Qulliq Energy Corporation (QEC) is a Government of Nunavut (GN) territorial corporation. Through the operation of 25 stand-alone diesel power plants, QEC is the sole provider of electricity to approximately 15,000 customers in the territory.

Qulliq Energy Corporation is proposing to construct and operate a new power plant in the Hamlet of Gjoa Haven located in the Kitikmeot Region of Nunavut (the project). Gjoa Haven is a community with increasing demand for electricity, reflecting its growing population. The existing power plant was constructed in 1977and has exceeded its design life. As the facility continues to age and become more outdated, it will become more difficult to maintain, and plant reliability will become an issue. Without reliable equipment, QECs customers are at risk of system failure.

This proposed multi-year project will include a new four-engine power generation facility with installed capacity of 3,100 kilowatts, designed for a 40-year life and will incorporate new technology to improve reliability, efficiency, operation, and safety. Construction will include a fuel storage system consisting of two 90,000 litre horizontal fuel tanks, and fuel pumping facilities. Additionally, QEC plans to construct a Quonset garage, transformer storage, pole racks, and oil and glycol drum storage and waste disposal area with secondary containment berm. Space will be allocated for transient staff accommodations, sea cans for storage, and a back-up emergency generator. Upgrades to the existing distribution system will also be required to connect to the new power plant. An approximately 50-metre fuel pipeline will be constructed to connect to the Petroleum Products Division (PPD) bulk fuel facility located to the east. The pipeline will be a combination of aboveground and underground construction. The new plant will be capable of integrating renewable energy sources.

The proposed new lot is approximately 10,110 square metres located on unsurveyed, untitled municipal land along Nuvu Road (Road R36) and is approximately 50 metres west of the PPD bulk fuel facility. The area proposed for the power plant has been designated by the Hamlet for industrial land use. The proposed lot was presented to and approved by the Hamlet of Gjoa Haven on June 1, 2021. The GN-CGS Planning and Lands Division issued a Sketch Plan Approval Report on June 18, 2021.

There are no natural drainages, or watercourses within 100 metres of the project location. There are no designated wildlife areas, marine protected areas, territorial or national parks or Inuit owned lands in conflict with the power plant location. An archaeological impact assessment will be carried out in July 2021 to determine if archaeological sites are in potential conflict with the project and identify any necessary avoidance or mitigation measures.

The anticipated project schedule is shown in Table 1.

Table 1: Schedule for the Gjoa Haven Power Plant Project

Task	**Anticipated Milestone**
Secure Land and Complete Archaeological Impact Assessment	March 2021 to March 2022
Detailed engineering design	April 2022 to March 2023
Contracting and procurement	April 2023 to March 2024
Construction	April 2024 to December 2025 (seasonal)
Testing and commissioning	January 2026 to March 2026
Plant handover to QEC staff	March/April 2026

On average, 21 workers are estimated to be required on-site for the duration of construction. This will fluctuate based on the construction phase. The contractor awarded the construction tender will determine the required

labour force to meet project requirements. Contractors will be obligated to meet mandatory Inuit labour levels for all construction work.

QEC has staff in Gjoa Haven that are responsible for the day to day operation of the power plant. This includes a full-time Plant Superintendent, and two part-time Assistant Operators. Existing staff will transition over to the new power plant once it has been constructed and commissioned. No new staffing is anticipated to be required as a result of this project.

The majority of construction materials for the Project will be delivered by annual sealift. Some materials may be sourced locally or delivered via cargo plane depending on size and quantity. The contractor will be responsible for sourcing construction equipment. This may include sub-contracting locally available equipment or bringing equipment to the community through the annual sealift.

This project is anticipated to provide an overall benefit to the Hamlet of Gjoa Haven with more efficient use of diesel, a non-renewable resource, and the reduction of greenhouse gas emissions. It will also allow QEC to improve power generation infrastructure in the community, support continued community growth and achieve its mandate for the provision of safe, reliable electrical power to the communities it serves.