NOISE



- Noise from the project is regulated by the AUC through Rule 012: Noise Control.
- Cumulative noise levels at occupied dwellings must not exceed daytime (7 am to 10 pm) or nighttime (10 pm to 7 am) Permissible Sound Level (PSL) limits.
- Cumulative noise levels include natural and nonindustrial sources, existing industrial facilities, and the proposed project.

- A computer model is used to predict cumulative noise levels at occupied dwellings located within 1.5 km of the project.
- Noise levels are expressed in A-weighted decibels (dBA). The graphic below provides dBA noise levels for common sources.



Noise Assessment Results: Contribution Rule 012 Cumulative Noise from Noise from Natural Permissible Noise Level Existing Sound Level and Non-[dBA] Compressor Project Industrial [dBA] Station [dBA] [dBA] Sources [dBA] Night Day Night Day Night Day 45 35 18.5 45.2 **RR01** 32.0 36.8 50 40 35 17.7 45.2 36.4 **RR02** 45 30.4 50 40 35 25.4 45.1 35.5 50 **RR03** 45 13.3 40 35 45.1 **RR04** 45 25.8 13.4 35.5 50 40



ENTERPRISE SOLAR POWER PROJECT

The project is

with PSL limits.

predicted to comply









GLARE



- The AUC requires a glare assessment for solar facilities
- The assessment uses the Solar Glare Hazard Analysis Tool (SGHAT) developed by the US Federal Aviation Administration.
- SGHAT predicts glare based on the location and orientation of solar panels and the sun's path through the sky.
- SGHAT characterizes glare at receptors based on the brightness and size of the glare spot formed on the retina of an observer's eye.
- The magnitude of the glare effect is characterized using a colour-coded classification scheme:
 - no glare there are no glare effects
 - green glare glare is present but there is a low potential for temporary after-image
 - yellow glare glare is present with potential for temporary after-image
 - red glare glare is present with the potential for permanent eye damage

- The glare assessment considers the following receptors:
 - 12 occupied dwellings located within 2 km
 - two airstrips within 10 km (i.e., Vulcan/Kirkcaldy Aerodrome and Vulcan Municipal Airport)
 - the four closest roadways (i.e., HWY 534 to the north, RR 251 to the east, RR253 to the west, and Township Road 163 to the south)
 - the CP railway running north and east
- The project incorporates design features that minimize glare:
 - anti-reflective coating on the solar panels
 - tracking system that adjusts solar panel orientation to maximize absorption and minimize reflection
- SGHAT predicts there will be no project-related glare at any of the receptors considered in the assessment.











WILDLIFE STUDIES

power for good

Wildlife studies were completed in 2019 and 2020 and include:

- Spring migration bird surveys (2020)
 - Species observed include two provincially listed 'Sensitive' species: American kestrel and sharp-tailed grouse
- Fall migration bird surveys (2019)
 - Species observed include one provincially listed 'Sensitive' species: prairie falcon
- Breeding bird surveys (2019 & 2020)
- Raptor nest surveys (2019 & 2020)
 - One active great-horned owl nest was observed. The Project is outside of the nests 100 m setback
- Sharp-tailed grouse surveys (2020)
 - No sharp-tailed grouse leks were observed
- Incidental observations (2019 & 2020)
 - 38 species were recorded including three provincially listed 'Sensitive' species: least flycatcher, sharp-tailed grouse, and upland sandpiper

Ongoing surveys:

• Raptor nest and sharp-tailed grouse surveys will be completed once every two years until the Project is commissioned

ENVIRONMENTAL PROFILE





Site Characteristics:

- Located in Vulcan County, approximately 4 km southwest of the Town of Vulcan, Alberta.
- Predominantly cultivated lands with some wetlands.
- The Project operations area has the potential to permanently affect 315.9 ha of land during operation.

Fieldwork and mapping:

- Wetlands were identified using imagery from 2018 and information from publicly available datasets.
 Desktop wetland delineations were field-verified in 2020.
- Early and late season rare plant surveys were conducted 2020.

Summary of Environmental findings:

- Land cover type in the Project Study Area is comprised of 528.8 ha of cultivation, 5.4 ha of wetlands and ephemeral waterbodies, and 1.0 ha of development.
- The Project layout was designed to avoid Class III-VI wetlands.
- Temporary Project construction area will be reclaimed to equivalent land use (e.g., cultivation).

Ongoing work:

• Pre-construction soil surveys will be completed to inform soil salvage activities and future reclamation plans.



CONSTRAINTS





