

EPCOR Water Services Inc.

E.L. Smith Solar Power Plant

February 20, 2019

Alberta Utilities Commission
Decision 23418-D01-2019
EPCOR Water Services Inc.
E.L. Smith Solar Power Plant

Proceeding 23418
Applications 23418-A001 and A002

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Alberta Utilities Commission
Calgary, Alberta

Decision 23418-D01-2019
EPCOR Water Services Inc. **Proceeding 23418**
E.L. Smith Solar Power Plant **Applications 23418-A001 and A002**

1 Decision summary

1. In this decision, the Alberta Utilities Commission must decide whether to approve an application from EPCOR Water Services Inc. to construct and operate a power plant designated as the E.L. Smith Solar Power Plant and an application to interconnect the power plant to the Alberta Interconnected Electric System (the project). After consideration of the record of the proceeding, and for the reasons outlined in this decision, the Commission finds that approval of the project is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.

2. Although the Commission recognizes that the North Saskatchewan River valley, the location proposed for the project, is an important resource for the City of Edmonton and its citizens, upon consideration of the current land-use of the site, combined with the mitigation measures proposed and commitments made by EPCOR Water, it is satisfied that the social and environmental impacts would not be significant.

3. The Commission finds that EPCOR Water's proposal to provide a portion of the energy produced by the project to the adjacent water treatment plant and to export the excess energy to the Alberta Interconnected Electric System is not contemplated by the legislative scheme. However, the Commission approves the interconnection of the power plant on the basis that EPCOR Water's intended purpose can be achieved through alternative means contemplated by the legislative scheme.

2 Introduction

4. EPCOR Water filed applications with the AUC for approval to construct and operate a 12-megawatt (MW) solar power plant in the City of Edmonton, pursuant to Section 11 of the *Hydro and Electric Energy Act,* and to interconnect the power plant to the Alberta Interconnected Electric System (AIES), pursuant to Section 18 of the *Hydro and Electric Energy Act*. These applications were registered on March 14, 2018, as applications 23418-A001 and 23418-A002, respectively.

5. The Commission issued a notice of applications for the project on April 23, 2018. The notice was mailed directly to potentially affected stakeholders within 2,000 metres of the project. It was also published on the AUC website, and a notice alert was sent through the AUC's eFiling System.[1] The notice was also published in the Edmonton Journal and Edmonton Sun on April 26, 2018.

[1] The AUC's eFiling system will send an email notification to persons who have signed up to receive AUC notices and to persons registered in the proceeding.

6. In response to the notice, the Commission received statements of intent to participate from Howell Mayhew Engineering Inc., Vince Paniak, Ron Gauvreau, Roman Wozniak, the Edmonton and Area Land Trust (EALT), and D. Gordon Bentham.

7. On June 20, 2018, the Commission issued a ruling on standing.[2] Mr. Paniak and the EALT indicated they did not intend to participate if a hearing was held; as a result, the Commission did not find it necessary to assess their standing. The Commission found that Howell Mayhew Engineering Inc., Mr. Wozniak, and Mr. Bentham did not provide any information indicating that they held a legally recognized right that would be directly and adversely affected by the Commission's decision. The Commission granted the parties participatory rights to file a brief written submission or make a brief oral submission if an oral hearing was held. The ruling granted standing to Mr. Gauvreau only and requested that he indicate whether he would prefer to participate via a written or an oral hearing process.

8. On July 16, 2018, Mr. Gauvreau indicated to the Commission that he no longer wished to participate in the proceeding.

9. After the Commission issued its standing ruling, Eric Gormley, on behalf of the Edmonton River Valley Conservation Coalition (ERVCC), filed a statement of intent to participate.

10. The Commission issued a second ruling on standing which determined that the ERVCC did not have standing. The Commission granted participatory rights to the ERVCC and indicated that it, and the other parties that were granted participatory rights in the initial standing ruling, could file a written submission to supplement their statements of intent to participate. The Commission also provided an opportunity for EPCOR Water to respond to these submissions.

11. The Commission also received a submission from the Tsuut'ina Nation on May 24, 2018, stating that it was seeking further information on the project. On June 7, 2018, the Commission issued a letter requesting that the Tsuut'ina Nation clarify, by June 28, 2018, whether it intended to participate in the proceeding. The Tsuut'ina Nation responded that it had contacted EPCOR Water and indicated it needed additional time to meet with the proponent and formulate its position. The Commission subsequently issued a second request to the Tsuut'ina Nation to clarify whether it intended to participate in the proceeding but did not receive a response by the requested deadline.

3 Legislative scheme

12. The Commission regulates the construction and operation of power plants in Alberta. Section 11 of the *Hydro and Electric Energy Act* states that no person may construct or operate a power plant without prior approval from the Commission.

13. When considering an application for a power plant and associated infrastructure, the Commission is guided by sections 2 and 3 of the *Hydro and Electric Energy Act*, and Section 17 of the *Alberta Utilities Commission Act*.

[2] Exhibit 23418-X0057, AUC ruling on standing.

14. Section 2 lists the purposes of the *Hydro and Electric Energy Act*. Those purposes include:

- To provide for the economic, orderly and efficient development and operation, in the public interest, of the generation of electric energy in Alberta.
- To secure the observance of safe and efficient practices in the public interest in the generation of electric energy in Alberta.
- To assist the government in controlling pollution and ensuring environment conservation in the generation of electric energy in Alberta.

15. Section 3 of the *Hydro and Electric Energy Act* requires the Commission to have regard for the purposes of the *Electric Utilities Act* when assessing whether a proposed power plant and associated infrastructure is in the public interest under Section 17 of the *Alberta Utilities Commission Act*. The purposes of the *Electric Utilities Act* include the development of an efficient electric industry structure and the development of an electric generation sector guided by competitive market forces.[3]

16. In Alberta, the legislature expressed its clear intention that electric generation is to be developed through the mechanism of a competitive, deregulated electric generation market. Section 3 of the *Hydro and Electric Energy Act* directs that the Commission shall not have regard to whether the proposed power plant, "…is an economic source of electric energy in Alberta or to whether there is a need for the electric energy to be produced by such a facility in meeting the requirements for electric energy in Alberta or outside of Alberta." Accordingly, in considering an application before it, the Commission does not take into account the potential need and cost of a project.

17. The Commission's public interest mandate is described in Section 17 of the *Alberta Utilities Commission Act*, which states:

> **Public interest**
>
> **17(1)** Where the Commission conducts a hearing or other proceeding on an application to construct or operate a hydro development, power plant or transmission line under the *Hydro and Electric Energy Act* or a gas utility pipeline under the *Gas Utilities Act*, it shall, in addition to any other matters it may or must consider in conducting the hearing or other proceeding, give consideration to whether construction or operation of the proposed hydro development, power plant, transmission line or gas utility pipeline is in the public interest, having regard to the social and economic effects of the development, plant, line or pipeline and the effects of the development, plant, line or pipeline on the environment.

18. AUC Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments* applies to the construction and operation of power plants, substations and transmission lines, which are governed by the *Hydro and Electric Energy Act*. The application must meet the informational and other requirements set out in Rule 007. Specifically, an applicant must provide technical and

[3] *Electric Utilities Act*, SA 2003, c E-5.1, Section 5.

functional specifications, information on public consultation, environmental and land-use information, including a noise impact assessment. The application must also meet the requirements set out in AUC Rule 012: *Noise Control*. Further, an applicant must obtain all approvals under other applicable provincial or federal legislation.

19. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, no party shall connect a power plant to the electric distribution system without an order from the Commission.

4 Power plant application

20. EPCOR Water proposed to construct and operate a 12-MW solar power plant that would consist of up to 45,000 solar panels, six inverters, and four padmount transformers. EPCOR Water submitted that the power plant equipment, including solar panels, inverters and transformers, and the exact locations of the equipment within the site, may be adjusted once the detailed design and procurement phases were completed. It stated that no changes would result in exceeding the proposed physical footprint or the proposed 12-MW capacity.

21. EPCOR Water stated the project would be located at 3900 E.L. Smith Road in the City of Edmonton, on EPCOR Water's property, south of the E.L. Smith Water Treatment Plant. The power plant would be located within the valley of the North Saskatchewan River on land that was previously used as farmland and is now primarily an empty field covered in grasses.

22. EPCOR Water submitted that it had committed to replacing at least 10 per cent of its conventional power consumption with locally-produced renewable energy. It stated that it considered other alternatives to the E.L. Smith site to reach this commitment, including roof-mounted solar panels on other EPCOR Water facilities, and entering into a power purchase agreement with a third party to build a solar power plant. EPCOR Water stated that the proposed power plant was the lowest cost option due largely to the availability of sufficiently-sized EPCOR Water-owned land adjacent to the E.L. Smith Water Treatment Plant.

23. EPCOR Water submitted that future water treatment operations are planned for the power plant site, but that because of increases in efficiency of treatment processes and infrastructure and the use of more water-efficient appliances within homes, it does not expect that expansion of the water treatment plant will be required until after the power plant's anticipated 30-year lifetime.

24. EPCOR Water retained Solas Energy Consulting Inc. (Solas) to conduct a glare analysis for observation points near the project site. Solas conducted an analysis at 16 points including residences, pathways and roads in the area. The analysis concluded that the power plant would have a low potential to result in hazardous glare conditions.[4] EPCOR Water submitted that the power plant "is expected to have either no glare or low levels of glare at most locations, including the residences along the east and west ridges of the North Saskatchewan River Valley."[5]

25. EPCOR Water retained Stantec Consulting Ltd. to evaluate the noise impacts of the power plant. Stantec completed a noise impact assessment (NIA) summary form in which it

[4] Exhibit 23418-X0024, Attachment 7, Glare Study.
[5] Exhibit 23418-X0001, EWSI Facility Application EL Smith Solar Farm, PDF page 7.

concluded that the predicted cumulative sound level at the most impacted dwelling would be below the permissible sound levels by a margin of three dBA. Accordingly, EPCOR Water submitted that the power plant would comply with Rule 012.

26. EPCOR Water retained Stantec to prepare an environmental evaluation of the project.[6] The evaluation examined the potential effects of the construction and operation of the power plant on the environment including terrain and soils, surface water bodies and hydrology, vegetation species and communities, and wildlife species and habitat.[7] The environmental evaluation recommended a number of mitigation measures to reduce potential environmental effects, including measures to control water and wind erosion, surface water runoff, vegetation management activities including weed management, and timing of construction, fencing and angling of panels to mitigate wildlife impacts. The environmental evaluation concluded that the potential adverse effects of the project can be avoided, reduced or controlled with implementation of the standard and project-specific mitigation measures outlined in the environmental evaluation. Provided that these mitigation measures are implemented, the environmental evaluation concluded that the potential effects of the project on the environment would not be significant, but that monitoring would be implemented during and after construction to evaluate the effectiveness of mitigation measures and adapt those measures as required.

27. EPCOR Water consulted with Alberta Environment and Parks (AEP), which determined that a referral report was not required because the project is proposed to be in an urban location and that the 2017 *Wildlife Directive for Alberta Solar Energy Projects* (the Directive) is not applicable to the project. Although the Directive does not apply to the project, EPCOR Water confirmed that it applied the standards and best management practices of the Directive for the project where practical.[8] EPCOR Water also filed a letter from AEP confirming that an environmental impact assessment is not required under provincial legislation,[9] and a letter from the Canadian Environmental Assessment Agency confirming that an environmental assessment is not required under federal legislation.[10]

28. EPCOR Water stated that it would develop an environmental protection plan prior to construction that would include mitigation measures, and committed to implementing the mitigation measures recommended in the environmental evaluation prepared by Stantec.

29. EPCOR Water further confirmed that it would develop a post-construction wildlife mortality monitoring plan in consultation with AEP, and that it would file a copy of this plan with the Commission once completed.

30. EPCOR Water submitted that the power plant would be situated on lands designated with high potential for both archaeological and paleontological sites and that it had applied to Alberta Culture and Tourism for *Historical Resources Act* clearance. EPCOR Water conducted a historical resource impact assessment in response to Alberta Culture and Tourism requirements which identified a newly-designated archaeological site. It stated that it also consulted with Alberta Culture and Tourism to complete field studies and mitigation

[6] Exhibit 23418-X0033, Attachment 13 Environmental Evaluation.
[7] Exhibit 23418-X0001, EWSI Facility Application EL Smith Solar Farm, PDF page 6.
[8] Exhibit 23418-X0033, Attachment 13 Environmental Evaluation, PDF page 11.
[9] Exhibit 23418-X0022, Attachment 5 Alberta Environment and Parks - No EIA Confirmation Letter.
[10] Exhibit 23418-X0023, Attachment 6 Canadian Environmental Assessment Agency Letter.

work. On September 19, 2018, EPCOR Water provided a copy of the project's *Historical Resources Act* clearance from Alberta Culture and Tourism.

31. EPCOR Water submitted a land development application to the City of Edmonton, and stated that it would submit a development permit application after completion of the land development application. EPCOR Water indicated that the project would be subject to the City's North Saskatchewan River Valley Area Redevelopment Plan. In response to intervener submissions, EPCOR Water submitted that the project aligns with the City of Edmonton's strategies such as "The Way Ahead / The Way We Green: Environmental Strategic Plan," the "Energy Transition Strategy," the draft "Greenhouse Gas Management Plan for Civic Operations 2019-2030," the 2018 draft "Breathe / Ribbon of Green" and the River Valley Alliance's "Plan of Action for Capital Region River Valley Park."[11]

32. EPCOR Water conducted a participant involvement program with the objective of providing parties with information about the project and opportunities to express concerns, ask questions, provide input, and discuss options, alternatives and mitigation measures. EPCOR Water stated that its participant involvement program aligned with the AUC's participant involvement guidelines as well as the City of Edmonton's Public Engagement Policy.

33. EPCOR Water notified landowners, occupants, and residents within 2,000 metres of the power plant boundary and consulted with parties located within 800 metres of the power plant boundary. EPCOR Water's participant involvement program also included "Indigenous communities, community leagues and organizations, special interest groups (e.g., River Valley Alliance, Sierra Club, North Saskatchewan River Valley Conservation Society), local businesses, elected officials, government agencies and the general public."[12] EPCOR Water hosted an open house in July 2017, and participated in a City of Edmonton-hosted open house in February 2018.

34. EPCOR Water submitted that in response to concerns expressed by parties during its participant involvement program, it reduced the footprint of the project to increase the separation between the project and the North Saskatchewan River, submitting that at its narrowest point, the fence line will be set back approximately 100 metres from the river. In response to submissions that the site should be used for recreational purposes due to its proximity to the City of Edmonton's river valley trail system, EPCOR Water agreed to provide public access through its property, outside the power plant fence line, for future recreational trails. Currently, none of the site is publicly accessible.

35. Stantec, on behalf of EPCOR Water, produced artistic renderings of the power plant to assist in communicating the potential visual impacts of the project. EPCOR Water shared these depictions at open houses and included them in project newsletters. To enhance the project aesthetics and the natural landscape of the area, EPCOR Water "committed to replace the grasses removed for the Project by replanting with City approved native seed mix to help improve the aesthetics and surrounding habitat in the area."[13]

36. EPCOR Water stated that the power plant would comply with Section 95(9) of the *Electric Utilities Act*, which states:

[11] Exhibit 23418-X0065, EWSI Response to Intervener Submissions 8-14-2018, PDF pages 2-5.
[12] Exhibit 23418-X0001, Application, PDF page 26, paragraph 76.
[13] Exhibit 23418-X0065, EWSI Response to Intervener Submissions, PDF page 11.

> A municipality or a subsidiary of a municipality may hold an interest in a generating unit located within the boundaries of the municipality on property of which the municipality or subsidiary is the owner or tenant if a majority of the electric energy produced annually by the unit is used by the municipality or subsidiary on that property.

37. Howell Mayhew Engineering Inc. submitted that it supported the development of solar photovoltaic generating units, but wanted to better understand the performance of the proposed power plant.

38. Mr. Paniak submitted that he was a resident across the river from the project and that he supported EPCOR Water's efforts to use solar power.

39. Mr. Wozniak expressed concerns that the cost of the power plant would be paid by City of Edmonton homeowners and that as the solar panels lose their efficiency over time, the costs would increase.

40. Mr. Bentham opposed the project's location within the river valley. He submitted that this land is precious and cannot be replaced, and encouraged that alternative locations, such as rooftops, be considered.

41. Prior to withdrawing from the proceeding, Mr. Gauvreau submitted that he owns land near the project and that the project would affect his property value. He also submitted that the project does not conform with the current land use, and that the area was not intended for commercial development.

42. The EALT stated that it supports the use of alternative and sustainable sources of energy but was opposed to the project's location within the river valley. It submitted that the river valley is constantly under pressure from development proposals that threaten the area's biodiversity and ecological integrity, as well as the opportunity for recreation.

43. The EALT submitted that the project would result in further compromise and depreciation of the river valley. It encouraged that the project not be evaluated in isolation; rather, the cumulative impacts of all non-conforming incursions in the city's network of green areas should be considered. It stated that there will be growth in linear recreational use of the area due to the ongoing development of the trail system, as well as increased adjacent residential development. The EALT submitted that this leads to growing conflict between people and wildlife, and environmental deterioration, and that the proposal will make the area a vulnerable "pinch point" in the ecological network of the river valley.[14]

44. The EALT further submitted that the river valley serves as an important recreational green space that will become increasingly important as the population of the City of Edmonton increases and the amount of large green space within the city decreases. It stated that access to large green spaces is an important factor for the wellness of the city's residents and that this project will compromise opportunities for outdoor recreation. The EALT also expressed concerns about the visual impacts of the power plant, submitting that the project would detract from the natural landscape character of the North Saskatchewan River valley.

[14] Exhibit 23418-X0050, EALT submission to AUC re EPCOR solar plant, PDF page 3.

45. The ERVCC submitted that it also supports renewable energy but objected to the proposed location of the power plant. It stated that the City of Edmonton's river valley is a cherished riparian area which holds great ecological value as a wildlife habitat. The ERVCC outlined the long history of efforts to preserve the river valley. It noted that the river valley is special parkland with great amenity value for humans and ecological value for wildlife habitat, and the project's location is an important link in this chain.[15]

46. The ERVCC stated that with its security fencing and inverter stations, the power plant will have a negative impact on the visual experiences of area residents and trail users. It submitted that the power plant's proposed site "is located in an attractive part of the river valley—a plain in a bend of the river with bluffs on both sides of the river" that is visible from many parts of the trail system.[16] It submitted that EPCOR Water largely ignored the project's impact on trail uses, as its glare analysis measured potential glare from 16 locations, only one of which is a pathway. ERVCC advocated for alternate locations for the solar panels, such as rooftops or brownfield sites.

47. The ERVCC further submitted that the proposed location is not currently zoned for solar development, and indicated that 828 people had signed a petition urging the City of Edmonton's council to preserve Edmonton's river valley by rejecting the rezoning of the land for the power plant. The ERVCC concluded that the river valley park system is rooted in the natural world and forms part of a major ecological corridor across Alberta. The ERVCC requested that the Commission consider the history of the City of Edmonton's attempt to acquire and protect parkland in the river valley and the best practices for siting solar farms and deny the application to build the project on river valley land.

48. EPCOR Water expressed its commitment "to taking action to reduce its own emissions and energy consumption"[17] and explained that "this Project provides an opportunity to directly reduce [EPCOR Water's] conventional electricity consumption from the grid at the E.L. Smith Water Treatment Plant. If the Project is approved, [EPCOR Water] will be providing clean water made with clean energy from the solar farm."[18] At the direction of the City of Edmonton, EPCOR Water conducted a triple bottom line analysis[19] to ensure that the cost savings of using the E.L. Smith Water Treatment Plant site were not outweighed by social and environmental considerations. EPCOR Water retained HDR Corporation (HDR) to analyze five alternatives on a triple bottom line basis. HDR considered the following alternatives:

1) **Grid Supply** – purchase of conventional power from the grid

2) **Grid Supply + Generic Market Renewable Energy Credit (REC)s –** purchase of conventional power from the grid and generic (non-additional) RECs available in the market.

[15] Exhibit 23418-X0064, Edmonton River Valley Conservation Coalition Brief opposing EPCOR's proposed solar plant, PDF page 1.
[16] Exhibit 23418-X0064.02, Edmonton River Valley Conservation Coalition Brief opposing EPCOR's proposed solar plant, PDF page 5.
[17] Exhibit 23418-X0001, EWSI Facility Application EL Smith Solar Farm, PDF page 5.
[18] Exhibit 23418-X0001, EWSI Facility Application EL Smith Solar Farm, PDF page 5.
[19] HDR explained that a triple bottom line analysis provides an overview of the economic, social and environmental impacts of the project.

3) **Offsite Wind Farm –** cost to build and operate (or contract to purchase power) an offsite wind farm in southern Alberta.

4) **E.L. Smith Solar Project –** cost to build and operate the proposed E.L. Smith Solar Project.

5) **Offsite Local Solar Farm –** cost to build and operate (or contract to purchase power) an offsite solar farm within 40 kilometers of the city of Edmonton and connect to the grid, but not tied directly to any of [EPCOR Water's] operating sites.[20]

49. HDR prepared a report entitled "Sustainability Value Analysis of the E.L. Smith Solar Farm Project."[21] The report concluded that if having an additional renewable resource and local generation are required, only the E.L. Smith project or an offsite local solar farm are viable alternatives. The HDR report stated that the E.L. Smith project could be developed at a much lower financial cost than an offsite local solar farm, with both alternatives providing equivalent emission reduction benefits, and that it was unlikely that the project would result in very significant ecosystem damages given the findings of the project's environmental evaluation.

50. EPCOR Water submitted that the project remains the best and lowest cost option to satisfy its stated environmental goals, even after factoring in environmental and social considerations through the triple bottom line analysis. EPCOR Water stated that the project would not have a significant impact on the environment and that the land would be available for re-use when the project is decommissioned.[22]

51. EPCOR Water stated that in addition to the economic benefits of the site, it intends to leverage the environmental, social and recreational value of the site by developing community integration objective options for the project.

52. EPCOR Water submitted that these objectives include enhancing the project aesthetics and natural landscape; integrating the project into the North Saskatchewan River valley and planning for future trails proposed in the City of Edmonton's "Breathe / Ribbon of Green" strategy; providing educational opportunities respecting the history and cultural resources of the land in collaboration with Indigenous communities; constructing an interactive public demonstration site to showcase the project and provide education and awareness about solar technology; and establishing long-term partnerships to support educational and research opportunities associated with solar energy generation.[23] EPCOR Water included a number of specific ideas which may help achieve these objectives, such as planting native plant species to attract and sustain local pollinator populations, installing permanent displays and art in proximity to the project to showcase the region's history, and conducting tours of the facility for hands-on learning experiences for nearby schools. In addition, EPCOR Water indicated that it has entered into discussions with the University of Alberta and the Northern Alberta Institute of Technology to allow equipment alterations and data monitoring for testing purposes.

[20] Exhibit 23418-X0065, EWSI Response to Intervener Submissions, PDF page 7.
[21] Exhibit 23418-X0066, Attachment 1 - HDR Sustainability Value Analysis.
[22] Exhibit 23418-X0065, EWSI Response to Intervener Submissions 8-14-2018, PDF page 9.
[23] Exhibit 23418-X0065, EWSI Response to Intervener Submissions 8-14-2018, PDF page 11.

5 Interconnection application

53. EPCOR Water submitted that the power plant is intended to supply power to the E.L. Smith Water Treatment Plant. It predicted that the power plant would generate approximately 20,000 MW hours of electricity annually, 70 per cent of which is expected to serve the water treatment plant, and that the remaining 30 per cent would be exported to the Alberta Interconnected Electric System through two metering points at the plant and sold into the wholesale market.

54. EPCOR Water submitted that the power plant would connect to the AIES via EPCOR Distribution & Transmission Inc.'s distribution system using two 13.8-kilovolt feeders originating from Petrolia 816S Substation. EPCOR Water provided a letter from EPCOR Distribution & Transmission Inc. indicating that it was prepared to allow the interconnection of the power plant. The point of interconnection would be located in the southwest quarter of Section 10, Township 52, Range 25, west of the Fourth Meridian.

55. In response to Commission requests for further information on how the project's self-supply and export proposal falls within the legislative scheme, EPCOR Water stated that its proposal would not result in uneconomic bypass of the AIES and that the project's proposed use is contemplated and consistent with the legislative framework under the *Electric Utilities Act* and the *Hydro and Electric Energy Act.* EPCOR Water explained that it will continue to take electric distribution service from EPCOR Distribution & Transmission Inc., and the amounts paid under its contract for distribution access service are not expected to change materially as a result of the project.

56. EPCOR Water submitted that Section 2(1)(b) of the *Electric Utilities Act* provides an exemption from the scheme for "electric energy produced on property of which a person is the owner or a tenant, and consumed solely by that person and solely on that property;" therefore, the energy produced and consumed on site will not be required to be exchanged through the wholesale electricity market.[24] EPCOR Water submitted that on a plain reading of Section 2(1)(b), the exemption applies "to *any and all* electric energy that meets the criteria in that section." EPCOR Water's position is that Section 2(1)(b) makes it clear that the legislature intended the exemption to apply to any portion of the total electricity "produced on property of which a person is the owner or a tenant, and consumed solely by that person and solely on that property." As a result, the 70 per cent of the annual power generated by the project and consumed on site would be exempt from the operation of the *Electric Utilities Act.*

6 Commission findings

6.1 Findings on the power plant

57. The Commission has determined that the technical, siting, emissions, environmental and noise aspects of the power plant have been met.

[24] 23418-X0075, EWSI Response to AUC Request 12-21-2018, PDF page 3.

58. The Commission finds that the participant involvement program for the project is adequate and meets the requirements set out in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*.

59. The Commission recognizes that the power plant would be located within the North Saskatchewan River valley, a valley of significant importance to the citizens of the City of Edmonton. The river valley is a limited resource and the importance of protecting that resource is evident from the submissions of individuals and groups such as the ERVCC and EALT. Multiple stakeholders filed submissions indicating they did not oppose EPCOR Water's development of a solar project, only its decision to site it within the river valley.

60. The Commission finds EPCOR Water's alterations to the project to reduce the footprint, increase the separation from the river, and allow access to its property to enhance the river valley's trail system demonstrate EPCOR Water's willingness to adapt its project in response to concerns raised by stakeholders. In assessing the social and environmental effects of the project, the Commission has relied upon EPCOR Water's commitments to integrate the trail system into its project.

61. Taking into account the submissions by interveners and groups such as the ERVCC and EALT, and considering the various mitigation measures and plans proposed by EPCOR Water, the Commission is satisfied that the power plant would not result in negative social or environmental impacts.

62. The Commission finds that the interveners' concerns about the importance of access to green space and protection of that green space are important considerations in its assessment of whether this project is in the public interest, but that those concerns are mitigated in these circumstances because the site is not currently accessible to the public, has been previously disturbed, and is intended to be used for the expansion of EPCOR Water's water treatment plant in the long term. In contrast, the Commission considers that EPCOR Water's commitment to allow access to its property for the development of additional trails along the river valley will result in a benefit in terms of public access to green space in that portion of the river valley.

63. The Commission considers that EPCOR Water's community integration objectives to develop opportunities for social benefits, including educational opportunities around historical and cultural resources and solar power, would further mitigate or offset the social impacts that would occur. Although EPCOR Water did not formally commit to some of these endeavours or present specific plans to achieve some of the identified objectives, the Commission considers that EPCOR Water's commitment to incorporating those objectives plays a significant role in its assessment of the project's ability to mitigate social impacts. The Commission accordingly expects EPCOR Water to follow through on its commitment to developing those opportunities.

64. The Commission finds that concerns with the potential visual impacts of the project will be mitigated to an extent because the site is located adjacent to the water treatment plant, has been previously disturbed, and is currently an empty field with no public access. While the Commission recognizes that the presence of solar panels will have a different visual impact than its existing use, the Commission considers that EPCOR Water's plans to enhance the natural aesthetics of the site using fence design, natural screening and other landscaping will help mitigate the visual impacts of the power plant.

65. The Commission notes that no intervener submitted evidence that the project will have an effect on the value of land in the surrounding area. In its reply submissions, EPCOR Water noted that the project involves the installation and operation of a solar facility at an existing water treatment plant that has occupied the area for more than 40 years. The land has been included in City of Edmonton plans for expansion of the water treatment plant for a number of years. Finally, EPCOR Water submitted that it is not aware of any evidence to suggest that large-scale ground mounted solar panels will have any meaningful impact on the value of nearby properties. Moreover, there is no evidence before the Commission that the project will have a negative impact on surrounding property values, such that the project would not be in the public interest.

66. The Commission accepts as reasonable the findings of the Solas analysis that the project has a low potential to result in hazardous glare conditions at any of the measured points surrounding the project, including residences, pathways, and roads in the area.

67. The Commission acknowledges that EPCOR Water is working through the City of Edmonton's process for rezoning the land and for a development permit for the application.

68. Upon a review of the environmental evaluation produced by Stantec and the various mitigation measures proposed within it, the Commission accepts EPCOR Water's commitments to develop an environmental protection plan prior to construction that will include mitigation measures, and to implement the mitigation measures outlined in the environmental evaluation. The Commission also accepts EPCOR Water's commitment to develop a post-construction wildlife mortality monitoring plan in consultation with AEP and to file that plan with the Commission once completed. Following completion of that program, the Commission expects that EPCOR Water will promptly notify AEP of the discovery of any carcasses of provincially or federally-threatened or endangered species that may be attributable to the project.

69. The Commission accepts the environmental evaluation's conclusion that the potential environmental effects of the project would be "not significant" and that the environmental impacts of the project can be adequately mitigated, given diligent implementation of the mitigation measures proposed in the evaluation and having regard for the additional commitments made by EPCOR Water.

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

71. EPCOR Water made efforts to consider multiple alternatives to reach its goal of increasing the amount of renewable energy it utilizes. The Commission finds that EPCOR Water's assessment of the alternatives and its retention of HDR to conduct a triple bottom line analysis demonstrate its commitment to achieving its goal in a manner that will minimize environmental, social and economic impacts.

72. The Commission is satisfied that the NIA summary form demonstrates that cumulative sound levels for the project will be below the daytime and nighttime permissible sound levels as required in Rule 012.

73. Finally, the Commission is satisfied that EPCOR Water, as a municipal subsidiary, may hold an interest in the power plant in accordance with Section 95(9) of the *Electric Utilities Act* based on its intention to utilize the majority of the electric energy produced annually on site. The Commission has assessed whether the project is in the public interest, having regard to its social, economic and environmental effects in keeping with its mandate in Section 17 of the *Alberta Utilities Commission Act.* In making its decision, the Commission has considered those effects and also that the potential rate impacts of the project are outside the scope of this proceeding.

74. Based on the foregoing, the Commission considers the power plant to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

6.2 Findings on the interconnection

6.2.1 Introduction

75. While the Commission is satisfied that approval of EPCOR Water's power plant is in the public interest and should be approved, it finds that EPCOR Water's proposal to directly consume approximately 70 per cent of the power plant's annual output on-site and export the remaining 30 per cent to the wholesale market is inconsistent with sections 18 and 101 of the *Electric Utilities Act* and Section 2(f) of the *Fair, Efficient and Open Competition Regulation.*

76. Section 18(2) of the *Electric Utilities Act* provides that all electric energy entering or leaving the Alberta Interconnected Electric System must be exchanged through the Power Pool of Alberta unless regulations made under sections 41, 99 or 142 provide otherwise.

77. Section 101(1) of the *Electric Utilities Act* states that a person wishing to obtain electricity for use on a property must make arrangements for the purchase of electric distribution service from the owner of the electric distribution system in whose service area the property is located.

78. Section 2(1) of the *Electric Utilities Act* sets the forms or types of electric energy that are exempt from the operation of the Act. EPCOR Water argues that the electricity produced on site that it intends to consume on-site is exempt from the *Electric Utilities Act* in accordance with the exemption found in subsection 2(1)(b).

79. Section 2(1)(b) states:

> **2(1)** This Act does not apply to
>
> > (b) electric energy produced on property of which a person is the owner or a tenant, and consumed solely by that person and solely on that property;

80. Section 2(f) of the *Fair, Efficient and Open Competition Regulation* compliments subsection 2(1)(b) of the *Electric Utilities Act*. That section provides that "not offering to the power pool all electric energy from a generating unit that is capable of operating, except where

the electric energy is used on property for the market participant's own use" is conduct that does not support the fair, efficient and openly competitive operation of the electricity market.

81. For the reasons that follow, the Commission finds that the exemption in subsection 2(1)(b) of the *Electric Utilities Act* does not apply to the power plant because the electric energy produced by the power plant will not be consumed solely by EPCOR Water and solely on EPCOR Water's property. Accordingly, sections 18 and 101 of the *Electric Utilities Act* apply to the electric energy produced by the plant.

82. In making this finding, the Commission is not concluding, nor is it suggesting in any way, that EPCOR Water is intentionally seeking to engage in conduct that is inconsistent with the statutory scheme. Rather, the Commission acknowledges that EPCOR Water's proposal is based upon its interpretation and understanding of the statutory scheme. It also acknowledges that EPCOR Water's stated goal in developing the facility is to increase the amount of renewable energy it uses. The Commission considers this goal to be laudable and consistent with current legislated policy objectives surrounding increases in renewable electricity generation.[25]

6.2.2 Interpreting Section 2(1)(b) of the *Electric Utilities Act*

83. EPCOR Water relied upon the exemption set out in subsection 2(1)(b) in support of its contention that it is entitled to both self-supply and export electric energy from its power plant. It argued that based on the plain and ordinary meaning of the provision, "the exemption applies to *any and all* electric energy that meets the criteria in the section; that is, any and all electricity 'produced on property of which a person is the owner or a tenant, and consumed solely by that person and solely on that property.'"[26] It submitted that the legislature intended that the exemption would apply "to any portion of the total electricity that may be 'produced on property of which a person is the owner or a tenant, and consumed solely by that person and solely on that property.'"[27] Accordingly, EPCOR Water's position is that the 70 per cent of annual power generated by the project that would be consumed on-site is exempt from the provisions of the *Electric Utilities Act.*

84. The starting point for interpreting Section 2(1)(b) is Driedger's modern principle of statutory interpretation. The Supreme Court of Canada explained Driedger's principle and its application to the statutory scheme administered by the Commission in *ATCO Gas & Pipelines Ltd v Alberta (Energy and Utilities Board).*[28] The Court stated that the principle requires that "the words of an act are to be read in their entire context, in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act and the intention of Parliament."[29] The court clarified that it looks first at the grammatical and ordinary meaning of a provision and then examines the entire statutory context and legislative intent. The Court concluded: "the ultimate goal is to discover the clear intent of the legislature and the true purpose of the statute while preserving the harmony, coherence and consistency of the legislative scheme."[30]

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25 *Renewable Electricity Act*, SA 2016, c R-16.5, s 2(1).
26 Exhibit 23418-X0075, EWSI Response to AUC Request 12-21-2018, paragraph 6.
27 *Ibid*.
28 ATCO Gas & Pipelines Ltd. v Alberta (Energy and Utilities Board), 2006 SCC 4, paragraph 37.
29 *Ibid*.
30 *Ibid*, paragraph 49.

85. The interpretation of regulations is governed by the same principles that govern the interpretation of statutes.[31] As stated by the Commission in Decision 2014-110, "[r]egulations too must be read in the context of their enabling statute, having regard to the language and purpose of the act in general and more particularly the language and purpose of the relevant enabling provisions."[32]

86. In accordance with its plain and ordinary meaning, the Commission finds that subsection 2(1)(b) establishes three pre-conditions for the exemption to apply:

- The electric energy must be produced on EPCOR Water's property;
- The electric energy must be consumed solely by EPCOR Water; and
- The electric energy must be consumed solely on EPCOR Water's property.

87. The Commission understands EPCOR Water's interpretation of subsection 2(1)(b) to be that the exemption applies to the portion of the electric energy produced and consumed by EPCOR Water on its property (i.e., the 70 per cent), but that it does not apply to electric energy produced on its property but consumed off-site (i.e., the 30 per cent). The effect of this interpretation is that two of the pre-conditions to the exemption are not satisfied: the electric energy produced on EPCOR Water's property will not be consumed solely by EPCOR Water, and will not be consumed solely on EPCOR Water's property. In the Commission's view, this interpretation is entirely at odds with the plain and ordinary meaning of the provision.

88. Analysis of the broader statutory scheme supports the Commission's interpretation of subsection 2(1)(b).

89. Section 2(1)(b) is one of a number of provisions in the scheme that directly addresses on-site generation for the purpose of self-supply.[33] Section 13 of the *Hydro and Electric Energy Act* provides that a person generating or proposing to generate electric energy solely for the person's own use does not require approval from the Commission to construct and operate the generating unit.

90. Section 6 of the *Isolated Generating Units and Customer Choice Regulation* addresses self supply in the context of self supply within an industrial area. That section states:

> [a] customer in an industrial area may use electric energy that is produced on the customer's premises by a supplier of the customer's choice if the electric energy is consumed only on the customer's premises.

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[31] Ruth Sullivan, *Sullivan on the Construction of Statutes*, 5th ed., page 368; *Interpretation Act*, SA 2000, c I-8, s 13.

[32] Decision 2014-110: Applications for review of AUC Decision 2012-104: Complaint by Milner Power Inc. regarding the ISO Transmission Loss Factor Rule and Loss Factor Methodology, April 16, 2014, page 12, paragraph 43, citing *Bristol-Myers Squibb Co. v Canada (Attorney General)*, 2005 SCC 26.

[33] There are other exemptions from the general requirement to take distribution service from the applicable distribution facility owner that do not deal directly with self-generation activities, including self-distribution in certain circumstances under Section 24(1) of the *Hydro and Electric Energy Act* and direct service from the transmission system under Section 101(2) of the *Electric Utilities Act.*

91. Subsection 2(f)(i) of the *Fair, Efficient and Open Competition Regulation* states:

> **2** Conduct by a market participant that does not support the fair, efficient and openly competitive operation of the market includes the following:
>
> > (f) not offering to the power pool all electric energy from a generating unit that is capable of operating, except where
> >
> > > (i) the electric energy is used on property for the market participant's own use,

92. The Commission considers it reasonable to conclude that these provisions all share the same target: on-site generation developed for the express purpose of self-supply. When read together, these provisions reflect the legislature's intention to allow a person to build and operate a generating unit on land a person owns or leases, and to exempt the generating unit and the electric energy produced by it from the statutory scheme if the electric energy is intended only for the person's own use, consumed solely by the person, and solely on the person's property. The Commission finds that these exemptions reflect the "closed loop" nature of a self- supply arrangement; because the person is not using market infrastructure and is not transacting in the market, neither the person, the unit, nor the output is bound by the market's rules.

93. The *Micro-generation Regulation* and subsection 2(1)(d) of the *Electric Utilities Act* address two other types of self-supply mechanisms: micro-generation and industrial system designations. Each of these mechanisms expressly allow a person to self-supply electric energy for their own use and to export electric energy in excess of what is required for their use through the interconnected electric system, provided they meet certain eligibility requirements. Sections 99 and 117 of the *Electric Utilities Act*, respectively, enable these mechanisms.

94. Section 99 of the *Electric Utilities Act* authorizes the Minister to make regulations specifying which provisions of that Act and the regulations do not apply to micro-generation generating units. The *Micro-generation Regulation* allows customers to own and operate a certain class of small generators (5 MW or less and powered exclusively by renewable or alternative energy) and to consume the electricity produced by that generator on site. Under this regulation, electric energy produced by a micro-generation generating unit that is in excess of the customer's on-site needs is exported to the interconnected electric system through a net billing mechanism.

95. The *Micro-generation Regulation* requires a customer to size the micro-generator so that it meets all or a portion of the customer's total annual energy consumption on site. Section 6 of the *Micro-generation Regulation* specifically excludes micro-generators from the obligation established by Section 18 of the *Electric Utilities Act* to exchange the excess electric energy through the Power Pool of Alberta. Instead, in the limited circumstances of micro-generation, the micro-generator's service provider acts as the electricity market participant in respect of the energy generated by the micro-generator. The *Micro-generation Regulation* also explicitly requires that the distribution tariff charged to a micro-generator must be the same as the tariff that would apply if that customer were not a micro-generator.

96. For industrial system designations, Section 2(1)(d) states that the *Electric Utilities Act* does not apply to electric energy exempted by the Commission in accordance with the rules made under Section 117 of that Act. Section 117(1) allows the AUC to (a) exempt facilities or

classes of facilities from the definition of electric utility, and (b) exempt the electric energy produced from and consumed by an industrial system from all or any provisions of the *Electric Utilities Act*.

97. Designated industrial systems are permitted to self-supply and are exempt from the obligation to obtain electric energy through the distribution or transmission system. In accordance with Section 117(1) of the *Electric Utilities Act*, each industrial system designation order issued by the Commission includes a condition specifying that the electric energy produced from and consumed by the subject industrial system is exempt from the operation of the *Electric Utilities Act*.

98. Designated industrial systems are entitled to export the electric energy that is in excess of the industrial system's requirements because such export is expressly contemplated by subsection 4(2)(b)(ii) of the *Hydro and Electric Energy Act*. That provision states that if an electric system is designated as an industrial system, that designation must support the efficient exchange, with the interconnected electric system, of electric energy that is in excess of the industrial system's own requirements.

99. The government of Alberta released a policy paper outlining the industrial system designation and the policy objectives and implications of exempting those systems from the *Electric Utilities Act*.[34] The stated objective of the exemption is "similar to the EUA section 2(b) self-generation exemption" to "provide the correct economic signals which enable integrated industrial processes to develop their own internal electricity supply where that is the most economic source of generation." The exemption is explicitly "not intended to facilitate development of independent electricity systems driven by avoidance of system costs."[35] The paper also explains that the exemption "fits in a continuum" between the self-generation contemplated by Section 2(b) of the *Electric Utilities Act* and a distribution system.[36] The legislature's intention with respect to the effect of the exemption is clearly outlined in its policy that only the electric energy "that is generated and consumed by the industrial system is exempt from the EUA."[37] For the exempted electric energy, the industrial system is not required to, among other things:

- Exchange the exempted electric energy through the Power Pool of Alberta if the electric energy produced by the industrial system is not transmitted via facilities of the interconnected electric system; and

- Purchase the exempted electric energy from the owner of the electric distribution system in whose service area the industrial system is located.[38]

100. The objectives outlined in the government of Alberta's policy document are reflected in the criteria in Section 4 of the *Hydro and Electric Energy Act*, and collectively demonstrate the purpose of the limited industrial system designation exemption. The exemption allows

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34 *Government of Alberta*, Industrial Systems Policy Statement, June 1997, online: <https://open.alberta.ca/dataset/472de409-6000-4941-a37b-f9a301f5b7a3/resource/71e5c77d-7508-48f3-af2c-15998d360de3/download/industrialsystemspol97.pdf >.

35 Ibid, page 1.

36 Ibid, page 2.

37 Ibid, page 4.

38 Ibid.

circumstances of partial self-supply and partial export to the grid in very limited circumstances, provided that the applicant meets the prescriptive criteria in that section.

101. Based on the above, the Commission is satisfied that the statutory scheme expressly authorizes the owners of industrial systems and micro-generators to self-supply and transact any electric energy that is in excess of their own use through the interconnected electric system. Absent from the statutory scheme, however, is any express authorization for a party that relies upon the exemption in subsection 2(1)(b) to export electric energy that is in excess of the person's own use on the property. Given that such express authorization exists for the other two self-supply mechanisms, the Commission considers its omission for subsection 2(1)(b) operations to be intentional and reflective of the drafter's intent to require that all the electricity produced on site be consumed on site.

102. As part of its consideration of the self-supply and export issue arising in this decision, the Commission reviewed its previous treatment of similar applications. The Commission identified instances where it previously approved power plant and connection applications in which the applicants' stated intention was to consume most of the electric energy on site but exchange the excess through Alberta's electricity market. Notwithstanding that the issue of whether such conduct complies with the statutory scheme was not raised in those proceedings, the Commission recognizes that its determination on this issue in this proceeding represents a departure from that in previous decisions. The Commission acknowledges that its statutory interpretation of the legislative provisions pertaining to self-supply and export may have ramifications for existing approval holders and future applicants. However, the Commission cannot address those ramifications within the scope of this proceeding.

6.2.3 Interconnection decision

103. EPCOR Water seeks a connection order pursuant to Section 18 of the *Hydro and Electric Energy Act* to enable it to exchange electric energy produced by the power plant with the interconnected electric system. From a technical perspective, the Commission is satisfied that the proposed connection order will function as planned and will facilitate the efficient exchange of electric energy produced by the power plant to the interconnected electric system. However, in the issuance of a connection order, it is implicit that market participants must exchange electric energy on the interconnected electric system in accordance with the duties and obligations set forth in the *Electric Utilities Act* and in other related statutory instruments.

104. For the reasons articulated above, the Commission finds that the exemption under subsection 2(1)(b) would not apply to the electric energy produced by the power plant if EPCOR Water proceeds with its proposal to directly consume a majority of the plant's output while exporting the excess energy to the interconnected electric system. Notwithstanding this conclusion, the Commission recognizes that EPCOR Water is not precluded from pursuing other alternative arrangements consistent with the statutory scheme that could allow it to meet its on-site power needs while still satisfying the requirements of Section 95(9) of the *Electric Utilities Act*.[39]

105. Having regard to the foregoing, the Commission will issue the connection order requested by EPCOR Water on the basis that EPCOR Water, as a market participant, must

[39] See, for example, the Municipal Own-Use Generation Regulation.

comply with the obligations set out in the *Electric Utilities Act* and is obliged to conduct itself in a manner that supports the fair, efficient and openly competitive operation of the electricity market. The Commission therefore conditions the interconnection approval on the following:

- As of the interconnection date of the project, EPCOR Water is required to file a compliance plan, endorsed by its chief executive officer, consisting of a written confirmation of statutory compliance and a detailed written description of the mechanism it is using to ensure compliance with the statutory scheme.

7 Decision

106. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants EPCOR Water the approval set out in Appendix 1 – 12-MW E.L. Smith Solar Power Plant – Approval 23418-D02-2019 – February 20, 2019 (Appendix 1 will be distributed separately).

107. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants EPCOR Water the approval set out in Appendix 2 – Connect E.L. Smith Solar Power Plant to EPCOR Distribution &Transmission Inc.'s distribution system – Approval 23418-D03-2019 – February 20, 2019 (Appendix 2 will be distributed separately), subject to the following condition:

- As of the interconnection date of the project, EPCOR Water is required to file a compliance plan, endorsed by its chief executive officer, consisting of a written confirmation of statutory compliance and a detailed written description of the mechanism it is using to ensure compliance with the statutory scheme.

Dated on February 20, 2019.

Alberta Utilities Commission

(original signed by)

Anne Michaud
Vice-Chair

(original signed by)

Joanne Phillips
Commission Member

(original signed by)

Kristi Sebalj
Commission Member