes that the water well investigation conducted by Matrix employed appropriate and accepted methodology to identify potential impacts to groundwater. The Commission finds that the measures presented in the environmental evaluation, including gathering site-specific groundwater information through pre-construction geotechnical investigations, spill prevention and control, and dewatering practices, are suitable to mitigate any potential impacts to groundwater quality or quantity.

88. The project area is relatively small in size (four hectares) and is adjacent to the existing Ghost hydro generation site. Considering TA Hydro's commitment to implement all mitigation measures recommended in the environmental evaluation report and environmental protection plan, and its commitment to engaging AEP on wildlife setbacks and timing restrictions, the Commission is satisfied that the project will have minimal effects on the environment.

89. TA Hydro submitted a noise impact assessment which concluded that the project would meet Rule 012: *Noise Control* requirements, including meeting applicable permissible sound levels and a low possibility of low frequency noise. The Commission has reviewed the noise impact assessment and accepts that the project as currently proposed will comply with Rule 012. The Cottage Club Community Group and the Stoney Nations did not file any noise studies or impact assessments, and so no evidence that noise from the project could have an adverse impact

¹⁷ Exhibit 27109-X0096, AUC letter – Second ruling on standing, scope of water management issues and process schedule.

on wildlife or avian species was presented. The Commission cannot assume, and has no basis to find that such an effect may occur, and so it will not impose the approval conditions requested by the Stoney Nations. However, to ensure that the project will still meet the requirements of Rule 012 with the actual layout and equipment selected, the Commission imposes the following as a condition of approval:

- TA Hydro must submit an updated noise impact assessment to the Commission once the final vendor and make of the batteries are selected. This information must be provided at least 90 days prior to construction commencement.

4.7 Siting options

90. The Cottage Club Community Group asked TA Hydro to move the project away from its residential development to a more industrial location, such as the Wildcat Hills industrial site to the east of the proposed location. M. Heier stated that this location has the appropriate land use designation and provides good road access. The Cottage Club Community Group acknowledged, however, that additional power lines connecting the project to the Ghost hydro facility would be needed.

91. TA Hydro stated that putting the project at the Wildcat Hills industrial site was not feasible because there would be no TA Hydro staff on site to monitor and maintain the battery storage facility. It also stated that there was no assurance that it could obtain a location there on commercially reasonable terms, and that a land use bylaw redesignation might be required due to the Wildcat Hills area being zoned as Special, Natural Resources (Gas Plant Extraction/Processing). TA Hydro added that new transmission wires emanating from the Ghost area would be required and it understands that the Cottage Club Community Group does not want additional wires built through the community or in the area.

92. TA Hydro stated that it considered three other existing hydro generation facilities to pair with the battery storage project, i.e., Bighorn (Clearwater County), Bearspaw (Calgary) and Brazeau (Brazeau County) hydro facilities. However, it rejected these sites for various reasons: lack of space, lack of existing transmission capacity, lack of hydro generation capacity for charging and the presence of wetlands on the site. TA Hydro's witnesses stated that moving the project south of the Ghost Lake spillway, further from the Cottage Club development, was not feasible due to that land being lower in elevation and therefore being a floodplain.

93. As discussed previously, the project poses minimal safety risk to the Cottage Club Community residents given the nature of the LFP batteries, safety features and TA Hydro's plans to co-operate with local fire services and other municipal authorities on road usage and emergency response planning. The Commission finds that the project is reasonably sited, having regard for the co-location within the existing Ghost hydro facility on TransAlta-owned lands, the avoidance of the need for additional transmission lines, the apparent acceptability to the County of Rocky View, and the limited environmental impacts as discussed above. The Commission finds that the evidence did not demonstrate that another site was both feasible and preferable to the proposed site.

4.8 Stoney Nations' water power rights and entitlement to water power rental payments

94. The Stoney Nations submitted that under the terms of the *Alberta Natural Resources Transfer Agreement* and amendments thereto, the Stoney Nations have a constitutional right to receive water power rental payments for hydroelectricity generated at the Ghost dam.¹⁸ They stated that water power rental payments are amounts paid by TransAlta, as the operator of hydroelectric dams on the Bow River and Kananaskis River, to Canada and Alberta for the benefit of the Stoney Nations. They also stated that the amount they are entitled to receive for water power rental payments should increase if the project proceeds.

95. The only written evidence filed by the Stoney Nations in this proceeding was the affidavit sworn by W. Snow. He did not attend the hearing as a witness and he was not questioned on his affidavit. Accordingly, the evidence given by W. Snow was not available to be tested in the Commission's hearing.

96. The Stoney Nations asked the Commission to impose three conditions on TA Hydro in relation to the Stoney Nations' assertion of water power rights, and in relation to the Province of Alberta's 2016 agreement with TransAlta on Ghost reservoir flood control:

Sixth, the entering into of nondisclosure agreements between TransAlta and Stoney Nations that address TransAlta's concerns relating to commercial confidentiality and the 2016 agreement between TransAlta and the Province of Alberta as set out in TransAlta's June 10th response to Stoney Nations' information request.

Seventh, engagement by TransAlta with Stoney Nations in conjunction with Alberta in furtherance of the water power rights set out in the *Constitution Act, 1930*, as amended.

And, finally, in order for the Commission to properly consider the public interest and before the Commission is able to make a decision on the present application, TransAlta must represent to this Commission whether or not the project will impact the Stoney Nations' water power rights. We would submit that it is incumbent on the Commission that it ensures that this representation be part of the record in the present application.¹⁹

97. TA Hydro stated that the Stoney Nations' claim for water power rental payments concerned an obligation owed by the Crown to the Stoney Nations, and not by TA Hydro as the operator of the dam. It stated that the terms of the constitutional agreement that is an exhibit to the affidavit of W. Snow, and the terms and conditions of the *Water Act* licence for the Ghost dam facility,²⁰ both indicate that the annual rental payments made by TA Hydro for the use of water at the Ghost dam are paid one-half to Canada and one-half to Alberta. TA Hydro submitted that if the Stoney Nations had concerns about receiving water power rental payments

¹⁸ The Stoney Nations referred specifically to Exhibit "E" to the affidavit of William Snow, being a copy of a 1945 memorandum of agreement made between Canada and Alberta. The memorandum of agreement stated in paragraph 3(c), in relation to water power at the Ghost dam: "As and from October 1, 1930, all sums which have been paid or are payable under the terms of the said Interim Licence of January 17, 1929, and the Final Licence referred to in paragraph 3(a) above for water power rights, since that date shall be divided between Canada and the Province in the proportions of one-half to Canada for the benefit of the said Indians of the Stony Band and one-half to the Province, and shall be paid to Canada and the Province respectively in the proportions stated."

¹⁹ Transcript, Volume 3, page 578, lines 3-22.

²⁰ Exhibit 27109-X0083, Attachment TA-AUC-2022MAY04-001(c) - 80704-00-00, PDF pages 14 and 15.

owed to them by the Crown, the proper venue for addressing or adjudicating those concerns is the litigation filed by the Stoney Nations in the Court of [King's] Bench of Alberta. TA Hydro also submitted that allowing such matters to be decided by the Commission would constitute a collateral attack on the court's proceedings.

98. The Commission agrees with TA Hydro that the matter of monies claimed by or owed to the Stoney Nations by the Crown on account of rental payments made by TA Hydro to the Crown is beyond the scope of this proceeding and beyond the Commission's authority. The Commission does not adjudicate or enforce the federal or provincial government's financial obligations to a First Nation under the Constitution.

99. In any case, although the affidavit of W. Snow attests to the Stoney Nations' water power rights and entitlement to water power rental payments, nothing in the affidavit or in any other information provided in this proceeding demonstrates if or how the project could impact those rights or the entitlement to water power rental payments. On the contrary, the evidence provided by TA Hydro indicates that the volume of water that flows over the Ghost dam will not change in a material way if the project proceeds. The Commission has no other information on that point, and it has no basis to conclude that the project could impact the water power rights of the Stoney Nations or warrant a change in water power rental payments due to them from the Crown. The Commission will therefore not impose the three conditions requested by the Stoney Nations.

4.9 Stoney Nations' constitutional rights and traditional land and resources uses

100. The Stoney Nations stated that their reserve lands are located adjacent to the project site and that they are concerned the project will impact their current use of lands and resources for traditional purposes, including their riparian rights to the waters and riverbeds of the Bow River and rights to the water power in the Bow River. The preceding section of this decision addresses the Stoney Nations' concerns about their rights to water power in the Bow River. This section will consider the evidence on the potential for their current use of lands and resources to be affected by the project.

101. As previously stated, the Stoney Nations did not give evidence in the hearing or question TA Hydro's witnesses on TA Hydro's evidence about environmental impacts and mitigation, or its dispersion modelling and risk assessment. The affidavit of W. Snow that was filed by the Stoney Nations is the only written evidence they provided in this proceeding. In an information request issued by the Commission, the Stoney Nations were asked to explain (with specific details) how the project has the potential to impact their members' ability to exercise their rights under Section 35 of the *Constitution Act, 1982*. The Stoney Nations' response to this request stated:

Certain Stoney Nakoda rights have been enshrined in the Constitution Act, 1930, as amended in 1945. These rights include the payment of water power rentals to the Stoney Nakoda Nations. The Stoney Nakoda have claimed a share of payments made to TransAlta Utilities Ltd. pursuant to a 2016 agreement with the Province of Alberta, the full terms of which have yet to be disclosed to the Stoney Nakoda. The Stoney Nakoda need to know the potential impact of the WaterCharger project to this 2016 agreement.²¹

²¹ Exhibit 27109-X0130, SNN&SNLML Response to AUC IR #1 2022-07-18.

102. This response from the Stoney Nations addresses their asserted rights to water power in the Bow River and to payments arising from the rental of those rights, and in that regard is similar to the information in the affidavit of W. Snow. Another response to the Commission's information requests refers to cumulative impacts of the project "sterilizing" Stoney Nation lands in close proximity to the project, including the lands owned by SNLML. A third response states that the Stoney Nations are concerned about the cumulative impacts of increased traffic and of noise, water and air pollutants.

103. The Commission accepts that the Stoney Nations are genuinely concerned that their current uses of the land and Bow River waters for traditional purposes might be affected by this project. However, in order for the Commission to assess the potential for the project to affect them or the activities associated with traditional uses, the Commission must have information about where the activities are taking place, when they are taking place, and how approval of the project may interfere with or prevent them from taking place. None of that information was provided to the Commission. For example, the Commission has no information about what lands are currently being used by the Stoney Nations for traditional purposes and how they could be sterilized by the project. The project lands are privately owned by TA Hydro's parent corporation TransAlta Corporation, so it cannot be said that a taking up of those lands will occur if the project proceeds. And in any case, no information that indicates the Stoney Nations' members are using the project lands for traditional purposes was provided. Similarly, no information was provided about where or how the Stoney Nations are using the Bow River or the bed and shores of the Bow River.

104. Given the absence of information about where the Stoney Nations' members are present on the land or waterways and exercising constitutional rights or enjoying traditional land and aquatic uses, the Commission is unable to make a finding that those rights or uses may be affected by the project or to impose approval conditions that are intended to address such impacts. There is simply no evidentiary basis for doing so.

4.10 Crown's duty to consult

105. Crown consultation is part of a process of fair dealing and reconciliation that flows from the historical relationship between the Crown and Aboriginal people. The Crown's duty to consult is a legal duty that rises from the honour of the Crown and the duty always rests with the Crown, although the Crown may delegate procedural aspects of consultation.

106. The duty arises when the Crown has knowledge, real or constructive, of the potential existence of an Aboriginal right, title or interest, and contemplates Crown conduct that might adversely affect it. When assessing potential impacts on Aboriginal claims or rights, the impacts must be causally linked to the proposed Crown conduct or decision.

107. The scope of the duty to consult is based on a preliminary assessment of the strength of the claim or right asserted and the extent of the alleged infringement. Where the perceived breach is less serious or relatively minor, the content of the duty will be at the lower end of the scale, for example, mere notice may be sufficient. If a strong prima facie case for the claim is established and the potential infringement is of higher significance, deep consultation that is aimed at finding a satisfactory solution may be required; however, the duty to consult does not confer a veto power on Indigenous groups.

108. The Commission is not the Crown or its agent, and it has not been delegated the Crown's duty to consult. However, an application before the Commission can trigger the duty to consult if the Commission's decision could result in an infringement of a recognized or asserted right.²² Where the duty to consult is so triggered, the Crown may rely on the Commission's process to address potential impacts to Aboriginal and treaty rights.

109. The Stoney Nations acknowledged in their closing argument that they were notified of the project by TA Hydro, as required by Rule 007. The Stoney Nations stated that they received information packages about the project and that TA Hydro met with the Stoney Nations' representatives. They also stated that TA Hydro consulted with the Stoney Nations in regard to their Section 35 rights, although Alberta's Aboriginal Consultation Office did not require consultation with any Treaty 7 First Nations.

110. The Stoney Nations indicated that consultation with TA Hydro was restricted to the traditional hunting, fishing and gathering rights of the Stoney Nations, and that additional consultation was required concerning the project's impacts on their water power rights and on cumulative environmental impacts. The Stoney Nations asked the Commission to require ongoing consultation as a condition of any approval for the project. They described seven specific approval conditions and one general approval condition that they believed were needed to fully recognize their rights.

111. As set out in Section 4.8 of this decision, the Commission has found that the information provided in this proceeding does not indicate that there is potential for the project to impact the water power rights of the Stoney Nations. In addition, no information was provided about fish passage on the Bow River and no information was provided about noise from the project affecting wildlife or avian species. No information was provided to the Commission about how the Stoney Nations are using the land and other resources in the project area, or how the Stoney Nations' Aboriginal or treaty rights could be affected by the project in the ways that the Stoney Nations appear to suggest with their proposed conditions. The Commission has no basis for concluding that Crown consultation on these matters or other concerns about impacts on constitutional rights is required; there is simply no evidence to support a finding that the Stoney Nations' constitutional rights could be infringed by the project.

112. The final specific condition requested by the Stoney Nations was that TA Hydro be required to employ three members of the Stoney Nations to assist in emergency planning and to communicate incidents to their communities. Section 4.1.3 of this decision addresses emergency response planning by TA Hydro. The Commission stated that it will impose three conditions on TA Hydro, two of which require it to consult with and incorporate input from representatives of the Stoney Nations. The Commission considers that these conditions respond adequately to the Stoney Nations' request for ongoing consultation on emergency response matters. To be clear, this kind of consultation is not based on the Crown's constitutional duty to consult nor is it intended to discharge any such duty. The need for it is rooted in good neighbour principles and a desire to protect individuals who may be located near the project when an emergency situation arises.

113. In summary, the duty to consult may be triggered when a decision of the Commission has the potential to adversely affect an Aboriginal right, title or interest, which includes a treaty right. Although the Stoney Nations stated their concerns over project-related impacts, they did not

²² *Chippewas of the Thames First Nation v. Enbridge Pipelines Inc.*, 2017 SCC 41; *Clyde River (Hamlet) v. Petroleum Geo-Services Inc.*, 2017 SCC 40.

provide information about how those concerns relate to their Aboriginal or treaty rights. The exception is that they did describe their water power rights; however, they did not demonstrate how those rights could be adversely affected and the only evidence before the Commission was that the project would have no impact on their water power rights. Given the absence of evidence indicating that the Stoney Nations' Aboriginal and treaty rights could be affected by the project, the Commission finds that the duty to consult is not triggered.

114. Having regard for the consultation that did occur between TA Hydro and the Stoney Nations, the participation rights granted to the Stoney Nations in this proceeding, and TA Hydro's obligation to consult with the Stoney Nations on emergency response planning, the Commission nevertheless finds that consultation with the Stoney Nations in fact occurred at the lower end of the consultation spectrum: at a point that was more than mere notice.

5 Conclusion

115. The Commission explained the legislative framework in place for the consideration and approval of the project in Alberta in Section 3 of this decision. In this conclusion, the Commission summarizes its findings made above, and applies the legislative framework in light of those findings. In doing so, the Commission weighs the benefits of the project against its negative impacts.

116. In accordance with Section 17 of the *Alberta Utilities Commission Act*, in addition to any other matters it may or must consider, the Commission must give consideration to whether approval of the project is in the public interest having regard to its social and economic effects and effects on the environment. The Commission considers that the public interest will be largely met if an application complies with existing regulatory standards, and the project's public benefits outweigh its negative impacts, including those experienced by more discrete members of the public.

117. The Commission has determined, based on the evidence provided regarding the proposed battery composition, project safety features and predicted contaminant concentrations at the fenceline of the project and at TransAlta's property line, that a fire that occurs in the project or begins outside the project and moves through the project does not pose an unacceptable safety risk to persons or property in the vicinity of the project. The Commission has directed TA Hydro to undertake and complete a site-specific emergency response plan that is intended to further reduce the risks from a fire at the project.

118. The Commission has also determined that concerns about vehicle traffic related to the construction and operational phases of the project, including dust and vehicle emissions, have been reasonably addressed by TA Hydro through its current speed limits and dust suppression measures. These concerns will be further addressed in the road usage plan that TA Hydro will develop with the County of Rocky View and by continuous evaluation and adjustment, if necessary, of TA Hydro's dust suppression plan.

119. The Commission has accepted the conclusions in TA Hydro's environmental evaluation that, with the imposition of the measures set out in the environmental protection plan, the project will have minimal effects on the environment and no significant impacts on wildlife or wildlife habitat. The Commission has also accepted the conclusion of TA Hydro's noise impact assessment that the project will meet the applicable permissible sound levels set out in Rule 012.

TA Hydro will be required to provide an updated assessment when it has selected the vendor and type of battery storage units to verify that the project will still comply with Rule 012.

120. The Commission found that concerns about the safe passage of construction vehicles across the Ghost dam and earthen dike have been addressed by TA Hydro's ongoing program of periodic inspections of the dam's integrity, and by directing TA Hydro to seek the advice of Alberta Environment and Protected Areas and to implement measures recommended by that ministry.

121. The Cottage Club Community Group cited a concern about property values in their development decreasing if the project proceeds, as a result of the owners being put in harm's way. However, no evidence was provided to indicate that property values would be affected by the project. The Commission was not prepared to assume or infer that such impacts could result from the project, especially given the location of the existing hydro generation facility south of the development.

122. For the foregoing reasons and the other reasons set out in this decision and subject to the conditions in Appendix C, the Commission finds that TA Hydro has satisfied the requirements of Rule 007 and Rule 012, and that the negative impacts of the project can be mitigated to an acceptable degree and are outweighed by the benefits of the project.

123. The Commission finds that approval of the project is in the public interest.

6 Decision

124. Pursuant to sections 11 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 27109-A001 and grants TA Alberta Hydro Inc. the approval set out in Appendix 1 – Approval 27109-D02-2022, to construct and operate the WaterCharger Battery Storage Facility.

125. The appendix will be distributed separately.

Dated on November 3, 2022.

Alberta Utilities Commission

(original signed by)

Douglas A. Larder, KC
Vice-Chair

(original signed by)

Vera Slawinski
Commission Member

Appendix A – Proceeding participants

Name of organization (abbreviation) Company name of counsel or representative
TA Alberta Hydro Inc. Vincent Light
Cottage Club Community Group Michael Heier Todd Achen
Stoney Nakoda Nations Rae and Company

Alberta Utilities Commission
Commission panel Douglas A. Larder, KC, Vice-Chair Vera Slawinski, Commission Member
Commission staff Gary Perkins (Commission counsel) Meghan Anderson (Commission counsel) Sophie Jiang

Appendix B – Oral hearing – Registered appearances

Name of organization (abbreviation) Name of counsel or representative	Witnesses
TA Alberta Hydro Inc. Vincent Light	Chris Teare Scott Taylor Stephen Ramsay
Cottage Club Community Group	Michael Heier Todd Achen Keri Davis
Stoney Nakoda Nations Douglas Rae Molly Chardon Elder Gilbert Francis	

Appendix C – Summary of Commission conditions of approval in the decision

This section is intended to provide a summary of all conditions of approval for the convenience of readers. In the event of any difference between the directions and conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail. The following are conditions of Decision 27109-D01-2022 that require follow-up with the Commission, and will be tracked as conditions of Power Plant Approval 27109-D02-2022 using the AUC's eFiling System:

- TA Hydro must submit its site-specific emergency response plan, the final project layout and an updated air quality plume dispersion modelling and risk assessment to the Commission once the final vendor and make of the batteries are selected. This information must be provided at least 90 days prior to construction commencement.
- TA Hydro shall discuss the WaterCharger Battery Storage Facility with Alberta Environment and Protected Areas and address any dam safety concerns that it may raise. TA Hydro must submit a summary of the discussion to the Commission, including any mitigation measures required or recommended by Alberta Environment and Protected Areas, not less than 60 days before the heavy trucks start transporting large project equipment to the site.
- TA Hydro must submit an updated noise impact assessment to the Commission once the final vendor and make of the batteries are selected. This information must be provided at least 90 days prior to construction commencement.

126. The following are conditions of Decision 27109-D01-2022 that do not require follow-up with the Commission:

- TA Hydro shall only use lithium iron phosphate batteries in the project.
- TA Hydro shall implement any upgrades made available by the battery manufacturer, supplier, installer or any service provider engaged by TA Hydro that are intended to improve the safety of the project, including but not limited to training, firmware and software enhancements, monitoring capability enhancement, process changes and safety standards, as they are developed and made available to TA Hydro.
- TA Hydro shall at all times during the construction and operation of the project, maintain insurance coverage that is sufficient to protect against any reasonably foreseeable third-party liabilities.
- TA Hydro must develop its site-specific emergency response plan in consultation with local fire departments, the Cottage Club condominium corporation, interested Cottage Club Community Group members, representatives of the Stoney Nakoda Nations and Stoney Nakoda Land Management Ltd., and other interested stakeholders who indicate a desire to participate. The site-specific emergency response plan must incorporate specific requirements from the local fire departments, such as including wildfire risk and installing firebreaks surrounding the project site, and incorporate any other relevant protective measures that emerge from the analysis of recent battery energy storage system fire incidents. TA Hydro must offer to provide any training program

identified or required in the site-specific emergency response plan to local first responders.

- TA Hydro shall continually update and improve its emergency response program including its corporate and site-specific emergency response plans, and make any changes required to incorporate input received from local fire departments on mitigation measures and other related requirements, and from the Cottage Club condominium corporation, interested Cottage Club Community Group members, representatives of the Stoney Nakoda Nations and Stoney Nakoda Land Management Ltd., and other interested stakeholders. The updated plans are to be provided to local fire departments.
- TA Hydro shall apply dust suppressant at least annually on the gravel road owned by TransAlta, and must monitor the effectiveness of the suppressant product and make changes to its dust control program as needed to respond to dust or roadway conditions, including applying effective dust suppression during the busiest time of construction.