ᓄᓇᕘᒥ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖏᑦᑎᒍᑦ ᑐᒃᓯᖅᑑᑦ ᖅᑭᒥᖅᕈᔭᒃᓴᖅ #125712

Naujaat Solar and Energy Storage Project

ᑐᒃᓯᖅᑑᑕᐅᔪᖅ ᖃᓄᐃᑦᑑᓂᖓ:	New
ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔫᑉ ᖃᓄᐃᑦᑑᓂᖓ:	ᐆᒻᒪᖁᑎᓕᕆᖕᖏᑉ
ᐅᓪᓗᖓ ᑐᒃᓯᖅᑑᑎᓕᐊᖏᓂᐅᑉ:	5/31/2022 5:25:27 PM
Period of operation:	from 0001-01-01 to 0001-01-01
ᑲᔪᓯᒃᑲᐃᔨᐅᓂᐊᕐᓱᒋᔭᐅᔪᑦ:	from 0001-01-01 to 0001-01-01
ᐱᓕᕆᐊᖅᑲᕈᒪᔪᖅ:	Dana May Kivalliq Alternative Energy Ltd. PO Box 188 Rankin Inlet Nunavut X0C 0G0 Canada ᐅᖄᓚᐅᑏᑦ: 403-968-1516, ᓱᑲᔪᒃᑯᑦ:

ᑐᓴᐅᒪᔭᒃᓴᑦ

ᖃᓄᐃᑦᑑᑎᓂᒃ ᐱᓕᕆᐊᖃᕐᓂᐊᕆᐊᖕᖓᓂᒃ

ᖃᓪᓗᓈᑎᑐᑦ: The community of Naujaat 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 1.05 MW solar PV installation, with a complementary 1 MWh battery. Together, this system would have the capacity to provide nearly 30% of the community's existing energy demand, displacing an estimated 465,000 L of diesel fuel consumption annually, or approximately 13.9 million litres over the project's 30-year lifetime. This equates to total carbon emission savings of approximately 32,500 tonnes of CO_2. The Project will be built by Kivalliq Alternative Energy, a partnership between Sakku Investments Corporation (the development corporation of the Kivalliq Inuit Association), and Northern Energy Capital (a renewable energy development company that empowers northern communities in their transition from fossil fuels to clean energy).The Project began in 2020 with the development of the Naujaat Community Energy Plan (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 Naujaat 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 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 and environmental assessment of the project area. The project team has also hired a contractor to conduct geotechnical assessment work. Further development work is scheduled to take place in 2023-2024. This work will include execution of a geotechnical assessment at the site, detailed design and engineering, securing a land lease, regulatory permitting, an interconnection study with QEC, and contractor and supplier procurement. The project is also awaiting the full release of QEC's Independent Power Producer policy, currently under final review 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. Construction of the project is scheduled to take place following the completion of all development activities, likely in 2024 or 2025. Construction activities will include capital equipment purchases, preparation of the site, 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 4 ha (9.8 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, the associated concrete or gravel pads for all equipment, and a short site access road. Additionally, a new electrical distribution line connecting the project site to the QEC powerhouse will 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 construction activities.

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

ᐃᓄᒃᑎᑐᑦ: ᓇᐅᔮᑦ ᓯᕗᓪᓕᖅᐹᖑᖁᑕᐅᔪᖅ ᐆᒪᖅᑯᑎᓕᐅᕆᕝᕕᖕᒧᑦ ᐊᒻᒪ ᐹᑐᕇᒧᑦ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᓄᑦ ᓄᓇᕗᒻᒥᑦ. ᑲᑎᓯᒪᔪᑦ ᓯᕿᓂᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᐅᕆᓂᕐᒧᑦ ᐊᒻᒪ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᒧᑦ ᐱᓕᕆᐊᖅ ᐃᓚᓕᐅᑎᔭᐅᓂᐊᖅᑐᖅ ᓄᓇᓕᖕᒥᑦ

ᐆᒻᒪᕐᖁᑎᓕᐅᕈᑎᒥᑦ, ᐃᖏᒃᑰᖓᐸᓗᓂ ᐊᐅᓵᖅᑲᑦᑕᖅᑐᖅ ᐃᓚᒥᔭᐅᐸᓗᓂ ᐃᑯᒻᒪᕐᖁᑎᓕᐅᕆᐢᐱᖓᑦ ᐊᐅᓵᖅᑎᑕᐅᔪᖅ ᖁᓪᓕᒃᑯᓐᓄᑦ. ᐱᓕᕆᐊᕐᒥᑦ ᐃᓚᐅᓂᐊᖅᑐᖅ 1.05 MW ᓯᕿᓂᕐᒥᑦ ᐱᖃᑦᑕᖅᑐᑦ ᐃᓕᔭᐅᓗᑎᒃ, ᐃᓚᖃᕐᓗᓂ 1 MWh ᐹᑐᓖᒥᑦ. ᐊᑕᐅᑦᑎᒃᑯᑦ, ᐃᓂᖃᖅᑎᑦᑎᓂᐊᖅᑐᖅ 30% ᖃᓂᑕᖓᓂᑦ ᓄᓇᓕᐅᑉ ᐆᒻᒪᕐᖁᑐᖃᑦᑕᕐᓂᕆᔭᖓᓂᑦ, ᐃᓇᖏᓗᓂ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᒥᒃ 465,000 ᓖᑕᓂᒃ ᐅᖅᓱᐊᓗᒃᑐᖃᑦᑕᕐᓂᕐᒥᑦ ᐊᕐᕌᒍᑕᒫᒃᑯᑦ, ᐅᐢᐸᓘᓐᓃᑦ 13.9 ᒥᓕᔭᓐ ᓖᑕᓪᓗᐊᓂᒃ ᐱᓕᕆᐊᖅ 30 ᐅᑭᐅᓄᑦ ᐊᐅᓵᕐᓂᓗᒃᑖᖓᓂᑦ. ᑲᑎᖕᒐᒍ ᑳᐸᓐ ᐊᓂᐊᔪᓂᒃ ᐊᑐᙱᓐᓂᖃᕐᓗᓂ 32,500 ᑕᓐᓗᐊᓂᒃ CO2-ᒥᑦ. ᓴᓇᔭᐅᓂᐊᖅᑐᖅ ᑭᐅᓪᓕᕐᒥᑦ ᐊᓯᐊᒍᖓᖅ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᔾᒃᑯᓐᓄᑦ, ᐱᓕᕆᖃᑎᒦᓪᓗᑎᒃ ᓴᒃᑯᒃᑯᓐᓄᑦ (ᐱᐅᓪᓕᐊᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᔾᒥᔭᐅᔪᑦ ᑭᐅᓪᓕᕐᒥᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔾᖃᑎᒌᒃᑯᓐᓄᑦ), ᐊᒻᒪᓗ ᐅᐊᖕᓇᒥᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᔾᒃᑯᑦ (ᐊᑐᖅᑕᐅᒃᑲᓐᓂᕈᖕᓇᖅᑐᖅ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᕐᒧᑦ ᑲᒻᐸᓂᐅᔪᖅ ᐆᒻᒪᕐᖁᑎᖃᖅᑎᑦᑎᐸᓗᓂ ᐅᐊᖕᓇᖅᐸᓯᖓᓃᑦᑐᑦ ᓄᓇᓕᖕᓂᑦ ᐅᖅᓱᐊᓗᖕᒥᑦ ᐊᑐᕈᖕᓅᖅᐸᓪᓕᐊᑎᓪᓗᒥᑦ ᓴᓗᒪᔪᖅ ᐆᒻᒪᕐᖁᑎᒧᑦ). ᐱᓕᕆᐊᖅ ᐱᒋᐊᓚᐅᖅᑐᖅ 2020-ᒥᑦ ᐱᐅᓪᓕᐊᔭᐅᐸᓗᓂ ᓇᐅᔮᓂᑦ ᓄᓇᓕᖕᒥᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ (CEP), ᑮᓇᐅᔭᖃᖅᑎᑕᐅᐸᓗᓂ ᓄᓇᖃᖅᖄᖅᑐᑦ ᐅᖅᓱᐊᓗᒃᑐᕈᖕᓅᖅᑎᑕᐅᓂᖕᒥᓐᓄᑦ ᐱᓕᕆᐊᒃᓴᕐᒧᑦ. ᓄᓇᓕᖕᒥᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ (CEP) ᐋᖅᑭᒃᑕᐅᓚᐅᖅᑐᖅ ᐱᓕᕆᖃᑎᒥᔭᐅᐸᓗᑎᒃ ᓄᓇᓕᖕᒥᑦ ᐃᓚᒥᔭᐅᔪᑦ ᐊᒻᒪᓗ ᓇᐅᔮᓂᑦ ᑭᑐᑐᐃᓐᓇᓄᑦ ᐅᒃᑯᐃᖓᑎᑦᑎᓂᖃᓕᖅᒍᑎᒃ ᒪᓐᓃᑦ 2022-ᒥᑦ. ᓄᓇᓕᖕᒥᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ (CEP) ᐱᓕᕆᐊᓇᔭᖓᒍᑦ, ᐱᓕᕆᔩᑦ ᐋᖅᑭᓚᐅᖅᑕᖏᑦ ᑳᓐᒥᒃ ᒥᒃᓴᒥᐊᖅᓯᓂᖅ ᑕᐅᑐᒐᖅᑲᖅᒍᑎᒃ ᐱᐅᓪᓕᐊᔭᐅᓂᖓ ᓯᕿᓂᕐᒥᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᖅ ᐃᑲᔪᐃᓂᐊᖅᑐᖅ ᑎᑭᐅᑎᓂᕐᒧᑦ ᓄᓇᓕᐅᑉ ᐊᑐᖅᑕᐅᒃᑲᓐᓂᖃᑦᑕᖅᑐᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᕐᒧᑦ ᑐᖂᓯᕆᔭᖏᓐᓄᑦ: ᓴᓗᒪᔪᖅ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᔪᖅ, ᐊᔪᙱᑦᑐᖅ ᐃᓇᖏᓗᓂ ᐅᖅᓱᐊᓗᒃᑐᖅᑐᒥᒃ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᔾᔪᑕᐅᔪᒧᑦ, ᐋᖅᑭᒃᑕᐅᔪᖅ ᐊᒻᒪᓗ ᐊᐅᓵᖅᑎᑕᐅᔪᖅ ᓄᓇᒋᑦ ᐃᖏᒃᑯᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᕐᒧᑦ ᐊᑐᐊᒐᖓᒐᑎᒍᑦ. ᐅᑉᓗᒥᒧᑦ ᑎᑭᖕᒐᒍ, ᐊᔪᙱᓐᓂᐊᕐᓂᖓᓄᑦ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐱᓕᕆᐊᖃᓚᐅᖅᑐᑦ ᓴᖅᑭᑕᐅᖅᖄᖅᑎᓪᓗᒍ ᓄᓇᓕᖕᒥᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ (CEP) ᐃᓚᐅᑉᓗᓂ ᐱᓕᕆᐊᕐᒥᑦ ᑕᐅᑐᒐᖃᕐᓂᖅ ᓈᒻᒪᒃᑑᓗᓂ ᐊᖏᑎᒥᓂᖓ ᐊᒻᒪᓗ ᖃᓄᐃᑦᑐᒥᒃ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᐊᕐᓂᖓᓄᑦ, ᐃᓚᐅᖃᑕᐅᑎᒍᒥᑦ ᐃᓚᒥᔭᐅᔪᑦ, ᓂᕈᐊᖅᑕᐅᓗᓂ ᐃᓂᐅᓂᐊᖅᑐᖅ, ᐱᐅᓪᓕᐊᔭᐅᓂᕐᒥᑦ ᓯᕿᓂᕐᒥᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᐅᑉ ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖓ, ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖓ ᐆᒻᒪᕐᖁᑎᓕᐅᕐᓂᐊᖅᑐᖅ, ᐋᖅᑭᒃᓯᐸᓗᓂ ᐱᓕᕆᐊᕐᒧᑦ ᑮᓇᐅᔭᖅᑑᑎᒥᑦ, ᐊᒻᒪᓗ ᖃᐅᔨᓴᐃᐸᓗᑎᒃ ᓄᓇᐅᔪᒥᒃ ᐊᒻᒪᓗ ᐊᐅᑎᒥᒃ ᐱᓕᕆᐊᖃᕐᕕᐅᓂᐊᖅᑐᒧᑦ. ᐱᓕᕆᐊᕐᒧᑦ ᐱᓕᕆᔾᑦ ᑳᓐᑐᖂᒃᑎᑦᑎᓚᐅᖅᑐᑦ ᓄᓇᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᓂᐊᖅᑐᒥᒃ. ᐱᐅᓪᓕᐊᒃᑲᓐᓂᐅᓂᐊᖅᑐᑦ ᐋᖅᑭᒃᑕᐅᓯᒪᔪᖅ 2023-2024-ᒧᑦ. ᐱᓕᕆᐊᕐᒥᑦ ᐃᓚᐅᓂᐊᖅᑐᑦ ᐃᓂᐅᔪᒧᑦ ᓄᓇᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᓂᖅ, ᓇᓗᓇᐃᔭᖅᓯᒪᓗᓂ ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖓ ᐊᒻᒪᓗ ᓱᓇᑐᐃᓐᓇᓕᐅᕆᓂᖅ, ᓄᓇᒥᒃ ᐊᑐᖅᑐᐊᕐᓂᕐᒧᑦ ᐋᖅᑭᒃᓯᓗᑎᒃ, ᒪᓕᒐᓕᕆᓂᕐᒧᑦ ᐱᔪᖕᓇᖅᑎᑦᑎᔾᔪᑎᓂᒃ ᐳᒥᑦᓂᒃ, ᑲᑎᓯᒪᓂᐊᖅᑐᓂᒃ ᖃᐅᔨᓴᐃᓗᑎᒃ ᖁᓪᓕᒃᑯᑦ ᐱᖃᑎᒥᓗᒥᑦ, ᐊᒻᒪᓗ ᑳᓐᑐᖂᒃᖃᕐᓂᐊᖅᑐᒥᒃ ᐊᒻᒪᓗ ᐱᑖᕐᕕᐅᖃᑦᑕᕐᓂᐊᖅᑐᒥᒃ. ᐱᓕᕆᐊᖅ ᐅᑕᖅᑭᖕᒥᔪᖅ ᐃᓗᐃᑦᑐᒃᑯᑦ ᓴᖅᑭᑕᐅᓂᐊᕐᓂᖓ ᖁᓪᓕᒃᑯᑦ ᐃᖏᒃᑯᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕆᓂᕐᒧᑦ ᐊᑐᐊᒐᖏᑦ, ᒫᓇᐅᔪᖅ ᑭᖑᓪᓕᖅᐹᒃᑯᑦ ᕿᒥᕐᕈᔭᐅᔪᖅ ᐱᓕᕆᖃᑎᒋᑉᓗᒥᑦ ᓄᓇᕗᒻᒥ ᒪᐢᐸᒪᒃᑯᑦ, ᐱᔭᕆᐊᖃᖅᑐᖅ ᐆᒻᒪᕐᖁᑎᒥᒃ ᓇᖏᓂᕆᔭᐅᖕᒥᑦᑐᒥᒃ ᐆᒻᒪᕐᖁᑎᓕᐅᕈᑎᒥᑦ ᓴᓇᔭᐅᓂᐊᕐᓂᖓᓄᑦ ᐊᒻᒪᓗ ᐊᐅᓵᖅᑎᑕᐅᓗᓂ ᓄᓇᕗᒻᒥᑦ. ᓴᓇᔭᐅᐸᓪᓕᐊᓂᐊᖅᑐᖅ ᐱᐊᓂᒃᑕᐅᒃᐸᑕ ᐱᐅᓪᓕᐊᓂᐅᔪᒃᑖᑦ, 2024-ᒥᐅᓇᔭᖅᑐᖅ ᐅᐢᐸᓘᓐᓃᑦ 2025-ᒥᑦ. ᓴᓇᐅᓪᓕᐊᓂᕐᓂᑦ ᐃᓚᐅᓂᐊᖅᑐᑦ ᐱᖁᑎᕐᔪᐊᑦ ᓂᐅᕕᖅᑕᐅᓂᕐᒥᑦ, ᐸᕐᓇᒃᑕᐅᓗᓂ ᐃᓂᐅᓂᐊᖅᑐᖅ, ᑎᑭᑎᑕᐅᓂᕐᒥᑦ ᐊᒻᒪᓗ ᐃᓕᐅᖅᑲᖅᑕᐅᓗᑎᒃ ᐱᖁᑎᓗᒃᑖᑦ ᐃᓚᐅᑉᓗᑎᒃ ᓯᕿᓂᕐᒥᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕈᑏᑦ, ᐹᑐᓖᑦ, ᐆᒻᒪᕐᖁᑎᓕᐅᕆᐢᐱᖕᒥᑦ ᐊᐅᓚᑦᑎᔾᔪᑎ, ᐃᒻᒪᓗ ᐃᑲᔪᖅᑐᑦ ᐃᑯᒻᒪᕐᖁᑎᒧᑦ ᐊᑐᖅᑐᑦ, ᐊᒻᒪᓗ ᐱᓕᕆᐊᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓪᓕᐊᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐱᔨᑦᑎᖁᐅᑏᑦ, ᐊᑐᓕᖅᑎᑦᑎᓂᖅ, ᐊᒻᒪᓗ ᓴᓗᒻᒪᖅᓴᐃᓂᖅ. ᑕᐃᒪᐅᖏᓐᓇᕐᓂᐊᖅᑐᑦ ᐱᖁᑏᑦ ᓴᓇᔭᐅᓂᐊᖅᑐᑦ ᓄᓇᒥᑦ ᐊᖏᑎᒋᔪᒥᑦ 4 ha (9.8 ᐄᑯᕐ (acre)) ᐃᓚᐅᓗᑎᒃ: ᓯᕿᓂᕐᒥᑦ ᐆᒻᒪᕐᖁᑎᓕᐅᕈᑏᑦ, ᖃᑉᓯᐊᕐᔪᐃᑦ ᐃᓗᐊᓄᐊᖅᓯᔾᔪᑏᑦ, ᐊᓯᐊᙳᖅᓯᔾᔪᑏᑦ, ᐃᑯᒻᒪᕐᖁᑎᒥᑦ ᓈᓴᐃᔾᔪᑏᑦ, ᑲᑎᓐᓂᖅᑲᕕᐅᔪᑦ ᐱᖁᑏᑦ, ᐹᑐᓘᖅ ᐊᒻᒪᓗ ᐹᑐᒨᑦ ᑐᖅᖁᖅᒪᐢᕕᒃ, ᐃᑯᒻᒪᕐᖁᑎᓕᐅᕈᑎᒧᑦ ᐊᐅᓚᑦᑎᔾᔪᑎ, ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐊᒻᒪᓗ ᐃᓚᔭᐅᔪᓄᑦ ᐃᑯᒻᒪᕐᖁᑎᓂᒃ ᑲᑎᖅᓯᐃᔾᔪᑏᑦ, ᕿᑰᓗᑎᒃ ᐊᒻᒪᓗ ᓯᐅᕋᐅᓗᑎᒃ ᑐᙵᕖᑦ ᐱᖁᑎᓗᒃᑖᓄᑦ, ᐊᒻᒪᓗ ᓇᐃᑦᑑᔪᒥᒃ ᐊᖅᖁᑎᒥᒃ. ᐃᓚᒥᔭᐅᔪᖅ, ᓄᑖᖅ ᐃᑯᒻᒪᕐᖁᑎᒥᒃ ᑐᓂᐅᖅᑲᐃᔪᖅ ᓴᕕᒐᐅᔭᖅ ᑲᑎᑎᑦᑎᔪᖅ ᐃᓂᐅᔪᒥᑦ ᖁᓪᓕᒃᑯᑦ ᐆᖅᒪᕐᖁᑎᓕᐅᕆᐢᐱᖓᓐᓄᑦ ᐱᔭᐅᔭᓇᐊᖃᕐᓂᐊᖅᑐᖅ. ᐱᓕᕆᐊᕐᒧᑦ ᑮᓇᐅᔭᖅᑖᖅᑎᑕᐅᓯᒪᔪᖅ ᐱᒋᐊᓵᕐᓂᕐᒥᑦ ᐱᐅᓪᓕᐊᓂᕐᒧᑦ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᓄᑦ 2024-ᒧᑦ ᑎᑭᓪᓗᒍ, ᐊᒻᒪᓗ ᑮᓇᐅᔭᖃᖅᑎᑕᐅᓂᕐᒧᑦ ᕿᓂᒃᑲᓐᓂᖅᑐᑦ ᓴᓇᔭᐅᓪᓕᐊᓂᐊᕐᓂᖓᓄᑦ.

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: 15

Days on site: 160

Total Person days: 2400

Operations Phase: from 2023-05-23 to 2025-12-28

Operations Phase: from 2025-12-29 to 2055-12-21

Post-Closure Phase: from to

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Naujaat Solar and Energy Storage Project	Access Road	Municipal	The project is located adjacent to existing municipal roads, which service the local landfill, sewage outfall area, and a scrap metal yard. The project will require a short segment of new road (118m) built within the site boundaries, to connect the project to the existing road, and to service project infrastructure.	None known.	The project site, including site roads, is located on the eastern edge of the community, 0.75km NE of the community centre, and 0.5km N of the northern edge of the airport runway.
Naujaat Solar and Energy Storage Project	Staging areas	Municipal	A staging area will be required during project construction, for the laydown of equipment and materials. The Project site is a former scrap metal yard, and has previously been used as a site for snow dumping during the winter. The site does not currently have any formal uses.	None known	The project site is located on the eastern edge of the community, 0.75km NE of the community centre, and 0.5km N of the northern edge of the airport runway.
Naujaat Solar and Energy Storage Project	Equipment installation	Municipal	This activity is for the proposed construction/installation of a solar energy project. The project site is a former scrap metal yard, and has previously been used as a site for snow dumping during the winter. The site does not currently have any formal uses.	None known.	The project site is located on the eastern edge of the community, 0.75km NE of the community centre, and 0.5km N of the northern edge of the airport runway.
Naujaat Solar and	Camp	Municipal	The project team is exploring the need for a	None known.	A temporary camp, if

Energy Storage Project			temporary camp for part of the project duration. Camp trailers would be located within the project staging area. The project site and staging areas are the location of a former scrap metal yard and were previously used for snow dumping, but do not have any current uses.		required, would consist of 2-4 mobile trailer units, each housing up to 4 occupants. These trailers would be located within the project staging area and would be serviced by municipal water and wastewater trucks. As no electrical service is present at the site, generators would also be required.

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ᓇᐅᔫᑦ	Luis Manzo, Director	Kivalliq Inuit Association	2022-03-07
ᓇᐅᔫᑦ	Luis Manzo, Director	Kivalliq Inuit Association	2022-10-17
ᓇᐅᔫᑦ	Bert Dean, Assistant Director	Nunavut Tunngavik, Department of Wildlife and Environment	2022-04-06
ᓇᐅᔫᑦ	Dolly Mablik, Manager	Arviq Hunters and Trappers Organization (Naujaat)	2022-09-16
ᓇᐅᔫᑦ	Community Open House	Open house run by: Northern Energy Capital, Sakku Investments Corporation, and Government of Nunavut Climate Change Secretariat	2022-06-07
ᓇᐅᔫᑦ	Mayor Robinson and Council	Hamlet of Naujaat	2022-03-11
ᓇᐅᔫᑦ	Mayor Robinson and Council	Hamlet of Naujaat	2022-06-07
ᓇᐅᔫᑦ	Mayor Robinson	Hamlet of Naujaat	2022-09-02

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Kivalliq

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ᒐᕙᒪᒋᔭᐅᔫᑉ ᐊᕕᒃᑐᖅᓯᒪᐅᕐᓂᖓᓐᓂ ᒪᓕᒐᕐᓅᖓᔪᓂᒃ ᐱᖁᔭᕐᓅᖓᔪᓂᒡᓗ ᑲᒪᔩᑦ ᐱᔪᖅᓇᐅᑎᑖᕈᑎᓂᒃ ᓚᐃᓴᓐᓯᓅᓪᓗ ᑲᔪᓯᒃᑲᐃᔩᑦ	ᖃᓄᐃᑦᑐᓪᓚᕆᐅᕙ ᓚᐃᓴᓐᓯᑖᕈᑕᐅᔪᖅ ᐱᔪᖅᓇᐅᑎᑖᕈᑕᐅᔪᖅ ᐊᖏᖅᑕᐅᔪᕐᓗᓐᓃᑦ	ᒫᓐᓇ ᖃᓄᐃᓕᖓᕙ	ᐅᓪᓗᒥ ᑐᓂᔭᖅ/ ᑐᒃᓯᖅᑑᑕᐅᓚᐅᖅᓯᒪᔪᖅ	ᑭᒡᓕᒃᑲᕐᕕᖓ
ᑲᓇᑕᒥ ᐃᖏᕐᖁᔪᓕᕆᔨᒃᑯᑦ	Aeronautical Assessment for Obstacle Notice and Assessment	Active	2022-09-23	2024-03-23
Hamlets and Municipalities	A land lease will be required from the Hamlet for the project site (administered by Community and Government Services)	Not Yet Applied		
ᐊᓯᖓ	Letter of No Objection from NAV CANADA	Active	2022-10-28	2024-04-28
ᓄᓇᕗᑦ ᒐᕙᒪᖓ, ᖁᓪᓕᖅ ᐆᒻᒪᕐᑯᑎᓕᕆᔨᒃᑯᑦ	A Power Purchase Agreement (PPA) will be required for the project to sell electricity to QEC. The ability to obtain a PPA will be contingent on QEC releasing their full Independent Power Producer Policy	Applied, Decision Pending		
ᓄᓇᕗᑦ ᒐᕙᒪᖓ, ᒐᕙᒪᓕᕆᔩᑦ	A land lease will be required from the Hamlet for the project site, which is administered by Community and Government Services	Applied, Decision Pending		
ᓄᓇᕘᒥ ᐃᒪᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᑦ	Type A or B permit NOT required, but NWB	Not Yet Applied		

	approval for camp use will be sought if needed.			

Project transportation types

Transportation Type	ᓄᓇᒧᑦ ᐊᑐᓚᐅᓂᐊᖅᐸ	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

Temporary Camp

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ᐊᖏᕈᔪᖅ ᐱᖃᑦ ᐊᑐᓚᐅᓂᐊᖅᑐᖅ ᖅᖃᓄᐃᑦᑐᓂᖏᓐᓂᒃ	ᖅᖃᑦᓭᐅᕐᑦ	ᐊᖏᕈᓂᖏᑦ - ᐳᖅᑐᓂᖏᑦ	ᓭᓇᒧᑦ ᐊᑐᓚᐅᓂᐊᖅᐸᒃ
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' (approximately)	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 70m).
Excavator	2-3	Standard	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	A small mobile concrete or cement mixer will be used to mix and pour concrete for the solar array foundations on site. 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	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.
Flat bed telescopic crane truck	1	37 ft x 12 ft (approximately)	Equipment will be delivered to Naujaat 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.
Diesel Generator	2	30kW	If a temporary camp is required, additional generators will be needed for heating and

			electricity inside the housing trailers
Solar Panels	2544	2256 x 1133 x 35 mm per panel	Bifacial Crystalline Passive Emitter and Rear Cell (PERC) panels will be installed at the site for the production of solar energy. Panels will be mounted on galvanized steel racking and arranged in 13 rows. A spec sheet is included in the documents section

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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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5	Water will be retrieved via truck for concrete/grout mixing (1-2 m3, intermittently). If a temporary camp is required, water would be supplied via Hamlet water trucks (4-5 m3/day).	Hamlet of Naujaat

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Equipment installation	ᐊᑲᑕᔪᑦ ᐃᓱᐊᓪᓚᑕᐅᔨᓐᓇᖅᑎᑦᑐᑦ	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.
Camp	ᐊᑲᑕᔪᑦ ᐃᓱᐊᓪᓚᑕᐅᔨᓐᓇᖅᑎᑦᑐᑦ	4500 kg per season	Residential solid waste from the camp during the construction season would be collected by the Hamlet as part of municipal solid waste collection, and disposed of at the local landfill	No additional treatment is required beyond typical municipal landfill treatment.
Equipment installation	ᖃᓄᖅᑕᓪᓕᓂᖅ	5000 gal	Port-a-potties or a built outhouse will likely be required on site during construction. 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 and disposal.
Camp	ᖃᓄᖅᑕᓪᓕᓂᖅ	100,000 gal per season	Camp wastewater would be collected in holding tanks connected to the mobile trailer units,	Collected waste would be transported to the Hamlet's wastewater facility for appropriate treatment and disposal.

			and will be collected by the Hamlet for disposal at the local wastewater facility.	

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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 along the eastern edge of the community, in a low lying valley bounded on the eastern edge by a ridge, and on the western edge by an existing road. The project site is 350m from the nearest structure on the community edge to the west, and approximately 325 m from the north end of the airport runway. The ground conditions are mostly flat and open, ranging from 25-35m above sea level, with the highest elevation point in the middle of the site. A stream is located on the eastern ridge that empties into an inlet to the SE of the project. Subsurface conditions at the site are not fully understood, but a desktop geotechnical report was completed which indicates the surface and subsurface are expected to consist of bedrock outcroppings, interspersed with original rootmat/organics overlain on ice-rich, native top soil (likely silty or clayey sand) above shallow bedrock (estimated 5m bgs). As noted in the NPC's 2016 interactive maps, no 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 Naujaat as an ideal site for the construction of a renewable energy project, and was confirmed by the local HTO as not in conflict with any traditional land use areas. The site is located within an already industrial portion of the municipality, and nearby facilities include the local landfill, a scrap metal yard, and the local sewer lagoon/outfall. The site itself was the former location of a scrap metal yard, and has some debris and refuse still scattered across the area that will require clearing.

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Following a site visit in June, the team observed that the site area was vegetated primarily by grasses and mosses, interspersed with bedrock outcroppings. As a lower lying area, some areas of grass were quite wet, and water was noted to be flowing slowly across the site in some areas, mostly towards the SE. No wildlife was encountered during the site visit, though this does not preclude the possibility of wildlife being present. However, due to the site's proximity to existing community buildings and infrastructure, it is not anticipated that the site is highly trafficked by wildlife. 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 northern Hudson Bay including caribou, buff-breasted sandpiper, wolverine, short eared owl, red-necked phalaropes, red knot rufas, and polar bears, however, due to the relatively small footprint of the project, the low-impact nature of operations, and

its proximity to town, 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 in an industrial area of the community about 400m away from residential areas, adjacent to an existing road that runs in the NW to SE direction. The existing road services industrial facilities in the area, including the local landfill and the sewer lagoon and outfall. A small portion of the north end of the site is currently being used as a snow dumping area by the Hamlet, however, the area was recommended to the project team by the Hamlet of Naujaat as an ideal location for the development of a renewable energy project, and the Hamlet has confirmed this will not be an issue. Following conversations with Community and Government Services, it was also found that a new road has been proposed to run through the area which will be used to access the sewer lagoon. The Project team has designed around this proposed road and left appropriate set backs between the road and the project infrastructure, which will be contained within a fenced area. The Project will also require a new electrical line to connect it to the local QEC power station, located due west from the project along a short road. The preferred route for new electrical service would run along this road, as it is the shortest route between the project and the QEC power house. This road crosses Nunavut Airports property, therefore, the team has been in contact with Nunavut Airports to collaborate on a mutually agreeable route that will not impact airport operations, and this collaboration is ongoing. The project team has proposed an underground or under-fill electrical conduit be installed across the segment of line that crosses the path of potential incoming and outgoing aircraft. If this route is deemed suitable, appropriate easements and ROWs will be obtained for the route, and the project team will work closely with Nunavut Airports during construction to minimize any adverse impacts. Finally, 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

The solar panels being used in this project are known as Passivated Emitter and Rear Cell, or PERC panels. PERC panels are a type of mono-crystalline silicon panel with improved efficiency due to a reflective layer at the back of the cell which prevents passive heating and increases the amount of solar radiation being absorbed. PERC solar panels are industry standard due to their higher efficiency, and are encased in durable tempered glass and aluminum alloy frames. Mono-crystalline solar panels are generally not considered to pose a toxicity hazard during installation or operations, with the greatest environmental risk posed during earlier lifecycle stages such as raw material extraction and manufacturing. Crystalline panels can sometimes be classified as hazardous waste at end of life if they contain heavy metals in the soldering such as lead, which can leech into the environment if disposed of improperly. Longi has confirmed that the panels under consideration for this project do not contain any substances classified as toxic or hazardous waste, and the panels have passed the Extractable Heavy Metal Test using the Toxicity Characteristic Leaching Procedures (TCLP) - test method EPA 1311:1992. For any broken or damaged panels encountered during the project life, the project will seek out recycling opportunities as a priority, and will safely remove and store damaged panels until such time as recycling can be arranged. If recycling is not possible, damaged panels will be disposed of at the local landfill. At the end of project life, it is anticipated that the project will be recommissioned for continued operations rather than being decommissioned, and as a result, panels and associated equipment will be refurbished for continued use. Any panels that are removed will be shipped to a recycling facility or sold to another user for refurbishment. It is anticipated that at end of project life in 30 years, recycling facilities for solar PV panels will be more widely available and technologically advanced than they are at present. As such, panels at end of life will not be disposed of at the local landfill.

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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 within the boundaries of the municipality of Naujaat, and would be built within a fenced area alongside an existing road and other infrastructure. Due to the project's location within the community, additional impacts to caribou movement, activities, or habitat are not expected, as caribou already avoid areas inhabited by humans. Furthermore, 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 very 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 1-2 summer seasons. The construction site safety plan will include detailed spill mitigation procedures, including protocol for the safe storage of fuel on site, as well as 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 stage, no impacts to traditional land use have been identified at the site location, and the HTO has confirmed they have no issues with the proposed site. 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 or archaeological 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 has completed a desktop review of known heritage site locations near the project area, and did not find any overlapping areas of note. 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 (including the solar panels), 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. If any solar panels are damaged and require disposal during construction, the project team will set these aside for safe storage until such time as recycling

can be arranged. If recycling is not possible, panels broken or damaged during construction will be disposed of at the local landfill.

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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Access Road		-	U	U	-	-	-	-	U	M	-	M	N		N	U	U	-	-		U	P	P	P	-
Staging areas		-	U	U	-	-	-	-	-	U	-	-	-		N	U	U	-	-		U	-	-	-	-
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Equipment installation		-	U	U	-	-	P	-	-	-	-	P	-		-	-	U	-	-		-	P	P	P	P
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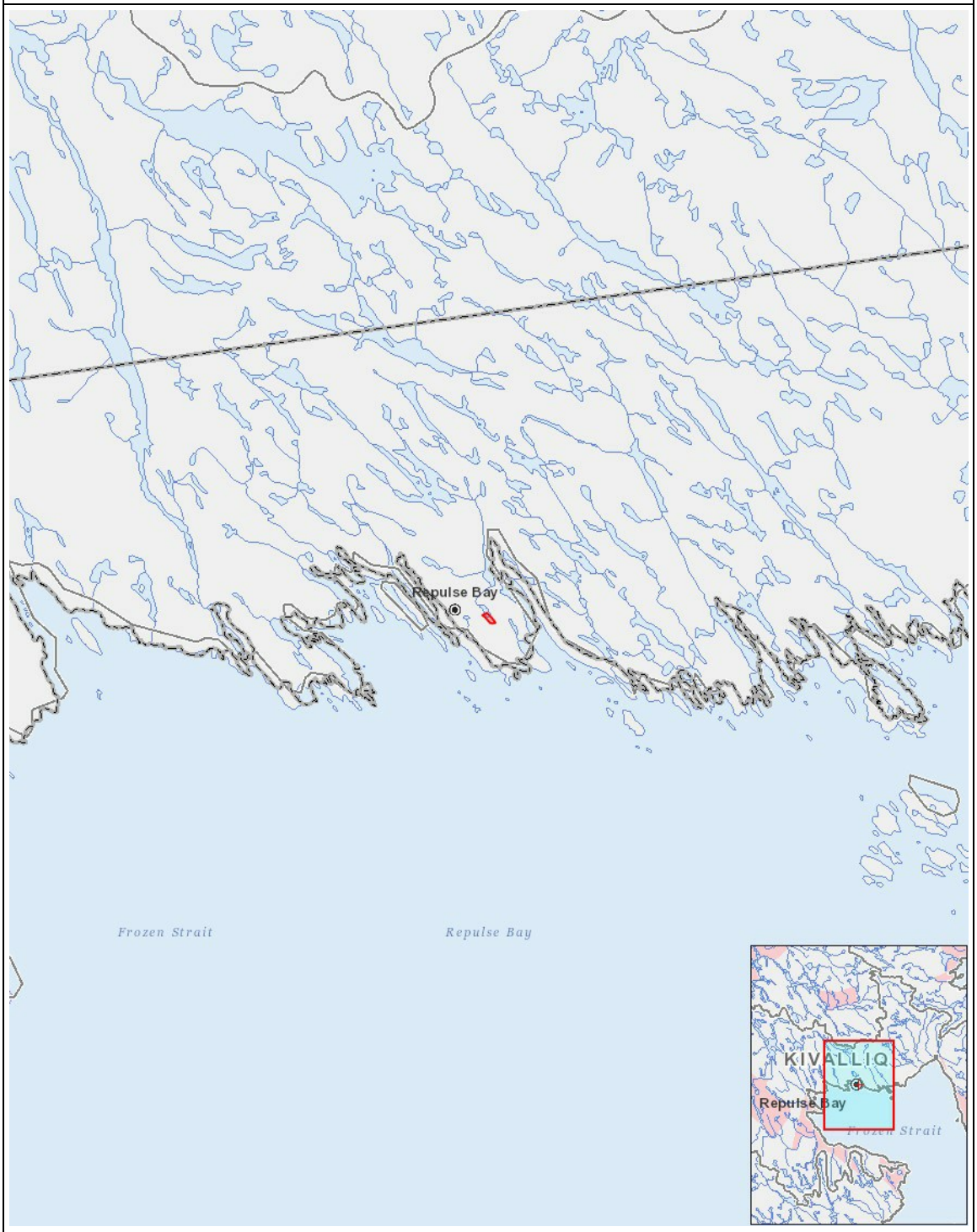

List of Project Geometries

1	polygon	Naujaat Solar and Energy Storage Project