



ODISHA RENEWABLE ENERGY DEVELOPMENT AGENCY

S-3/59, MANCHESHWAR INDUSTRIAL ESTATE

Bhubaneswar-751010, ODISHA

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EOI No. 3212 dated 19.08.2020

Expression of Interest (EOI) for designing, engineering, installing, testing, commissioning along with operating and maintaining Solar Trees and solar street lighting systems in Konark NAC, Odisha

Notice Inviting EOI

Expressions of Interest (EOI) are invited from reputed manufacturers/ integrators (“Participants”) of Solar Trees and solar street lighting systems for sharing their experiences and technical know-how about various aspects of Solar Trees such as product design, erection details, maintenance requirements, etc. and as per the scope of work requirements in connection with “Solarization of Konark”, a project being implemented in Konark, Odisha under the high Visibility Solar Applications program of Ministry of New and Renewable Energy, Government of India.

All interested Participants are requested to submit their response to this EOI through email as per the requirements in this EOI by 29.08.2020.

The select Participants will be required to make online presentations about their products and services as per schedule to be intimated subsequently.

-Sd-
Chief Executive

Background

“Solarization of Konark” is a project proposed under the High Visibility Solar Applications Scheme and Off-grid Solar Power Scheme of the Ministry of New and Renewable Energy (MNRE), Government of India. The project prima facie envisages the Solarization of Notified Area Council (NAC) in Konark. The broad objective of the Project is minimizing the overall carbon footprint of the NAC through the replacement of conventional grid power by solar energy. The Project primarily entails the installation of a grid-connected solar power plant of suitable capacity to make Konark a Z-NET (zero net energy) NAC. It further explores the relevance and scope of introducing various on-grid and off-grid applications of solar power in the context of the NAC. The various applications include street lighting, provision of clean drinking water, e-public transport system, assured power supply to places of public gathering/sensitive areas, etc.

Under this initiative, a total of fifty (50) no of Solar Trees along the three approach roads to Konark namely - Puri-Konark Marine drive, Konark-Kakatpur Road and Junei-Ranihatsahi-Konark Road; for powering two hundred (200) street lights are proposed with each street light proposed to house a White-LED light (“Project”).

The specific sites for the erection of Solar Trees and street lights will be finalized by OREDA in consultation with Konark NAC and intimated to the vendor. The Project will be implemented through reputed vendors to be selected through a competitive bidding process. The ownership of the Solar Trees and street lights will rest with Konark NAC.

Objectives

- To develop an understanding of the technical, operational, and maintenance aspects of Solar Trees and solar street lighting systems through a consultative process.
- To firm up a Request for Proposal (RFP) for designing, engineering, installing, testing, and commissioning along with operating and maintaining Solar Trees and solar street lighting systems in Konark NAC Odisha, for a period of five years or more.

Requirements :

- The Solar Trees should be designed in a way such that the modules integrated on the tree should get exposed to sunshine during most of the day.
- The aggregate capacity of solar panels on each tree should not be less than 2 kWp.
- On any normal day, each tree should be able to deliver a minimum of 8 units of power to the batteries housed in the Solar Tree.
- Other components, such as charge controllers, inverters, etc. should be carefully housed in the tree.
- The battery and electronic components housed in the tree should not be exposed to open weather, and care should be taken to make them theft-proof.
- The trees should be designed aesthetically to gel with the ambiance of the place.

- The design, as well as the materials to be used for manufacturing the solar tress and the street lights, should adequately take care of the high salinity and heavy winds prevailing in the area.
- The solar PV modules, other equipment, etc. may be subject to salt mist corrosion and frequent dust/sand deposits on their exposed surfaces. The design of Solar Trees should address these aspects vis-à-vis ease of maintenance.
- The streetlights, each having white LED(s), will be energized through these Solar Trees. The PV capacity of each Solar Trees should be determined to provide adequate power to at least four street lights for dusk to dawn operations.
- The battery bank should be sized to provide at least two days of autonomy. The battery type should be selected so that its space requirement is optimized as it will be an integral part of the Solar Tree.
- The luminaries and lamps should be selected in such a way that a minimum of 6 Lux/Sq. Meter is available on the road from a height of seven (7) meters.

Who can participate in the EOI

The following are the eligibility criteria for participating in the EOI.

1. The Participant must be a single business entity registered as a company or/proprietorship firm under the applicable laws in India.
2. The Participant should have up to date knowledge and information about Solar Trees, their functionality, maintenance aspects, and other associated issues.
3. The Participant should have complete knowledge of the project area, including its geo-climatic challenges.
4. The Participant shall have experience of achieving commissioning of at least fifty (50) no of Solar Trees of various capacities.
5. The Participant organization shall not have been blacklisted by any Government Agency/ Authority.

Submission of EOI

The responses submitted by the participating Participants should cover the following points:

1. Brief description of the Company, year of incorporation, management, and experience of the Company.
2. Suggestion/ recommendation on Solar Trees and solar street lighting systems with a brief description of various technologies available in conformity with various BIS/ ISO/ Government guidelines/ rules and covering the requirement mentioned above.
3. Detailed specifications for the proposed Solar Trees and street lighting systems.
4. Engineering design and drawing for both civil and electrical works.

5. Business plan for running, operation, and maintenance of the proposed Solar Trees and street lighting systems.
6. Manpower requirement for operation and maintenance of Solar Trees and solar street lighting systems.
7. Description of Solar Tree and solar street lighting system set up or operated by the Participant.
8. Highlight key quality parameters like structural strength and other relevant details.
9. Client certificates regarding satisfactory handling of Solar Tree and solar street lighting system projects.
10. Case study of past installation of similar systems.
11. Major risks in operations and maintenance of Solar Trees and solar street lighting systems.
12. Filled Application Format as enclosed at Annexure-A.

Selection Parameters

The responses submitted by Participants for the Project will be evaluated based on the following parameters for the preparation of the RFP:

1. Detailed description of the specifications for the proposed Solar Trees and street lighting systems.
2. Engineering design and drawing for both civil and electrical works.
3. Previous experience of the Participants in the relevant area.
4. Detailed business plan for operation and maintenance of the proposed Solar Trees and street lighting systems.
5. Novelties proposed in the Project in question.

Selection Procedure

1. OREDA will form a Technical Committee for evaluation of the responses submitted by the Participants.
2. The committee may request the Participants to make online presentations on their products.
3. The Technical Committee will shortlist the responses based on the selection parameters as decided by the committee, from the various selection parameters stated above to prepare the RFP.
4. Final recommendations from the Technical Committee will be placed before CE, OREDA, for approval.
5. Following approval, the RFP document will be finalized and published.

Procedure for submitting the response under this EOI

All the responses will be submitted through Email to ceoreda@oredaorissa.com on or before the scheduled date.

List of Documents to be submitted

1. A proposal in response to the EOI covering the scope highlighted above.
2. Legal registration certificate of the Participant's organization.
3. Letter of awards/ Work Orders/ contract agreement along with the Joint Commissioning Certificates as evidence of the Participant experience of achieving commissioning of at least fifty (50) no of Solar Trees of various capacities.

Timeline

Sl. No.	Activity	Timeline
1.	Issue of EOI for development of the Project	19.08.2020
2.	Last date and time of submission of the response to EOI	29.08.2020
3.	Online presentation of the response made by the Participants	To be intimated later
4.	Finalization of RFP	To be intimated later

-Sd-
Chief Executive

Annexure-A

Application

Name of the company/firm	
Detail Postal address of the registered office	
Date of incorporation/registration (attach a photo copy of the certificate of incorporation/registration)	
Name of the head of the organization	
Name of the contact person	
Contact details	
Phone	
Fax	
Email	
Experience in manufacturing/assembling Solar Trees	
No. of Solar Trees commissioned during the last three years. (please provide site-wise details such as the name of the site, capacity, numbers, purpose for which the trees were installed, name and contact details of the client, etc.	
Name of the other national/International organization with which the firm has collaborated particularly (Copies of MOUs/work orders may be furnished)	
Major works in hand	
Size and spread of the organization (Give the list of the staff and names of the districts/blocks/villages where the organization has worked).	
Details of finances handled by the organization for managing the proposed assignment (give a detailed analysis in a separate sheet.)	

*****End of EOI*****