



## **Georgetown Solar Inc.**

### **Georgetown Solar + Energy Storage Project**

**November 2, 2022**

**Alberta Utilities Commission**

Decision 27205-D01-2022

Georgetown Solar Inc.

Georgetown Solar + Energy Storage Project

Proceeding 27205

Applications 27205-A001 and 27205-A002

November 2, 2022

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Alberta Utilities Commission

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## **1 Decision summary**

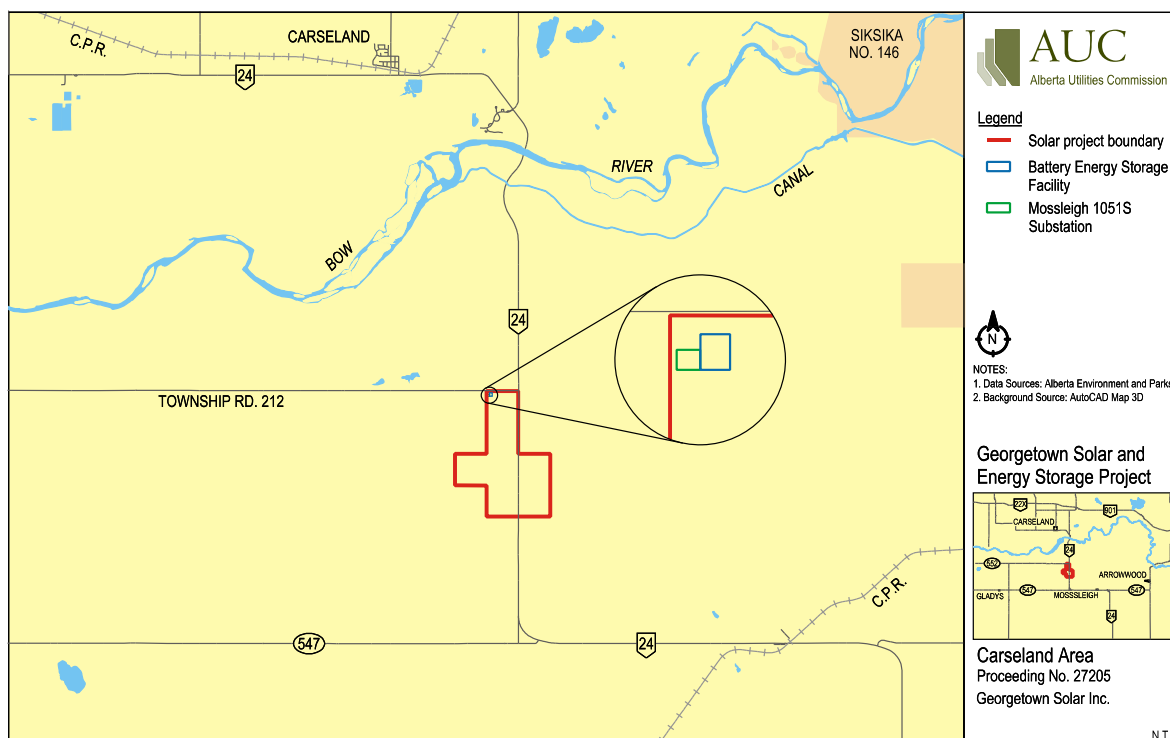
1. In this decision, the Alberta Utilities Commission approves applications from Georgetown Solar Inc. (Georgetown), to construct and operate the Georgetown Solar + Energy Storage Project, located near Mossleigh in Vulcan County. The project consists of a solar power plant with a capacity of up to 230-megawatt (MW), a battery energy storage system with capacity of up to 200-megawatt-hour (MWh) and the associated Mossleigh 1051S Substation.

## **2 Applications**

2. Georgetown filed applications with the Commission for approval to construct and operate the Georgetown Solar + Energy Storage Project. The solar power plant would consist of approximately 433,000 solar modules on a fixed-tilt racking system, 75 inverter and transformer stations, and underground collector lines that would connect to the Mossleigh 1051S Substation. The battery energy storage system (BESS) would consist of 80 energy storage containers for lithium-ion phosphate batteries, 20 power conversion stations each having two inverters and a transformer, and two auxiliary transformers. The BESS would be rated up to 100 MW and have a storage capacity of 200 MWh. The Mossleigh 1051S Substation would contain one 240/34.5-kilovolt (kV), 256-megavolt ampere transformer, one 240-kV circuit breaker, eight 34.5-kV circuit breakers, up to two 10-megavolt ampere capacitor banks, and associated substation equipment. Georgetown submitted that once the final selection of equipment is made, it will inform the Commission of the make, model and quantity of the equipment, and confirm whether the finalized design of the project is expected to increase the land, noise and environmental impacts beyond those reflected in the initial application to the Commission.

3. The project is sited on approximately 547 acres of privately owned agricultural land, in Vulcan County, within sections 4, 5 and 8 of Township 21, Range 25, west of the Fourth Meridian, as shown in the figure below. The BESS and Mossleigh 1051S Substation are located in Legal Subdivision 15 of Section 8, Township 21, Range 25, west of the Fourth Meridian.

Figure 1. Georgetown Solar + Energy Storage Project location



4. Separate applications will be submitted for approval to construct transmission infrastructure to connect the project to the Alberta Interconnected Electric System.
5. Georgetown's applications included:
  - A participant involvement program (PIP) summary, which details consultation with stakeholders within 400 metres of the project and notification to stakeholders within 800 metres of the project.<sup>1</sup>
  - A copy of the renewable energy project submission filed with Alberta Environment and Parks Fish and Wildlife Stewardship (AEP),<sup>2</sup> which is specific to wildlife and wildlife habitat and describes baseline environmental conditions and associated surveys or studies; identifies potential environmental impacts from the project; and describes mitigation to prevent or limit those impacts.<sup>3</sup> Supplemental environmental information was provided in response to AUC information requests.<sup>4</sup>

<sup>1</sup> Exhibit 27205-X0004, Attachment B1 - Georgetown Solar PIP Report.

<sup>2</sup> On October 24, 2022, the Ministry of Environment and Parks was renamed the Ministry of Environment and Protected Areas. Any references to AEP in Rule 033: *Post-approval monitoring requirements for wind and solar power plants* and elsewhere that relate to forward-looking obligations or commitments between the applicant and AEP should be interpreted as meaning Alberta Environment and Protected Areas.

<sup>3</sup> Exhibit 27205-X0005, Attachment C - Georgetown Solar AEP Submission and Exhibit 27205-X0006, Attachment D - AEP Information Requests and Responses.

<sup>4</sup> Exhibit 27205-X0071, Georgetown Solar Information Responses - AUC Round 2 June 2022.

- An environmental protection plan, completed by Western EcoSystems Technology, ULC, which summarizes the environmental protection measures that Georgetown commits to undertaking during the project's construction and operation.<sup>5</sup>
- An initial conservation and reclamation plan, completed by Western EcoSystems Technology, ULC, that describes the existing baseline conditions and land use associated with the project and outlines site-specific conservation and reclamation activities that have or will be undertaken.<sup>6</sup> The conservation and reclamation plan was updated on June 10, 2022, and the update was filed on the proceeding record.<sup>7</sup>
- The AEP renewable energy referral report, dated February 9, 2022, which ranked the project an overall low risk to wildlife and wildlife habitat.<sup>8</sup>
- A draft site-specific emergency response plan for the construction and operation of the project that was provided to local responders and authorities.<sup>9</sup>
- A solar glare assessment, completed by Green Cat Renewables Canada Corporation, which predicted that glare from the project is not likely to create hazardous glare conditions for nearby dwellings or transportation routes.<sup>10</sup>
- A noise impact assessment (NIA), completed by Green Cat Renewables Canada Corporation, which confirmed that the project will comply with Rule 012: *Noise Control*.<sup>11</sup>
- A *Historical Resources Act* approval dated September 30, 2021.<sup>12</sup>

6. Georgetown expected construction to begin in the third quarter of 2023, with a commercial operation date in the third quarter of 2024.

7. The Commission issued a notice of applications to area stakeholders, the Blood Tribe and Siksika Nation. In response, the Commission received statements of intent to participate from 10 parties. On May 12, 2022, the Commission issued its ruling,<sup>13</sup> granting standing to stakeholders in the area and denying standing to Wayne Robinson, as he did not demonstrate that the Commission's decision on the applications has the potential to directly and adversely affect his rights or interests.

8. Upon granting standing, the Commission set out a process to consider the applications, which included an oral hearing. Seven of the landowners that were granted standing formed the Mossleigh Landowners Group, which participated in the proceeding by asking information requests and filing evidence. The Mossleigh Landowners Group and its members subsequently

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<sup>5</sup> Exhibit 27205-X0008, Attachment F - Environmental Protection Plan.

<sup>6</sup> Exhibit 27205-X0009, Attachment G - C&R Plan.

<sup>7</sup> Exhibit 27205-X0069, Georgetown Solar Updated C&R Plan June 2022.

<sup>8</sup> Exhibit 27205-X0007, Attachment E - AEP-FWS Referral Report.

<sup>9</sup> Exhibit 27205-X0010, Attachment H - Georgetown Solar Emergency Response Plan.

<sup>10</sup> Exhibit 27205-X0013, Attachment K - SGHAR.

<sup>11</sup> Exhibit 27205-X0012, Attachment J - NIA.

<sup>12</sup> Exhibit 27205-X0011, Attachment I - Historical Resources Act Approval.

<sup>13</sup> Exhibit 27205-X0058, Ruling on standing.

withdrew their objections to the project on August 30, 2022.<sup>14</sup> Vulcan County filed a letter withdrawing from further participation in the Commission's process on August 31, 2022.<sup>15</sup> The Commission cancelled the oral hearing for the project on September 1, 2022, and provided the remaining intervener, Les Groeneveld, an opportunity to provide a brief written statement to supplement his existing submission. No submission was received by the Commission.<sup>16</sup>

9. In the Mossleigh Landowners Group's letter of August 30, 2022 (in which it and its members withdrew their objections to the project), the group also requested that the Commission remove the statements of intent to participate filed by the group and its members, as well as the evidence filed by the group, from the proceeding record. The Commission declined to remove the evidence from the proceeding record, but indicated that if it anticipated relying on the group's evidence to inform any specific findings or conditions, it would provide the applicant the opportunity to comment through information requests in advance of issuing a decision.<sup>17</sup> The Commission took account of the Mossleigh Landowners Group evidence but has not relied on that evidence in reaching its findings and determinations set out in this decision.

### **3 Discussion and findings**

10. The Commission has considered the applications in their entirety, and for the reasons outlined below, the Commission finds that approval of the project is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.

11. The Commission begins by discussing issues that are relevant to the project as a whole, including project consultation and the project's environmental and noise impacts. The Commission then discusses considerations that relate primarily to the power plant, substation, and BESS, in that order.

#### **3.1 Considerations relevant to the project as a whole**

12. The Commission considers that the information requirements specified in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines* have been met.

13. Georgetown's PIP consisted of notification to stakeholders, including occupants, residents, and landowners located within 800 metres of the project boundary, and personal consultation with stakeholders located within 400 metres of the project boundary. Georgetown also held a public open house and a virtual project update meeting. The PIP provided stakeholders with an opportunity to be informed of the project and provide feedback. Georgetown consulted with the Siksika Nation and Blood Tribe and obtained letters of

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<sup>14</sup> Exhibit 27205-X0099, Mossleigh Landowners Letter to the AUC dated August 30, 2022 re Withdrawal of Statements of Intent to Participate.

<sup>15</sup> Exhibit 27205-X0101, Vulcan County withdrawal request.

<sup>16</sup> Exhibit 27205-X0102, AUC letter - Ruling on requests to cancel oral hearing and withdraw submissions from the public record.

<sup>17</sup> Exhibit 27205-X0102, AUC letter - Ruling on requests to cancel oral hearing and withdraw submissions from the public record.

non-objection. The Commission finds that Georgetown's PIP has satisfied the requirements of Rule 007.

14. Georgetown was able to address the concerns of the Mossleigh Landowners Group, which resulted in the group and its members withdrawing their objections to the project. Vulcan County also withdrew from the proceeding, and indicated that its remaining concerns with the project could be addressed through continued engagement with the applicant.

15. Vulcan County requested that the Commission condition the project's approval to include bimonthly meetings between Georgetown and Vulcan County to review and approve vegetation and soil management plans, or alternatively that the Commission condition the approval with mitigation measures to address soil and vegetation management to the satisfaction of Vulcan County's development authority.<sup>18</sup>

16. In response, Georgetown filed a letter stating that it is fully engaged with Vulcan County to ensure compliance with municipal bylaws and site-specific requirements, and agreed to regular meetings with Vulcan County to review and incorporate feedback on vegetation and soil management.<sup>19</sup> In information responses to Vulcan County, Georgetown provided additional information on its soil and vegetation management practices, and re-iterated its commitment to ongoing consultation with Vulcan County at regular meetings.<sup>20</sup>

17. In light of the foregoing, the Commission understands that Georgetown takes Vulcan County's concerns seriously and is committed to regular, ongoing engagement. Vulcan County suggested that the Commission could impose conditions related to weed control, source and pinning of straw, and manure spreading, but did not propose specific conditions. To that end, the Commission considers that Vulcan County, and its development authority, are in the best position to communicate particular mitigation measures that they wish to see implemented or modified as the engagement process unfolds. The Commission does not find it necessary to impose conditions on the frequency or nature of meetings between Georgetown and Vulcan County. However, the Commission's approval of the project is premised on its understanding that Georgetown will abide by its commitments and continue to engage in good faith with Vulcan County to address its concerns in relation to vegetation, soil management and related matters.

18. The Commission accepts AEP's assessment that the project presents an overall low risk to wildlife and wildlife habitat due to being sited almost entirely on previously disturbed lands, and finds that any residual environmental effects can be reasonably mitigated by implementing the mitigation and monitoring measures committed to by Georgetown. Georgetown has committed to directionally drilling one collector line under a watercourse to mitigate impacts to native habitat. Other mitigation measures for the project include designing project fencing to minimize habitat infringement and entrapment risk, and enhance visibility to wildlife, and engaging a qualified environmental monitor to conduct environmental inspections to ensure compliance with all environmental commitments.

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<sup>18</sup> Exhibit 27205-X0056, Vulcan County - Georgetown AUC Submission.

<sup>19</sup> Exhibit 27205-X0057, Georgetown Letter to AUC, PDF page 5.

<sup>20</sup> Exhibit 27205-X0068, Georgetown Solar Information Responses to Vulcan County June 2022, PDF page 5.



19. Georgetown did not prepare a stand-alone environmental evaluation, instead filing the renewable energy project submission,<sup>21</sup> responses to AEP's information requests,<sup>22</sup> the environmental protection plan, and the initial conservation and reclamation plan. While the applications should have addressed all of the environmental information requirements set out in SP15 and TS24 of Rule 007, Georgetown has provided the missing information in responses to information requests from the Commission.<sup>23</sup> Future applications submitted by Georgetown must include a stand-alone environmental evaluation report.

20. The Commission is satisfied that, with diligent implementation of the mitigation measures outlined on the record of this proceeding, and adherence to the commitments made by Georgetown, the identified environmental effects of the project can be mitigated to an acceptable degree. The project area is located primarily on cultivated lands. No seasonal wetlands will be infringed by the project and the class I and II wetlands that are infringed have been cultivated through. No project infrastructure is sited within the 100-metre setback of seasonal wetlands, with one exception where a section of the fence is placed 94 metres from the edge of a seasonal wetland, on the quarter section line. The Commission considers that the seasonal wetlands may provide amphibian habitat, especially given that boreal chorus frogs were identified during the 2021 surveys. However, the Commission finds that the infringement is not likely to increase risk to wildlife in light of the mitigation committed to by Georgetown, which includes using silt fencing to protect wetlands from temporary soil placement and construction site water flow, and protecting low-usage bare soil areas. The Commission therefore finds that the potential for the project to impact wetlands is minimal. The Commission further notes that native grasslands are present but avoided by the project.

21. There is no project infrastructure within wildlife setbacks and no sharp-tailed grouse leks or raptor nests were identified in the project area.

22. As outlined in the AEP referral report,<sup>24</sup> Georgetown has committed to keeping wildlife data current, specifically repeating sensitive raptors and sharp-tailed grouse surveys every two years until the project is commissioned. If sensitive wildlife features are identified, a mitigation plan will be developed in consultation with Alberta Environment and Protected Areas.

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

- Georgetown Solar Inc. shall submit an annual post-construction monitoring report to Alberta Environment and Protected Areas – Fish and Wildlife Stewardship and the Commission no later than January 31 of the year following the mortality monitoring period, and on or before the same date every subsequent year for which Alberta Environment and Protected Areas requires surveys pursuant to subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

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<sup>21</sup> Exhibit 27205-X0005, Attachment C - Georgetown Solar AEP Submission.

<sup>22</sup> Exhibit 27205-X0006, Attachment D - AEP Information Requests and Responses.

<sup>23</sup> Exhibit 27205-X0071, Georgetown Solar Information Responses - AUC Round 2 June 2022.

<sup>24</sup> Exhibit 27205-X0007, Attachment E - AEP-FWS Referral Report.

24. The noise impact assessment (NIA) modelled the following equipment as major sound sources of the project:

- 75 inverter/transformer stations at the solar power plant.
- 80 energy storage containers, 20 power conversion stations, and two auxiliary transformers at the project BESS.
- A 256-megavolt ampere high-voltage transformer at the project substation.

25. The NIA identified six dwellings (R1 to R6) within 1.5 kilometres of the project boundary as receptors. The NIA established permissible sound levels (PSLs) to be 40 A-weighted decibels (dBA) nighttime and 50 dBA daytime at receptors R2, R3 and R4, and to be 45 dBA nighttime and 55 dBA daytime at receptors R1, R5 and R6, based on their dwelling densities and relative proximity to heavily travelled roads. In particular, the NIA explained that receptors R1, R5 and R6 have higher PSLs, because they are located between 30 metres and 500 metres from Highway 24, which qualifies as a heavily travelled road as defined in Rule 012.<sup>25</sup>

26. The NIA predicted receptors R1 and R6 would be the most affected receptors, with a predicted nighttime cumulative sound level of 44.5 dBA, which is 0.5 decibels lower than the nighttime PSL of 45 dBA.

27. Overall, the Commission finds the NIA meets the requirements of Rule 012 and accepts its conclusion that the project will comply with the rule. Given that predicted cumulative sound levels at receptors R1 and R6 are close to the nighttime PSL, and that the BESS would be a major noise contributor at these receptors, the Commission will require Georgetown to complete a post-construction comprehensive sound level survey to verify compliance with Rule 012 at these receptors once the project commences operation. Both receptors R1 and R6 are located to the north of the project, with a short distance (approximately 106 metres) between them. Therefore, it is likely that surroundings and ground cover conditions at these two receptors are similar. The Commission considers that there would be little value in collecting post-construction sound level data at both locations. Because Receptor R6 is slightly closer to the project than Receptor R1, the Commission finds that Receptor R6 would be the better monitoring location for the purposes of testing project noise compliance. The Commission imposes the following as a condition of approval:

- Georgetown Solar Inc. shall conduct a post-construction comprehensive sound level survey, including an evaluation of low frequency noise, at Receptor R6. The post-construction comprehensive sound level survey must be conducted under representative conditions and in accordance with Rule 012: *Noise Control*. Within one year after the project commences operations, Georgetown Solar Inc. shall file a report with the Commission presenting measurements and summarizing results of the post-construction comprehensive sound level survey.

28. The Commission finds that Georgetown has adequately considered the decommissioning and reclamation activities that will be required at the end of the project's life, including its

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<sup>25</sup> Exhibit 27205-X0012, Attachment J – NIA, PDF page 11.

obligations under the *Conservation and Reclamation Regulation*. Georgetown updated its conservation and reclamation plan to incorporate feedback from stakeholders during the proceeding, and confirmed that the conservation and reclamation plan will be updated throughout the project's life until a reclamation certificate has been obtained. In addition to its reclamation obligations under provincial legislation, Georgetown stated that the project land lease agreement includes a removal and reclamation clause, in which Georgetown commits to restoring the premises to their original condition, including restoration of the soil and land surface to its condition prior to installation of the solar facilities. Notably, Georgetown has substantiated its reclamation commitments by agreeing to provide a bond or a letter of credit in the amount of the estimated reclamation costs less salvage value to ensure sufficient funds are available at the project end of life.

### 3.2 Considerations specific to the power plant

29. Georgetown retained Green Cat Renewables Canada Corporation to assess solar glare. The solar glare assessment indicated that the project's solar panels would be mounted on a fixed-tilt racking system with a tilt angle of 28 degrees, and assumed that the project would use anti-reflective coating on the solar panels. The assessment considered five potential receptors near the project: two dwellings within approximately 800 metres of the project described in the assessment as D1 and D2; and three transportation routes, identified as Highway 24, Township Road 210 and Township Road 212. The solar glare assessment confirmed that there are no registered aerodromes within 4,000 metres of the project boundary.

30. The solar glare assessment predicted that dwellings D1 and D2 may experience yellow glare for up to 5,055 minutes per year and 1,490 minutes per year from the project, or a maximum daily glare of 32 minutes and 20 minutes, respectively.<sup>26</sup> Green Cat Renewables Canada Corporation submitted its analysis used conservative assumptions such as not considering obstruction from trees and buildings. It added that potential glare at the dwellings originates from the same general direction as the sun, so the glare impacts may be eclipsed by the direct effects of the sun if both can be seen simultaneously by the observer.

31. Highway 24 is not expected to experience glare at any level from the project.

32. The solar glare assessment predicted that drivers on Township Road 210 may observe yellow glare for up to 10,291 minutes per year, or a maximum daily glare of 72 minutes.<sup>27</sup> Georgetown explained that the actual solar glare experienced along this road would be less than the duration predicted in the assessment, as vehicle operators travel past the project rather than observing the solar panels from a stationary position as assumed in the assessment. Similar to dwellings D1 and D2, glare on Township Road 210 originates from the same general direction as the sun. Georgetown further noted that Township Road 210 is a gravel road and is not expected to experience high volumes of traffic.

33. With respect to Township Road 212, the solar glare assessment explained that glare impacts to Township Road 212 are expected to be limited or non-existent, because it is unlikely that the project solar panels, which are oriented to the south, will reflect sunlight to Township Road 212, which is located north of the project. However, the modelling indicated that drivers on Township Road 212 may experience a small amount of yellow glare (i.e., up to

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<sup>26</sup> Exhibit 27205-X0013, Attachment K – SGHAR, PDF page 23.

<sup>27</sup> Exhibit 27205-X0013, Attachment K – SGHAR, PDF page 20.

68 minutes of yellow glare per year). Although the modelling predicted the potential for yellow glare along Township Road 212, the assessment stated this prediction is “likely the result of approximations inherent in the software’s algorithms.”<sup>28</sup>

34. The solar glare assessment concluded that solar glare from the project is not expected to create a hazardous situation or have a significant adverse impact on a resident’s use of their home or to drivers on the roads.

35. The predictions and associated conclusions in the solar glare assessment were premised upon the use of an anti-reflective coating. Accordingly, the Commission imposes the following condition of approval:

- Georgetown Solar Inc. shall use anti-reflective coating on the project solar panels.

36. The Commission assesses glare impacts on a case-by-case basis. In the current circumstances, the Commission is satisfied that the glare impacts from the project will be minimal. However, the Commission requires that any glare issues associated with the project that may arise must be addressed by Georgetown in a timely manner. Accordingly, the Commission imposes the following condition of approval:

- Georgetown Solar Inc. shall file a report with the Commission detailing any complaints or concerns it receives or is made aware of regarding solar glare from the project during its first year of operation, as well as its response to the complaints or concerns. Georgetown Solar Inc. shall file this report no later than 13 months after the project becomes operational.

37. Georgetown stated that the final selection of the photovoltaic solar modules will be made prior to construction, based on the required electrical characteristics and economic aspects of available modules at the time of procurement. As such, the Commission imposes the following condition to ensure the final equipment does not result in impacts greater than those considered in this application:

- Once Georgetown Solar Inc. has finalized its equipment selection for the photovoltaic power plant it must file a final project update to the Commission to confirm that the project has stayed within the final project update specified allowances for solar power plants. The final project update must be filed at least 90 days prior to the start of construction.

### **3.3 Considerations specific to the substation**

38. The Commission finds that impacts from the construction and operation of the substation will be minor in nature. The footprint of the substation is within the project boundary, which the Commission considered in its assessment of the solar power plant. The NIA also demonstrated that the substation will operate in compliance with Rule 012.

39. The Commission notes that the substation may include capacitor banks for power factor correction and this will be determined after the inverters for the solar power plant are selected

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<sup>28</sup> Exhibit 27205-X0013, Attachment K – SGHAR, PDF page 20.

and analyzed. The Commission imposes the following condition to confirm the final substation equipment.

- Once Georgetown Solar Inc. has finalized its equipment selection for the substation, it must submit a final project update to the AUC confirming quantity and rating of the capacitor banks. The final project update must be filed at least 90 days prior to the start of construction of the substation.

### 3.4 Considerations specific to the battery energy storage system

40. Georgetown's proposed BESS is anticipated to be rated at 100 MW with a storage capacity of 200 MWh. The BESS is proposed to consist of 80 energy storage containers for lithium-ion phosphate batteries, 20 power conversion stations each having two inverters and a transformer, and two auxiliary transformers. Georgetown has not selected the battery vendor so specifications are subject to change.

41. The Commission considered the noise and environmental impacts of the BESS in its consideration of the project as a whole, and finds that impacts from the construction and operation of the BESS will be minor in nature.

42. The Commission notes that the final battery vendor has not been selected, but that Georgetown has indicated that it will utilize lithium-ion phosphate batteries. The Commission understands that the use of lithium iron phosphate<sup>29</sup> batteries mitigates some safety concerns related to battery technology because the materials in a lithium iron phosphate battery are thermally and structurally stable chemical compounds that are less prone to thermal runaway than those in other types of lithium-ion batteries. The Commission therefore imposes the following condition of approval.

- Georgetown Solar Inc. shall select lithium iron phosphate batteries for the BESS. If an alternate battery chemistry is selected, Georgetown Solar Inc. shall submit specifications such as the cell combustion phase duration and peak temperature to the Commission, along with confirmation the alternate chemistry possesses better thermal stability than lithium iron phosphate. Georgetown Solar Inc. shall also confirm the BESS monitoring equipment. Georgetown Solar Inc. cannot proceed with construction of the BESS until it receives written sign-off from the Commission.

43. Georgetown did not conduct toxicity plume modelling for the BESS because the battery vendor and battery module type had not been finalized. The specific components to be modelled in an air emissions event are dependent on the battery vendor and battery type. Georgetown indicated that it was prepared to engage a consultant to perform emissions dispersion modelling prior to construction. Although the Commission's preference is to receive emissions dispersion modelling concurrently with an application, the Commission accepts Georgetown's explanation for the absence of toxicity plume modelling in the circumstances. The Commission notes that the batteries are located together in the northwest of the project lands. The Commission therefore imposes the following condition of approval to ensure that potential emissions impacts are fully considered:

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<sup>29</sup> Lithium iron phosphate batteries are a type of lithium-ion battery which use iron phosphate as the cathode. They are also referred to as LFP batteries or LiFePO<sub>4</sub>.

- Upon final equipment selection of the BESS, Georgetown Solar Inc. shall engage the services of a third-party expert consultant to perform emissions dispersion modelling for gases potentially hazardous to health in the event of a fire at the BESS involving the battery modules, and assess the results of the modelling with reference to relevant air quality standards and guidelines from Alberta and other jurisdictions, including the *Alberta Ambient Air Quality Objectives* and the United States Environmental Protection Agency acute exposure guideline level 2 (AEG). The emissions dispersion modelling must reflect a reasonable worst-case scenario event taking into account the specific project layout. The emissions dispersion modelling report must be filed with the final project update prior to the anticipated start of construction. The Commission will review the report and notify Georgetown Solar Inc. if it is satisfied or has outstanding concerns. Georgetown Solar Inc. cannot proceed with construction of the BESS until it receives written authorization from the Commission.

44. Georgetown's draft emergency response plan considers the BESS. The draft emergency response plan summarizes information for first responders to safely and effectively respond to incidents that involve BESS and encourages local and rural fire departments to develop pre-incident plans for responding to fires, explosions, and other incidents associated with BESS installations. In response to a concern from Vulcan County regarding access for emergency responders, Georgetown confirmed that the project's internal road system will be compliant with the specifications set out in Vulcan County Policy 32-1009, including minimum road widths of six metres.<sup>30</sup> The Commission notes that the emergency response plan is a dynamic document and Georgetown has committed to updating it during planning milestones and that it will be reviewed annually during the construction and operation phase of the project.

45. While the Commission considers that iterative, site-specific emergency response plans are an important tool for preparing and responding to emergency incidents, proper third-party liability insurance coverage is also necessary. Accordingly, the Commission imposes the following conditions of approval:

- Georgetown Solar Inc. shall continually review and update its site-specific emergency response plan, and make any changes required to incorporate input received from local fire departments on mitigation measures and other related requirements, and from Vulcan County and other interested stakeholders. The updated plans are to be provided to Vulcan County and local fire departments.
- Georgetown Solar Inc., and any subsequent operator, shall at all times during the construction and operation of the project, maintain insurance coverage that is sufficient to protect against any reasonably foreseeable liabilities.
- Georgetown Solar Inc., and any subsequent operator, shall implement any ongoing upgrades to improve the safety of the project, including but not limited to firmware and software enhancements, monitoring capability enhancement, process changes and safety standards as they are developed.

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<sup>30</sup> Exhibit 27205-X0057, Georgetown Letter to AUC, PDF pages 5-6.

46. In light of the foregoing, and subject to the conditions set out in this decision and commitments undertaken by Georgetown, the Commission considers the applications to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

#### **4 Decision**

47. Pursuant to sections 11 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 27205-A001 and grants Georgetown Solar Inc., the approval set out in Appendix 1 – Power Plant Approval 27205-D02-2022 to construct and operate the solar power plant and battery energy storage system.

48. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 27205-A002 and grants Georgetown Solar Inc., the approval set out in Appendix 2 – Substation Permit and Licence 27205-D03-2022 to construct and operate the Mossleigh 1051S Substation.

49. The appendices will be distributed separately.

Dated on November 2, 2022.

#### **Alberta Utilities Commission**

*(original signed by)*

Douglas A. Larder, KC  
Vice-Chair

*(original signed by)*

Matthew Oliver, CD  
Commission Member

*(original signed by)*

John McCarthy  
Acting Commission Member

## Appendix A – Summary of Commission conditions of approval in the decision

This section is intended to provide a summary of all conditions of approval specified in the decision for the convenience of readers. Conditions that require subsequent filings with the Commission will be tracked as directions in the AUC's eFiling System. In the event of any difference between the conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

The following are conditions of Decision 27205-D01-2022 that require subsequent filings with the Commission and will be included as conditions of Power Plant Approval 27205-D02-2022:

- Georgetown Solar Inc. shall submit an annual post-construction monitoring report to Alberta Environment and Protected Areas – Fish and Wildlife Stewardship and the Commission no later than January 31 of the year following the mortality monitoring period, and on or before the same date every subsequent year for which Alberta Environment and Protected Areas requires surveys pursuant to subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.
- Georgetown Solar Inc. shall conduct a post-construction comprehensive sound level survey, including an evaluation of low frequency noise, at Receptor R6. The post-construction comprehensive sound level survey must be conducted under representative conditions and in accordance with Rule 012: *Noise Control*. Within one year after the project commences operations, Georgetown Solar Inc. shall file a report with the Commission presenting measurements and summarizing results of the post-construction comprehensive sound level survey.
- Once Georgetown Solar Inc. has finalized its equipment selection for the photovoltaic power plant it must file a final project update to the Commission to confirm that the project has stayed within the final project update specified allowances for solar power plants. The final project update must be filed at least 90 days prior to the start of construction.
- Georgetown Solar Inc. shall select lithium iron phosphate batteries for the BESS. If an alternate battery chemistry is selected, Georgetown Solar Inc. shall submit specifications such as the cell combustion phase duration and peak temperature to the Commission, along with confirmation the alternate chemistry possesses better thermal stability than lithium iron phosphate. Georgetown Solar Inc. shall also confirm the BESS monitoring equipment. Georgetown Solar Inc. cannot proceed with construction of the BESS until it receives written sign-off from the Commission.
- Upon final equipment selection of the BESS, Georgetown Solar Inc. shall engage the services of a third-party expert consultant to perform emissions dispersion modelling for gases potentially hazardous to health in the event of a fire at the BESS involving the battery modules, and assess the results of the modelling with reference to relevant air quality standards and guidelines from Alberta and other jurisdictions, including the *Alberta Ambient Air Quality Objectives* and the United States Environmental Protection Agency acute exposure guideline level 2 (AEGL). The emissions dispersion modelling must reflect a reasonable worst-case scenario event taking into account the specific project layout. The emissions dispersion modelling report must be filed with the final project update prior to the anticipated start of construction. The Commission will review



the report and notify Georgetown Solar Inc. if it is satisfied or has outstanding concerns. Georgetown Solar Inc. cannot proceed with construction of the BESS until it receives written authorization from the Commission.

The following is a condition of Decision 27205-D01-2022 that requires a subsequent filing with the Commission and will be included as a condition of Substation Permit and Licence 27205-D03-2022:

- Once Georgetown Solar Inc. has finalized its equipment selection for the substation, it must submit a final project update to the AUC confirming quantity and rating of the capacitor banks. The final project update must be filed at least 90 days prior to the start of construction of the substation.

The following are conditions of Decision 27205-D01-2022 that may or do not require subsequent filings with the Commission and will be included as conditions of Power Plant Approval 27205-D02-2022:

- Georgetown Solar Inc. shall use anti-reflective coating on the project solar panels.
- Georgetown Solar Inc. shall file a report with the Commission detailing any complaints or concerns it receives or is made aware of regarding solar glare from the project during its first year of operation, as well as its response to the complaints or concerns. Georgetown Solar Inc. shall file this report no later than 13 months after the project becomes operational.
- Georgetown Solar Inc. shall continually review and update its site-specific emergency response plan, and make any changes required to incorporate input received from local fire departments on mitigation measures and other related requirements, and from Vulcan County and other interested stakeholders. The updated plans are to be provided to Vulcan County and local fire departments.
- Georgetown Solar Inc., and any subsequent operator, shall at all times during the construction and operation of the project, maintain insurance coverage that is sufficient to protect against any reasonably foreseeable liabilities.
- Georgetown Solar Inc., and any subsequent operator, shall implement any ongoing upgrades to improve the safety of the project, including but not limited to firmware and software enhancements, monitoring capability enhancement, process changes and safety standards as they are developed.