

ADVANCE CONTRACT AWARD NOTICE (ACAN)

1. Advance Contract Award Notice (ACAN)

An ACAN is a public notice indicating to the supplier community that a department or agency intends to award a contract for goods, services or construction to a pre-identified supplier, thereby allowing other suppliers to signal their interest in bidding, by submitting a statement of capabilities. If no supplier submits a statement of capabilities that meets the requirements set out in the ACAN, on or before the closing date stated in the ACAN, the contracting officer may then proceed with the award to the pre-identified supplier.

2. Definition of Requirements

Continuous and reliable solar resource data across all of Canada and in particular hourly or sub-hourly time series of solar irradiation data is necessary for detailed analysis of solar and building energy applications. Existing such dataset for south of Canada based on Perez's latest State University of New York (SUNY) satellite model (Version 3) was acquired by NRCAN in 2016. This hourly data covers eighteen (18) years (1998-2015) with a spatial resolution of 0.1° x 0.1°. The current NRCAN solar resource data set stops at 58° latitude north. The objective of the proposed work is to extend the irradiance data coverage to northern Canadian latitudes north of 58° latitude.

This requirement is as follows:

- 1 Processing CERES data from NASA.** Data will include hourly global, direct and diffuse irradiances (GHI, Dif, and DNI) as well as clear sky irradiances for a region spanning from 50° to 83° North latitude from 52° to 135° West longitude - a total of 2739 distinct geographic locations. CERES hourly data will span 13 years (2005-2017)
- 2 Evaluating CERES data against existing SolarAnywhere/SUNY data.** This will be done by comparing spatially integrated high-resolution SolarAnywhere data matching the CERES footprints to the CERES data. This will be done systematically for strategically sampled locations in the overlap region between the two sources: we anticipate comparing data for climatically distinct locations in three latitude bands - 50°, 54° and 58° north - i.e., going from a region where SUNY model accuracy has been well documented, to the northern transition region between the two sources.
- 3 Developing and implementing a methodology** - to blend the two data sets based on the above comparison. The blending methodology will include adjusting CERES and/or SUNY irradiances to eliminate any discontinuities

observed at 58° north. The methodology will involve first adjusting clear sky backgrounds, and implementing statistical adjustments to augment/reduce cloud cover if additional adjustments are needed.

3. Criteria for Assessment of the Statement of Capabilities

Any interested supplier must demonstrate by way of a statement of capabilities that it meets the following requirements:

- Developed and owns a validated satellite-based solar resource model that was previously and independently evaluated. This model must have been independently evaluated by NRCan or similar third party against ground solar measurements from at least over 15 Canadian sites.
- Supplier satellite model includes a multi-channel infrared module that improves performance during snow cover conditions, which is important for the particular case of the Canadian weather.
- The supplier satellite solar resource model will be made available and used during the timeframe of this contract for evaluating the NASA Clouds and the Earth's Radiant Energy System (CERES) dataset and for the development of a solar resource dataset for the entire Canadian territory.
- In depth knowledge of the physical and statistical processes underlying the supplier satellite solar resource model. This knowledge is important to insure that data adjustments, resulting from the blending with northern latitudes' of NASA's CERES data, are physically sound and coherent, see above Tasks 1, 2 and 3 in section 2.
- Must have already generated and must already has access to 0.1° x 0.1° gridded hourly and averaged solar resource dataset, including global horizontal irradiance (GHI) and direct normal irradiance (DNI), for the Canadian south of 58 degrees latitude for at least 12 calendar years spanning from 2005 to 2016. A selected subset of this data and input will be used in completing the contract requirements. This data for the south along with the new data to be developed under this contract for the north will be merged to produce a unified solar dataset and maps for the entire Canadian territory, which will be published and made public by NRCan.

4. Trade Agreements:

This procurement is subject to the following trade agreement(s):

North America Free Trade Agreement (NAFTA);

Canadian Free Trade Agreement (CFTA);

5. Set-aside under the Procurement Strategy for Aboriginal Business:

Not applicable

6. Comprehensive Land Claims Agreement(s):

Not applicable

7. Justification for the Pre-Identified Supplier

We intend to deal directly with the supplier mentioned in section 13 below as, it is the only known supplier that meets the mandatory criteria set out in section 3 above.

Should Canada receive a statement of capabilities from a supplier that contains sufficient information to indicate that it meets the requirements set forth in this ACAN, a competitive process will be triggered with a technical and financial evaluation methodology of the bids proposed by the potential bidders

8. Exception to the Government Contracts Regulations

The following exception(s) to the Government Contracts Regulations is invoked for this procurement under subsection

- 6(d) – “only one person is capable of performing the work”

The identified provider, Atmospheric Sciences Research Center (ASRC) team at the State University of New York at Albany (SUNY), is the only one able to meet all of the criteria identified in paragraph 3 above.

9. Exclusions and/or Limited Tendering Reasons

The following exclusion(s) and/or limited tendering reasons are invoked under the:

North American Free Trade Agreement (NAFTA): Article 1016, 2, b

Canadian Free Trade Agreement (CFTA): Article 513 (b)

10. Ownership of Intellectual Property

Canada intends to retain ownership of any Foreground Intellectual Property arising out of the proposed contract.

11. Contract Period

The contract period will be from date of award to March 31, 2018

12. Estimated Cost

The estimated maximum value of the contract is \$74,856.00 USD inclusive.

13. Name and Address of the Proposed Contractor

Suny
The Research Foundation for
The State University of New York
Room 100
Albany, New York 12222

14. Suppliers' right to submit a statement of capabilities

Suppliers who consider themselves fully qualified and available to provide the services/goods described herein, may submit a Statement of Capabilities in writing, preferably by e-mail, to the contact person identified in this Notice on or before the closing date and time of this Notice. The Statement of Capabilities must clearly demonstrate how the supplier meets the advertised requirements.

15. Closing Date

The closing date for a submission of a Statement of Capabilities is November 9, 2017 at 14:00 Eastern Standard Time).

16. Contract Authority

Julia Pace
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