Neyaskweyahk Group of Companies Inc. ("NGCI")

Request for Proposals ("RFP") for Design-Build of Sundancer Phase 1 Solar Photovoltaic Project

Part B: Project Specifications

(This is not a Tender)

Prepared By:

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Contents

1. INTRODUCTION

This document provides the Project Scope (Section 2), the technical specifications of the project (Sections 4, 5, and the Appendices), and general conditions pertaining to the site (Section 6).

2. PROJECT SCOPE

2.1. Overview

Provide a turnkey solution to supply all labour, material, tools, equipment, and incidentals necessary for the Supply and Installation of a Photovoltaic Array System that includes the material, design, installation and commissioning of the system.

Deliverables

a) An approximately 1,100 to 1,300 kWdc fixed ground-mounted photovoltaic array system including but not limited to the following:

i. Solar panels

ii. Inverters

iii. Racking and foundations

Solar PV system to be connected to new FortisAlberta distribution infrastructure to be installed at the project site prior to completion of a solar PV system.

b) Fixed racking system at an angle of 45 degrees is to be installed and secured to either a pile or a ballasted foundation. The foundation design is to be engineered and stamped drawings by a qualified professional(s) are required, to ensure a proper foundation design for local conditions.

c) The transformer, meter, and connection of wire to the high voltage side of the transformer. Fortis Alberta will bring the distribution to the property, up to the last pole next to the proposed transformer location (see Section 4.2). The scope of the Proponent's work will be LV works up to the base of the transmission pole. The LV connection will be in buried conduit, and terminated in location next to the transmission pole, with ample wire coiled at the base. Fortis Alberta will complete all remaining grid connection works.

d) Supply the project Proponent with all single line diagrams and equipment specifications, including as-built drawings at the end of the project.

e) A successful inspection of the array including all trenching, interconnection materials and electrical connections.

f) The successful Proponent will obtain and pay for all applicable permits and licenses required either by all levels of government and authorities having jurisdiction (e.g. building, electrical).

g) Supply and Operations and Maintenance Manual, as well as operation and maintenance training, to Project Owners.

2.2. Project Schedule

The table below describes the anticipated RFP Schedule. Please note that the proposed project timeline is preliminary in nature and these dates are subject to change. The Project Contact will issue an addendum with any changes to the proposed schedule. NGCI will work with a selected Proponent to refine the project schedule. The goal is to have the solar array installed and commissioned by late Spring 2019.

RFP Timetable:	
Issuance of RFP:	**Monday, October 22, 2018**
LOI Submission Deadline:	Deadline for submitting an LOI to the Project Contact **is 3:00 p.m. Mountain Daylight Time** on **Monday, October 29, 2018**
Notification to Proponent(s) to Submit Proposal(s):	Proponent(s) will be notified if they are invited to submit a Proposal **on or before 3:00 p.m. Mountain Standard Time** on **Monday, November 5, 2018**
Closing Time for Proposals:	The Closing Time for submissions of Proposals **is 3:00 p.m. Mountain Standard Time** on **Monday, December 3, 2018**
Proponent Interviews (if necessary), and, NGCI Review of Proposals	Weeks of: • Monday, December 3, 2018; • Monday, December 10, 2018; • Monday, December 17, 2018; and Monday, December 24, 2018.
Notification to selected Proponent to Enter Into Negotiations:	Notification to selected Proponent to enter into negotiations for an agreement to design and build the Project on or before **3:00 p.m. Mountain Standard Time** on **Monday, December 31, 2018**
Delivery Date of the Project:	**On or before May 31, 2019**

As the project is still in planning phases, proponent feedback is welcome on the project schedule based on your experience with solar array installations. Please include your proposed project timeline.

3. PROJECT TEAM

3.1. NGCI

The Board of Directors consists of Trent Blind (Chairman), Conrad Young, Geraldine Hill, and Audrey Ward. Sam Minde, CEO, has been authorized to proceed on behalf of NGCI and is the primary contact for NGCI on this project.

3.2. Mars Green Consulting

NGCI has engaged Mars Green Consulting as a technical expert to assist NGCI select a solar EPC to construct the Phase I of the Sundancer project. Dr. Martha Lenio and Jade Fennell are the team members for this work.

3.3. Peters Energy Solutions

NGCI has a trusted relationship with Peters Energy Solutions (Peters). Through a consulting contract, Peters will be involved in this project to assist with financial modelling, reporting, and overall project execution in alignment with our funding requirements.

4. LOCATION/SITE CONDITIONS

4.1. Location

NGCI has with their consultants, identified the project location for the Sundancer Project. Phase I is to be contained within the northerly portions of 13-29-44-24 W4M & 14-29-44-24 W4M, as shown below.

Map 1: Subject Properties (NW-29-44-24 W4M)

The project location is on the urban fringe with low density urban developments including residential, commercial and industrial uses directly to the north, rural residential to the west and commercial along the Provincial Highway.

Map 2: Proposed Location - 1MWdc (Sundancer) PV Project

4.2. Existing Site Conditions

Despite being on the urban fringe of Maskwacis, the proposed site area is rural/agricultural in nature. The land use is currently farm (grain) with the disturbed area accounting for approximately 21ha / 53 acres as delineated in Map 2 above. The elevation of this site varies from ~806-820 m.a.s.l., with relatively gentle slopes and no abrupt changes in elevation that would need to be remedied for the purposes of a ground-mounted solar PV installation.

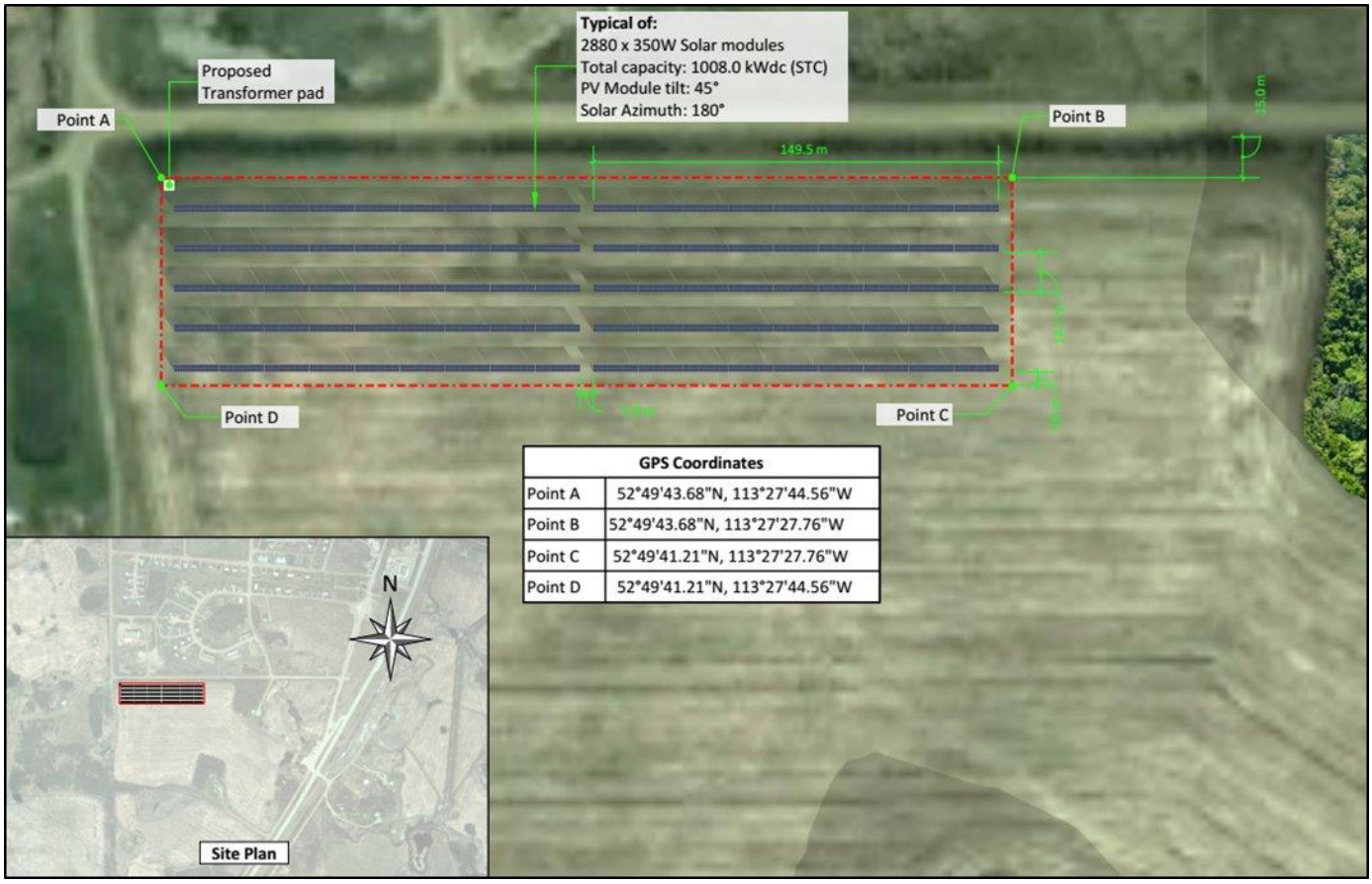
Along the north edge of the subject property is a built-up gravel roadway running east/west which provides good access to the site. However, this road unnamed and is therefore not a legal roadway. A north/south running road also abuts the NW corner of the site and provides legal access to the property.

Figure 1: Project Site - North Edge (Looking West)

Figure 2: Project Site - Northern Edge (Looking NE)

SkyFire Energy produced a preliminary layout for a 1.008 MWDC project based on an assumed 350 Watt (STC) module and a 45° tilt angle as illustrated below in Figure 3.

Figure 3: Preliminary Module Layout 1.008 MWDC Solar PV System



4.3. Geotechnical Conditions

A geotechnical study was conducted for the site in May 2018. The geotechnical fieldwork was completed on March 12, 2018. Six boreholes were drilled to depths ranging from 5.7 to 10.4 m below grade (BH01 to 06). Auger refusal was encountered at one borehole location (BH06) at a depth of approximately 5.7 m below grade.

Several factors exist within the study area that could impact the proposed construction, including:

- Presence of organic soils;
- Presence of soils with a high silt content and low plasticity that will be frost susceptible if in contact with water;
- Presence of relatively hard layers in the sandstone;
- Potential seeping and sloughing subsurface conditions; and
- Potential presence of cobbles and boulders.

It was also noted that the presence of relatively hard layers in the sandstone on site may lead to difficulty in helical pile installation. TetraTech noted that should helical piles be considered for this project, it is recommended that interested piling contractors confirm the feasibility of installing helical piles on the site. TetraTech has provided recommendations for raft foundations, driven steel piles, and rock anchors.

The report in its entirety has been included in Appendix B, for reference.

5. EXISTING ELECTRICAL INFRASTRUCTURE

5.1. Current Land Use Considerations

As part of the Pre-feasibility Study completed by Peters, a Fortis High Level Study was completed. Further, given the expectation that this Project can scale over time, four generation hosting options were evaluated. Options included Scenario 1 = 16 MW, Scenario 2 = 2- MW, Scenario 3 = 5 MW and Scenario 4 = 800 kW (all AC). It is currently expected that the distribution cost for an 800 kW to 5 MW development would be approximately $250,000 (connecting to the east) and ~150,000 (connecting to the west). The cost is rounded and includes the Fortis cost to construct the Distribution facilities up to the point of interconnection including overheads, the cost of an installed SCADA capable recloser. The aforementioned cost does not include: transformer, generator, switchgear, protection equipment, metering or brushing.

Connecting to the west is the lowest cost option but will only allow for a 2 MW project whereas connecting to the east, while estimated at an additional $100k, will allow for up to 5 MW.

The decision on how best to connect the solar PV system will be determined parallel to the construction of Phase I. Proponents are asked to assess and provide a Price Table for the project assuming that the Point of Interconnection is located in the NE corner of the 4.78 ha project area and that Fortis will be bringing the necessary distribution infrastructure to that location.

5.2. Grid Connection Specifications

The Fortis Alberta 25 kV distribution connection work is currently in the Detailed Study phase, and the estimated completion date (Ready for Export) is March 2019. The following section summarizes the project requirements of the transformer, service access and grid interconnection, and is repeated in Appendix A, section 2.5.

.1 General

- .1 Utility approved service entrance (25kV) sized to accommodate up to 1MVA of solar generation for phase 1 but up to 2.5 MVA of future generation
- .2 Include 25kV Disconnect device. Breaker/switch as required by utility.
- .3 Include metering cell as per requirements from Wires Service Provider
- .4 Include distribution class surge arrestors at MV connections
- .5 Include grounding and bonding of all substation, transformer, inverters and solar array as required by utility
- .6 Include visible, lockable break device as required by Fortis
- .7 Include bollards to protect service entrance equipment from physical damage as necessary
- .8 All service entrance equipment to be rated NEMA 3R or better as required

.2 Step-up Transformer:

- .1 2500 kVA oil filled, pad mounted step-up, 600-25kV 3 phase. Approved for use by approving authority
- .2 Transformer must be designed for cyclic loading typical of solar PV generators
- .3 Include bollards to protect as necessary
- .4 Include transformer commissioning and initial oil sampling and NETA testing as required by NETA accredited organization only.

.3 Utility interconnection and metering

- .1 Utility interconnection to be coordinated with Fortis.

.2 Utility metering to be provided as per Fortis requirements. Assume metering on the high voltage side of the transformer for quotation purposes.

.3 RFP response to clearly state assumptions of what has been included and excluded for substation/ switchgear, protections and controls and metering

6. GENERAL CONDITIONS

6.1. Proponent's Use of Site

A successful Proponent that concludes an agreement with NGCI to design and build the Project will become the prime contractor for the site and assume responsibilities for site safety and security. The Proponent will not have access to washrooms onsite and will need to include for this in their Proposal. The Proponent will assume responsibility for the disposal of site debris.

6.2. Protection of Work and Property

The Proponent shall take all reasonable precautions necessary to protect the Project and property from damage during the performance of the Agreement to design and build the Project, including dust control if applicable, and shall make good any damage to the Project or property caused by the Proponent or any of its Subcontractors. The Proponent shall be responsible for the location of all existing utilities prior to construction and protection of them during construction.

6.3. Worksite Safety

The Proponent shall, for the purposes of the Alberta Occupational Health and Safety (OH&S) Regulations (the Regulation), and for the duration of the Project and Contract:

1. Be designated as the “Prime Contractor” pertaining to safety at the “Work site”.
2. Do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the Regulation, as required ensuring the health and safety of all persons at the “Work site”.
3. The Proponent shall direct all subcontractors, workers and any other persons at the “Work site” on safety related matters, to the extent required to fulfill its “Prime Contractor” responsibilities pursuant to the Regulation.

The Proponent shall, after submission of LOI, provide an electronic copy of a site safety plan as part of the Part C response.

APPENDICES

APPENDIX A: TECHNICAL SPECIFICATION

1. GENERAL

1.1. General Requirements

.1 Provide materials and equipment to fabricate a complete and operational solar photovoltaic power generation system meeting performance requirements specified in this section and as follows

.2 Confirm layout and location of solar photovoltaic system at the site.

.3 Delegated Design Professional Engineer: Retain Delegated Design Professional Engineer to design fabrication and erection of structural supports in accordance with applicable Building Code and Contract Documents including the following

- .1 Seal and signature to fabrication and erection documents and design submittals
- .2 Site review of installed components
- .3 Completion of Letters of Commitment and Compliance

.4 Delegated Design Professional Engineer: Retain Delegated Design Professional Engineer to design DC photovoltaic wiring, module selection, bonding, grounding, AC wiring, Inverter selection, utility interconnection, protection and control in accordance with applicable Electrical Code and Contract Documents including the following

- .1 Seal and signature to fabrication and electrical documents and design submittals
- .2 Site review of installed components
- .3 Completion of Letters of Commitment and Compliance

.5 Provide shop drawings for all system components and designs to be approved by the solar consultant and NGCI

.6 Obtain all required building, development and electrical permits as required.

.7 Assist NCGI and solar consultant(s) with interconnection application and interconnection agreement with Fortis Alberta

.8 Deliver, assemble and install the equipment at the site.

.9 Commission system according to best practices, in coordination with Fortis and provide documentation of quality control checks throughout installation process. This should include but is not limited to pile pullout or torque testing results for every pile, torque checks on fasteners, IV curve testing of each module string, megger testing of all wiring, inverter performance testing and protections and controls testing

1.2. Proponent/Solar EPC (Engineering, Procurement and Construction) firm required qualifications:

.1 Must be qualified to offer solar PV engineering and installation for commercial clients.

.2 Solar EPC firm must be registered in the province of Alberta with APEGA and be qualified to provide PV engineering services

.3 Solar EPC firm may sub-contract portions of engineering work but MUST act as the “Coordinating Registered Professional” as per Alberta Building Code

.4 The Proponent must employ staff with a “Construction Electrician (NOC 7241) Solar Photovoltaic (PV) Systems Certified (SPVC) Certification” or equivalent training/certification. Demonstrate staff certification and training through a CSA recognized third party, independent personnel certification program for construction electricians installing solar photovoltaic equipment in Canada, having experience with systems similar size and complexity as to this scope

.5 The Proponent must be a licensed electrical contractor in good standing, or shall maintain a contractual relationship with a licensed electrical contractor in good standing for the duration of the installation, who will carry the responsibility for the installation.

.6 Proponent or sub-contractor must be a NETA accredited organization.

.7 Must have a minimum of five years of solar-specific engineering and construction experience in Alberta.

.8 Must provide a minimum two-year workmanship warranty on the system.

.9 Must provide references of at least three commercial systems of similar size and scope.

.10 Proponent must be COR certified.

.11 Proponent to act as prime contractor and develop site specific Health, Safety and Environmental management plan. Proponent is required to follow all applicable health and safety guidelines including but not limited to Alberta OH&S guidelines.

1.3. Scope

.1 Provide labour, materials, equipment and services required for manufacture, supply, installation, testing and putting into proper operation complete systems as shown, as specified and as otherwise required.

.2 Provide the following services by the equipment supplier, including but not limited to the following:

- .1 shop drawings,
- .2 fabrication and assembly as per reviewed shop drawings,
- .3 interface control wiring diagrams, schedules and wire running lists between components,
- .4 factory testing and supplementary acceptance testing,
- .5 delivery schedule and delivery DDP (Incoterms, 2010) to job site,
- .6 information as appropriate to install and test the equipment,
- .7 calibration and testing of equipment, and verification of performance of the system,
- .8 commissioning, site testing including acceptance testing,
- .9 technical staff and manuals for factory and field training of Owner's staff in the complete operation of the system,
- .10 warranty service,
- .11 O&M manual including schematic diagrams.

.3 Provide services to oversee and facilitate commissioning.

.4 Provide Owner's training.

.5 Leave complete systems ready for continuous, efficient and satisfactory operation.

1.4. Applicable Standards

.1 2014 Alberta Building Code

.2 C22.1-15 Canadian Electrical Code (23rd Edition)

.3 Alberta Fire Code

.4 IEEE 1547-03, Standard for Interconnecting Distributed Resources with Electric Power Systems

.5 CAN/CSA C22.2 107.1 Power Conversion Equipment

.6 UL1741, Standard for Inverters, Converters, Controllers, and Interconnection System Equipment for Use With Distributed Energy Resources

.7 CAN/CSA C61215-08 - Crystalline silicon terrestrial photovoltaic (PV) modules

.8 UL1703, Standard for Flat-Plate Photovoltaic Modules and Panels

.9 ULc ORD C1703-1 PV Module Safety Standard

1.5. Submittals

.1 Shop drawings and product data sheets

.2 Provide detailed shop drawings for the system including modules, mounting systems and hardware, cabling, inverters and other electrical hardware.

.3 Factory acceptance testing procedure, as a shop drawing

.4 One additional set of drawings shipped with the equipment for startup and maintenance use.

.5 Complete spare parts list, including parts location diagrams or drawings.

.6 List of priced spare parts which manufacturer recommends to be on hand during start-up and during the first two year's operation.

.7 A material list, listing the quantity, rating, type, and manufacturer's catalog number of all equipment on each unit.

.8 Installation, Operating, and Maintenance Instructions to cover the equipment furnished.

1.6. Quality Control

.1 Manufacturer's Production Test and Records

a. Submit certified copies of reports of manufacturer's production testing for each unit.
b. Correct any deficiencies discovered during FAT, prior to shipping of product.
c. Submit copies of completed FAT test result documentation to Proponent and Consultant.

.2 Site Acceptance Testing (SAT)

a. Manufacturer to provide services of manufacturer's authorized service personnel in accordance with the requirements of this specification.

1.7. Performance Guarantee

.1 Provide a copy of all commissioning report and commissioning data
.2 Provide an estimate of expected system performance in Year 1 and over 25 years (MWh/yr), in the form two MWh figures and PVsyst modelling data
.3 System for collecting and storing historical performance data, and comparing real system operation against expected. A screenshot of an existing Operations dashboard or software attached to this proposal would be preferred.
.4 Plan for remedying systemic performance issues

1.8. Operating and Maintenance Documentation

.1 Provide operating and maintenance instructions
.2 Two paper copies and one digital copy of the operation and maintenance manuals which shall include, but not limited to the following:

.1 List of equipment supplied including serial numbers.
.2 Shutdown and isolation procedure for emergency and maintenance.
.3 Maintenance procedures and timelines
.4 Commissioning records and installation checklist
.5 Warranty information
.6 As-built system electrical and structural drawings
.7 Equipment manufacturer's specification sheets and manuals for all equipment
.8 PV Proponent 's contact details including after-hours contact details.

1.9. Maintenance Materials

.1 Provide as per manufacturer's recommendations.

1.10. Operation and Maintenance Training

.1 Provide the services of qualified factory trained technicians and service representatives to conduct industry best practice training of the facility operating staff in the operation and maintenance of all aspects of the solar asset. This will include but not be limited to, all electrical equipment, racking, vegetation management, and site safety.
.2 Include for a total of 2 training sessions, each to be 2 hours in duration and to be provided on separate nonconsecutive days at times acceptable to the Owner.
.3 Training sessions may be video recorded by the Owner for future reference.
.4 Should equipment fail during a training session, conduct a repeat session.

1.11. Warranty

.1 Equipment supplier to provide a warranty, covering a period of 2 years following substantial performance of the project, against:

.1 faulty or inadequate design, manufacture or operation,

.2 improper assembly,
.3 defective material or workmanship or both,
.4 leakage, breakage or other failures that occur under normal and proper operation of the equipment.

.2 Equipment supplier to correct deficiencies in his equipment which occur during the 2 year warranty period at no additional cost to the Owner. This to include all costs for material, labour and expenses.
.3 Manufacturer's technical representative to be available on site on a priority basis within 72 hours of being notified. PV Contractor may act as manufacturer's technical representative

2. PRODUCT AND CONSTRUCTION REQUIREMENTS

2.1. General

.1 Confirm layout and location of solar photovoltaic system at the site.
.2 Supply a fixed solar array as described in specification below.
.3 PV Proponent to coordinate with consultant for installation and commissioning related clarifications.
.4 Exact equipment specifications will be confirmed prior to issue of an Engineering, Procurement and Construction agreement between NGCI, the Solar Consultants and the Proponent.

2.2. Solar Modules

.1 Total system capacity of approximately 1,100 to 1,300 kWDC
.2 High power solar modules preferred (ideally above 350 W)
.3 Positive power tolerance
.4 Must be from a bankable (Bloomberg New Energy Finance Tier 1) manufacturer
.5 Minimum product warranty of 12 years
.6 Minimum power production warranty of 25 years at minimum of 80%
.7 Must meet or exceed requirements of:

.1 IEC 61215 – "Crystalline Silicon Terrestrial Photovoltaic Modules – Design Qualification and Type Approval" (if crystalline modules are selected), or equivalent; and
.2 ULC/ORD C1703-01 – "Flat Plate Photovoltaic Modules and Panel", "IEC 61730 – Photovoltaic Module Safety Requirements (Part 1 and 2)", or equivalent.

.8 Tier 1 solar module manufacturers

2.3. Racking System

.1 Racking system to be tilted at 45°. Other tilts may be considered with proper justification and performance modeling to support the design change.
.2 Proponent is required to select a PV array racking system that meets the site conditions.
.3 Delegated Design Requirements: Design structural support assemblies and connections required by the Contract Documents to withstand PV array dead loads and wind loadings in accordance with requirements of the Building Code and CAN/CSA S16 to resist forces, moments and shears, and allow for movements without damaging the solar photovoltaic modules
.4 Engage fabricator who utilizes registered professional engineer to prepare calculations, shop drawings, and other structural data for supports and connections.
.5 Retain registered professional engineer to ascertain and confirm that fabrication and erection of work meets design criteria required for the Work.
.6 Racking system to be compatible with the available ground space available, required clearances and be compatible with local ground conditions including:

.1 corrosivity

.2 soil types
.3 soil strength
.4 frost depth
.5 water table

.7 Racking system to be structurally capable of withstanding the worst of the effects of 0.39 kPa wind pressure, or the effects of the design wind speed for the locality with a 1 in 50 year return period
.8 Racking system to be structurally capable of withstanding the worst of the effects of Ss 2.0 kPa Sr 0.1 kPa snow and rain pressure, or the effects of the design snow load for the locality with a 1 in 50 year return period
.9 All equipment located outdoors shall be rated and warranted to withstand and operate under local conditions
.10 Racking system to comply with all existing local and national codes
.11 Ensure that the bonding of all modules is not broken if a module is removed.
.12 Foundations can be driven pile, helical screw pile, ballasted or ground screw but foundation design must be stamped by engineer registered with APEGA and designed for the site geotechnical, wind and snow loading conditions
.13 Racking system must be certified for use in Alberta with integrated electrical bonding of solar modules – note that many racking systems acceptable in Ontario are not acceptable for use in Alberta
.14 Racking system design and installation shall provide for thermal expansion / contraction.
.15 Torque specification to be included on product documentation, O&M manual and verified during QC/QA program

2.4. Inverters

.1 Rated inverter rated maximum capacity to be 0.99 MW AC, or less
.2 Inverter architecture is to be distributed with capacity of a single inverter to be no more than 100kW
.3 Internet-based monitoring is required for quick verification of performance and to limit down-time in case of failure
.4 Must include remote power curtailment and reactive power control capability
.5 The inverter's DC side shall

.1 be compatible with the PV system array output
.2 be capable of completely automatic, continuous, unattended and stable operation over the range of voltages, currents, power levels and temperatures for the size, type and location of the array to which it is connected, including at start-up, synchronization and disconnect
.3 employ maximum power point tracking (MPPT) technology

.6 Each inverter shall have a communication port or separate equipment capable of remote monitoring of inverter operation and energy performance from the internet. Inverters shall be easily integrated/compatible with communications network on site and the monitoring system/SCADA
.7 The inverter manufacturer’s warranty shall cover defects in materials and workmanship for ten (10) years starting from date of Practical Completion for the Project
.8 Incorporate monitoring equipment ready to be accessed on the client’s local network
.9 The inverter shall have the following certifications at the time of its delivery on site:

.1 Compliant with Canadian Standards Association standard C22.2 No. 107.1, General Use Power Supplies, Clause 15, Utility-Interconnected Inverters
.2 Contain a mark on its label or documentation indicating that it meets the CSA performance standard C22.2 No. 107-01 for grid-connection
.3 IEEE 1547-03, Standard for Interconnecting Distributed Resources with Electric Power Systems

.10 Only reputable solar inverter manufacturers may be used. Examples: Huawei, SMA

2.5. Service entrance, transformer & metering

.1 General

.1 Utility approved service entrance (25kV) sized to accommodate up to 1MVA of solar generation for phase 1 but up to 2.5 MVA of future generation
.2 Include 25kV Disconnect device. Breaker/switch as required by utility.
.3 Include metering cell as per requirements from Wires Service Provider
.4 Include distribution class surge arrestors at MV connections
.5 Include grounding and bonding of all substation, transformer, inverters and solar array as required by utility
.6 Include visible, lockable break device as required by Fortis
.7 Include bollards to protect service entrance equipment from physical damage as necessary
.8 All service entrance equipment to be rated NEMA 3R or better as required

.2 Step-up Transformer:

.1 2500 kVA oil filled, pad mounted step-up, 600-25kV 3 phase. Approved for use by approving authority
.2 Transformer must be designed for cyclic loading typical of solar PV generators
.3 Include bollards to protect as necessary
.4 Include transformer commissioning and initial oil sampling and NETA testing as required by NETA accredited organization only.

.3 Utility interconnection and metering

.1 Utility interconnection to be coordinated with Fortis.
.2 Utility metering to be provided as per Fortis requirements
.3 RFP response to clearly state assumptions of what has been included and excluded for substation/ switchgear, protections and controls and metering

2.6. Civil Work

.1 Site Fence

.1 Site shall be fenced to meet CEC requirements section 26-300 to 26-324
.2 Not less than 1.8m high with not less than 3 strands of barbed wire
.3 Fence to include 5m wide vehicle access gate and man gate
.4 Adequate clearance from equipment to be provided to avoid array shading and to allow for future maintenance access including vegetation clearing, etc

.2 Weed and Pest Controls

.1 The Proponent will be responsible for ensuring that weed and pest controls are considered in the project design, construction, and ongoing maintenance instructions.

2.7. Commissioning Program

.1 In addition to the manufacturer's Site Acceptance Testing, installation contractor and manufacturer to provide field service personnel to participate in the system integration commissioning of the equipment including:

.1 review of equipment and system commissioning procedures, provided by the commissioning agent, in addition to the manufacturers own testing procedures,
.2 control of and operation of equipment during testing,
.3 adjusting of equipment controls as required to simulate load or fault conditions, and
.4 assist with record keeping of test results as directed by the commissioning agent.
.5 QA/QC reports for solar module racking including installation, racking torque test, thermal expansion gap verification, etc.
.6 QA/QC reports for electrical installation including cable management, racking and system bonding.

2.8. Demonstration and Training

.1 Provide training to the facility operations staff, in conjunction with the manufacturer's service representative.

.2 An initial training session on system operation and maintenance requirements

.3 A minimum of 2 year workmanship warranty starting after commissioning and after 15 days of continuous problem free operation. Workmanship warranty shall include labour and travel costs for inverter, optimizer, module, transformer, metering, protection and control or other equipment troubleshooting, repair or replacement in cases where product warranties do not cover any or all labour costs.

END OF SECTION

APPENDIX B: GEOTECHNICAL ASSESSMENT