



**Keepers of the Athabasca in partnership with Sucker Creek First Nation  
Solar Pilot project at the Treaty 8 Building**



**Draft Services Contract - Request for Proposals**

**Section 1 System Overview**

**1.1 Functional Description: Phase 1**

A roof mounted photo voltaic (PV) solar system to generate electricity from sunshine, with a theoretical peak capacity of **at least** 6.5 kilowatts (kW). At least thirty five solar panels shall be installed on the Treaty 8 Building, connected to a 4 kW DC/AC inverter, and terminated to the main AC electric panel. The electricity produced will go directly to the grid, providing power for the Treaty 8 Building and nearby buildings on Sucker Creek First Nation (SCFN).

**1.2 System Performance and Assumptions: Phase 1**

The project is located on the southwestern shore of Lesser Slave Lake, about 22 kilometres east of High Prairie, Alberta, on the Sucker Creek First Nation. The roof of the Treaty 8 Building is covered with corrugated metal panels, with a pitch of 4/12, and two of the roof surfaces are aligned at 190 degrees, south by southwest. Thirty five 260 watt solar panels will comfortably fit on the roof surfaces. The south edge of the Treaty 8 Building roof is 10 ft. above grade. The entire roof is essentially free of shading 12 months of the year, and this building stands next to Highway 2, between Slave Lake and High Prairie, a highly visible location. Due to the steep panel tilt and reasonably easy access to the panels, the buildup of snow, dust, pollen, etc is expected to be readily mitigated.

These parameters and assumptions were entered into the PVWatts Calculator (<http://pvwatts.nrel.gov/pvwatts.php>) which indicated an average yearly production of 8,432 kWh per year, after approximately 11% system losses, before long term production degradation. The Treaty 8 building's base power consumption averages approximately 20,000 kWh so the yearly net result is expected to be close to zero.

### 1.3 Educational display: Phase 1

An educational display account is required to be opened, and displayed on a monitor inside the Treaty 8 Building. Bidders are to provide details of their choice in programming with bid package.

## **Section 2 Scope of Work**

The Contractor shall design, procure, install and commission the complete **at least** 6.5 kW solar system, plus the associated AC system, described as 'Phase 1', in more detail henceforth.

### 2.1 Material supply (procurement and delivery) to project location

2.1.1 At least thirty five (35) PV solar panels, rated nominally at 260 DC watts each. Panel dimensions approximately 990mm by 1650mm by 40mm.

2.1.2 The remainder of the DC solar system including:

- the complete roof mounting system to install solar panels to corrugated metal roof (standing seam, refer to attached photo)
- appropriately sized inverter, with external display to indicate system performance;
- any other equipment or hardware to fully install the solar system on the Treaty 8 Building roof.

2.1.3 All AC equipment including:

- breakers and associated conduit to main AC panel in the Treaty 8 Building and all associated electric wire;
- including any other equipment or hardware needed to fully install the AC system for connection of the solar system.

### 2.2 Supply of labour and other resources

2.2.1 Install the complete PV solar system as described in the Material Supply, including any other work necessary to fully install the solar system on the Treaty 8 building.

2.2.2 Install all AC equipment on the Treaty 8 Building roof and to the main AC panel in the Treaty 8 Building, as described in Material Supply, including any other equipment or hardware to fully install the AC system for connection of the solar system.

2.2.3 Supply all other labour and resources to:

- design and specify the solar system and all other required equipment;
- fill out the SCFN Cost Appendix form
- procure all materials;
- arrange for an electrical permit and inspections; and
- manage and administer the solar system installation project, including educational display functionality.

2.2.4 Obtain all electrical permits to install solar system and electrical equipment described within this contract, and apply for Micro-Generator approval.

2.2.5 Supply and install a monitor and educational programming display

- monitor 22" to be installed inside the Treaty 8 Building at a central location approved by Sucker Creek First Nation and the Treaty 8 Building staff
- Creation of an account, along with Treaty 8 Building staff (providing account name and password), with Enphase Enlighten or other similar program for educational and technical display <https://enphase.com/en-us/products-and-services/enlighten-and-apps>

2.2.6 Provide training to at least 20 community members before and during installation. Training will include basics of solar power, trouble shooting, maintenance of this solar installation, and some basics of installation, so that community members may help provide labour to the contractor, and be involved during installation. This training will occupy at least 2 days before project installation.

2.2.7 Work with Sucker Creek First Nation in the development of a 'Phase 2' solar installation proposal, which will be at least 80% larger than 'Phase 1', including a broader community training component for the purposes of an application to Alberta's Indigenous Solar Program.

## **Section 3 Responsibilities**

### **3.1 Contractor**

3.1.1 The Contractor has the overall responsibility for the execution and successful completion of this contract, including but not limited to:

- supply of all necessary resources, materials, equipment, and consumables;
- complete and submit a Micro-Generator (MG) application to the Wire Service Provider, and comply with the Alberta Utilities Commission MG application process to ensure successful installation of a bi-directional utility meter;
- compliance to all Health, Safety, and Environmental laws, regulations, codes, bylaws, etc applicable in Alberta to the contract work location;
- act as the Prime Contractor if any other employers must work concurrently at the contract work location in activities associated to the contract work;
- carry proper commercial and general liability insurance to a minimum of \$1,000,000;
- carry WCB-Alberta insurance for all workers and provide a WCB clearance letter when requesting payment at the completion of the work;
- conduct cleanup at the work location, just prior to end of each work day; and
- provide written notice to the Owner and sub-contractors that Substantial Completion of the contract work has been achieved. See Section 4 Substantial Completion.

3.1.2 In addition, the Contractor shall provide additional resources for any Extra Work requested by the Owner in writing, at the work location. An Hourly Labour Rate shall be provided by the Contractor in the Payment Schedule, or the Contractor may provide a separate attachment for this contract detailing Hourly Rates for various worker categories. All Labour Rates shall be fully loaded (inclusive with

tools, equipment, vehicles, overhead, supervision, etc).

### 3.2 Owner (SCFN and Keepers of the Athabasca in partnership)

3.2.1 The Owner shall notify the Contractor when the work location is ready for installation of the solar system and electrical equipment.

3.2.2 The Owner will provide notice to the electricity retailer about the Micro-Generator (solar system) project after the Wire Service Provider has approved the MG application.

## **Section 4 Substantial Completion**

4.1 When the Contractor has completed all work to the Owner's satisfaction, tested the solar system, educational display, and electrical equipment, has obtained electrical inspector approval, and the bi-directional utility meter has been installed, Substantial Completion has been achieved. If minor deficiencies still exist, and the Contractor has committed to resolutions in writing with firm completions dates, such work will not affect Substantial Completion.

## **Section 5 Payments**

5.1 Keepers of the Athabasca shall provide on invoice, a Deposit payment upon signing of the contract, to the amount of half (50%) of the contract worth.

5.2 Upon the receipt of Substantial Completion notice from the Contractor, Keepers of the Athabasca shall provide on invoice within 30 days, a second payment for an additional 40%, an amount that will keep the total payments at 90% of the contract total.

5.3 Keepers of the Athabasca will release the final 10% Holdback amount after the Contractor provides a Statutory Declaration stating that all suppliers and sub-contractors have been fully paid, and that Sucker Creek First Nation is satisfied with the project completion. Keepers of the Athabasca reserves the right to ensure a Lien has not been registered on property before releasing the Holdback.

5.4 Project must be entirely complete by March 31, 2018