

Demande de la CNER faisant l'objet d'un examen préalable #125442
Kugluktuk Power Plant and Solar Project

DÉTAILS

Description non technique de la proposition de projet

Anglais: The power plant in Kugluktuk is at the end of its useful life. Built in 1973, the building does not have the capacity to house more generators or yield more power to the community. QEC proposes to build a new power plant at a different location than the current plant with a higher power output and more efficient engines. The current fuel system is also at end of life so QEC proposes installing 2 engineered field erected vertical tanks within a lined berm. The construction phase will span two years and provide good employment opportunities for local labour. The power plant, outbuildings as well as the fuel system will be built at the industrial section of the hamlet near the current fuel tank farm with a 40 year expected lifespan and will provide a cleaner, more efficient production of diesel generation. The plant will also be built to integrate sustainable technologies for future power generation. A solar array will be built adjacent to the diesel plant to supplement the electrical capacity of the plant.

Français: La centrale de Kugluktuk a atteint la fin de sa vie utile. Construit en 1973, le bâtiment n'a pas la capacité d'accueillir davantage de générateurs ou de produire plus d'électricité pour la collectivité. La SEQ propose donc de construire à un nouvel emplacement une centrale qui produira plus d'électricité et sera dotée de moteurs plus efficaces. Le système d'alimentation actuel étant également en fin de vie, la SEQ propose aussi de construire sur place deux réservoirs verticaux confinés par une berme à revêtement imperméable. La phase de construction s'étendra sur deux ans et offrira d'intéressantes possibilités d'emploi pour la main-d'œuvre locale. La centrale elle-même, ses dépendances et le système d'alimentation seront construits dans le secteur industriel du hameau, près du parc de stockage actuel. Elle aura une durée de vie projetée de quarante ans et assurera une production d'électricité au diesel plus propre et efficace. Enfin, la centrale sera conçue de façon à pouvoir intégrer des technologies durables en prévision de la production d'électricité future. Un générateur solaire sera érigé à proximité de la centrale diesel pour en augmenter la capacité électrique.

[illegible]

Inuinnaqtun: Tamna pauwaqarvik Kugluktukmi auladjutikhanga nuunguniqituuq aulavikhanga. Napaqtitaivakhimayuuq 1973mi, tamna pauwaqarvikhangat naalimairyuqiliman auladjutikharnik igluakharnik ingniqutiriyuungit auladjaaluaqtilimailiqtuuq pauwakharnik talvunga nunalaamun. QEckut tukhiqtun napaqtigiangani nutaamik pauwaqarvikharnik allami nayugakhaani talvunga aularviangani pauwarvingmin taima anginirmik pauwaktuutikharnik auladjutikharnik ihuatqiyauyuniklu ingniqutikharnik piqaqtukhaq. Tamna aulayuuq uqhuqyuaqarvikhangalu auladjutikhanga nuunguliqtuuq QEckut tukhiqpakhimayut iliugaiyukharnik marlungnik ingniqutikharnik hanahimayunik napaqtaugumik nalruyukharnik qataqyuungit piqarluni avataini kuvlaitkutikharnik aihinun nunamun qataqyuqarvingmin. Tamna napaqtirutikhanga aulavakhanga aulaniaqtun marlungnik ukiunganik tunihimaarniaqturlu havaaqharnik nunalaani inungnun havaktiqarniaqtun. Tamna pauwaqarvikhaq, hilataaniit tukhat iglukhat unalu qataqyuungit napaqtauniaqtun talvani hanaqilivingmi nayugaani talvani hamilaatku haniani aulayutlu tapkuat urhuqyuungat qataqyuungit nayugaani taima 40nik ukiuni aulaniaqtun tunihimaarniaqturlu halumayumik, ihuaqtumik pidjutikharnik urhuqyuani ingniqutiqarniaqtuuq. Tamna pauwarvikhaq napatitauniaqtuuq ilaayukharnik atuqtauhimaanginaqtun alrauyaqtuqtunik hivunirmi pauwaqarvikharnik ingniqutikharnik. Hiqinirmin auladjutikharnik napaqtauniaqturlu haniani talvani Urhuqyuaqarviit pauwaqarviani aulatitiyaangat ikumadjutikharnik katitirutikharnik talvani pauwaqarvikhaanun.

Personnel

Personnel on site: 32

Days on site: 350

Total Person days: 11200

Operations Phase: from 2019-07-15 to 2021-12-31

Operations Phase: from 2021-12-31 to 2049-12-31

Post-Closure Phase: from to

Activités

Emplacement	Type d'activité	Statut des terres	Historique du site	Site à valeur archéologique ou paléontologique	Proximité des collectivités les plus proches et de toute zone protégée
ForNPC	Municipal and Industrial Development	Commissioners	Site was recently a rock quarry.	No Identified archaeological or paleontological value.	Within the community industrial section next to the fuel tank farm.
ForNPC	Fuel and chemical storage	Commissioners	Site was recently a rock quarry.	No Identified archaeological or paleontological value.	Within the community industrial section next to the fuel tank farm.

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Kugluktuk	Lori Kimball. Deputy Minister, CGS	Community and Government Services	2018-05-01
Kugluktuk	Donald LeBlanc	Hamlet of Kugluktuk	2016-11-22

Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Kitikmeot

Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Environment and Climate Change Canada	registration of bulk fuel storage system	Not Yet Applied		
Hamlets and Municipalities	Municipal Development Permit	Not Yet Applied		

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Land	1/2 ton pickup truck	

Project accomodation types

Collectivité

Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

Type d'équipement	Quantité	Taille – Dimensions	Utilisation proposée
Excavator	1	large	Perform civil work to prepare land for foundation
Loader	1	Large	Perform moving of equipment and materials during construction of power plant
Driller	1	2m X 3m x3m	Drill piles for foundation of power plant

Décrivez l'utilisation du carburant et des marchandises dangereuses

Décrivez l'utilisation de carburant :	Type de carburant	Nombre de conteneurs	Capacité du conteneur	Quantité totale	Unités	Utilisation proposée
Diesel	fuel	1	205	205	Liters	Run heavy equipment
Diesel	fuel	2	90000	180000	Liters	Operate diesel generators
Ethylene Glycol	hazardous	5	1000	5000	Liters	Engine coolant

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
2	Municipal truck delivery	Municipal water source

Déchets

Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Fuel and chemical storage	Déchets combustibles	3000 liters	Burn in waste oil furnace	Send south for recycling
Fuel and chemical storage	Déchets non combustibles	3000 liters	Ship south for disposal	none

Répercussions environnementales :

Building the structures will change the makeup of the ground and could alter the permafrost under them. QEC has committed to an engineered design which will eliminate this risk by constructing a foundation which will not affect the perma-frost. A pile foundation will mitigate this risk. The two 90,000 liter fuel tanks will be 110% contained, double wall and be mounted on a concrete slab. All outside liquid hazardous material storage areas will be lined and slightly hollow so as to contain spills and leaks. Otherwise products and waste will be stored in a leak proof sea-can. The new plant will be much more environmentally friendly with the newest technology engines and hospital grade silencers. Building the plant away from residential areas will result in less risk to the public. The plant will be built with a 40 year life span and will be able to integrate various forms of sustainable energy such as solar and wind. One of the single most important ways QEC mitigates risk is by training personnel. QEC is fully committed training on all levels to assure that we meet all regulation on health safety and the environment.

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

Description de l'environnement existant : Environnement physique

This is land in the industrial section of town and most recently was the municipal gravel pit.

Description de l'environnement existant : Environnement biologique

Rock and gravel no plant life

Description de l'environnement existant : Environnement socio-économique

Commissioner's land ideal spot for a power plant due to the proximity of the fuel source

Miscellaneous Project Information

Identification des répercussions et mesures d'atténuation proposées

There are no immediate impacts from the construction of a power plant but due to operations storing and using diesel fuel real potential of impacts exist. Also generation, storage and transportation of liquid wastes poses threats to the environment. Mitigation measures include engineered controls and administrative controls. Fuel storage systems are designed with automated shut off during transfers to prevent overflow. All fuel and hazardous waste are stored with secondary containment to prevent entry into the natural environment. Visual checks are performed daily and recorded monthly and all staff are trained to prevent spills and leaks and to effectively respond in case of an incident. If a spill does occur we work with regional regulators to clean it up immediately and completely. This plant is unique in that funding is provided for a sizable solar array which will offset some quantity of diesel fuel.

Répercussions cumulatives

Due to the length of time a power plant is designed to operate, cumulative effects can build over time. Our practices include immediate and sustained response to incidents to mitigate the potential for cumulative effects due to operational activities.

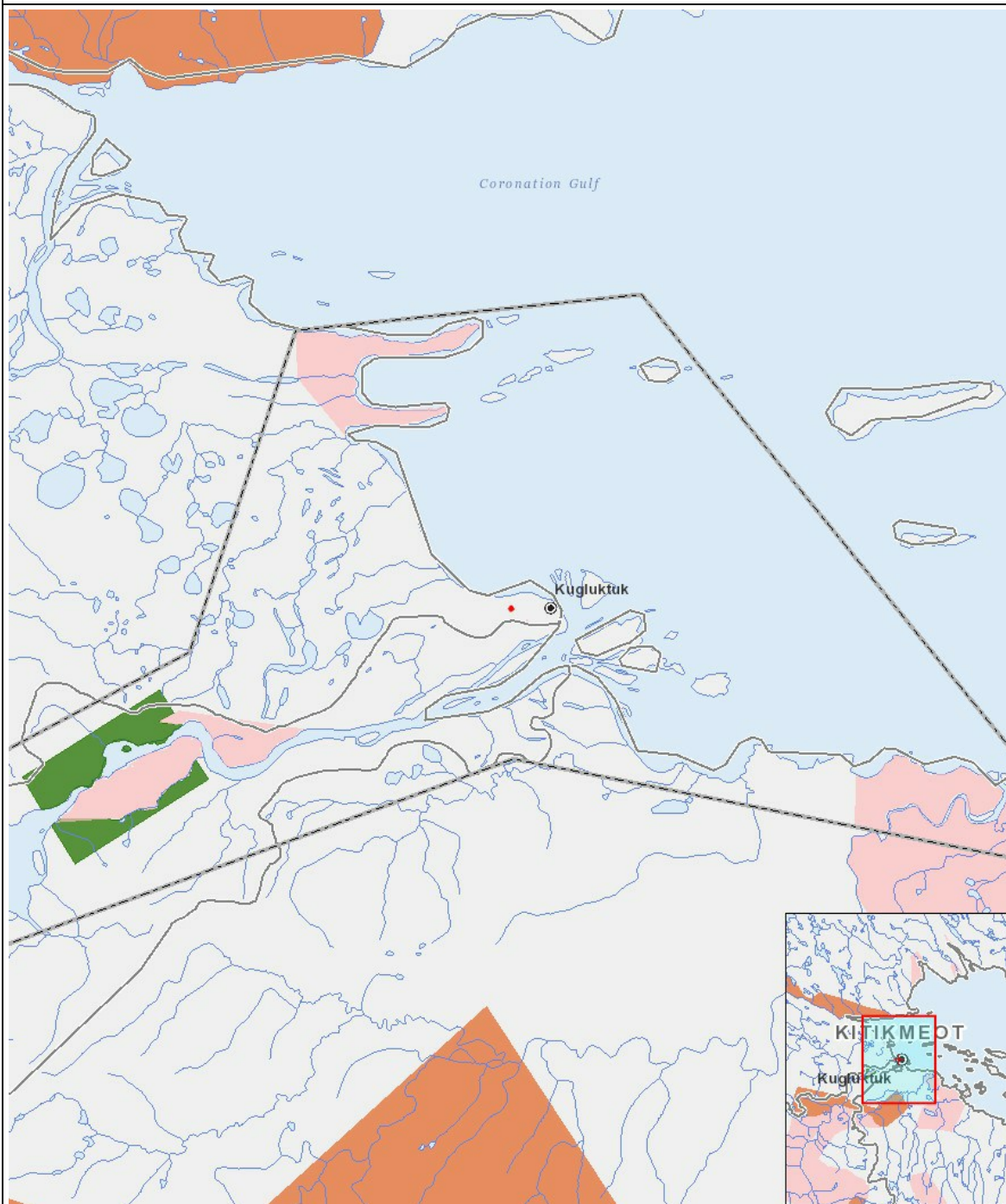
Impacts

Identification des répercussions environnementales

	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
Construction																									
Fuel and chemical storage	-	N	N	-	-	-	-	-	N	-	N	-		-	-	-	-	-		P	-	-	-	-	
Exploitation																									
Fuel and chemical storage	-	N	N	-	-	-	-	-	N	-	N	-		N	-	-	-	-		P	-	-	-	-	
Désaffectation																									
-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

Site du projet



Liste des géométries de projet

1	polygon	ForNPC
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