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August 27th, 2025

### **Georgetown Solar + Energy Storage Project – Noise Impact Assessment Final Project Update**

Georgetown Solar Inc. (Georgetown Solar) has approval to construct and operate a photovoltaic (PV) electricity generating power plant with a capacity of up to 230-megawatt ( $MW_{AC}$ ) and a battery energy storage system (BESS) with a capacity of up to 200-megawatt-hour (MWh), located approximately seven kilometers northwest of the hamlet of Mossleigh, Alberta, designated as the Georgetown Solar + Energy Storage Project (the Project).<sup>1</sup>

Green Cat Renewables Canada Corporation (GCR) conducted a Noise Impact Assessment (NIA) for the Project in December 2021 (the Previous NIA)<sup>2</sup>, which was submitted to the Alberta Utilities Commission (AUC) as part of its application in Proceeding 27205. The Previous NIA concluded that the Project would comply with AUC Rule 012: Noise Control (Rule 012) requirements at all assessed receptors during both daytime (DT) and night-time (NT) periods.

Since the Project approval, Georgetown Solar has updated the Project layout, which included changes to the noise-producing Project elements and their locations. In August 2025, GCR updated the NIA to reflect the changes in the Project layout and equipment specifications. This letter presents the results of the updated NIA, which confirms that the Project, with its final layout, continues to comply with the AUC Rule 012 requirements at all assessed receptors. Additionally, it verifies that the potential noise impacts of the Project have been reduced from what was originally approved by the AUC.

The updated assessment is based on the layout provided by Georgetown Solar in July 2025, which is understood to be the final design for construction. The noise-producing Project elements assessed in the final layout include:

- 62 X Sungrow SG4400UD-MV Solar Inverter Stations (97.0 dBA)
- 64 X TESLA Megapack 2XL (FN03) – 2-hour fan mode (95.6 dBA)
- 16 X Medium Voltage (MV) BESS Transformer – each rated at 9.6 MVA (83.2 dBA)
- 1 X Project Substation with two 167 MVA High Voltage (HV) Transformer (101.2 dBA)
- 2 X BARD W60AC HVAC Units (84.3 dBA)

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<sup>1</sup> Power Plant Approval 27205-D01-2022, Georgetown Solar + Energy Storage Project, November 02, 2022; and Power Plant Approval 28586-D01-2023, Georgetown Solar + Energy Storage Project and Mossleigh 1051S Substation Time Extension, November 28, 2023

<sup>2</sup> AUC Exhibit 27205-X0012, Attachment J - NIA

The assessment considered the same six (6) receptors that were assessed in the Previous NIA for the Project. In addition, Georgetown Solar identified one (1) new receptor located within 1.5 km of the Project property boundary, which has been included in this assessment.

To re-evaluate the baseline sound levels at the receptors, GCR conducted a new search in August 2025 for active and approved regulated third-party energy-related facilities (both AER and AUC) and pumping wells within 3km of the Project property boundary. No new active or approved facilities were identified within this area. However, the search determined that two facilities and three wells that were considered in the Previous NIA are now either suspended or abandoned. As a result, these facilities and wells have been excluded from the baseline assessment, and the baseline sound levels at all assessed receptors have been adjusted accordingly.

The results of the updated NIA, with a comparison to the Previous NIA, are provided in **Table 1**. The updated NIA was conducted using the latest version of the iNoise software (version 2024.3, released March 5, 2025), which incorporates the new version of the ISO 9613-2.

Table 1 – Updated Noise Modelling Results and Comparison with the Previous NIA

Receptor ID <sup>3</sup>	Previous NIA Project Sound Level (dBA)	Updated NIA Project Sound Level (dBA)	Difference (dB)
R01	42.4	39.1	-3.3
R02	36.6	33.9	-2.7
R03	27.0	25.9	-1.1
R04	34.1	29.3	-4.8
R05	28.8	25.9	-2.9
R06	42.4	39.1	-3.3
R07	-	26.1	-

As shown above, the predicted Project sound levels at all receptors included in the Previous NIA have been reduced between 1.1 to 4.8 dB in the final layout compared to the previous layout. The Project sound level contours are shown in **Appendix A**.

<sup>3</sup> Receptors R07 is newly added and were not included in the Previous NIA.

**Table 2** presents the updated results of the cumulative impact and compliance results for both DT and NT periods.

Table 2 – Updated Cumulative Sound Level Assessment for NT and DT Periods


Receptor	Updated Baseline Sound Level (dBA)		Updated Project Sound Level (dBA)		Updated Cumulative Sound Level (dBA)		Permissible Sound Level (dBA)		Updated PSL compliance Margin (dB)	
Dwelling ID <sup>4</sup>	NT	DT	NT	DT	NT	DT	NT	DT	NT	DT
R01	40.1	50.0	39.1	39.1	42.6	50.3	45	55	2	5
R02	35.5	45.1	33.9	33.9	37.8	45.4	40	50	2	5
R03	35.1	45.0	25.9	25.9	35.6	45.1	40	50	4	5
R04	35.2	45.0	29.3	29.3	36.2	45.1	40	50	4	5
R05	40.1	50.0	25.9	25.9	40.3	50.0	45	55	5	5
R06	40.1	50.0	39.1	39.1	42.6	50.3	45	55	2	5
R07	35.1	45.0	26.1	26.1	35.6	45.1	40	50	4	5

All assessed receptors are predicted to remain in compliance with the PSLs established in AUC Rule 012. R01, R02, and R06 remain as the most impacted receptors. The highest predicted cumulative sound levels occur at R01 and R06, each with a 2.4 dB compliance margin during NT hours, while R02 has the lowest predicted margin at 2.2 dB during NT hours. These compliance margins have increased from 1 dB in the Previous NIA, reflecting the reduction in predicted project sound levels presented in **Table 1**.

A low frequency noise (LFN) assessment determined that the sound predicted from the Project, with the final Project layout, is not likely to produce any significant LFN effects.

Based on the updated assessment, the Georgetown Solar + Energy Storage Project, with its final layout, is expected to remain in full compliance with AUC Rule 012 requirements at all assessed receptors.

Kind regards,



**Merlin Garnett**

Principal Consultant, Green Cat Renewables Canada Corporation

<sup>4</sup> Receptors R07 is newly added and were not included in the Previous NIA.





This document has been prepared by Green Cat Renewables Canada Corporation. The material and data in this report were prepared under the supervision and direction of the undersigned.



**August 27, 2025**  
Justin Lee, P.Eng.

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RM APEGA ID#:	250600
DATE:	August 27, 2025
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The Association of Professional Engineers and Geoscientists of Alberta (APEGA)	

*This noise impact assessment is being issued with professional engineering authentication. The information contained in this report, to which the engineering authentication applies, is deemed complete for the intended purpose.*

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