

Appendix 3 – Noise impact assessment summary form
(Please retain detailed records for compliance purposes)



Licensee: Horus Energy

Facility name: Dunmore Solar Type: Solar

Legal Location: 27-12-4 W4M, E 33-12-4 W4M, W 34-12-4 W4M

Contact: Maggie McKenna Telephone: (403) 608-7833

1. Permissible Sound Level (PSL) determination (Rule 012, Section 2)

(Note that the PSL for a pre-1988 facility undergoing modifications is the equivalent noise level (Leq) that currently exists at the dwelling if no prior noise complaint exists and the current sound level Leq exceeds the calculated PSL from Section 2.1.)

Complete the following for the most impacted dwelling(s) or at a distance of 1.5 km where there are no dwellings:

Dwelling Distance from facility (m)	Dwelling Direction from facility	BSL (dBA)	Daytime Adjustment (dBA)	Nighttime PSL (dBA)	Daytime PSL (dBA)
300m	East	40	+10	40	50

2. Sound source identification

For the new and existing equipment, identify the model major sources of noise from the facility, their associated sound power level (PWL) or sound pressure level (SPL).

New and/or Existing Equipment Noise Sources (include make and model, power rating)	Predicted <u>or</u> Measured		Data Source (Vendor Measurement theoretical, etc.)	Distance SPL measured from the noise source (m)
	<input checked="" type="checkbox"/> PWL (dBA) or <input type="checkbox"/> SPL (dBA)	<input type="checkbox"/> PWL (dBA) or <input checked="" type="checkbox"/> SPL (dBA)		
Sungrow Inverter 2500 kW		72.2	Vendor	1.0m
2.5MVA Transformer	74.8		Theoretical	
240MVA Transformer Substation	103.5		Theoretical	

Provide a tentative schedule and timing for the operation, maintenance and testing of the equipment

The proposed facility has a planned In-Service Date (ISD) of Q2 2023.

3. Normal operating conditions

When using manufacturer’s data for expected performance, it may be necessary to modify the data to account for actual operating conditions (for example, indicate conditions such as operating with window/doors open or closed, load, RPM). Describe any considerations and assumptions used in preparing estimates:

Fully operational 24/7

4. Noise modelling parameters

If modelling was conducted, identify the model input parameters used (see Section 3.2):

Relative Humidity: 70%, Temp.: 10°C, No source directivity, Ground Attenuation: 0.5, Receptor Height: 4.5m, # of Sound reflections: 1, Wind: 1 – 5 m/s from facility to receptor as per ISO-9613, Terrain: 5m interval, Inverter height 2.5m, MV Transformer height 1m, HV Transformer height 3m

(continued)

5. Predicted sound level/ compliance determination

Identify the predicted sound level at the most impacted dwelling(s) or at a distance of 1.5 km where there are no dwellings. Typically, only the nighttime sound level is necessary, as levels do not often change from daytime to nighttime. However, if there are differences between day and night operations, both levels must be calculated.

Predicted Nighttime Cumulative Sound Level Including the New or Modified Facility (dBA)						
Receptor	Ambient Sound Level	Sound Level from Existing, Approved, and Proposed (Deemed Complete Facilities)	Baseline Sound Level	Predicted Sound Level from new or modified facility alone	Cumulative Sound Level	Permissible Sound Level
R1	35	-	35.0	26.9	35.6	40

Predicted Daytime Cumulative Sound Level Including the New or Modified Facility (dBA)						
Receptor	Ambient Sound Level	Sound Level from Existing, Approved, and Proposed (Deemed Complete Facilities)	Baseline Sound Level	Predicted Sound Level from new or modified facility alone	Cumulative Sound Level	Permissible Sound Level
R1	45	-	45.0	26.9	45.1	50

Is the predicted sound level less than the permissible sound level by a margin of three dBA? Yes No

If No, conduct a detailed NIA as per Section 3 of AUC Rule 012.

6. Supply any other relevant information you want to provide to the AUC. Submit additional pages if required.

Most impacted dwelling(s) assessed at UTM position (R1): 538152 5543930. R1 has been modelled as a two-story property.

7. If the nighttime permissible sound level is higher than 40 dBA L_{eq} , provide supplementary information to support the use of such permissible sound level.

8. Explain what measures have been taken to address construction noise.

- Construction will be primarily semi-sized trucks dropping off modular equipment.
- Horus will construct during daytime hours (7:00-22:00), with noise primarily limited to mobile equipment including cranes, trucks, graders and bulldozers.
- Keep equipment and vehicles in good working order

9. Acoustical practitioner's information (See Section 3.2 (12)):

Company:
Green Cat Renewables

Name:
Cameron Sutherland

Experience: 15 years

Title: Technical Director Telephone: (403) 540 7782 Date: March 15th, 2021