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 Qulliq Energy Corporation
 Société d'énergie Qulliq
 Qulliq Alruyaktuqtunik Ikumatjutiit

Connection Impact Assessment (CIA) Application

This Application Form is for proponents applying for Connection Impact Assessment (“CIA”) and for proponent with a project size >10 kW, including:

- **New Generators** applying for revisions to their original CIA
- **Generators** applying for a CIA after rescinding a previous CIA. **Note:** Please include your previous CIA Project ID # below.
- **Existing Generators** to verify information related to current connection to the Qulliq Energy Corporation system. It is part of the overall Distribution Connection Agreement.

Please return the completed form, fees and other required documents by mail to:

Qulliq Energy corporation.
 Attn: Engineering Department
 Generation Connection Application
 243 Umiaq Crescent, PO Box 250
 Iqaluit, NU.
 X0A 0H0

If you have any questions, please e-mail Qulliq Energy Corporation at servicedesk@qec.nu.ca

NOTES:

- 1) Applicants are cautioned **NOT** to incur major expenses until Qulliq Energy Corporation approves connection for the proposed generation facility.
- 2) All technical submissions (Form B, single line diagrams, etc.) must be signed and sealed by a licensed NAPEG Professional Engineer (P.Eng.).
- 3) All fields below are mandatory, except where noted. Incomplete applications shall be returned by Qulliq Energy Corporation.

Date: _____ (dd / mm / yyyy)

Application Type: New CIA Application CIA Revision/Rework

1. **Original CIA Project ID# (if applicable):** _____ **Project Name:** _____

2. **Proposed In- Service Date:** _____(dd / mm / yyyy)

3. **Project Size:** Nameplate Capacity _____ kW



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4. Project Location: Address _____
 City / Town / Township _____
 Lot Number(s) _____
 Block Number(s) _____
 Plan Number(s) _____

5. Project Information:
 Choose a Single Point of Contact: Owner Consultant

Information	Owner (same as Generator)	Consultant
Company/Person		
Contact Person		
Mailing Address Line 1		
Mailing Address Line 2		
Telephone		
Cell		
Fax		
E-mail		

Preferred method of communication with QEC: E-mail Telephone Mail Fax

7. Customer Status:

Existing Qulliq Energy Corporation. Customer? Yes No

If yes, Qulliq Energy Corporation. Account Number: _____

Customer name registered in this Account: _____

Are you a GST registrant? Yes No

If yes, provide your GST registration number: _____-____RT _____

8. Fuel / Renewable Energy Type:

Biomass Solar Water Wind

Diesel Engine Gas Turbine

Other (Please Specify) _____

9. Connection to Qulliq Energy Corporation. Distribution System:

a. Proposed or existing Connection voltage to QEC distribution system: _____kV

b. Power Plant / Station: _____

c. Feeder: _____

d. GPS coordinates of the following:

(Please give GPS co-ordinates in following format: Longitude, Latitude - Degree Decimal Format: * e.g. 49.392, -



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Rated capacity of each unit: _____kW _____kVA
 If unit outputs are different, please fill in additional sheets to provide the information.
 Rated frequency: _____Hz

Type:
 Synchronous Induction Inverter Other (Please Specify) _____
 (If the machine type is "Other", please provide values equivalent to a Synchronous or Induction type Generator)

Generator connecting on: single phase three phase Limits of
 range of reactive power at the machine output:

i. Lagging (over-excited): _____kVAR power factor _____
 ii. Leading (under-excited) _____kVAR power factor _____

Limits of range of reactive power at the POC:

iii. Lagging (over-excited): _____kVAR power factor _____
 iv. Leading (under-excited) _____kVAR power factor _____ Starting

inrush current: _____ pu (multiple of full load current) Generator

terminal connection: delta star

Neutral grounding method of star connected generator:

Solid Ungrounded Impedance: R_____ohms X_____ohms

For Synchronous Units:

- i. Nominal machine voltage: _____kV
- ii. Minimum power limit for stable operation: _____kW
- iii. Unsaturated reactance on: _____kVA base _____kV base
 - Direct axis sub-transient reactance, Xd'' _____pu
 - Direct axis transient reactance, Xd' _____pu
 - Direct axis synchronous reactance, Xd _____pu
 - Zero sequence reactance, X0 _____pu
- iv. Provide a plot of generator capability curve (MW output vs MVAR)

Document Number: _____, Rev. _____

For Induction Units:

- i. Nominal machine voltage: _____kV
- ii. Unsaturated reactance on: _____kVA base _____kV base
 - Direct axis sub-transient reactance, Xd'' _____pu
 - Direct axis transient reactance, Xd' _____pu
- iii. Total power factor correction installed: _____kVAR
 - Number of regulating steps _____
 - Power factor correction switched per step _____kVAR
 - Power factor correction capacitors are automatically switched off when generator breaker opens
 Yes No

12. Interface Step-Up Transformer Characteristics:

- a. Transformer ownership: Customer / QEC
 - b. Transformer rating: _____kVA
 - c. Nominal voltage of high voltage winding: _____kV
 - d. Nominal voltage of low voltage winding: _____kV
 - e. Transformer type: single phase three phase
 - f. Impedances on: _____kVA base _____kV base R:____
 _____pu, X:_____pu
 - g. High voltage winding connection: delta star
- Grounding method of star connected high voltage winding neutral:
 Solid Ungrounded Impedance: R:_____ohms X:_____ohms Nameplate rating



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and impedance values of High Voltage Grounding Transformer (If applicable):

Voltage: _____ V Rating: _____ KVA R: _____ pu X: _____ pu

- h. Low voltage winding connection: delta star
 Grounding method of star connected low voltage winding neutral:
 Solid Ungrounded Impedance: R: _____ ohms X: _____ ohms

13. Intermediate Transformer Characteristics (if applicable):

- a. Transformer rating: _____ kVA
 b. Nominal voltage of high voltage winding: _____ kV
 c. Nominal voltage of low voltage winding: _____ kV
 d. Transformer type: single phase three phase
 e. Impedances on: _____ kVA base _____ kV base R _____ pu X _____ pu
 f. High voltage winding connection: delta star
 Grounding method of star connected high voltage winding neutral:
 Solid Ungrounded Impedance: R _____ ohms X _____ ohms
 g. Low voltage winding connection: delta star
 Grounding method of star connected low voltage winding neutral:
 Solid Ungrounded Impedance: R _____ ohms X _____ ohms

NOTE: The term ‘High Voltage’ refers to the intermediate voltage that is input to the interface step-up transformer and the ‘Low Voltage’ refers to the generation voltage.

14. Load information:

- a. Maximum load of the facility: _____ kVA _____ kW
 b. Maximum load current (referred to the nominal voltage at the connection point to QEC System): _____ A
 c. Maximum inrush current to loads (referred to the nominal voltage at the connection point to QEC system): _____ A

Attached Documents:

Item No.	Description	Document No.	No. of Pages
1			
2			
3			

Attached Drawings:

Item No.	Description	Document No.	No. of Pages
1			
2			
3			



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APPENDIX A - FIGURES & DIAGRAMS

Figure A: Generator Owns Entire Tap Line

