

NOTICE INVITING BUDGETORY OFFERS

Name of Work	NAME OF WORK "Engagement of project management consultancy for implementation of Solar Power plant project under RESCO model"
Date of submission of budgetary quotation	On or Before 02/03/2023 at 11:00 Hrs.
Address for communication:	Executive Engineer (E-HL), Mechanical Engineering Department, Mormugao Port Authority, Electrical Section, 1st Floor, Admin. Building, Headland sada Vasco-de-Gama Goa - 403804
Contact Details	Phone : (0832) 2594241, 2594244 Email : xene.mgpt@gmail.com
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**EXECUTIVE ENGINEER (E-HL)
MORMUGAO PORT AUTHORITY**

MORMUGAO PORT AUTHORITY
ENGINEERING MECHANICAL DEPARTMENT

Sub: Engagement of project management consultancy for implementation of Solar Power plant project under RESCO model

Ref: Budgetary Quotation No. CME/XEN(E-HL)/Solar/2023/B2

Mormugao Port Authority intends to engage project management consultancy for implementation of Solar Power plant project under RESCO model. As such, kindly furnish the budgetary quotation for the same (Scope of work enclosed as Schedule - 'A' and Price Schedule enclosed as Schedule - 'A1').

Your budgetary quotation should reach to this office on 02.03.2023.

Thanking you,

Yours sincerely,

EXECUTIVE ENGINEER (E-HL)

TECHNICAL SPECIFICATION

1.0 Introduction :

Mormugao Port Authority (formerly known as Mormugao Port Trust) is one of the oldest ports on the West Coast of India located in the state of Goa, commissioned in 1885. This port is one among twelve major ports in India. This port is midway between ports of Mumbai and New Mangalore Port is blessed with a protected open type natural harbour. Over the years, it has developed a deep draft channel. With its location at the mouth of the Zuari River, it is a crucial component in the flourishing export industry of the state of Goa. It became one amongst the major ports of the country in 1964.

2.0 General:

- a. The Mormugao Port Authority seeks the services of a qualified Applicant for acting as a Consultant for the “work of providing project management consultancy services for implementation of Solar Power plant project under RESCO model” (the “Consultancy”). The Terms of Reference (the “TOR”) i.e., the scope of the Consultancy for this assignment are specified below.
- b. The Consultant shall assist the Port, by furnishing clarifications as required for implementation of solar power plant through RESCO model, relevant regulations and documentations.
- c. The Consultant shall make available the Key Personnel to attend and participate in meetings, conferences and discussions with the Authority and shall otherwise advise on and assist the Authority in the diverse commercial, legal and Technical issues that may arise from time to time.

3.0 Scope of Work for Consultancy Services (TOR):

The scope of services to be provided by the Consultant, for the work of detailed engineering for the augmentation of solar power through RESCO model for Mormugao Port Authority of suitable capacity of Solar PV Project proposed by consultant' shall be as follows:

3.1 Preparation & submission of a Pre-feasibility Report for the RESCO model based on the following:

- a) Survey & feasibility to be carried out on land/rooftops available with the Port to install suitable capacity of Solar Power Plant under RESCO model at Head Land Sada, Vasco, Goa. Study existing contract demand, energy bill analysis, electrical load details and identify the requirement of solar power plant capacity. Detailed analysis of energy consumption and requirement.
- b) Solar Resource Assessment for the Project Site(s).
- c) Maps, Site Layout & Details (co-ordinates) of the area proposed for Ground Mounted Project
- d) Energy Yield Assessment.
- e) Technology Assessment.
- f) Project Justification.
- g) Technical Feasibility analysis.
- h) Determination of Capacity, Size and Technology of the Project(s).
- i) Project Implementation Schedule.
- j) Cost Estimates & Financial Analysis

- k) The cost of visits to study the above has to be borne by the consulting Firm.
- l) Risk Assessment
- m) Ground Water test report.
- n) Soil investigation report for Ground Mounted Solar (Soil bearing capacity, Type of soil, Ground water level, Strata, Soil test report etc.)
- o) Wind profile from nearest meteorological station.
- p) The details of solar power evacuation supported by the proposed Single Line Diagram (SLD) of the project & expected solar export details to the GRID.
- q) Furnishing the details of necessary permissions required from GED and/or other statutory bodies with regards to installation of solar plant, transmission line and interconnection with the grid.
- r) Furnishing any other relevant data/information w.r.t. the Solar PV plant (Study and identify the requirements for construction such as water, power, office space, fabrication yards, storage yard / storage space and material handling arrangements for the Solar PV plant).
- s) Critical costs that need to be considered in lowest discovered percentage tariff, among others, are:
 1. Provision for state electricity department charges, third party inspection charges, transport, etc,
 2. Statutory taxes and duties;
 3. Expected price escalation for 25 years.
- t) Submission of Draft Pre-Feasibility Report (PFR) for review & comments (if any) by MPA.
- u) Presentation to MPA management/officials on submitted PFR and concurrence of the PFR by the Port.
- v) Submission of Final Pre-Feasibility Report (PFR).

3.2 Preparation of Tender, selection of SPD, co-ordination with state electricity dept. to connect proposed solar power to Grid.

After acceptance of PFR by MPA and subject to project being feasible, for the Ground/Rooftops Solar Plant, the Proposed Solar PV power project shall be developed under RESCO model. Under this model, MPA will offer land/rooftops for setting up of Solar Power Project.

The solar project will be setup on Build, Own, Operate & Transfer basis by a solar power developer (SPD) selected by MPA through competitive bidding process by the consultant. Under RESCO model, the selected SPD owns, installs and maintains the solar power plant for the PPA period typically for 25 years (project life). The PPA tariff is determined by MPA through tariff based competitive bidding (TBCB)/e-reverse auction.

The entire energy generated from the Project shall be bought by MPA in accordance with the Power Purchase Agreement (PPA) to be signed between SPD and MPA.

The Consultant shall carry out the following activities::

- a. Preparation of scope of works based on the detailed energy analysis recommendation for which tenders are to be invited.
- b. Study and identify the requirements for construction such as water, power, office space, fabrication yards, storage yard / storage space and material handling arrangements for the Solar Plant and accordingly mention the same in the scope of work of SPD.
- c. Prepare Bid documents, Bid Evaluation Criteria & selection method for SPD. The Bid document would broadly cover Instructions to Bidders, Site Description, General Conditions of Contract (GCC), Special Conditions of Contract (SCC), Technical Specification, pre-

- qualifying requirements, Scope of Work, PPA, Drawings, Performance Guarantee Test Procedures, Price format, Price format for O&M of the plant.
- d. The cost of all travel in connection with any presentation to be made at any place shall be borne by the consultancy Firm.
 - e. The consultant shall submit the single draft tender document (3 copies). On approval of the draft tender document, the consultant shall submit a soft copy as well as 03 hard copies of the final tender document duly incorporating the comments of the Mormugao Port Authority.
 - f. E-tendering, pre-bid meetings/clarifications, reverse auction and evaluation of the Bids.
 - g. Issue of LOI to SPD after getting consent from MPA.

3.3 Vetting of power purchase agreement and other terms and conditions.

- a. Provide support in preparation and signing of Power Purchase Agreement on long term basis (25 years) at a tariff determined based on lowest discovered percentage tariff through competitive bidding with SPD.
- b. Finalization of the Solar developer considering the best quality and commercial aspects. Document Review for Financial Closure of the SPD & Provide assistance in final project Commissioning.
- c. The Consultant shall be responsible and shall complete all formalities with the DISCOM and other statutory bodies.
- d. Liasoning work for approvals, permits and clearances required for setting up of the Project including those required from State Government and local bodies shall be in the scope of the consultant. All the expenses for obtaining such clearance shall be borne by the SPD. The SPD shall be required to follow the applicable rules regarding project registration with the State Nodal Agency, if required in line with the provisions of the applicable policies/regulations of the Goa State. It shall be the responsibility of the SPD to remain updated about the applicable charges payable under the Goa state solar policy.
- e. Performance ratio acceptance.
- f. Exercise necessary controls as directed by the Port and submit reports that may be required by the financing agency/Govt. from time to time.
- g. Furnish information as may be required by the Port in connection with the audit remarks, queries from Govt. and other financial agencies etc., till one year after successful completion of the work.

3.4 Project progress report & Commissioning certificate

- CONNECTIVITY WITH THE GRID: The Project should be designed for interconnection with the desired existing substation in accordance with the prevailing Central Electricity Regulatory Commission (CERC) regulations and state regulations in this regard. For interconnection with the grid and metering, the SPD shall abide by the applicable Grid Code, Grid Connectivity Standards, Regulations on Communication System, transmission of electric and other regulations (as amended from time to time) issued by Appropriate Commission and Central Electricity Authority (CEA) and any other statutory body(ies). Liasoning work for signing Power Purchase Agreement with Goa Electricity Department (GED) for net metering is under scope of consultant.
 - Liasoning work and all application work for approvals, permits and clearances required for setting up of the Net metering arrangement including those required from State Government and local bodies shall be in the scope of the consultant. Charges and fees to State Govt. and any other statutory body for obtaining clearance shall be borne by the MPA at actuals. The other expenses such as transportation, lodging and boarding, out-of-pocket expenses (OPE) on conveyance, communication expenses, 3rd party expenses and subsistence expenses on site for the above activity is under scope of consultant.
- i. Review of Project progress report.

- ii. Project review report.
- iii. Commissioning review.
- iv. Commissioning certificate issuance.

3.5 Rendering Advisory Services

The Consultant shall provide such other advice and assistance as may be necessary and incidental to the Services and as may be requested by the Port in respect of the Project, including but not limited to attending meetings, conferences and discussions with the Port, and shall otherwise advise on and assist the Port in the diverse commercial issues that may arise from time to time.

3.6 Tax and Insurance-related matters

During the course of the Consultancy, the Consultant may be called upon to advice on tax and / or insurance related issues affecting the Project.

3.7 Scope not exhaustive

The Scope of Services and Terms of Reference specified in this Clause 3.0 are not exhaustive and the Consultant shall undertake such other tasks as may be necessary to appraise the project financially and assisting in legal aspects.

5.0 DELIVERABLES

In pursuance of this TOR, the Consultant shall undertake/deliver the following deliverables (the “Deliverables”) during the course of this Consultancy. Each deliverable shall include an executive summary, analyses, assumptions, results of computations, tables, charts, recommendations, and such other contents that generally comprise deliverables for similar consultancy work by way of best practices. 07 hard copies and soft copy of all the Reports mentioned herein below shall be submitted to the Port. The deliverables shall include:

Sr. No.	Activity	Time
1.	Collection of relevant data/information by conducting site survey & studies, preparation and submission of Pre-Feasibility Report (PFR) to MPA.	Within 15 (Fifteen) days from the 7 th day of the date of placement of LOA
2.	Submission of Scope of work & Single Draft tender document for the work.	Within 30 (Thirty) days after submission of report and acceptance of PFR by the Port.
3.	Submission of Final tender document duly incorporating the observations by the employer.	Within 10 (ten) days after acceptance of scope of work & draft tender document for the work by the Port
4.	Replies to Pre- Bid queries	Within 5 (five) days from the date of submission of queries by Port
5.	Technical Bid evaluation, Price Bid evaluation & recommendations if any, upto award of work to the successful Applicant.	Within 5 (five) days from the date of submission of the pre bid documents by the Port

6.	Handing Over of Site for construction of proposed solar plant.	As specified in the final tender document.
7.	Approval of documents, agreement, etc. submitted by the successful Applicant	Within 10 (ten) days from the date of submission of documents.
8.	Monitoring the work progress of proposed solar project, and Consultant should ensure that supply of solar power to the Port should be in accordance with the terms and conditions of tender.	As specified in the final tender document.
9.	After successful completion of the project signing of PPA agreement on long term basis (25 years) at a tariff determined based on lowest discovered percentage tariff with SPD. Also, signing PPA with GED for net metering arrangement.	Within 30 (Thirty) working days from the date of completion of the project including obtaining NOC and other liaison works with all concerned statutory and non- statutory agencies like companies, load dispatch centre etc, by the Contractor (SPD).

NOTE:- In the event that a viable project does not seem possible, the Consultant shall not proceed with the Consultancy and the same shall be terminated. Upon such termination, the Consultant shall be entitled to (a) full payment for the Deliverables completed by it; and (b) balance amount related to other undelivered deliverables shall not be paid, and the consultancy services will be discontinued as per written notice from the Port to the consultant.

6.0 TIME AND PAYMENT SCHEDULE

- a) Subject to the provisions of the TOR, the total duration for completion of the subject work shall be as per clause no. 5.0. "Deliverables" item no.7.
- b) The schedule for completing the Deliverables shall be determined by the maximum number of days from the Effective Date of the Agreement (the "Key Dates" or "KD"). Time schedule for important Deliverables of the Consultancy and the payment schedule linked to the specified Deliverables are given below:

Sr.No.	Milestone	Payment
a)	On submission of final Pre-feasibility report on recommendation of design after incorporating the suggestions/requirements of the MPA.	20 % of the quoted amount
b)	On submission of Final tender document and agreements duly incorporating the observations by the employer and uploading the same on the Port's website	20 % of the quoted amount
c)	Technical Bid evaluation, Price Bid evaluation & recommendations if any, upto award of work to the successful Applicant	15 % of the quoted amount
d)	Upon signing of Power Purchase Agreement on long term basis (25 years) at a tariff determined based on lowest discovered percentage tariff through competitive bidding with SPD.	15 % of the quoted amount
e)	Against successful completion of project.	10 % of the quoted amount
f)	Against connection with GED grid and completion of Net metering procedures	20 % of the quoted amount
	TOTAL	100 %

Note: (1) Timelines for Deliverables excludes the time taken by the port in providing the requisite documents or in conveying its comments on the reports.

(2) In case of premature closure of work, the amount payable to the consultant will be as per the deliverable completed and delivered to the Port, and the balance amount related to other undelivered deliverables shall not be paid, and the consultancy services will be discontinued as per written notice from the Port to the consultant.

- c) Payment for the Services shall be made as per the Clause no. 6.0. above.
- d) Payment shall be made in respect of each Deliverable upon completion thereof.
- e) **Final Payment to be made to the Consultant upon completion of all services including signing of agreements with electricity departments, SPD & Port and handing over the document to MPA.** In the event that the Consultancy is terminated by the Port prior to its completion, the Consultant shall be entitled to (a) full payment for the Deliverables completed by it; and (b) balance amount related to other undelivered deliverables shall not be paid, and the consultancy services will be discontinued as per written notice from the Port to the consultant.

7.0 MEETINGS

- a) The Port may review with the Consultant, any or all of the documents and advice forming part of the Consultancy, in meetings and conferences which will be held in Goa at the Port's office. Further, the Consultant may be required to attend meetings and conferences with pre-qualified Applicants / the Selected Applicant / Govt. agencies or as directed by the Authority from time to time.
- b) The Authority may, in its discretion, require the Consultant to participate in extended meetings and/or work from the offices of the Authority and the Consultant shall, on a best endeavor basis and without unreasonable delay, provide such services.

8.0 REPORTING

- a) The Consultant will work closely with the designated Nodal Officer nominated by the Port, who will be responsible for the overall coordination and project development. He will play a coordinating role.
- b) The Consultant may issue papers highlighting issues that could become critical for the timely completion of the project and that require attention from the Port.
- c) Regular communication with the Nodal Officer of the Project is required in addition to all key communications.
- d) The Deliverables to be submitted as per schedule provided in this document.

9.0 DOCUMENTS TO BE MADE AVAILABLE BY THE PORT

Available data as may be required by the Consultant will be provided by the Port on request. The Nodal Officer designated by the Port shall facilitate handing over of such information to the Consultant.

10.0 COMPLETION OF SERVICES

All the study outputs including primary data shall be compiled, classified and submitted by the Consultant to the Port in soft form apart from the reports indicated in the Deliverables (Clause no. 5.0.). The study output shall remain the property of the Port and shall not be used for any purpose other than that intended under these terms of reference without the permission of the

Port. The Consultancy services shall stand completed on acceptance by the Port of all the deliverables of the Consultant and issue of a certificate by the Port to that effect.

11.0 Minimum Eligibility Criteria

The bidder should have experience in providing PMC services for setting up solar power plant of capacity 500 KW or more, through RESCO model at any Port / Government / PSU / Private organizations. The bidder shall submit at least 01 no. Satisfactory Completion Certificate of the above work issued by the Client.

**EXECUTIVE ENGINEER (E-HL)
MORMUGAO PORT AUTHORITY**

SCHEDULE OF PRICES AND QUANTITIES

PRICE SCHEDULE

Sl. No.	Description of work	Unit	Qty.	Rate/Unit (Rs.)		GST %	Amount (Rs.)
				In figure	In words		
1	Providing project management consultancy services for purchase of solar power through RESCO model as per the scope of work indicated at Schedule A	LS	1				
Total Amount							

(In Words Rupees _____ only exclusive of all taxes and duties)

Note: The rates quoted shall be inclusive of transportation, lodging and boarding, out-of-pocket expenses (OPE) on conveyance, communication expenses, 3rd party expenses and subsistence expenses on site but exclusive of GST. Applicable GST shall be paid extra as applicable.

Date:

Signature:

Place:

Name:

Address:

Office Seal of firm