

# TSILHQOT'IN SOLAR PHOTOVOLTAIC POWER PLANT

**Owner:** Dandzen Development Limited Partnership  
**Consultant:** EcoSmart Foundation Inc.

## REQUEST FOR EXPRESSION OF INTEREST (RFEOI)

**Issued Date** Sept 5, 2017

**Closing location:** EcoSmart Foundation Inc.  
2703, 124b Street  
Surrey, BC, V4A 3N8

**Closing date and Time:** October 27, 2017  
5:00 PM PDT

**Contact Person:** Michel de Spot, P.Eng.  
[tsf@ecosmart.ca](mailto:tsf@ecosmart.ca)  
604 689 4021 x 121

## BACKGROUND

Dandzen, the economic development arm of the Tsilhqot'in Nation<sup>1</sup> (TNG), is developing a one Megawatt (1 MW) solar photovoltaic (PV) plant on the former River West sawmill owned by TNG in the Chilcotin. Once completed, the "Tsilhqot'in Solar Farm" (TSF) will be the first large-scale solar power plant owned and operated by a First Nation in western Canada.

More information on the project can be obtained on request. A graphical presentation can be found at [https://ecosmartsun.com/docs/TSF\\_Described.pdf](https://ecosmartsun.com/docs/TSF_Described.pdf)

The expected outcomes of TSF are multiple: generation of clean energy, redevelopment of a closed sawmill and adjacent brownfield into a solar farm, support to the local communities, creation of jobs and business opportunities, fostering innovation and access to new technologies, training and advanced education, and more. The Chilcotin region is amongst the top five solar hot spots in BC. TNG wants to make TSF a center of excellence for indigenous solar development and foster many more solar projects both regionally and in other communities.

All the preliminary activities such as feasibility studies, land title, permits, zoning, EPA, interconnection, system design are now completed or near completion. The project is thus entering in its implementation stage.

Here follows a short description of the project together with the goods and services that will be required to implement it. Interested parties and prospective suppliers are encouraged to contact EcoSmart to discuss their interests and potential future involvement in the project.

### 1) Location:

- a) River west sawmill, 5531, Chilcotin Highway 20, BC.
- b) Lat/Long: 51° 56' 17.07" N, 122° 58' 50.49" W .
- c) Area: 7 ha footprint available.
- d) Ground: TBD by geotechnical analysis.
- e) Access: Highway 20. 90 km west of Williams Lake.
- f) Connection: BC Hydro 34.5 kV Distribution Line.
- g) Distance to POI: 70 m from solar plant perimeter.

### 2) Main components:

- a) PV Modules: 72 cells, power >340 Wp, 1,000 V from reliable, top-tier manufacturer.
- b) Inverters: Distributed string inverters 60 kVA. 1,000V.
- c) Mounting: Dual axis trackers, supporting 36 or 38, 72-cell modules.
- d) Foundations: Piling or concrete footing (TBD by geotechnical / engineering study).
- e) eBos: Electric wires, controls, step-up transformer, monitoring, net-metering, interconnection.

### 3) Engineering

Detailed engineering in the following fields:

- a) Survey: Site survey, property lines, level contours.

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<sup>1</sup> The Tsilhqot'in Nation is a prominent First Nation, whose traditional territories located in the Chilcotin, west of Williams Lake, BC. - <http://www.tsilhqotin.ca>

- b) Geotechnical: Ground bearing analysis to support foundations (steel piles or concrete footing).
- c) Civil: Final site layout, layout, foundation details, wiring trenches.
- d) Structural / Mechanical: Tracker design verification (wind and snow load), QA/QC of tracker construction (in manufacturer plant), bill of material, foundation design, QA/QC of final tracker on site, verification of modules installation on tracker array.
- e) Electrical: Single line diagrams, grounding, feeder schedule, controls, electrical specifications, wiring, equipment standard and installation conformity lightning protection, monitoring, communication, interconnection to the distribution line, BC Hydro and client final testing.

4) Equipment

- a) PV modules: 2,880 units + spares.
- b) Inverters: 16 Units + spares.
- c) Combiner boxes as specified in electrical design.
- d) Trackers: 80 units.
- e) Step-up HV Transformer: 1.
- f) Electrical BOS: Wires, breakers, fuses, disconnects, terminations, surge arrestors, lightning protection, grounding, etc.. As specified in electrical design.
- g) Monitoring equipment. Integrated with inverter or stand alone.
- h) Net metering: As specified by BC Hydro.
- i) Communication equipment. (connection to Telus fiber optics or satellite internet).
- j) Material: concrete, piles, electric poles as needed.

5) Construction

- a) Civil
  - i) Site preparation and leveling.
  - ii) Cable trenches.
  - iii) Piling or concrete foundation for the trackers.
  - iv) Maintenance trails.
  - v) Fencing.
- b) Structural/Mechanical
  - i) Erection of tracker structure.
  - ii) Installation of PV modules.
- c) Electrical
  - i) Installation and start-up of inverters.
  - ii) Wiring DC & AC (low and high voltage).
  - iii) Transformer installation.
  - iv) High voltage interconnection.
  - v) Line protection (switches, breakers, grounding).
  - vi) SCADA, metering and monitoring.
  - vii) Communication.

**CRITERIA**

EcoSmart will make the procurement on behalf of Dandzen according to criteria that include: cost,

ability to provide the service/equipment, reputation, bankability, expertise, and for construction contractors: local presence and experience with indigenous communities.

**ESTIMATED TIME-FRAMES**

The following timetable outlines the anticipated schedule for the TSF project. The timing and the sequence of events resulting from this request may vary and shall ultimately be determined by EcoSmart.

<b>Event</b>	<b>Anticipated date</b>
Selection of engineering services	Oct-Nov, 2017
Final selection main equipment (PV, Inverters, Trackers)	Oct-Nov 2017
Site Survey, Geotechnical analysis	Oct-Nov 2017
Selection of contractors	Nov-Dec 2017
Start of construction (*)	Jan, 2018
End of Construction	July 2018
Testing / Commissioning / Connection	Aug-Sep 2018
By Hydro Start of operation (COD)	Nov 16, 2018

(\*) depending on weather conditions

**RESPONDENT EXPENSES**

Respondents responding to this RFEOI are solely responsible for their own expenses. Dandzen and EcoSmart will not be liable to any respondent for any claims, whether for costs or damages incurred by the respondent in preparing the response, loss of anticipated profit in connection with any final contract, or any other matter whatsoever.

**ACCEPTANCE OF RESPONSES**

This RFEOI is not an agreement to purchase goods or services. Neither Dandzen nor EcoSmart is bound to enter into a contract with any Respondent. Responses will be assessed in light of the qualification review criteria. Dandzen or EcoSmart will be under no obligation to receive further information, whether written or oral, from any respondent.

**MODIFICATION OF TERMS**

EcoSmart, acting for Dandzen, reserves the right to modify the terms of the TSF Project at any time at its sole discretion. This includes the right to modify this RFEOI at any time and the right to cancel the TSF project at any time without entering into any contract.

**OWNERSHIP OF RESPONSES**

All information and data, including documents or verbal communication, submitted as a result of this

RFEOI become the property of EcoSmart. They will be received and held in confidence, subject to the provisions of the Freedom of Information and Protection of Privacy Act.

### **CONFIDENTIALITY OF INFORMATION**

Information pertaining to the TSF project obtained by the respondent as a result of responding to this RFEOI (and any subsequent communication) is confidential and must not be disclosed without written authorization from the concerned parties.

### **ENQUIRIES AND REPLIES**

It is recommended that respondents fill the form at [https://ecosmartsun.com/tsf\\_rfeoi/](https://ecosmartsun.com/tsf_rfeoi/)  
Additional information, brochure and/or references may be email separately at [tsf@ecosmart.ca](mailto:tsf@ecosmart.ca).  
All enquiries related to this RFEOI are to be directed by email to the same email address.