ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖏᑦᑎᒍᑦ ᑐᒃᓯᖅᑑᑦ ᕿᒥᕐᕈᔭᒃᓴᖅ #125713

Coral Harbour Solar and Energy Storage Project

ᑐᒃᓯᖅᑑᑕᐅᔪᖅ ᖃᓄᐃᑦᑑᓂᖓ:	New
ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔫᑉ ᖃᓄᐃᑦᑑᓂᖓ:	ᐆᒻᒪᕐᑯᑎᓕᕆᐤᐱᒃ
ᐅᓪᓗᖓ ᑐᒃᓯᖅᑑᑎᓕᐊᕕᓂᐅᑉ:	5/31/2022 5:54:45 PM
Period of operation:	from 0001-01-01 to 0001-01-01
ᑲᔪᓯᒃᑲᐃᕈᐅᓂᐊᕋᓯᒋᔭᐅᔪᑦ:	from 0001-01-01 to 0001-01-01
ᐱᓕᕆᐊᖃᕈᒪᔪᖅ:	Dana May Kivalliq Alternative Energy Ltd. PO Box 188 Rankin Inlet Nunavut X0C 0G0 Canada ᐅᖃᓚᐅᑏᑦ: 403-968-1516, ᓯᑲᔪᒃᑯᑦ:

ᑐᓴᐅᒪᔭᒃᓴᑦ

ᖃᓄᐃᑦᑑᑎᓂᒃ ᐱᓕᕆᐊᖅᑲᖅᓂᐊᕆᐊᖕᒐᓐᓂᒃ

ᖃᓪᓗᓈᑎᑐᑦ: The community of Coral Harbour is the proposed location for one of the first utility-scale renewable energy and battery storage systems in the territory of Nunavut. The combined solar energy generation and storage project will be integrated with the community's microgrid, which operates remotely as part of the regional electrical utility network run by Qulliq Energy Corporation (QEC). The Project is proposed to include a 0.96 MW solar PV installation, with a complementary 1 MWh battery. Together, this system would have the capacity to provide up to 31% of the community's existing energy demand, displacing an estimated 360,000 L of diesel fuel consumption annually, or more than 10 million litres over the project's 30-year lifetime. This equates to total carbon emission savings of approximately 28,000 tonnes of CO_2. The Project began with the development of the Coral Harbour Community Energy Plan (the CEP), funded through the Indigenous Off Diesel Initiative. The CEP was created in collaboration with community stakeholders and concluded with a community open house hosted in Coral Harbour in June of 2022. Through the work of the CEP, the project team narrowed its carbon reduction focus towards development of a solar PV energy project which will contribute to achieving the community's renewable energy goals: a clean energy system, capable of displacing fossil fuel consumption on a utility-scale, developed for and operated within Nunavut's upcoming Independent Power Producer policy. To date, preliminary feasibility work following the creation of the Community Energy Plan has included narrowing of the project scope to an appropriate size and type of energy production, engaging with key stakeholders, selecting a project site, developing the preliminary solar project design, modelling energy output, creating a project budget, and conducting a topographical survey of the project area. The project team has also hired a contractor to conduct upcoming geotechnical assessment work. Further development work is scheduled to take place in 2022-2024. This work will include execution of a geotechnical assessment at the site, detailed design and engineering, securing a land lease, environmental and regulatory permitting, contractor and supplier procurement, and interconnection studies with QEC. The project is also awaiting the release of QEC's Independent Power Producer policy, currently under development in cooperation with the Government of Nunavut, which is required in order for a non-utility owned energy project to be constructed and operated within Nunavut. Finally, construction of the project is scheduled to take place in 2024. Construction activities will include capital equipment purchases, preparation of the site, contract execution for the delivery and installation of all equipment including the solar array, battery, microgrid controller, and supporting electrical infrastructure, as well as project and development management services, commissioning, and clean up. Permanent structures to be built on the 2.6 ha (6.5 acre) site area will include: solar PV arrays, several inverters, transformers, electrical meters, point of interconnection equipment, battery and battery housing, a microgrid control system, underground and overhead electrical collection systems, and the associated concrete pads for all equipment. Additionally, a new or updated electrical distribution line connecting the project site to the QEC powerhouse may also be required. This project has received funding for early-stage development work through to 2024, and is in the process of seeking additional funding for a portion of the construction activities.

ᐅᐃᕖᑎᑐᑦ: This project is located in the Kivalliq region, therefore a French project description is not required, as per the instructions.

ᐃᓄᒃᑎᑐᑦ: ᓴᓪᓕᖅ ᐃᓚᒋᔭᐅᔪᖅ ᓯᕗᓪᓕᖅᐸᐅᑎᔭᐅᔪᓂᒃ ᐆᒪᖅᑯᑎᓕᐅᕆᔾᔪᑎᓄᑦ ᐊᒻᒪᓗ ᐸᑐᕈᓄᑦ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᓂᑦ ᓄᓇᕗᒻᒥᑦ. ᑲᑎᑦᑐᒥᑦ ᓯᖅᑭᓂᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᐅᕆᔪᖅ ᐊᒻᒪᓗ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᒃ ᐃᓚᔭᐅᓂᐊᖅᑐᖅ ᓄᓇᓕᐅᑉ ᐆᒪᖅᑯᑎᓕᐅᕈᑎᐊᓄᑦ, ᐊᐅᓛᖅᑲᑦᑕᖅᑐᖅ ᐅᖓᓯᒃᓱᓂ ᐃᓚᒋᔭᐅᑉᓗᓂ ᐃᑯᒻᒪᖅᑯᑎᓕᐅᕆᔪᓄᑦ ᐊᐅᓚᑕᐅᔪᑦ ᖁᓪᓕᖅ ᐆᒪᖅᑯᑎᓕᕆᔨᒃᑯᓐᓄᑦ. ᐱᓕᕆᐊᒥᑦ ᐃᓚᐅᓂᐊᖅᑐᑦ 0.96 MW ᓯᖅᑭᓂᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᐅᕈᑎ ᐃᓕᔭᐅᓗᓂ, ᐃᓚᖃᖅᓗᓂ 1 MWᐃᑲᖅᑯᒧᑦ ᐸᑐᕈᖅ. ᐊᑕᐅᑦᑎᒃᑯᑦ, ᐋᖅᑭᐅᒪᔪᖅ 31%-ᖓᓂᒃ ᓄᓇᓕᐅᑉ ᒫᓐᓇ ᐆᒪᖅᑯᑎᑳᖑᖃᑦᑕᖅᑐᒥᒃ ᐆᒪᖅᑯᑎᓕᐅᕆᖅᑲᑦᑕᕋᔭᖅᑐᖅ, ᐃᓇᖏᓗᓂ 360,000 ᓖᑕᓂᒃ ᐅᖅᓯᐊᓗᒃᑐᖅᓂᖅᒥᒃ

ᐊᕐᕌᒍᑕᒫᑦ, ᐅᓇᓐᓇᖅᑐᓂ 10 ᒥᓕᔭᓐ ᓀᑕᐃᑦ ᐅᖓᑖᓄᑦ ᐱᓕᕆᐊᖅ 30 ᐅᑭᐅᓂᑦ ᐊᐅᓚᖅᓯᓗᒃᑖᖓᓂᑦ. ᑲᑎᕐᓗᒥᑦ ᐱᓕᐅᕆᙵᒥᓪᓗᓂ ᑳᐸᓐ (carbon) ᐊᓂᐊᔪᓂᒃ 28,000 ᑕᓐᓗᐊᓂᒃ CO2-ᒥᒃ.ᐱᓕᕆᐊᖅ ᐱᒋᐊᓚᐅᖅᑐᖅ ᐱᓇᓪᓕᐊᐸᓗᒍ ᓴᓪᓕᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᕆᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ (CEP), ᐱᓇᐅᔭᖅᑲᖅᑎᑕᐅᐸᓗᓂ ᓄᓇᖅᑲᖅᑳᖅᑐᑦ ᐅᖅᓱᐊᓗᒃᑐᑮᕐᓃᖅᑎᑕᐅᓂᕐᒧᑦ ᐱᓕᕆᐊᕐᒍᔪᒃᑯᑦ. CEP ᓴᖅᑭᑕᐅᓚᐅᖅᑐᖅ ᐱᓕᕆᖃᑎᒋᐸᓗᒥᑦ ᓄᓇᓕᕐᒥᑦ ᐃᓚᒋᔭᐅᔪᑦ ᐊᒻᒪᓗ ᐱᒋᐊᓕᖅᓱᑎᒃ ᓄᓇᓕᕐᒥᑦ ᐅᒃᑯᐃᖓᑎᑦᑎᐸᓗᓂ ᐃᓄᖕᓄᑦ ᒪᓐᓃᑦ (ᔫᓂ) 2022-ᒥᑦ. ᐱᓕᕆᐊᕐᒥᑦᑎᒍᑦ CEP-ᑯᑦ, ᐱᓕᕆᔪᑦ ᑕᐅᑐᙳᖃᓚᐅᖅᑐᑦ ᑳᐸᓐᑐᓗᐊᕐᒥᓕᕐᓂᕐᒧᑦ (carbon) ᐱᓇᓪᓕᐊᓂᒃᑯᑦ ᓯᕿᓂᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᐅᕈᑎᒥᒃ ᐃᑲᔪᐃᓂᖅᑲᖅᓱᓂ ᓄᓇᓕᐅᐸ ᐊᑐᒃᑲᓐᓂᕈᕐᓇᖅᑐᑦ ᐆᒪᖅᑯᑎᓕᐅᕆᓂᕐᒧᑦ ᑐᕌᖓᕐᒥᓐᓂᑦ: ᓴᓗᒪᔪᒥᒃ ᐆᒪᖅᑯᑎᓕᐅᕈᑎ, ᐃᓇᕐᒌᔪᕐᓇᖅᓱᓂ ᐅᖅᓱᐊᓗᒃᑐᖅᑐᖅ ᐆᒪᖅᑯᑎᓕᐅᕈᑎᕐᒫᓐᓂᑦ, ᐱᓇᓪᓕᐊᐸᓗᑎᒃ ᐊᐅᓚᖅᑎᕐᓗᒍ ᓄᓇᕗᒻᒥᑦ ᑕᐃᒪᐅᓂᐊᖅᑐᖅ ᐃᖅᒥᒃᑯᑦ ᐆᒪᖅᑯᑎᓕᐅᕆᓂᕐᒧᑦ ᐊᑐᐊᒐᖓᒐᑎᒍᑦ.ᐅᐸᓗᒥᒧᑦ ᑎᑭᕐᓗᒍ, ᓯᕗᓂᐊᒍᑦ ᐊᔪᙱᓐᓂᐊᕐᒪᖔᑦ ᐱᓕᕆᐊᖃᓚᐅᖅᑐᑦ ᑭᖑᓂᐊᒍᑦ ᓴᖅᑭᑕᐅᓗᓂ ᓄᓇᓕᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᐅᕆᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ ᐃᓚᐅᐸᓗᑎᒃ ᐱᓕᕆᐊᖅ ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖓ ᓈᒻᒪᒡᓗᓂ ᐊᖏᑎᒥᓂᖓ ᐊᒻᒪᓗ ᖃᓄᐃᑦᑑᓂᖓ ᐆᒪᖅᑯᑎᓕᐅᕆᓂᖅ, ᐃᓚᐅᑎᕐᓗᒥᑦ ᐃᓚᒋᔭᐅᔪᑦ, ᓂᕈᐊᖅᓗᑎᒃ ᐱᓕᕆᐊᕐᒧᑦ ᐃᓂᒃᓴᒥᒃ, ᐱᓇᓪᓕᐊᐸᓗᒍ ᓯᕗᓂᐊᒍᑦ ᓯᕿᓂᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᐅᕆᓂᖅ ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖓ, ᐋᖅᑭᐅᒪᔪᓕᐅᕆᓂᖅ ᐆᒪᖅᑯᑎ ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖕᒪᓂᑦ, ᐱᓕᕆᐊᕐᒧᑦ ᐱᓇᐅᔭᖅᑑᑎᓕᐅᖅᓱᑎᒃ, ᐊᒻᒪᓗ ᓄᓇᒥᒃ ᖃᐅᔨᓴᐃᓂᖅᑲᖅᓱᑎᒃ ᐱᓕᕆᐊᖃᕐᕕᐅᓂᐊᖅᑐᒥᑦ. ᐱᓕᕆᔪᑦ ᑳᓐᑐᕌᒃᑎᑦᑎᓚᐅᕐᒥᔪᑦ ᑕᐃᒪᐅᓂᐊᖅᑐᒥᒃ ᓄᓇᒥᒃ ᖃᐅᔨᓴᐃᓂᐊᕐᓗᑎᒃ.ᐱᓇᓪᓕᐊᓂᕐᒧᑦ ᐱᓕᕆᒃᑲᓐᓂᕐᓂᐊᖅᑐᑦ 2022-2024-ᒥᑦ. ᐱᓕᕆᐊᕐᒥᑦ ᐃᓚᐅᓂᐊᖅᑐᑦ ᓄᓇᒥᒃ ᖃᐅᔨᓴᐃᓗᑎᒃ ᐃᓂᐅᔪᒥᑦ, ᓇᓗᓇᐃᔭᖅᓯᒪᓗᒍ ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖓ ᐊᒻᒪᓗ ᓱᓇᑐᐃᓐᓇᓕᕆᓃᑦ, ᐋᖅᑭᒃᑕᐅᓗᓂ ᓄᓇᒥᒃ ᐊᑐᖅᑐᐊᕐᓂᖅ, ᐊᕙᑎᒥᒃ ᐊᒻᒪᓗ ᒪᓕᒐᓕᕆᓂᕐᒧᑦ ᐱᔪᕐᓇᖅᑎᑦᑎᔾᔪᑎᓂᒃ ᐳᒥᑦᓂᒃ, ᑳᓐᑐᕌᒃᓂᐊᖅᑐᓂᒃ ᐊᒻᒪᓗ ᓂᐅᕕᕐᕕᐅᓂᐊᖅᑐᓂᒃ, ᐊᒻᒪᓗ ᑲᑎᓐᓂᖅᑲᕐᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᓗᑎᒃ ᖁᓪᓕᖅ ᐆᒪᖅᑯᑎᓕᕆᔾᔪᒃᑯᑦ ᐱᖃᑎᒋᓗᒥᑦ. ᐱᓕᕆᐊᖅ ᐅᑕᖅᑭᕐᒥᔪᖅ ᓴᖅᑭᑕᐅᓂᐊᕐᓂᕐᒪ ᖁᓪᓕᒃᑯᑦ ᐃᖅᒥᓂᒃ ᐆᒪᖅᑯᑎᓕᐅᕆᓂᕐᒧᑦ ᐊᑐᐊᒐᖕᒐᑦ, ᒫᓐᓇᐅᔪᖅ ᐱᓇᓪᓕᐊᔭᐅᔪᖅ ᐱᓕᕆᖃᑎᒋᐸᓗᒥᑦ ᓄᓇᕗᒻᒥ ᒐᕙᒪᒃᑯᑦ, ᐱᔭᕆᐊᖃᖅᑐᖅ ᐆᒪᖅᑯᑎᓕᐅᕈᑎᒥᑦ ᓇᕐᒥᓂᖃᙵᒥᑦᑐᑦ ᐱᓕᕆᐊᕐᒧᑦ ᓴᓇᔭᐅᓂᐊᖅᑐᒧᑦ ᐊᒻᒪᓗ ᐊᐅᓚᓯᖅᑎᑕᐅᓗᓂ ᓄᓇᕗᒻᒥᑦ.ᑭᖑᓪᓕᖅᐹᖅ, ᓴᓇᔭᐅᓂᐊᕐᓂᖓ ᐱᓕᕆᐊᖅ 2024-ᒥᐅᓂᐊᖅᑐᖅ. ᓴᓇᓪᓕᐊᓂᕐᓂᑦ ᐃᓚᐅᓂᐊᖅᑐᑦ ᐱᖁᑎᕐᔪᐊᓂᒃ ᓂᐅᕕᕐᓗᑎᒃ, ᐱᓕᕆᐊᕐᒍᓗᓂ ᐃᓂᐅᔪᖅ, ᑳᓐᑐᕋᒃᑎᑦᑎᓗᑎᒃ ᐱᓕᕆᐊᕐᒍᓂᐊᕐᓗᓂ ᐊᒻᒪᓗ ᐃᓕᔭᐅᓗᑎᒃ ᐱᖁᑎᓗᒃᑖᑦ ᐃᓚᐅᐸᓗᓂ ᓯᕿᓂᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᐅᕆᔾᔪᑏᑦ, ᑰᑐᓃᑦ, ᐆᒪᖅᑯᑎᓕᐅᕆᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᔾᔪᑎ, ᐊᒻᒪᓗ ᐃᑲᔪᐃᔪᑦ ᐃᑯᒪᖅᑯᑎᓕᐅᕆᓂᕐᒧᑦ ᐱᖁᑏᑦ, ᐊᒻᒪᓗ ᐱᓕᕆᐊᕐᒧᑦ ᐊᒻᒪᓗ ᐱᓇᓪᓕᐊᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ ᐱᕋᑦᑎᕋᐅᑏᑦ, ᐊᐅᓛᓕᖅᑎᑕᐅᓗᓂ, ᐊᒻᒪᓗ ᓴᓗᒪᖅᓴᖅᑕᐅᓗᓂ. ᐃᓕᓯᒪᐃᓐᓇᕐᓂᐊᖅᑐᑦ ᓴᓇᔭᐅᓂᐊᖅᑐᑦ 2.6 ha (6.5 ᐊᖏᑎᒥᓂᖓ ᓄᓇ) ᐃᓂᐅᔪᒥᑦ ᐃᓚᐅᓂᐊᖅᑐᑦ: ᓯᕿᓂᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᐅᕆᔾᔪᑏᑦ, ᖃᐸᓯᐊᕐᔪᐃᑦ ᐃᓗᐊᓄᐊᖅᓯᔾᔪᑏᑦ, ᐊᓯᐊᙳᖅᓯᔾᔪᑏᑦ, ᐃᑯᒪᖅᑯᑎᓕᐅᕆᓂᕐᒧᑦ ᓈᓴᐃᔾᔪᑏᑦ, ᐱᒋᐊᕕᒃ ᑲᑎᓯᒪᑎᑦᑎᓂᕐᒧᑦ ᐱᖁᑏᑦ, ᑰᑐᓀᖅ ᐊᒻᒪᓗ ᑰᑐᓀᒥᒃ ᐊᐸᓗᓯᒪᔪᖅ, ᐆᒪᖅᑯᑎᓕᐅᕈᑎᒥᒃ ᐊᐅᓚᑦᑎᔾᔪᑎ, ᓄᓇᐅᐸ ᐃᓗᐊᓂᑦ ᐊᒻᒪᓗ ᖁᓖᓂᑦ ᐃᑯᒪᖅᑯᑎᓂᒃ ᑲᑎᖅᓯᐃᔾᔪᑏᑦ, ᐊᒻᒪᓗ ᕿᑰᓗᑎᒃ ᑐᙵᕚᑦ ᐱᖁᑎᓗᒃᑖᓄᑦ. ᐃᓕᒋᔭᐅᔪᖅ, ᓄᑖᒥᒃ ᐅᓇᓐᓇᖅᑐᓂᑦ ᓄᑖᙳᖅᑎᖅᓯᒪᔪᒥᒃ ᐃᑯᒪᖅᑯᑎᒥᒃ ᑐᓂᓯᓂᕐᒧᑦ ᓴᕕᒐᐅᔭᐃᑦ ᑲᑎᑎᓯᒪᔪᑦ ᐱᓕᕆᐊᕐᒧᑦ ᐃᓂᐅᔪᒥᑦ ᖁᓪᓕᒃᑯᑦ ᐆᒪᖅᑯᑎᓕᐅᕆᓃᕕᖓᓄᑦ ᐱᔭᐅᔭᕆᐊᖃᕐᓂᐊᖅᑐᒃᓴᐅᔪᖅ. ᐱᓕᕆᐊᖅ ᐱᓇᐅᔭᖅᑖᖅᑎᑕᐅᓯᒪᔪᖅ ᐱᒋᐊᕓᕐᓂᕐᒦᖓᔪᑦ ᐱᓇᓪᓕᐊᓂᕐᒧᑦ ᐱᓕᕆᐊᕐᒍᓂᐊᖅᑐᓄᑦ 2024-ᒧᑦ, ᐊᒻᒪᓗ ᐱᓇᓪᓕᐊᓕᖅᑐᑦ ᐱᓇᐅᔭᖅᑲᖅᑎᑕᐅᒃᑲᓐᓂᕐᓂᕐᒧᑦ ᐊᓯᖏᓐᓄᑦ ᐃᓚᖏᓐᓄᑦ ᓴᓇᔭᐅᓇᓪᓕᐊᔪᓄᑦ.

Inuinnaqtun: This project is located in the Kivalliq region, therefore a Inuinnaqtun project description is not required, as per the instructions.

Personnel

Personnel on site: 20

Days on site: 115

Total Person days: 2300

Operations Phase: from 2023-04-26 to 2024-12-26

Operations Phase: from 2024-12-26 to 2054-12-26

Post-Closure Phase: from to

ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᑦ

ᓇᒥ	ᖃᓄᐃᑦᑑᒥᑦ ᐱᓕᕆᐊᖅᓂᐊᖅᐸ	ᑭᒃᑯᑦ ᓄᓇᖁᑖᓂ	ᑐᓴᐅᒪᔭᒃᓴᑦ ᓄᓇᐅᑉ ᖃᓄᖅ ᐊᑐᒐᐅᓚᐅᖅᓯᒪᔭᓇᐊᖕᒐᓂᒃ	ᐃᑦᓴᕐᓂᑕᖅᑲᕐᕕᐅᕋᓚᐅᖅᐸ ᐃᒍᖕᒍᑦ ᓇᔪᖅᑕᐅᖅᑦᑕᕐᓂᒎᕋᓗ ᑕᐃᑦᓯᒪᓂᑐᖅᑲᐅᓕᖅᑐᖅ	ᖃᓂᖕᓂᖅᐹᖅ ᓄᓇᓕᒥᔭᐅᔪᖅ ᐊᒪᓗ ᓴᐳᒥᒃᓰᕕᐅᕋᓗ ᓯᓇᓄᑦ
Coral Harbour Solar Project	Access Road	Crown	A short access road will be built to connect the project site to the existing road north of the site (approximately 150m). No historical uses of the area are known.	None known	2.4 km east of centre of airport runway. 10.3km northwest of Coral Harbour community. The site is located in the far southwest corner of the Coral Harbour Community Water Source Watershed
Coral Harbour Solar Project	Equipment installation	Crown	This activity is for the proposed construction/installation of a solar energy project. This site is located near (within 3km) to the local airport, however, the site itself is not currently known to have had any historical uses	None known	2.4 km east of centre of airport runway. 10.3km northwest of Coral Harbour community. The site is located in the far southwest corner of the Coral Harbour Community Water Source Watershed area
Coral Harbour Solar Project	Staging areas	Crown	A staging area will be required for equipment and material laydown during construction. No historical uses of the site area are known.	None known	2.4 km east of centre of airport runway. 10.3km northwest of Coral Harbour community. The site is located in the far southwest corner of the Coral Harbour

					Community Water Source Watershed area

ᓄᓇᓕᐅᑉ ᐃᓚᐅᖃᑕᐅᓂᖓ ᓄᓇᓖᓪᓗ ᐊᕕᒃᑐᖅᓯᒪᐅᕐᓂᖓᓄᑦ ᐃᑲᔪᑕᐅᔪᓐᓇᖅᑐᑦ

ᓄᓇᓕᒥᔪᖅ	ᐊᑏᑦ	ᑲᑐᔾᔨᐊᖃᑎᒌᒥᔪᖅ	ᖃᖕᒐᓗ ᑐᓴᖅᑎᑕᐅᓚᐅᕆᐊᕐᒥᓐᓂᒃ
ᓴᓪᓕᑦ	Luis Manzo, Director	Kivalliq Inuit Association	2022-03-08
ᓴᓪᓕᑦ	Bert Dean, Assistant Director	Nunavut Tunngavik, Department of Wildlife and Environment	2022-04-07
ᓴᓪᓕᑦ	Shana, Interim Manager	Aiviit Hunters and Trappers Organization (Coral Harbour)	2022-06-09
ᓴᓪᓕᑦ	Community Open House	Open house run by: Northern Energy Capital, Sakku Investments Corporation, and Government of Nunavut Climate Change Secretariat	2022-06-09
ᓴᓪᓕᑦ	Mayor Nakoolak and Council	Hamlet of Coral Harbour	2022-03-07

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ᓇᒦᒥᐊᖏᓐᓂᒃ ᐱᓕᕆᐊᕆᕝᕕᐅᓂᐊᖅᑐᑦ ᑎᑎᕋᕐᓗᒋᑦ:

Kivalliq

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ᒐᕙᒪᒋᔭᐅᔫᑉ ᐊᕕᒃᑐᖅᓯᒪᐅᕐᓂᖓᓐᓂ ᒪᓕᒐᕐᓅᖓᔪᓂᒃ ᐱᖁᔭᕐᓅᖓᔪᓂᒡᓗ ᑲᒪᔩᑦ ᐱᔪᖕᓇᐅᑎᑖᕈᑎᓂᒃ ᓚᐃᓴᓐᓯᓄᓪᓗ ᑲᔪᓯᒃᑲᐃᔩᑦ	ᖃᓄᐃᑦᑐᓪᓚᕆᐅᕙ ᓚᐃᓴᓐᓯᑖᕈᑕᐅᔪᖅ ᐱᔪᖕᓇᐅᑎᑖᕈᑕᐅᔪᖅ ᐊᖏᖅᑕᐅᔪᕐᓘᓐᓃᑦ	ᒫᓐᓇ ᖃᓄᐃᓕᖓᕙ	ᐅᓪᓗᒥ ᑐᓂᔭᖅ/ ᑐᒃᓯᖅᑑᑕᐅᓚᐅᖅᓯᒪᔪᖅ	ᑭᒡᓕᖃᕐᕕᖓ
ᑲᓇᑕᒥ ᐃᖏᕐᕋᔪᓕᕆᔩᒃᑯᑦ	An Aeronautical Assessment Form for Obstacle Notice and Assessment must be completed for this project, as it is within 4km of an aerodrome	Not Yet Applied		
Indigenous and Northern Affairs Canada	A lease and land use permit will be required from CIRNAC for this project, as the project site is located on Crown Land	Not Yet Applied		
ᐊᓯᖓ	A land use proposal form must be submitted to NAV CANADA for this project	Not Yet Applied		
ᓄᓇᕗᑦ ᒐᕙᒪᖓ, ᖁᓪᓕᖅ ᐆᒪᕐᑯᑎᓕᕆᔩᒃᑯᑦ	A Power Purchase Agreement will be required for the project to sell electricity to QEC. This cannot be applied for until QEC releases their Independent Power Producer policy.	Not Yet Applied		

Project transportation types

Transportation Type	ᓱᓇᒧᑦ ᐊᑐᒐᐅᓂᐊᖅᐸ	Length of Use
Air	Any non-local personnel working on the project will come to site via plane. Some smaller equipment and materials may be	

	brought in via air outside of the summer barge windows, as required.	
Water	The majority of materials, supplies, and equipment will be brought to site via barge in the summer months	

Project accomodation types

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ᐊᖏᕈᔪᖅ ᐱᖃᑦ ᐊᑐᓚᐅᓂᐊᖅᑐᖅ ᖃᖅᓄᐃᑦᑐᓂᖏᓚᒃ	ᖃᖅᑎᓯᐅᒋᑦ	ᐊᖏᕈᓂᖏᑦ - ᐳᖅᑐᓂᖏᑦ	ᓯᓚᒍᑦ ᐊᑐᓚᐅᓂᐊᖅᐸ
Passenger vehicles	4-5	Pick up truck	Site vehicles will be required for the movement of personnel on site, and for transport to and from site. Trucks may also be used for moving smaller equipment or supplies around, and for various site needs.
Drill Rig	1	TBD	A drill will be required on two occasions: (1)for geotechnical work in summer/fall 2022 to obtain core samples for informing project engineering; and (2) during construction, for the installation of the solar array foundations. The specific type of foundation to be installed will not be finalized until after the geotechnical assessment, but could include adfreeze pipe pile foundations, rock socket anchors, or other design as appropriate.
Gravel Hauling Truck	1-2	19 x 24 ft (approx.)	Large hauling trucks (single box, tandem axel dump truck) will be required for the delivery of fill material (eg. gravel) required for construction of the short segment of new road (approximately 110m).
Excavator	2-3	Standard size	Excavators will be required to move earth during construction of the solar array. This includes earthworks while building new road, levelling of ground for

			battery pad, pad for electrical equipment housing, and inverter pads. Excavation for installation of the array foundations will also be needed
Mobile Concrete Batching Plant	1	Small/mobile size	A small mobile concrete mixer will be used to mix and pour concrete for the solar array foundations on site, and possibly for concrete equipment pads. The exact size is not known at this time, likely around 30 ft in length and attachable to a vehicle as a trailer.
Pile Driver	1	Small	If a pile foundation design is selected for the project, a pile driver may be required to carry out installation of the solar array foundations. This may either be a small, walk along pile driver suitable for installing small solar pilings, or a pile driver attachment to an excavator.
Diesel Generator	2	30kW (approx.)	A generator will be used on site to power the site office. Additionally, a second generator may be required for other power needs, such as charging small tools, or for lighting.
Flatbed Telescopic Truck Crane	1	37 x 12 ft (approx.)	Equipment will be delivered to Coral Harbour via barge in seacans. Once the seacans arrive, they must be loaded onto a truck, brought to site, and then offloaded from the truck. The crane will be used for offloading at site.

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Diesel	fuel	2	50	100	Gallons	For use in the site generators, and heavier equipment such as the excavators, drill rig/pile driver, and gravel trucks. Minimal fuel will be stored on site (up to 2 x 50 gal containers), most equipment will be filled with a mobile fuel truck. As construction is still 1.5 - 2 years away, exact quantities are not known at this time and estimates are very approximate
Grout or Ready-Mix Concrete	hazardous	2	10	20	Cubic Meters	It is expected that grout or ready-mix concrete batching will be completed on site, therefore dry grout or ready-mix concrete will be delivered

						to and stored on site. This material will be used for the solar array foundations, and concrete pads. Exact quantities required are unknown at this stage, however, are estimated at around 20 m3.

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1	Water will be retrieved via truck for concrete mixing. Jugs of potable water will be kept on site for personnel consumption.	Hamlet of Coral Harbour

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Other	ᐊᑲᑕᔪᑦ ᐃᓱᐊᓪᓚᑕᐅᔨᓐᓄᖅᑎᑦᑐᑦ	5-10 m3	Non-recyclable construction waste will be taken to the local landfill.	As the waste is inert and does not contain any harmful substances, no other treatment is required.
Other	ᖃᓱᖅᑕᓪᓚᓂᖅ	5000 gal	Port-a-potties or a built outhouse will be required on site. Outhouse holding tanks will be emptied at regular intervals as required with a honey truck, under supervision and direction of the Hamlet.	Collected waste would be transported to the Hamlet's wastewater facility for appropriate treatment.

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All predicted environmental impacts and proposed mitigation measures are discussed in the Additional Information section of this application.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

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The project site is located on a flat, open area, just to the south of an existing road running in the NE-SW direction which connects the site area to the airport and community. The project site is about 10km northwest of the community of Coral Harbour, and about 3km northeast of the local airport. Ground surface/soil appears to be primarily barren clay/silt and gravel, with limited vegetation scattered across the surface in small clumps. Some bodies of water exist nearby, bounded by low shrubs, mosses, and grasses. Some low lying areas are quite saturated and unstable to walk upon, while others are slightly higher up, firm, and dry, as observed during a site visit in June. The Project area has been selected to sit atop a drier section of barren land within this region. The project is located in the very far southwest corner of the Coral Harbour community watershed protected area, as noted in the NPC's 2016 interactive maps. No other overlap was noted with wildlife protected areas or migration routes, recreational areas, heritage sites, or sensitive areas. This location was recommended to the team by the Hamlet of Coral Harbour as an ideal site for the construction of a renewable energy project. At this time, information about the subsurface conditions, including permafrost, are not known, but will be investigated prior to project construction in order to inform project design and engineering.

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Vegetation in the area is sparse, mostly clustered around the edges of water bodies and in marshy low lying areas. During the team's site visit in June, no wildlife was encountered, however, due to the site's location several km from the community and the airport, there could be wildlife present in the area. A review of the Nunavut Planning Commissions interactive maps revealed no overlap with critical wildlife areas, migration routes, breeding grounds, or valued ecosystem components. Several SARA registered species of concern have general habitat ranges that overlap with southern Southampton Island, including caribou, wolverine, short eared owl, red-necked phalaropes, red knot rufas, and polar bears, however, due to the relatively small footprint of the project and the low-impact nature of operations, impacts to these species is not anticipated to be a risk. Nonetheless, the project site area will be checked for species presence before construction.

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The project site is located away from the community and the airport, along an existing road which runs in the NE-SW direction, approximately 100m north of the site. There are no known designated land uses at the proposed site location, and the general area was recommended to the project team by the Hamlet of Coral Harbour as an ideal location for the development of a renewable energy project. As such, the Project is not expected to interfere with existing land use or economic activities in the region. Furthermore, initial conversations with both the Kivalliq Inuit Association and the Hunters and Trappers organization did not reveal any concerns with the development of a solar energy project in this area.

Miscellaneous Project Information

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1.Risk: Disturbance of land resulting in habitat destruction. Mitigation Measure: Prior to construction, a review of the site for sensitive plant and animal species will be undertaken via desktop by consulting available databases to identify species of concern within the vicinity of the project. At the time of writing, no important biological or ecological protection areas for wildlife were noted to overlap with the project site. If threatened species are identified within the site area, a plan will be prepared to preserve them. This could look like a slight adjustment to the site location or layout, a plant relocation plan, or a protection plan to ensure disturbance does not occur during construction, as appropriate. Care will be taken during construction to disturb only the land required for the footprint of the solar array and associated components. Once construction is complete, the site will be cleaned up and areas of disturbed vegetation will be revegetated. 2.Risk: Impact to caribou migratory corridors and habitat range. Mitigation Measure: A desktop review of the Caribou Protection Measures outlined in the KRLUP was conducted, as well as a review of the most current (2016) Caribou Ranges Valued Ecosystem Component Map available on the NPC's website. The project site is not located within any caribou protection areas or migration corridors. The project is located 10 km away from the community, and would be built within a fenced area alongside an existing road. The fenced area would present a minor, new obstacle to caribou if they were to move through the area. However, once operational, solar projects do not have any moving parts, are contained within the fenced area, operate with very little noise, and do not often require the presence of human personnel to operate. The greatest potential for impact to caribou will be during construction in the summer months, in the event caribou were to stray from their typical movement corridors and come close to the project site. During construction, the site will be active with large, noisy equipment such as excavators, trucks, and drill rigs. Because of the project's proximity to the community and its existence outside of known ranges, potential impacts to caribou posed by these activities are considered low. However, the project safety plan will include plans to temporarily cease construction activities if caribou are observed within sight or sound range of the project area. 3.Risk: Leak or spillage of fuel, leading to ground contamination. Mitigation Measure: Minimal fuel will be kept on site during the construction phase, estimated to occur over one summer season. The construction site safety plan will include detailed spill mitigation procedures, including protocol for the safe storage of fuel on site, and prevention and containment measures and supplies in the event of a spill or leak. All personnel will be briefed daily on site safety and fuel handling. 4.Risk: Interference with local, traditional use of the land. Mitigation Measure: The project team has initiated consultation with both the local Hunters and Trappers Organization, and the Kivalliq Inuit Association to share the proposed project location and understand if there are any potential impacts to traditional land use. At this early stage, no impacts to traditional land use have been identified at the site location. The project team will continue to work with the HTO, the KIA, and the Hamlet as project planning progresses, to ensure there are no anticipated impacts to traditional land use. 5.Risk: Presence of archaeological sites or artefacts within the project area. Mitigation Measure: Prior to construction, the project team will undertake any required heritage assessments of the site area in cooperation with the GN Department of Culture and Heritage, to screen for possible archaeological sites or artefacts. The project team envisions completing a desktop model of archaeological potential within the project area, followed by further field study in the event it is not possible to modify the project footprint to avoid areas of significant archaeological potential.

During construction, the project will put in place procedures to cease activities in the event that an archaeological site is discovered, and will notify the appropriate entities for direction before any activities are resumed. 6.Risk: Generation of construction waste and human waste at the site during construction. Mitigation Measures: The project team will take all appropriate measures to ensure that waste generated during construction is contained and disposed of properly. The project will not generate any hazardous waste, but may generate minimal construction waste including steel, wiring, glass, wood, etc. All waste will be properly stored during construction and will be disposed of at the local landfill following the completion of construction. The site will also have port-a-potties or an outhouse on site for personnel use during construction. Outhouses will be locked when the site is not occupied, and emptied at frequent intervals by an assigned operator from the Hamlet, to be disposed of appropriately. 7.Risk: Impact to watershed, based on location of project at edge of Community Watershed Protected Zone. Mitigation Measures: The project team has identified that the site chosen for the project is located on the far southern edge of the protected watershed zone for the community of Coral Harbour. This location presents a possible conflict with the protected area. However, with the preferred site located at the very edge of the protected zone, and given the nature of the project (renewable energy), the potential for impacts to the watershed are expected to be very low. Solar projects generally have very low environmental impacts, especially during operations. The greatest potential for adverse impacts occurs during construction. The project will work closely with environmental experts to prepare a robust environmental protection and safety plan to ensure there are no adverse impacts that could affect water quality. This includes a strict safety plan surrounding the handling of fuel on site (see risk 3), ensuring fuel storage on site is minimized to the greatest degree possible, containment of sanitary waste/greywater to port-a-potties with removal of waste at regular intervals, and an assessment of possible sediment impacts to surface waters that could be caused by work at the site.

Cumulative Effects

Given the low frequency of commercial and utility scale solar projects in Nunavut, this project is not expected to add significant cumulative effects to past and present developments in the region. Cumulative impacts are thus expected to mainly apply in the context of future development in the territory. Cumulative impacts could include increasing land displacement and habitat loss, as solar projects require significant space to construct and operate. Other cumulative impacts could include the build up of solar PV waste products at end of project life. Solar panels contain harmful chemicals and should be disposed of properly. Currently, recycling of solar PV panel components is available, but not widespread, and based almost entirely in the USA and Europe. In 30 years when this project reaches its end of life, it is anticipated that the project would be re-commissioned for continued operation, and only some components may need to be replaced. By that time, advances in recycling options are expected to have improved as well. From an energy and climate change perspective, some cumulative effects from this project could be considered positive, as the project will increase the amount of available energy in the region, while simultaneously decreasing regional reliance on fossil fuels and decreasing air pollutants and emissions that adversely affect air quality and contribute to global warming.

Impacts

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	PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
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Equipment installation		U	U	U	-	U	-	-	U	U	-	-	M		M	U	U	-	-		U	P	-	P	-
Access Road		U	U	U	-	U	-	-	U	U	-	-	M		N	U	U	-	-		U	P	P	P	-
Staging areas		U	U	U	-	U	-	-	U	U	-	-	-		M	U	U	-	-		U	-	-	-	-
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Equipment installation		U	U	U	-	-	P	-	-	-	-	P	-		-	U	U	-	-		-	P	P	P	P
Access Road		U	U	U	-	-	P	-	-	-	-	P	-		-	U	U	-	-		-	P	P	P	P
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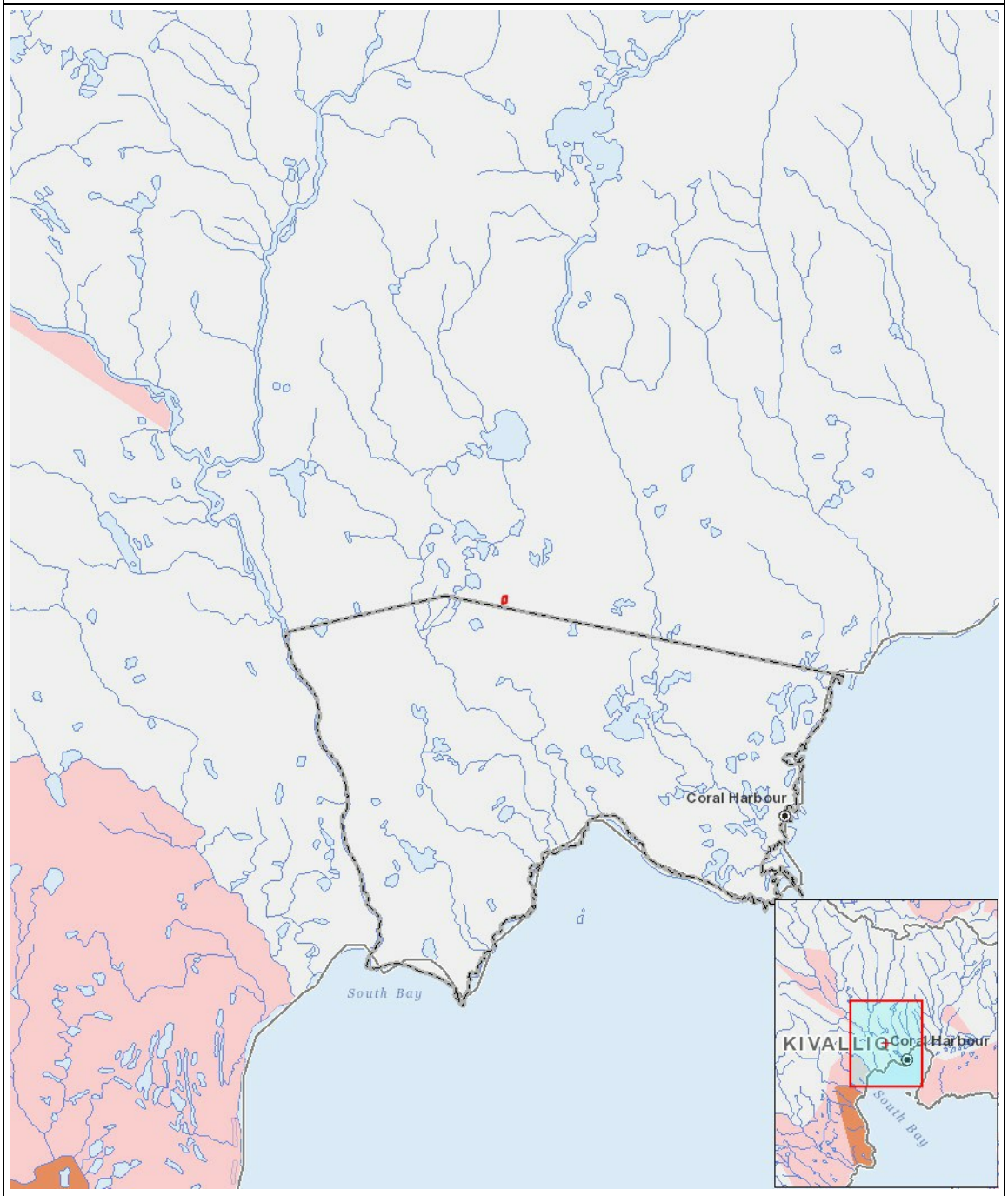

List of Project Geometries

1	polygon	Coral Harbour Solar Project