Appendix 3 – Noise impact assessment summary form

(Please retain detailed records for compliance purposes)

Licensee: Solar Krafte Utilities

Facility name: Spring Coulee Solar Project Type: 38.35 MWDC Solar Plant

Legal location: W½ 15-004-24 W4M Contact: Jeff Thachuk, LL. B

Telephone: (403) 897-9768

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

Complete the following for the most affected 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)
740	ESE	45.0	10.0	45.0	55.0

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	Predicted or Measured		Data source	Distance SPL
Noise Sources (include make and model, power rating)	X PWL (dBA) or	☐ PWL (dBA) or	(Vendor Measurement theoretical, etc.)	measured from the noise source (m)
	☐ SPL (dBA)	☐ SPL (dBA)		
(7) SMA 4400-S2-US Inverter/Transformer MVPS	95.9	NA	Vendor Supplied Lw	NA
AltaLink Spring Coulee Substation 385S (3) 66/25kV Transformers	NA	87.1	Site Measurement	NA

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

Solar Krafte to provide

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:

Solar Plants operate only during daylight hours. Summer operation can include power generation (early mornings) during the AUC defined nighttime period. The modelling reflects continuous operation during the entire nighttime period not just from the time there is enough light to the beginning of the daytime period.

4. Noise modelling parameters

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

Softnoise GmbH Predictor Type 7810 V.12.01 / ISO 9613 / Ground Attenuation Factor: 0.5 / Local Meteorological Correction: 0 / Receiver Height: 1.5m / Relative Humidity: 70% / Temperature: 15˚C / Wind Velocity: 1.0m/sec – 5.0m/sec (ISO 9613 default w/mild inversion) / Topography: Natural Resources Canada 15m LiDAR - Canadian Digital Elevation Model.

5. Predicted sound level/compliance determination

Predict the cumulative sound level at the most affected 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
NE¼ 10	40.0	30.5	45.0	24.2	40.5	45.0

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
NE¼ 10	50.0	30.5	45.0	24.2	50.0	55.0

Is the predicted cumulative sound level less than the permissible sound level by a margin of three dBA?

Yes __X__ 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.

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.

ALBERTA HIGHWAYS 1 TO 986
TRAFFIC VOLUME HISTORY 2011 - 2020
Alberta Transportation
Produced: 18-Feb-2021 By CornerStone Solutions Inc.

Hwy	CS	TCS	Muni	Location Description	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT
5	04	08	Card	E OF 503 NE OF CARDSTON	2160	2280	2300	2240	2340	2480	2580	2410	2490	2270
5	04	08	Card	W OF 820 SW OF SPRING COULEE	1970	2090	2110	2110	2190	2240	2260	2110	2170	1990

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

Applicant will limit construction to the AUC daytime period and advise residents of any significant noise generating activities and arrange the best times to complete. Vehicles used during construction will be well maintained with muffler systems.

9. Acoustical practitioner's information (See Section 3.2 (15)):

Company: FDI Acoustics Inc. - Suite 250, 600 Crowfoot Crescent N.W. Calgary, Alberta T3G 0B4

Name: Peter Davis, C.E.T. / James Farquharson, C.E.T., INCE

Experience: Mr. Davis has 23 years of acoustics experience preparing NIAs in the Province of Alberta. Mr. Farquharson has 32 years of acoustics experience preparing NIAs in the Province of Alberta.

Title: Acoustical Consultant. Telephone: 403-547-9511 Date: September 03, 2021