

▷ᵇᶜ▷ᵀᶜ: 8679797579, ᵀᵇᶜᵀᶜ:

Qulliq Energy Corporation (QEC) is a Government of Nunavut 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 Chesterfield Inlet. This will replace the existing power plant, which was constructed in 1975 and which has exceeded its design life. As the facility continues to age and become more outdated, it has become more difficult to maintain, and thus reliability is declining. Without reliable equipment, QEC's 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 1,270 kilowatts. It is designed for a lifespan exceeding 40 years, and it will incorporate new technology to improve reliability, efficiency, and safety. Construction will include a fuel-storage system consisting of two 90,000 litre horizontal fuel tanks, and fuel-pumping facilities. QEC also plans to construct a Quonset garage, as well as storage facilities for transformers, utility poles, oil, and glycol. 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 250-metre fuel pipeline will be constructed to connect to the Petroleum Products Division (PPD) bulk fuel facility located to the southwest. 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 6,200 square metres located on unsurveyed, untitled municipal land off of Crescent 1A, and is located 250 metres northeast of the PPD bulk fuel facility. The area proposed for the power plant has been designated by the Hamlet for industrial land use. A QEC land application was approved by the Hamlet of Chesterfield Inlet on September 3, 2020. The Nunavut Water Board has confirmed that our plant will not affect any water bodies. 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 was carried out in July 2021, and 30-metre buffer zones were established. Construction fencing will be used to ensure that heavy machinery does not enter the buffer zone. The anticipated project schedule is shown below.

Task	Time
Choosing the site and doing the studies	March 2021 to March 2022 (already done)
Detailed Engineering Design	April 2023 to March 2024
We hire a Contractor	April 2024 to March 2025
Contractor builds the new plant	April 2025 to December 2026 (seasonal)
Testing the new plant	January 2027 to March 2027
Plant Handover to QEC Staff	March/April 2027
Operations (power production)	2027 to 2067 and beyond

On average, 21 workers are estimated to be required on-site for the duration of construction. This will vary 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 Chesterfield Inlet who take care of the daily operation of the existing 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 subcontracting 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 Chesterfield Inlet with more efficient use of diesel fuel and the reduction of greenhouse-gas emissions. It will also enable QEC to improve power generation infrastructure in the community, support future growth, and achieve its mandate for the provision of safe, reliable electrical power to the communities that it serves. (Note: This

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Inuinnaqtun: Qulliq Alrujaqtuqtunik Ikumadjutiit(QEC) Kavamatkun Nunavutnmi (GN) aviktuqhimajumi kuapaliisit. Aulapkaivaktut 25nik uqhurjuaqtuqtunik pauwaqarviinik, QEC-kut avaliittut tuniuhaijiujut alrujaqtuutikhanik imaatut amigaittunut 15,000 atuqtiujut aviktuqhimajumi. Qulliq Auladjutiqhanut Kuapaliisinga uuktuqtut nappaqtirilutik aulapkailugitlu nutaamik pauwaqarviaviqhamik Hamlanganin Igluligaarjukmi. Una himautiginiaqtaa atuqtaujuq pauwaqarviup, kitu havaktauhimajuq uvani 1975mi kitu idjuhia utuqanguqtuq. Igluqpak utuqanguqpaliajuq, ajungnaqhiblunilu ihuaqhaqataariami, ihuarniralu ihuiqpaliabluni. Piqangitumik ihuaqtumik tamajanik, QECkunun akiliqtuijut qajangnautiaqtut auladjutit nutqarniranun.Una tughiqtaujuq amigaitunun-ukiunun havaaghaq ilaujuq nutaaq hitamanik-ingniqtuqtauqtuq pauwaqtuut igluqpak iliuraqtauhimajuq aktilaanganik imaa 1,270 kilowattsmik. Havaktauhimajuq auladjutaa hivutuniqauqtuq avatqulugu 40 ukiutlt, piqarniaqturlu nutaamik ihuaqhiuumirutijuq ihuarnira qajangnautaallu. Nappaktirinirmun ilaliutihimajuq urhuqjuaqarvighaa malruk 90,000 litre urhuqjuaqarviik, urhuqjuamiklu-papautiaqhuni igluqpak. QECkut upalungaiqhimaqut napaqtirilutik uuminga Quonset aghaluutiqarvingmik, tamajaqarvighallu alruyaqtuutunik, naparianik, urhuqjuamik, haffumingalu, glycolmik. Najugahait nuutiqtauhimaqut havaktinun hiniktarvighait, umiakktu uhidjutit, parnallu ingniqut. Ihuaqhaidjutit atuqtaujunun auladjutinun pijariaqarniaqtuq ataliqluni nutaamun pauwaqarvingmun. Naamavjaktuq 250-miitanik urhuqjuamun tughuanga havaktauniaqtuq ataliriangnai Urhuqjualiqiqiit Havagvianun urhuqjuamik tutquumaviinun hivuraata kivataanii. Turhuat qaanganiiniaqtut nunami ataanilu havaktaulutik. Nutaaq pauwaqarviqhaq pidjutittaaqhun'nguyuuq pidjutittaariami atutqiqtaaffaaqtunik auladjutihatigut. Tughiqtaujuq nutaaq najugahaa naamavjaktuq 6200 kikariktuuq metremmik najugaqauqtuq naunaijaqtauhimangitumi, atiqangituuq haamlatkut nunaa hamani Crescent 1A, najugaa 250 metres tunungani hivuraani PPDkut urhuqjuaqarviiani. Najugaa tughiqtaujuq pauwaqarvighamun tikuaqtauhimajuq haamlatkunin havagvikjuanun nuna atugahaq. QECkut nunamik uuktuutaat angiqtauhimajuq Haamlanganin Igluligaarjungmi uvani Apitilirvia 3, 2020.Nunavut Imalirinirmut Katimayit tutqighaqhimajaat tamna pauwaqavik hulaqutilimaituuq aujaginarmun imaqarnirmun. Piqangittuuq huradjat najugaanik, imakullu munarijaujunik najugaani, aviktuqhimaup kanadamiluuniin min'nguiqhiviinun Inuit-nanminirijainunluuniin nunat ihuiguuutiqangitut pauwaqarvighap najugahaani. Ingilgaarnitiginirmun hulaqutait havaktauhimaqut uvani Taaqhivalirvia 2021, unalu 30-metremmik kiklighait havaktauhimaqut. Havaktauhimaqut happutigahq atuqtauniaqtuq uqangijut aghaluutit itilimaitaangini kikliinun.Niriuktaujuq havaaghaq naunaitkutaa takunaqtuq ataani.Naunaitkutaa haffuma Igluligaarjuup Pauwaqarvighaanun HavaaghaqHavaktahqUpluqhiutaaNaunaijaqlugit najugahait ihivriuqlugilluQiqailruq 2021 hamunga Qiqailruq 2022 (iniriiqtut)Naunaijattiaqhimaqut titiraujakhimaqut Idjuhighaa Qitiqqautijuq 2023 talvunga Qiqailruq 2024Havaktitiluta KatulaaqauqtunikQitiqqautijuq 2024 hamunga Qiqailruq 2025Katulaaktup napaqtiliqlugu nutaaq pauwaqarvighaqQitiqqautijuq 2025 talvunga Ubluirvia 2026 (ukiumi ilangani)Uuktuutait nutaap pauwaqarviupUbluqtuhivia 2027 talvunga Qiqailruq 2027Pauwaqarviqhaq tunijauniaqtuq QECkut havaktiinnutQiqailruq/Qitiqqautijuq 2027Auladjutit (aulaliqluni)2027 hamunga 2067 hivumutQaffiunniit, 21 havaktit tiqungniaqtaujuq ihariagijauniaqtut najugaani napaqtitirilugit. Una aalanganiaqtuq pihimalugu napaqtitirinnun hivitunianun. Katulaangmik tunijauniaqtuq naunaitkutatigut ihumaliuqlutik pijaghat havaktut havagianganin havaaghamun pijaghat. Katulaaktut pijaghaqarniaqtut pitqujaunirmun Inuinnarnik havaktitilutik tamainun napaqtitirinnun havaaghamun. QECkut havaktiit Igluligaarjungmi kitut munaqhijut ubluni auldjutainik atuqtaujuumun pauwaqarvingmik. Una ilaujuq havagaanginaqtughaq Pauwaqarvingmun Atangujaq malruklu havakaffuktuk Ikajuqtik Auladjutinun. Havaktut hadja nuutiqhun'nguyut nutaamun pauwaqarviannut iniktiqqat. Nutaanik havaktiqalimaitut haffumunga havaaghamun. Amigaingniatigut nappaktirinirmun tamajait Havaaqhamut agjaqtauniaqtut umiakktut. Ilangit tamajait niuviktauniaqtun nunanganit agjaqtaulutikluunniit

tingmitikkut naunairutilugit aktilaangit kaffiutilangillu. Kantraaktitaujuq munarijaqarniaqtuq atuqtitilutik nappaqtirutikhanik ingilrutinik. Una ilauniaqtuq aalamik katulaaqaqtumik nunamingnik piinarialingmik tamajanik agidjijughamikluuniin nunallaamun umiakkut. Una havaaghaq niriuktaujuq tunihiluni tamainun ikajuutinik Haamlanganun Igluligaarjuk ihuatqiamik atungniranun urhuqjuanik mighijuumiqrutijuqlu pujuqmik tingivralaaqtumik. Pipkainiaqtut QECkunun ihuaqhijuumirnirmun auladjutinun igluqpak nunallaami, ikajuqlutiklu hivnuniptingni angiklijuuminirmik, pilugulu pitqujaujuq iluani qajangnaitkutit, ihuaqtut alrujaqtuutit nunallaamun kivgaqtuqtamingnun.

Personnel

Personnel on site: 30

Days on site: 200

Total Person days: 6000

Operations Phase: from 2025-04-04 to 2026-12-12

Operations Phase: from 2027-01-01 to 2049-12-12

Post-Closure Phase: from to

$$\Lambda \subset \mathbb{N} \triangleleft \mathbb{N} \xrightarrow{\sigma} \mathbb{N} \xrightarrow{\sigma^b} \mathbb{N}^c$$
[illegible]

መረጃ ለረዕሰ ምክር ቤቱ ለመስጠት ለሚችል ሁሉም ሰራተኛ አካላት ለመረጃ ማግኘት ሚና ሲጫወት

ᓄᓇᑦᒋᔭ ^ᖃ	ᐱᓂ ^ᑕ	ᑲᐅᙳᐱᖃᓂᓯᒋᔭ ^ᖃ	ᖃ ^ᖃ ᓴᓗ ᐅᙳᖃᓂᑕᐅᑦᐅᓚᐱᐱᖃᓯᓐᓈ ^ᖃ
Δᓴᓐᑕᓴᖃ ^ᖃ	Hamlet of Chesterfield Inlet, Douglas Aggark (letter of approval)	Qulliq Energy Corporation	2020-09-03

ᄒᄆᅃᆫ ᄇᄊᅃᄂᆺ ᄈᅃᆯᅃᄌᄆᄂᄆᅃ

$a_1 r^0 r^{\infty} \sigma^b$ $\Lambda_{C-2} \Delta_{L^e} \Delta D \sigma^b \gamma^c$ $\Pi \Pi \gamma^c \omega^c$:

Kivalliq

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<p>ረፍረፍኩት፣ ቁጥጥራችሁን ረፍረፍኩት፣ ለገጣሚዎች ለረፍረፍኩት ለረፍረፍኩት ለረፍረፍኩት ለረፍረፍኩት ለረፍረፍኩት</p>	<p>የግልጽጽጽ ረፍረፍኩት ለረፍረፍኩት ለረፍረፍኩት ለረፍረፍኩት ለረፍረፍኩት ለረፍረፍኩት ለረፍረፍኩት</p>	<p>ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ</p>	<p>ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ ፊት የግልጽጽጽ</p>	<p>የግልጽጽጽ የግልጽጽጽ የግልጽጽጽ የግልጽጽጽ የግልጽጽጽ የግልጽጽጽ የግልጽጽጽ የግልጽጽጽ</p>
Information is not available				

Project transportation types

Transportation Type	Transportation Description	Length of Use
Water	Sealift of materials for building new power plant	
Land	Trucks from sealift area to the power plant site	

Project accomodation types

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Λ⁹δ^c Δ⁹ρ²Δ⁵ Δ⁵CDσ²Δ⁴Δ⁵ Δ^cΔ⁵ρ²Δ⁵Δ⁵Δ⁵ Δ⁵Δ⁵Δ⁵, Γ^cΔ⁵Δ⁵Δ⁵, Δ⁵Δ⁵Δ⁵, Δ⁵Δ⁵Δ⁵ Δ⁵Δ⁵Δ⁵

በበፍጥረቱ ስራ ላይ ለሚገኙት ሰራተኞች ምርጫ ማድረግ ይቻላል።

ᐱᕈᑦ ᐸᓄᒃ ᐅᖃᓂᓴᓴᓯᐳᖃ ᐳᐭᐤᓂᐳᖃ	ᖃᓂᐃᑦᑐᑦᑕᓇᐅᑦ ᐅᖃᓂᓴᓴᓯᐳᖃ	ᖃᓂᓯᐅᑦᑕ ᐅᖃᓂᓴᖃᐅᓯᑦ	ᐆᓴᐅᑦ ᐃᓚᖃᓂᓯᓯᐳᑦᓂᓴᓴ	ᓂᓯᐭ	ᐆᓴᐃᑦ ᐳᓲᓂᓴᓯᑦ	ᐱᕈᑦ ᐳᐭᐤᓂᐳᖃ
Diesel	fuel	2	90	180	Cubic Meters	Diesel fuel for construction purposes, will be kept in double-walled portable tank. This is for the construction of the power plant itself. The completed power plant will have two large 90-cubic-metre fuel tanks, double-walled and with continuous electronic monitoring. There will also be small

$\triangleleft^b C d^c$
$$\Delta^b C d_c \sim \sigma \Delta^a \sigma^a$$

ᐱᓕᓇᑖᓚᔭᑦᑲᑦᑲᑦ ᐱᓕᓇᑖᓚᔭᑦᑲᑦ	ᐱᓕᓇᑖᓚᔭᑦᑲᑦ ᐱᓕᓇᑖᓚᔭᑦᑲᑦ	ᐱᓕᓇᑖᓚᔭᑦᑲᑦ ᐱᓕᓇᑖᓚᔭᑦᑲᑦ	ᐱᓕᓇᑖᓚᔭᑦᑲᑦ ᐱᓕᓇᑖᓚᔭᑦᑲᑦ	ᐱᓕᓇᑖᓚᔭᑦᑲᑦ ᐱᓕᓇᑖᓚᔭᑦᑲᑦ
Equipment installation	ᐱᓕᓇᑖᓚᔭᑦᑲᑦ ᐱᓕᓇᑖᓚᔭᑦᑲᑦ	100 litres per year	Waste oil from construction machinery will be drummed for disposal by the Contractor in charge of construction work.	Waste will be shipped out via sealift in drums, as per standard procedure for waste engine oil and simple machinery-related liquids.
Other	ᐱᓕᓇᑖᓚᔭᑦᑲᑦ ᐱᓕᓇᑖᓚᔭᑦᑲᑦ	1000 litres per year	All wastes from engines (e.g. waste engine oil, waste coolant) will be drummed and stored in specially lined sea-cans. At annual intervals, the drums are shipped out (strapped to pallets) via the annual sea-lift. In this way, the waste fluids are disposed of in southern Canada.	Waste engine oil is re-refined into new-oil by a re-refiner such as Safety-Kleen in Breslau, Ontario.
Other	ᐱᓕᓇᑖᓚᔭᑦᑲᑦ ᐱᓕᓇᑖᓚᔭᑦᑲᑦ	10 kilograms a month	These are standard non-hazardous wastes include office paper, empty cardboard boxes, and other everyday wastes.	To be disposed of at standard municipal landfill.
Equipment installation	ᐱᓕᓇᑖᓚᔭᑦᑲᑦ ᐱᓕᓇᑖᓚᔭᑦᑲᑦ	5 cubic metres	All construction projects generate leftover materials and other wastes (e.g. end cuts and other	We reuse and recycle as much as possible. Extra materials are also kept at the plant for future repairs (e.g. spare paint, extra sheets of siding, etc.).

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 area proposed for the power plant has been designated by the Hamlet as industrial land use and was the location previously identified by the Hamlet for the power plant. This implies that the Hamlet is interested in or is willing to consider some form of development in this area. •Surrounding development in this area is industrial in nature (e.g., PPD bulk fuel facility). •Given that the proposed power plant will be on an existing road and in close proximity to the PPD bulk fuel facility, community members or wildlife using this area will already be accustomed to traffic activity in the area. •The location selected for the power plant is generally flat terrain and is geologically amenable to construction. •Regarding a small creek that is located about 50 metres from our site, we have received confirmation from the Nunavut Water Board that no special procedures are required, given that our plant does not entail any water-takings, nor in-stream works, nor any discharge of waste to these small water features. We note that our use of diesel generators uses radiators to air for cooling. Our domestic water usage the plant will entail a freshwater tank along with a sewage tank, both serviced via truck. Construction activities will also entail tanked water, with portable toilets for employees. The contractor will also be required to ensure that surface disturbance (e.g. disrupted soils) are not able to run off the site. For this purpose, standard silt fences are anticipated to be used. •There are no designated wildlife areas, marine protected areas, territorial or national parks or Inuit owned lands in conflict with the power plant location.

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•There are no designated wildlife areas, marine protected areas, territorial or national parks or Inuit owned lands in conflict with the power plant location. The land is designated industrial and does not constitute special-value habitat for birds or other wildlife. That being said, it is acknowledged that terrestrial and marine wildlife may be observed in the general surrounding area, especially by observers equipped with tripod-mounted spotting scopes, high-powered telephoto lenses, and high-resolution digital single-lens-reflex cameras, or with other sophisticated optical imaging devices.

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•The proposed power plant will be located about 1 kilometre from the centre of the hamlet, and it will also be downwind of the hamlet. This alleviates concerns regarding noise and emissions. Also, the design of the plant incorporates the latest emissions-control technology (dry oxidation catalysts) with modern diesel technology that minimizes fuel consumption and minimizes emissions. The exhaust systems will include mufflers (also known as silencers) that are of “hospital-grade” for the greatest possible attenuation of sound throughout the frequency range typical of reciprocating internal

collected for disposal at an approved facility. Contractors will be required to have a fuel management plan in place that includes refueling procedures and proper bulk storage if applicable.

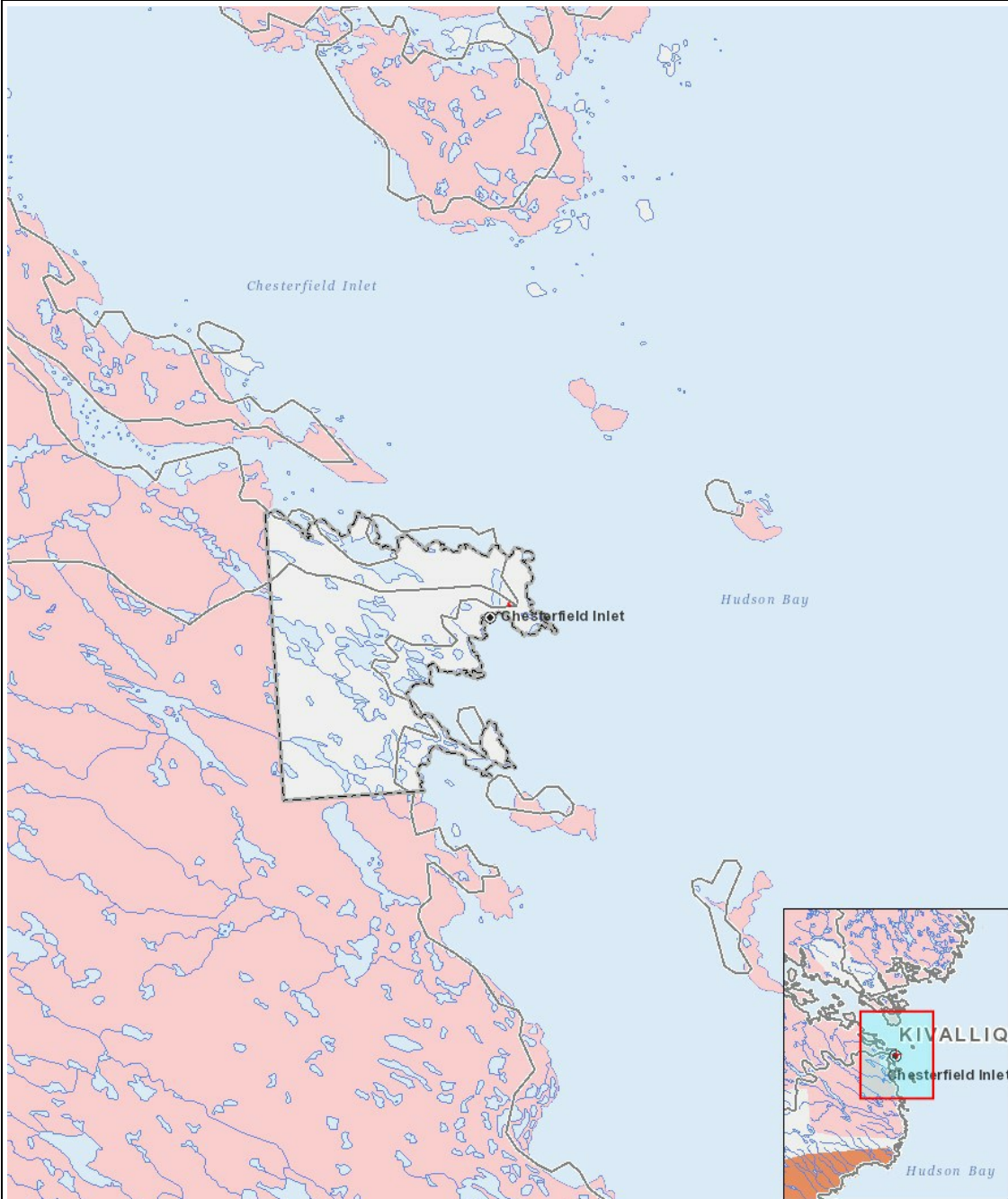
Cumulative Effects

For all of the reasons described in the preceding sections, the cumulative effects of this power plant are expected to be smaller than those of the existing in-town power plant at Chesterfield Inlet.

Impacts

$\mathbf{e} \rightarrow \mathbf{e} \Delta^{\mathfrak{b}} \mathbf{C} \triangleright \sigma^{\mathfrak{a}} \mathbf{r}^{\mathfrak{c}}$ $\mathbf{d} \mathfrak{e} \cap \Gamma \triangleright \mathbf{C} \dot{\sigma}^{\mathfrak{c}} \mathbf{D}^{\mathfrak{c}}$ $\mathbf{d}^{\mathfrak{b}} \mathbf{D}^{\mathfrak{b}} \mathbf{C} \triangleright \mathbf{r}^{\mathfrak{c}} \mathbf{L}^{\mathfrak{c}}$

[illegible]
$$(P = \langle b \rangle \Delta_P \cap \langle a \rangle^c)^c, N = \langle b \rangle \Delta_P \setminus \langle D \rangle \langle a \rangle^c \langle b \rangle^c \langle \langle D \rangle \setminus \langle P \rangle \rangle^b \langle D \rangle \langle a \rangle^c \langle P \rangle^c)^c, M = \langle b \rangle \Delta_P \setminus \langle D \rangle \langle a \rangle^c \langle b \rangle^c \langle \langle D \rangle \setminus \langle P \rangle \rangle^b \langle D \rangle \langle a \rangle^c \langle b \rangle^c)^c, U = \langle b \rangle \Delta_L \langle a \rangle^c \langle P \rangle^b)$$



List of Project Geometries

1	polyline	New project geometry
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