

ODISHA POWER TRANSMISSION CORPORATION LIMITED



**PACKAGE: 19/2015-16 -EXECUTION OF EMERGENCY /NORMAL OPGW STRINGING
& MAINTENANCE WORKS IN EHV TRANSMISSION LINES IN OPTCL SYSTEM**

**BIDDING INSTRUCTIONS
(INV & INB)**

VOLUME-I

NOTICE INVITING e-TENDER NOTICE NO. CPC-19 / 2015-16
TENDER SPECIFICATION NO. Sr. GM-CPC- Tender-OPGW Works-**Rate contract**-19/2015-16



**ODISHA POWER TRANSMISSION CORPORATION LTD.
OFFICE OF THE SENIOR GENERAL MANAGER,
CENTRAL PROCUREMENT CELL,
JANPATH, BHUBANESWAR – 751022**

e-tender NOTICE NO- CPC-19 /2015-16.

For and on behalf of ODISHA POWER TRANSMISSION CORPORATION LTD, Sr.G.M. [C.P.C.] invites sealed bids under single stage two-bid system in e-tendering mode only from reputed Contractors having valid HT/EHT license from competent licensing authority for enlistment as rate contract holder of OPTCL for the following works.

PACKAGE: 19/2015-16 -EXECUTION OF EMERGENCY /NORMAL OPGW STRINGING & MAINTENANCE WORKS IN EHV TRANSMISSION LINES IN OPTCL SYSTEM

The bidders can view the tender documents from www.optcl.co.in website free of cost.

(i) The bidders who want to submit bid shall have to pay the tender cost for each package (As mentioned in TABLE-I, non refundable which is inclusive VAT @ 5%), in the form of Demand draft only, drawn in favour of the D.D.O Head quarters, OPTCL, Bhubaneswar.

(ii) The bidders shall have to submit the nonrefundable tender processing fee (*mentioned in the tender notice, which is inclusive of service tax@14.00%*) in the form of Demand draft, drawn in favour of **K.S.E.D.C.Ltd, Payable at Bangalore**. The said demand draft is to be submitted along with the EMD & tender cost on or before the last date & time of submission of tender.

(iii) The bidders shall scan the Demand Draft / Bank guarantee, towards **EMD** and **Tender Cost** against the package and upload the same in the prescribed form in .gif or .jpg format in addition to sending the original as stated above.

(iv) The prospective bidders are advised to register their user ID, Password, company ID from website www.tenderwizard.com/OPTCL by clicking on hyper link “Register Me”.

(v) Complete set of bidding documents are available at www.tenderwizard.com/OPTCL. Interested bidder may visit OPTCL’s official web site <http://www.optcl.co.in> and www.tenderwizard.com/OPTCL for detail specification.

All subsequent corrigendum / addendums if any shall be hosted in the official web site of OPTCL ie: <http://www.optcl.co.in> and www.tenderwizard.com/OPTCL only.

(vi) Any clarifications regarding the scope of work and technical features of the project can be had from the undersigned during office hours.

SENIOR GENERAL MANAGER, CPC
email id- sgm.cpc@optcl.co.in

TABLE-I

Sl No	Description	Schedule
1	e-tender Notice No	CPC-19 / 2015-16
2	Bid Documents No	Sr. G.M-CPC- Tender-OPGW Works-Rate contract-19/2015-16
3	Description of work	Enlistment as rate contract holder of OPTCL for the following works. Package:19/2015-16 – Execution of Emergency /Normal OPGW stringing & maintenance works in EHV Transmission lines in OPTCL system.
4	Duration of Rate contract.	Two years
5	Free view of tender document	01.08.2015
6	Cost of Tender document	Rs 2100.00
7	On line request for bid document	From 01.08.2015, 03.00PM Up to 26.08.2015, 12.45 PM
8	Issue of bid document	From 01.08.2015, 03.01 PM Up to 26.08.2015, 12.46 PM
9	Bid security in INR (EMD)	Rs 50,000.00 The bidder has to furnish bid security in shape of BG or DD issued /drawn in any nationalized bank of India.
10	Tender processing fee	Rs 2280.00
11	Pre bid meeting	14.8.2015 (Clause 38.0) at 11AM
12	Last date and time of receipt of bid.	Up to 27.08.2015, 1.00 PM
13	Opening of Techno-commercial bid.	On 28.08.2015, at 03.00 PM



BIDDER'S QUALIFICATION CRITERIA (BQC)/ QUALIFYING REQUIREMENTS (QR)

MINIMUM QUALIFICATION CRITERIA OF BIDDERS(PACKAGE: 19/2015-16)

(1) The bidder should have a valid HT/EHT license from the competent licensing authority on the date of opening of the bid.

(2) The bidder should have executed **minimum 10 Km** of OPGW(8F/24F/48F) de-stringing, Stringing and complete commissioning of OPGW link including supply & commissioning of required & recommended hardware fittings in 110 KV or higher Transmission line in a single project

OR

minimum 15 Km of OPGW(8F/24F/48F) de-stringing, Stringing and complete commissioning of OPGW link including supply & commissioning of required & recommended hardware fittings in 110 KV or higher Transmission line in multiple project taken together .

The above work should have been completed in any State Transmission Utility/ Central Transmission Utility in India during last 10 (ten) years and should be in successful operation for a minimum period of ONE (01) year reckoned from the date of opening of Techno- Commercial Bids. **In both the cases the bidder has to submit minimum 01 year of performance certificate from the date of opening of bid**

(3) The bidder should have experience in OPGW(8F/24F/48F) maintenance work comprising of splicing & testing, OFC (Approach) erection, Lowering/Fixing/Uppering of joint closer on tower and associated OPGW works including supply & commissioning of required & recommended hardware fittings in 110 KV or higher Transmission line .

The above work should have been completed during last 10 (ten) years and should be in successful operation for a minimum period of ONE (01) years reckoned from the date of opening of Techno-Commercial Bids. **The bidder has to submit minimum 01 year of performance certificate from the date of opening of bid.**

(4) Must have adequate T&P, plant and machinery which shall be inspected by OPTCL engineer and if found not up to standard or adequate the contractor shall be disqualified. The firm has to furnish the list of

adequate T&P, plant and machinery as at **annexure-III**

(5) The firm has to furnish **Current contract commitment** relating to the work of de-stringing, Stringing and complete commissioning of OPGW in India.

(5) **PERFORMANCE:** The working contractor from whom Govt / Govt undertaking/PSU have **off loaded** work due to poor performance shall not be eligible to participate in the bid.

(6) Contractors whose **AVERAGE ANNUAL TURNOVER** in the latest three financial years is **LESS THAN 0.5 CRORES** shall not be eligible to participate in the tender.

OUT RIGHT REJECTION CRITERIA

Bids received without **Tender cost, Bid security** and **Tender processing fee** shall be treated as non-responsive and shall be out rightly rejected.

OPTCL reserves the right to accept /reject any or all tenders without assigning any reasons thereof.

SR. GENERAL MANAGER [CPC]
sgm.cpc@optcl.co.in

SECTION – INB

INSTRUCTIONS TO BIDDERS CONTENTS

Sl. No.	Description
	Introduction
1.0	General Instructions
2.0	Qualifying Requirements of Bidders
3.0	Cost of Bidding
<u>A.</u>	The Bidding Documents
4.0	Contents of Bidding Document
5.0	Understanding of Bid Documents
6.0	Clarifications on Bid Documents
7.0	Amendment to Bidding Documents
<u>B.</u>	Preparation of Bids
8.0	Language of Bid
9.0	Local Conditions
10.0	Documents comprising the Bid
11.0	Scope of the Proposal
12.0	Bid Price
13.0	Alternate Proposals
14.0	Price Basis and Payments
15.0	Taxes and Duties
16.0	Time Schedule
17.0	Insurance
18.0	Brand Names
19.0	Bid Guarantee
20.0	Period of Validity of Bids
<u>C.</u>	Submission of Bids
21.0	Format of Bid
22.0	Signature of Bids
23.0	Sealing and Marking of Bids
24.0	Deadline for Submission of Bids
25.0	Late Bids
26.0	Modification and withdrawal of Bids
27.0	Information required with the Proposal

D.

Bid Opening and Evaluation

28.0 Opening of Bids by Owner

29.0 Clarification of Bids

30.0 Preliminary Examination

31.0 Definitions and Meanings

32.0 Contacting the Owner

F.

Award of Contract

33.0 Award Criteria

34.0 Owner's Right to Accept any Bid and to reject any or all Bids

35.0 Notification of Award

36.0 Signing of Contract

37.0 Contract Performance Guarantee

SECTION – INB

INSTRUCTION TO BIDDERS

A. INTRODUCTION

1.0 GENERAL INSTRUCTIONS

1.1 The ODISHA POWER TRANSMISSION CORPORATION LIMITED, hereinafter called 'OPTCL'/'OWNER' will receive bids in respect of **OPGW Works Rate Contract-2015-16** to be furnished and executed as set-forth in the accompanying Specifications. All bids shall be prepared and submitted in accordance with these instructions. The tender is invited in two-part basis i.e. Techno-commercial bid and price bid.

2.0 QUALIFYING REQUIREMENTS OF BIDDERS-

2.1 The bidding for this package is open to any experienced contractor having adequate experience in execution of OPGW stringing & maintenance work in 400kV/220 KV/132 KV transmission Lines.

a) Who is a qualified OPGW contractor for stringing and maintenance of OPGW in 220 KV/132 KV/400 KV transmission lines, of the type specified and has adequate technical knowledge and practical experience; The bidders should possess the qualification criteria as mentioned under the clause Minimum Qualification Criteria (1) to (5) for Package 19/2015-16.

b) does not anticipate change in the ownership during the proposed period of work (if such a change is anticipated, the scope and effect thereof shall be defined);

c) Has adequate financial stability and status to meet the financial obligation pursuant to the scope of the works. For Package 19/2015-16, the Contractors whose Minimum average annual turnover (MAAT) in the last three financial years is at least Rs 0.5 crores shall be eligible to participate in the tender. Further, the Bidders should upload the scanned copy of their audited profit and loss account and balance sheet for the last three years.

d) Has adequate plant, tools and machinery available to perform the works properly and expeditiously within the time period specified.

e) Has adequate field services organization to provide the necessary field erection, testing and commissioning OPGW Stringing & Maintenance works in EHV Transmission lines in OPTCL System and management services required to successfully erect, test and commission the equipment as required by the Specifications and Documents; and

f) Has established quality assurance systems and organization designed to achieve high levels of equipment reliability, during field installation activities.

g) Must ready to accept the materials to be supplied by the OPTCL and use the same for the OPGW work in the transmission lines and where required.

*****Qualifying Requirement relating to work experience to be submitted as per below.**

(i) If the work executed as main contractor to the principal employer, then a work completion certificate as well as a certificate regarding satisfactory operation of the installation for One (01) year from the date of commissioning should be submitted duly issued by the Principal employer.

(ii) In case the work executed as sub-contractor to the main contractor of the Principal Employer, then a work completion certificate from the main contractor and a certificate that the same installation have been in satisfactory operation for more than One (01) year from the date of commissioning should be submitted duly issued by the Principal Employer. However, if the main contractor is a CPSU/SPSU then they can issue both the certificates.

2.2 Majority publicly owned enterprises domiciled in India may be eligible to qualify if, in addition to meeting all the qualifying requirements, they also:

- a) are commercially oriented legal entities distinct from the Owner, and are not a government department;
- b) are financially autonomous, as demonstrated by requirements in their constitutions to provide separate audited accounts and return on capital, powers to raise loans and obtain revenues through the sale of goods or services; and
- c) are managerially autonomous.

2.3 The above stated requirements are a minimum and the Owner reserves the right to request for any additional information and also reserve the right to reject the Proposal of any Bidder, if in the opinion of the Owner, the qualification data is incomplete or the Bidder is found not qualified to satisfactorily perform the Contract.

3.0 COST OF BIDDING

The Bidder shall bear all costs and expenses associated with preparation and submission of its bid including pre and post-bid discussions, technical and other presentations etc., and the Owner will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. THE BIDDING DOCUMENTS

4.0 CONTENTS OF BIDDING DOCUMENT

4.1 The goods and services required, bidding procedures and contract terms are prescribed in the Bidding Document. In addition to the Invitation to Bids, the Bidding Document is a compilation of the following sections:

TENDER NOTIFICATION:-

- a) Tender Notice
- b) Tender notification

COMMON DOCUMENT(Free view):

- a) Instructions to Bidders – Section INB.
- b) General Conditions of Contract – Section GCC
- c) Technical Specifications.

BID DOCUMENT (To be filled by the Bidder on line in www.tenderwizard.com/OPTCL_portal)

- a) Techno-commercial bid (Part-I).
- b) Price bid (Part-II)

5.0 UNDERSTANDING OF BID DOCUMENTS

5.1 A prospective Bidder is expected to examine all instructions, forms, terms and specifications in the Bid documents and fully inform himself as to all the conditions and matters which may in any way

affect the scope of work or the cost thereof. Failure to furnish all information required by the Bid documents or submission of a Bid not substantially responsive to the Bid document in every respect will be at the Bidder's risk and may result in the rejection of its bid.

6.0 CLARIFICATIONS ON BID DOCUMENTS

6.1 If the prospective Bidder finds discrepancies or omissions, in specifications and document or is in doubt as to the true meaning of any part, he shall at once make a request, in writing, for an interpretation/clarification, to the Owner. The Owner, then, will issue interpretation(s) and clarification(s) as he may think fit in writing. After receipt of such interpretation(s) and clarification(s), the Bidder may submit his bid but within the time and date as specified in the Invitation to Bid. All such interpretations and clarifications shall form a part of the Bidding Document and shall accompany the Bidder's Proposal. A prospective Bidder requiring any clarification on Bidding Document may notify the Owner in writing. The Owner will respond in writing to any request for such clarification of the Bidding Document which it receives not later than fifteen (15) days prior to the deadline for submission of bids prescribed by the Owner. Written copies of the Owner's response (including an explanation of the query but without identifying its source) will be sent to all prospective Bidders who have received the Bidding Document.

6.2 Verbal clarification and information given by the Owner or his employee(s) or his representative(s) shall not in any way be binding on the Owner.

7.0 AMENDMENT TO BIDDING DOCUMENT

7.1 At any time prior to the deadline for submission of bids, OPTCL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Document by amendment(s).

7.2 The amendment will be notified in www.tenderwizard.com/OPTCL portal for information of all prospective Bidders. OPTCL, will bear no responsibility or liability arising out of non-receipt of the same in time or otherwise.

7.3 In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, OPTCL, may, at its discretion, extend the deadline for the submission of bids by a maximum period of 15 days.

7.4 Such amendments, clarifications, etc. shall be binding on the Bidders and will be given due consideration by the Bidders while they submit their bids and invariably enclose such documents as a part of the bid. In case amendment is issued subsequent to receipts of Bids, bidder shall follow the instructions issued along with amendment with regard to submission of impact on quoted price/revised price, if any.

C. PREPARATION OF BIDS

8.0 LANGUAGE OF BID

8.1 The bid prepared by the Bidder and all correspondences and documents relating to the bid, exchanged by the Bidder and the Owner shall be written in the English language, provided that any printed literature furnished by the Bidder may be written in another language so long as accompanied by an English translation of its pertinent passages. Failure to comply with this may disqualify a bid. For purposes of interpretation of the bid, the English translation shall govern.

9.0 LOCAL CONDITIONS

9.1 It will be imperative on each Bidder to fully inform himself of all local conditions and factors which may have any effect on the execution of the Contract covered under these documents and specifications. The owner shall not entertain any request for clarifications from the Bidders, regarding such local conditions.

9.2 It must be understood and agreed that such factors have properly been investigated and considered while submitting the Proposals. No claim for financial adjustment to the Contract awarded under these specifications and documents will be entertained by the Owner. Neither any change in the time schedule of the Contract nor any financial adjustments arising thereof shall be permitted by the Owner, which are based on the lack of such clear information or its effect on the cost of the Works to the Bidder.

10.0 DOCUMENTS COMPRISING THE BID

(A) Hard Copy

Hard copy of the bid shall comprise of following documents to be submitted in sealed envelope prior to submission of bid.

- (i) Bid Security, Tender Cost & Tender processing (in Original) for the package as indicated in tender notification.
- (ii) Power of Attorney in original /notarized copy for signing the bid document.

(B) Soft Copy

Soft copy of the bid shall comprise of following documents to be uploaded on the www.tenderwizard.com/OPTCLportal as per provisions therein.

AS PART OF FIRST ENVELOPE(TECHNO-COMMERCIAL BID , PART-I).

(i) The Electronic Form/Template of the bid for First Envelope (Techno –Commercial bid), as available on the portal, shall be duly filled. Details of sheet available in Techno commercial bid are as follow.

- (1) Bidder’s Information.
- (2) Abstract of Terms and conditions
- (3) Commercial deviation (Schdule-1)
- (4) Technical deviation(Schedule-2)
- (5) Minimum Qualifying requirement data (Schedule-3)

The following Attachments (Scanned copy) are to be uploaded in tender portal as a part of documents accompanying Techno commercial bid part-I.

Sl No	Description	Pdf file reference
1	Scanned copy of Tender cost, Bid security, Tender processing fee.	Attach 1.pdf
2	Scanned copy of Power of attorney.	Attach 2.pdf
3	Credential in support of meeting Minimum Qualifying criteria	Attach 3.pdf
4	Annual audited balance sheet for last 03(Three) Years.	Attach 4.pdf
5	Turn over certificate(for last 3 years)duly signed by Chartered accountant.	Attach 5.Pdf
6	Other documents(Certificate of Incorporation, HT License, IT PAN, VAT/ST, PF certificate and any other relevant documents)	Attach 6.pdf
7	Bid proposal duly signed by the authorized signatory.	Attach 7.pdf

8	Scanned copy of Annexure-I (Declaration form) Annexure-II(Personnel capability) Annexure-III(Equipment capability) Annexure-IV(Financial capability) Annexure-V(Litigation History)	Attach 8.pdf
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As part of Second Envelope (PRICE BID, PART-II)

(i) The Electronic Form/Template of the bid for Second Envelope (Price - Part, as available on the portal, shall be duly filled.

11.0 SCOPE OF THE PROPOSAL

11.1 Scope of work includes execution of normal and emergency works in OPGW stringing & maintenance works in EHV transmission lines in OPTCL System in accordance to TENDER SPECIFICATION NO. Sr. GM-CPC- Tender-OPGW Works-**Rate contract**-19/2015-16.

11.2 Bids containing deviations from provisions relating to the following clauses will be considered as non-responsive:

- a) **Non-submission of tender cost, tender processing fee, Bid Guarantee as per tender condition.**
- b) **Non-compliance to Minimum qualifying requirement as stipulated in the tender.**

However, the Bidders, wishing to propose deviations to any of the above provisions, must provide in the **Technical & Commercial Deviations schedule attached in techno commercial bid.**

The Owner's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

However, the Bidders, wishing to propose deviations to any of the above provisions, must provide in the Commercial Deviations schedule of Bid Proposal Sheet in their bid, the cost of withdrawal of such deviations. If the deviation to any of these provisions is not priced, the bid will be rejected. The evaluated cost of the bid shall include, in addition to the costs described in INB Clause 37, the cost of withdrawal of the deviations from the above provisions to make the bid fully compliant with these provisions.

At the time of Award of Contract, if so desired by the Owner, the Bidder shall withdraw these deviations listed in Commercial Deviation Schedule of Bid Proposal Sheet in their Bid at the cost of withdrawal stated by him in the bid. In case the Bidder does not withdraw the deviations proposed by him, if any, at the cost of withdrawal stated by him in the bid, his bid will be rejected and his bid security forfeited.

The Owner's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

11.3 Bids not covering the above entire scope of Works may be treated as incomplete and hence rejected.

12.0 BID PRICE-

The quoted price should be FIRM and to remain valid for two Years. Firms not quoting firm price shall be out rightly rejected.

12.1 The Bidder shall quote in the appropriate schedule of Bid Form the unit cost and total cost as per the schedule. The unit rates of the goods it proposes under the Contract on a Firm Price basis,

12.2 The Bidder shall furnish the price in the appropriate schedules of Bid Form (Bid template).

A. In case of items having supply component with works to include the following:

- i) Unit basic price
- ii) Charges for inland transportation (including port handling) and insurance for delivery of the equipment/materials upto their final destinations.
- iii) Lump sum charges towards unloading, storage, insurance, erection, testing and commissioning.
- iv) Sales Tax/Work Contract Taxes and any other levies legally payable on the transactions between the Owner and the Bidder.
- v) Charges for Unit erection and commissioning.
- vi) Service Tax shall not be included in the bid price. The same shall be paid extra as applicable

B. In case of items having service component only to include the following:

- i) Charges for Unit erection and commissioning.
- ii) Any other levies legally payable on the transactions between the Owner and the Bidder.
- iii) Service Tax shall not be included in the bid price. The same shall be paid extra as applicable

13.0 ALTERNATIVE PROPOSALS

12.1 Based on their experience, capabilities, patented research, and development works etc., the Bidder may, in addition to a base Proposal, offer alternate Proposal(s), for reasons of economy or better performance. But in all such cases, the base Proposal shall be strictly in line with the requirements as stipulated in the Bidding Documents and only such base Proposal shall be considered for the purposes of evaluation of the Proposals. Should the bid by the successful Bidder contain such alternate Proposal then the Owner at its discretion may accept the same at the time of award of Contract.

14.0 PRICE BASIS AND PAYMENTS

14.1 The Bidders shall quote in their proposals the FIRM price in per unit basis. Any excess quantity to be executed shall be billed as per the unit rate arrived in rate contract. The price shall remain firm for the entire period and the entire work until final handing over to the owner.

14.2 Bidder shall indicate bid prices in Indian Rupees only.

15.0 TAXES AND DUTIES

15.1 All customs duties, excise duties, sales taxes, Entry Tax and other levies payable by the Bidders in respect of the transaction between the Bidders and their vendors/sub-suppliers while procuring any components, sub-assemblies, raw materials and equipment, erection cost shall be included in the bid price and no claim on this behalf will be entertained by the Owner.

15.2 Sales Tax on goods incorporated in the Works:

The Bidder shall include the Sales Tax on Works Contract, Turnover Tax or any other similar taxes under the Sales Tax Act, as applicable in their quoted bid price and OPTCL would not bear any liability on this account. OPTCL shall, however, deduct such taxes at source as per the rules and issue TDS Certificate to the Contractor.

15.3 As regards the Income Tax, surcharge on Income Tax and other corporate taxes the Bidder shall be responsible for such payment to the concerned authorities.

16.0 TIME SCHEDULE

The basic consideration and the essence of the contract shall be strict adherence to the time schedule for performing the specified works i.e time specified from the date of placement of the order.

17.0 INSURANCE

The Bidder's insurance liabilities pertaining to the scope of works are detailed out in clauses titled 'Insurance' in General Terms and Conditions of Contract. Bidder's attention is specifically invited to these clauses. Bid price shall include all the cost in pursuance of fulfilling all the insurance liabilities under the Contract.

18.0 **BRAND NAMES-** The Bidder shall note that standards for workmanship, material and equipment and reference to brand names or catalogue numbers designated by the owner in its Technical Specifications are intended to be descriptive only and not restrictive. The bidder may substitute alternative standards, branch name and/or catalogue numbers in its bid, provide that it demonstrates to the owner's satisfaction that the substitutions are substantially equivalent or superior to those designed in the Technical Specifications.

19.0 **BID GUARANTEE**

19.1 The Bidder shall furnish, as part of its bid, bid guarantee for an amount as specified in Notice Inviting Tender No 19/2015-16. The bid guarantee shall be valid for a period of 240 days from the date of opening of bids.

19.2 The bid security is required to protect the owner against the risk of Bidder's conduct, which would warrant the guarantee forfeiture, pursuant to Clause 19.7. The bid guarantee shall be made payable to the owner without any condition whatsoever.

19.3 The bid guarantee shall be denominated in Indian Rupees only and shall be in one of the following forms:

- a) Bank Guarantee
- b) Bank draft

19.4 Any bid not secured in accordance with clause No 19.1 and 19.3 above will be rejected by the owner as non-responsive.

19.5 Unsuccessful Bidder's bid guarantee will be discharged/returned as promptly as possible but not later than 60 days after the expiration of the period of bid validity prescribed by the owner.

19.6 The successful Bidder's bid guarantee will be discharged upon the Bidder's executing the contract and furnishing the Performance Guarantee.

19.7 The bid guarantee may be forfeited:

- a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form.

OR

- b) In case of a successful Bidder, if the Bidder fails:
 - i) To furnish the Performance Guarantee.

19.8 The bid guarantee shall be submitted prior to last date and time for submission of bid. Any bid without bid security shall not be opened and in accordance with provisions of this clause shall be rejected by the owner.

19.9 No interest shall be payable by the owner on the above bid security.

20.0 **PERIOD OF VALIDITY OF BIDS**

20.1 Bids shall remain valid for 180 days from the date of bid opening prescribed by the owner. A bid valid for a shorter period will be rejected by the owner as non-responsive.

20.2 In exceptional circumstances the owner may solicit the bidder's consent to an extension of the period of validity. The request and the response thereto shall be made in writing (including FAX). The bid security provided under clause 20.0 shall also be extended by the same period as the extension in the validity of the bid. A bidder may refuse the request without forfeiting his bid security. A bidder granting the request will not be required or permitted to modify its bid.

21.0 **MODE OF SUBMISSION OF BID:-**

(i) The bidder shall submit the bid in Electronic Mode only i.e in www.tenderwizard.com/OPTCL portal. The bidder must ensure that the bids are received in the specified website of the OPTCL by the date and time indicated in the Tender notice.

(ii) Bids submitted by telex/telegram will not be accepted..

(iii) The OPTCL reserves the right to reject any bid, which is not submitted in electronic mode and according to the instruction, stipulated above.

22.0 PARTICIPATION IN e-TENDER:-

(i) For all the users it is mandatory to procure the Digital Signatures.

(ii) Contractors / Vendors / Bidders / Suppliers are requested to follow the below steps for registration:

22.1: REGISTRATION IN TENDER WIZARD PORTAL	
(a)	log in www.tenderwizard.com/OPTCL . Click “Register”, fill the online registration form
(b)	The firm has to get registered for e tendering by paying Registration for an amount of Rs.2280/- in the form of DD in favour of K S E D C Ltd Payable at Bangalore. Or Registration fee can also be paid to KSEDC Ltd through e-payment mode. (by Debit card / Credit card / net banking mode) For any assistance please contact our help desk – 9937140591. <i>The contractors /vendors/bidders/supplier who have already registered in e-tendering site of OPTCL, they need not to pay the registration amount KSEDCL again for this tender.</i>
(c)	Send the acknowledgment copy for verification.
(d)	As soon as the verification is being done the e-tender user id will be enabled
22.2: ON LINE REQUEST FOR e-tender DOCUMENTS.	
After viewing Tender Notification in www.tenderwizard.com/OPTCL , if bidder intends to participate in tender, he has to use his e-tendering User Id and Password which has been received after registration and acquisition of DSCs(Digital signature certificate, Class-III). If any Bidder wants to participate in the tender he will have to follow the instructions given below	
(e)	Insert the PKI (which consist of your Digital Signature Certificate) in your System. (Note: Make sure that necessary software of PKI be installed in your system)
(f)	Click / Double Click to open the Microsoft Internet Explorer (This icon will be located on the Desktop of the computer).
(g)	Go to Start > Programs > Internet Explorer. Type www.tenderwizard.com/OPTCL in the address bar, to access the Login Screen
(h)	Enter e-tender User Id and Password, click on “Go”. Click on “Click here to login” for selecting the Digital Signature Certificate. Select the Certificate and enter DSC Password. Re-enter the e-Procurement User Id Password
(i)	Click “Un Applied” to view / apply for new tenders
(j)	Click on Request icon for online request. After making the request Bidders will receive the Tender Documents which can be checked and downloaded by following the below steps
(k)	Click to view the tender documents which are received by the user. Tender document screen appears.
(l)	Click “Click here to download” to download the documents
22.3 ON LINE SUBMISSION OF BID	
(J)	Prior to submission of bid, the bidder has to furnish the tender cost, tender processing fee and EMD in shape of BG/DD as specified in the tender notification in an envelope. In the

	front side of the envelope, tender notice No, tender specification No and date and time of opening of techno-commercial bid(Part-I) should be clearly mentioned. The firm has to pay tender processing fee to KESDC Ltd for an amount Rs2280.00 in the form of DD in favour of K S E D C Ltd Payable at Bangalore. Or Tender processing fee can also be paid to KESDC Ltd through e-payment mode.(by Debit card / Credit card / net banking mode)
(m)	After completing all the formalities Bidders will have to submit the tender and they must take care of all instructions. Prior to submission, verify whether all the required documents have been attached and uploaded to the particular tender or not. Note down / take a print of bid control number once it displayed on the screen
(n)	Tender Opening event can be viewed online
(o)	Competitors bid sheets are available in the website for all

*For any e-tendering assistant contact help desk number, 080- 40482000(Bangalore).

****The participants to the tender should be registered under ODISHA Sales Tax Act, VAT Act/Central sales Tax Act./Service Tax**

23.0 SEALING AND MARKING OF BID:-

23.1 Hard copy of followings[ref- Clause No 10(A) of ITB]:

- (i) Tender cost, Tender processing fee & Bid Security (in Original) in accordance to tender notification in one envelope.
- (ii) Power of Attorney in original.

23.2 First Envelope[ref- Clause No 10(B) of ITB]:

- (i) The Electronic Form/Template of the bid for First Envelope (Techno –Commercial bid), as available on the portal, shall be duly filled.
- (ii) Attachments –Scanned copy of documents in support of meeting the Minimum qualifying requirement of the tender (both technical and financial, files named as 1.pdf to 8.pdf).

23.3 Second Envelope[ref- Clause No 10(C) of ITB]::

The Electronic Form/Template of the bid for Second Envelope (Price - Part), shall be duly filled.

23.4The List of following documents shall be scanned & uploaded on the portal(as the part of First Envelope) as per table given below:

Sl No	Description	Pdf file reference
1	Scanned copy of Tender cost, Bid security, Tender processing fee.	Attach 1.pdf
2	Scanned copy of Power of attorney.	Attach 2.pdf
3	Credential in support of meeting Minimum Qualifying criteria	Attach 3.pdf
4	Annual audited balance sheet for last 03(Three) Years.	Attach 4.pdf
5	Turn over certificate (for last 3 years)duly signed by Chartered accountant.	Attach 5.Pdf
6	Other documents(Certificate of Incorporation, HT License, IT PAN, VAT/ST, Service Tax Registration, PF certificate and any other relevant documents)	Attach 6.pdf
7	Bid proposal duly signed by the authorized signatory.	Attach 7.pdf

8	Scanned copy of Annexure-I (Declaration form) Annexure-II(Personnel capability) Annexure-III(Equipment capability) Annexure-IV(Financial capability) Annexure-V(Litigation History)	Attach 8.pdf
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24.0 . DEADLINE FOR SUBMISSION OF BIDS

24.1 Soft copy of the bid shall be uploaded through the portal www.tenderwizard.com /OPTCL on or before the submission time and date as stipulated in the bidding document. Tender cost, tender processing fee, Bid Security, Power of Attorney, must be received by the Employer at the address not later than the time and date stated in the tender notification. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the bids will be received/uploaded on the next working day as per the time indicated in tender notification.

24.2 The Employer may, at its discretion, extend this deadline for submission of bids by amending the Bidding Documents for the reasons specified therein at any time prior to opening of, in which case all rights and obligations of Employer and bidders will thereafter be subject to the deadline as extended.

25.0 LATE BIDS

25.1 Soft part of the bid will not be uploaded on the portal after expiry of submission time and the bidder shall not be permitted to submit the same by any other mode. In such case, even if the bidder has submitted the specific documents in hard copy in original (viz., bid security, tender cost) within the stipulated deadline, its bid shall be considered as late bid. The hard copy submitted [specific documents (viz., bid security, tender cost.)] shall be returned unopened to the bidder.

Hard copy of the bid security of the bid received by the Employer after the deadline for submission of bid prescribed by the Employer pursuant to ITB Clause 26.0 will be considered as late bid even if the bidder has uploaded the soft part of the bid within the stipulated deadline. In such a case, the soft part of the bid uploaded on the portal shall be sent unopened to ‘Archive’ and shall not be considered at all any further

26.0 MODIFICATION AND WITHDRAWAL OF BIDS:-

26.1 Bidder may modify or withdraw its bids through the relevant provisions on the portal www.tenderwizard.com/OPTCL up to due date and time of submission of bid indicated in tender notification.

26.2 The Bidder’s modifications shall be done and submitted as follows:
(i) Modified Electronic form of the bid as per the provision of portal therein.
(ii) Soft copy of the entire bid if any modification is there.

26.3 Bidder may withdraw its bid through the relevant provisions of portal only.

26.4 No bid shall be modified/ withdrawn subsequent to the dead line for submission of bids. Withdrawal/modification of bid before the expiry of bid validity shall result forfeiture of Bidder’s bid security, pursuant to ITB Sub-Clause 19.7.

27.0 INFORMATION REQUIRED WITH THE PROPOSAL

27.1 The Bidder, along with his proposal, shall submit a list of recommended erection equipment, tools which will be required for the purpose of erection of equipment and materials supplied under the contract.

27.2 In case the 'Proposal' information contradicts specification requirements, the specification requirements will govern, unless otherwise brought out clearly in the Technical/Commercial Deviations Schedule.

D. BID OPENING AND EVALUATION

28.0 OPENING OF BIDS BY OWNER

The owner will open bids in the presence of Bidders' representatives who choose to attend at the date and time for opening of bids or in case any extension has been given thereto, on the extended bid opening date and time notified to all the Bidders who have participated in on line bidding.

29.0 CLARIFICATION OF BIDS

29.1 To assist in the examination, evaluation and comparison of bids of owner may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.

30.0 PRELIMINARY EXAMINATION

30.1 The owner will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

30.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the Bidder does not accept the correction of the errors as above, his Bid will be rejected and the amount of Bid guarantee forfeited.

The Bidder should ensure that the prices furnished in various Price bid Part-II, are consistent with each other. In case of any inconsistency in the prices furnished in the specified price schedules to be identified in Bid Form for this purpose, the owner shall be entitled to consider the highest price for the purpose of evaluation and for the purpose of award of the contract use the lowest of the prices in these schedules.

30.3 Prior to the detailed evaluation, the owner will determine the substantial responsiveness of each bid to the Bidding Document. For purpose of this clause, a substantially responsive bid is one which conforms to all the terms and conditions of the Bidding Document without material deviations. A material deviation is one which affects in any way the prices, quality, quantity or delivery period of the equipment or which limits in any way the responsibilities or liabilities of the Bidder of any right of the owner as required in these specifications and documents. The owner's determination of a bid's responsiveness shall be based on the contents of the bid itself without recourse to extrinsic evidence.

30.4A bid determined is not substantially responsive will be rejected by the owner and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

30.5 The owner may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.

31.0 DEFINITIONS AND MEANINGS

31.1 For the purpose of evaluation and comparison of bids, the following meanings and definitions will apply:-

a) 'Bid Price' shall mean the base price quoted by each Bidder in his proposal for the complete scope of works.

- b) 'Differential Price' shall mean the summation of the equalizing elements of price for parameter differential or deficiencies in the equipment and services determined from the Bidder's Proposal.
- c) 'Cost Compensation for Deviations' shall mean the Rupee value of deviations from the Bidding Documents as determined from the Bidder's Proposal.
- d) 'Evaluated Bid Price' shall be the summation of 'Bid Price', 'Differential Price' and 'Cost Compensation for deviations'.

31.2 Calculation of Differential Price and Cost Compensation for Deviations.

31.3 The Differential Price to be added to the Bid Price of each bid during evaluation and comparison shall be derived as under:

Differential Price (DP) = $n_1F_1 + n_2F_2 + \dots + n_nF_n$ where F_1, F_2, \dots, F_n are the various factors in Indian Rupees per unit of parameter differential or deficiency in the equipment and services offered as stipulated in these specifications; n_1, n_2, \dots, n_n are the respective parameter differential or deficiency in the corresponding units to be determined from the Bidder's Proposal. The above factors and corresponding units of parameter differential are brought out in the technical Specifications and/or Special Conditions of Contract.

31.4 Deviations from the Bidding Documents in so far as practicable, will be converted to Rupee value (D) and added to the bid price to compensate for the deviation from the Bidding Document while evaluating the bids. In determining the Rupee value of the deviations the owner will use parameters consistent with those specified in the specifications and documents and/or other information as necessary and available to the owner.

32.0 CONTACTING THE OWNER

Bids shall be deemed to be under consideration immediately after they are opened and until such time official intimation of award/rejection is made by the owner to the Bidders. While the bids are under consideration, Bidders and/or their representatives or other interested parties are advised to refrain from contacting by any means, the owner and/or his employees/representatives on matters related to the bids under consideration. The owner, if necessary, will obtain clarifications on the bids by requesting for such information from any or all the Bidders, either in writing or through personal contacts as may be necessary. Bidders will not be permitted to change the substance of the bids after the bids have been opened.

33.0 AWARD CRITERIA

The owner will award the RATE CONTRACT ORDER to the successful bidders under the following condition.

- (i) The Bidder, whose bid has been determined to be substantially responsive.
- (ii) The Bidder, who has agreed to the lowest price arrived after price bid evaluation against the tender
- (ii) The Bidder, who is determined to be qualified to perform the contract satisfactorily.

The owner shall be the sole judge in this regard.

34.0 OWNER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The owner reserves the right to accept or reject any bid, and to annual the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the owner's action.

35.0 NOTIFICATION OF AWARD

35.1 Prior to the expiration of the period of bid validity and extended validity period, if any, the owner will notify the successful Bidder in writing by registered letter /e-mail / fax, to be confirmed in writing by registered letter, that its bid has been accepted.

35.2 The notification of award/Rate contract order and subsequent acceptance furnished by the bidder will constitute the formation of the Contract.

35.3 Upon the successful Bidder's furnishing of contract performance guarantee pursuant to clause 37 the owner will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to clause 19.5

36.0 SIGNING OF CONTRACT

36.1 Within 15 days of issue of Rate Contract Order, the successful Bidder shall sign and date the same and return it to the owner as a token of acceptance of the Order.

36.2 The notification of award/Rate contract order and subsequent acceptance furnished by the bidder will constitute the formation of the Contract.

37.0 CONTRACT PERFORMANCE GUARANTEE

37.1 As a Contract Performance Security, the successful Bidder, who has furnished acceptance to the rate contract order, shall be required to furnish a Performance Guarantee from (a) a Public Sector Bank or b) a Scheduled Indian Bank having paid up capital (net of any accumulated losses) or Rs.100 crores or above (the latest annual report of the Bank should support compliance of capital adequacy ratio requirement) or (c) any foreign Bank or subsidiary of a foreign Bank with overall international corporate rating or rating of long term debt not less than A-(A minus) or equivalent by reputed rating agency, in the form attached as Annexure-II to this Vol.I in favour of the owner.

The CONTRACT PERFORMANCE GUARANTEE amount shall be equal to the Bid Security amount notified in Notice Inviting Tender and it shall guarantee the faithful performance of the Rate Contract in accordance with the terms and conditions specified in these documents and specifications. The guarantee shall be valid up to 90 days after the end of duration of contract.

37.2 As a Work Performance Security, the successful Bidder, to whom the work is awarded, shall be required to furnish a Performance Guarantee to the owner amounting to Five percent (5%) of the work order value. The Work Performance Security **shall be valid up to 90 days after the end of Guarantee Period.**

a) The successful Bidder guarantees the successful and satisfactory operation of the equipment/materials furnished and erected under the contract, as per the specifications and documents including the erection work.

b) The successful Bidder further guarantees that the equipment/materials provided/ and erection work done and installed by him shall be free from all defects in design, material and workmanship and shall upon written notice from the owner fully remedy free of expenses to the owner such defects as developed under the normal use of the said equipment within the period of guarantee specified in the relevant clause of the General Terms and Conditions in this Vol.I.

37.3 The Contract Performance Guarantee is intended to secure the performance during the entire Rate Contract Period.

37.4 The Contract Performance Guarantee will be returned to the Contractor without any interest after its validity period subject fulfillment of conditions stipulated in the Tender Specification.

37.5 The Work Performance Security shall be released after its validity period subject successful performance within the guarantee period stipulated in the Tender Specification.

38.0 : A Pre-bid meeting shall be held on 05.8.2015 at CPC conference, OPTCL, Bhubaneswar hall at 11AM. All the interested bidders are requested to attend the meeting and put forth their queries relating to the technical specification and terms and condition if any.

END OF SECTION – INB

SECTION – GCC

GENERAL TERMS AND CONDITIONS OF CONTRACT

GENERAL TERMS & CONDITIONS OF CONTRACT

CONTENTS

Sl. No.	Description
A.	Introduction
1.0	Definition of Terms
2.0	Application
3.0	Standards
4.0	Language and Measures
5.0	Contract Documents
6.0	Use of Contract Documents and Information
7.0	Construction of the Contract
8.0	Jurisdiction of Contract
9.0	Manner of Execution of Contract
10.0	Enforcement of Terms
B.	Contract Security and Payments
11.0	Contract Performance Guarantee
12.0	Payment
13.0	Guarantee
14.0	Penalty
C.	Resolution of Disputes
15.0	Settlement of Disputes
16.0	Arbitration
17.0	Reconciliation of Accounts

SECTION – GCC
GENERAL TERMS & CONDITIONS OF CONTRACT

A. INTRODUCTION

1.0 DEFINITION OF TERMS

1.1 The ‘Contract’ means the agreement entered into between the owner and the Contractor as per the Contract Agreement signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

1.2 ‘Owner’ shall mean the ODISHA POWER TRANSMISSION CORPORATION Ltd Bhubaneswar and shall include its legal representatives, successors and assigns.

1.3 ‘Contractor’ or ‘Manufacturer’ shall mean the Bidder whose bid will be accepted by the owner for the award of the works and shall include such successful Bidder’s legal representatives, successors and permitted assigns.

1.4 ‘Sub-Contractor’ shall mean the person named in the Contract for any part of the works or any person to whom any part of the contract has been sublet by the Contractor with the consent in writing of the Engineer and will include the legal representatives, successors and permitted assigns of such person

1.5 Engineer’ shall mean the officer appointed in writing by the owner to act as Engineer from time to time for the purpose of the Contract .

1.6 ‘Consulting Engineer’/’Consultant’ shall mean any firm or person duly appointed as such from time to time by the owner.

1.7 The terms ‘Equipment’, ‘Stores’ and ‘Materials’ shall mean and include equipment, stores and materials to be provided by the Contractor under the Contract.

1.8 ‘Works’ shall mean and include the furnishing of equipment, labour and services, as per the Specifications and complete erection, testing and putting into satisfactory operation including all transportation, handling, unloading and storage at the Site as defined in the contract.

1.9 ‘Specifications’ shall mean the Specifications and Bidding Document forming a part of the Contract and such other schedules and drawings as may be mutually agreed upon.

1.10 ‘Site’ shall mean and include the land and other places on, into or through which the works and the related facilities are to be erected or installed and any adjacent land, paths, street or reservoir which may be allocated or used by the owner or contractor in the performance of the contract.

1.11 The term ‘Contract Price’ shall mean the lump sum price quoted by the contractor in his bid with additions and/or deletions as may be agreed and incorporated in the Letter of Award, for the entire scope of works.

1.12 The term ‘Equipment Portion’ of the contract price shall mean the ex-works value of the equipment.

1.13 The term ‘Erection Portion’ of the contract price shall mean the value of field activities of the works including erection, testing and putting into satisfactory operation including successful completion

of performance and guarantee tests to be performed at Site by the Contractor including cost of insurances.

1.14 'Manufacturer's Works' or 'Contractor's Works', shall mean the place of work used by the manufacturer, the Contractor, their collaborators/associates or Sub-Contractors for the performance of the Contract.

1.15 'Inspector' shall mean the owner or any person nominated by the owner from time to time, to inspect the equipment; stores or works under the contract and/or the duly authorized representative of the owner.

1.16 'Notice of Award of Contract'/'Letter of Award'/'Telex of Award' shall mean the official notice issued by the owner notifying the contractor that his bid has been accepted.

1.17 'Date of Contract' shall mean the date on which Notice of Award of Contract/Letter of Award has been issued.

1.18 'Month' shall mean the calendar month. 'Day' or 'Days' unless herein otherwise expressly defined shall mean calendar day or days of 24 hours each.

A 'Week' shall mean continuous period of seven(7) days.

1.19 'Writing' shall include any manuscript, type written or printed statement, under or over signature and/or seal as the case may be.

1.20 When the words 'Approved', 'Subject to Approval', 'Satisfactory', 'Equal to', 'Proper', 'Requested', 'As Directed', 'Where Directed', 'When Directed', 'Determined by', 'Accepted', 'Permitted', or words and phrases of like importance are used the approval, judgement, direction etc. is understood to be a function of the Owner/Engineer.

1.21 test on completion shall mean such tests as prescribed in the Contract to be performed by the Contractor before the work is taken over by the owner.

1.22 'Start up' shall mean that time period required to bring the equipment covered under the Contract from an inactive condition, when construction is essentially complete, to the state ready for trial operation. The start up period shall include preliminary inspection and check out of equipment and supporting sub-system, initial operation of the complete equipment covered under the Contract to obtain necessary pre-trial operation data, perform calibration and corrective action, shut down, inspection and adjustment prior to the trial operation period.

1.23 'Initial Operation' shall mean the first integral operation of the complete equipment covered under the Contract with the sub-system and supporting equipment in service or available for service.

1.24 'Trial Operation', 'Reliability Test', 'Trial Run', 'Completion Test', shall mean the extended period of time after the startup period. During this trial operation period the unit shall be operated over the full load range. The length of trial operation shall be as determined by the Engineer, unless otherwise specified elsewhere in the Contract.

1.25 'Performance and Guarantee Tests' shall mean all operational checks and tests required to determine and demonstrate capacity, efficiency, and operating characteristics as specified in the Contract Documents.

1.26 The term 'Final Acceptance'/'Taking Over' shall mean the Owner's written acceptance of the works performed under the contract, after successful commissioning/completion of performance and guarantee tests, as specified in the accompanying Technical Specifications or otherwise agreed in the contract.

1.27 'Commercial Operation' shall mean the condition of operation in which the complete equipment covered under the Contract is officially declared by the owner to be available for continuous operation at different loads upto and including rated capacity. Such declaration by the owner, however, shall not relieve or prejudice the Contractor of any of his obligations under the Contract.

1.28 'Guarantee Period'/'Maintenance Period' shall mean the period during which the Contractor shall remain liable for repair or replacement of any defective part of the works performed under the Contract.

1.29 'Latent Defects' shall mean such defects caused by faulty designs, materials or workmanship which cannot be detected during inspection, testing etc. based on the technology available for carrying out such tests.

1.30 'Drawing', 'Plans' shall mean all:

- a) Drawings furnished by the owner/consultant as a basis of Bid/Proposals.
- b) Supplementary drawings furnished by the owner/consultant to clarify and to define in greater detail the intent of the contract.
- c) Drawings submitted by the contractor with his bid provided such drawings are acceptable to the owner/consultant.
- d) Drawings furnished by the owner/consultant to the contractor during the progress of the work; and
- e) Engineering data and drawings submitted by the contractor during the progress of the work provided such drawings are acceptable to the Engineer/Owner.

1.31 'Codes' shall mean the following including the latest amendments and/or replacements, if any:

- a) Indian Electricity Act, 1905 and Rules and Regulations made there under.
- b) Indian Factory Act, 1948 and Rules and Regulations made there under.
- c) Indian Explosives Act, 1884 and Rules and Regulations made there under.
- d) Indian Petroleum Act, 1934 and Rules and Regulations made there under.
- e) ASME Test Codes.
- f) AIEE Test Codes
- g) American Society of Materials Testing Codes.
- h) Standards of the Indian Standards Institution.

i) Other Internationally approved standards and/or rules and regulations touching the subject matter of the contract.

1.32 Words imparting the singular only shall also include the plural and vice-versa where the context so requires.

1.33 Words imparting 'Person' shall include firms, companies, corporations and associations or bodies of individuals, whether incorporated or not.

1.34 Terms and expressions not herein defined shall have the same meaning as are assigned to them in the Indian Sale of Goods Act (1930), failing that in the Indian Contract Act (1872) and failing that in the General Clauses Act (1897) including amendments thereof, if any.

The various Acts and Regulations are normally available for sale from the following addresses:

- i) Deputy Controller, Publication Department, Government of India, Civil Lines, DELHI-110 006.
- ii) Deptt. of Publication, Government of India, Kitab Mahal, Unit No.21, Emporia Building, Baba Khark Singh Marg, NEW DELHI-110 001.

OR With leading authorized Government of India Book – Sellers.

1.35 In addition to the above the following definitions shall also apply.

- a) 'All equipment and materials' to be supplied shall also mean 'Goods'.
- b) 'Constructed' shall also mean 'erected and installed'.
- c) 'Contract Performance Guarantee' shall also mean 'Contract Performance Security'.

2.0 APPLICATION

These General Conditions shall apply to the extent that they are not superceded by provisions in other parts of the Contract.

3.0 STANDARDS

The goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the goods and such standards shall be the latest issued by the concerned institution.

4.0 LANGUAGE AND MEASURES

All documents pertaining to the contract including specifications, schedules, notices, correspondences, operating and maintenance instructions, drawings or any other writing shall be written in English language. The Metric System of measurement shall be used exclusively in the contract.

5.0 CONTRACT DOCUMENTS

5.1 The term Contract Documents shall mean and include the following which shall be deemed to form an integral part of the Contract:

- a) Invitation to Bid including letter forwarding the Bidding Documents, Instructions to Bidders, General Terms and Conditions of Contract and all other documents included under Vol.I.
- b) Specifications of the equipment to be furnished and erected under the contract as brought out in the accompanying Technical Specifications.
- c) Contractor's Bid Proposal and the documents attached there to including the letters of clarifications thereto between the Contractor and the Owner/Consultant prior to the Award of Contract except to the extent of repugnance.
- d) All the materials, literature, data and information of any sort given by the Contractor along with his bid, subject to the approval of the owner/consultant.
- e) Letter of Award and any agreed variations of the conditions of the documents and special terms and conditions of contract, if any.

5.2 In the event of any conflict between the above-mentioned documents the matter shall be referred to the Engineer whose decision shall be considered as final and binding upon the parties.

6.0 USE OF CONTRACT DOCUMENTS AND INFORMATION

6.1 The contractor shall not, without the owner's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the owner in connection therewith, to any person other than a person employed by the contractor in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for the purpose of such performance.

6.2 The contractor shall not, without the owner's prior written consent, make use of any document or information enumerated in various contract documents except for the purpose of performing the contract.

6.3 The contractor shall not communicate or use in advertising, publicity, sales releases or in any other medium, photographs or other reproduction of the works under this contract, or descriptions of the site, dimensions, quantity, quality or other information, concerning the works unless prior written permission has been obtained from the owner.

6.4 Any document, other than the contract itself, enumerated in various contract documents shall remain the property of the owner and shall be returned (in all copies) to the owner on completion of the contractor's performance under the contract if so required by the owner.

7.0 CONSTRUCTION OF THE CONTRACT

7.1 Notwithstanding anything stated elsewhere in the bid documents, the contract to be entered into will be treated as the contract based on rate contract order.

7.2 In case of divisible supply and erection contract, or where the owner hands over his equipment to the contractor for executing, then the contractor shall at the time of taking delivery of the equipment/dispatch documents be required to execute an Indemnity Bond in favour of the owner in the form acceptable to OPTCL for keeping the equipment in safe custody and to utilize the same exclusively for the purpose of the said contract. Samples of proforma for the Indemnity Bond are enclosed as Annexure-VII & VIII to this Vol.I.

7.3 The contract shall in all respects be construed and governed according to Indian Laws.

7.4 It is clearly understood that the total consideration for the contract(s) has been broken up into various components only for the convenience of payment of advance under the contract(s) and for the measurement of deviations or modifications under the contract(s).

8.0 JURISDICTION OF CONTRACT

8.1 The laws applicable to the contract shall be the laws in force in Odisha. The courts of Cuttack/Bhubaneswar shall have exclusive jurisdiction in all matters arising under this contract.

9.0 MANNER OF EXECUTION OF CONTRACT

9.1 The owner, after the issue of the Letter of Award to the Contractor, will send one copy of the final agreement to the Contractor for his scrutiny and approval.

9.2 The Agreement, unless otherwise agreed to, shall be signed within 60 days of the acceptance of the Letter of Award, at the office of the owner at Bhubaneswar, on a date and time to be mutually agreed. The contractor shall provide for signing of the contract, performance guarantee in six copies, appropriate power of attorney and other requisite materials. In case the contract is to be signed beyond the stipulated time, the bid guarantee submitted with the proposal will have to be extended accordingly.

9.3 The Agreement will be signed in six originals and the contractor shall be provided with one signed original and the rest will be retained by the owner.

9.4 The contractor shall provide free of cost to the owner all the Engineering data, drawings, and descriptive materials submitted with the bid, in at least six(6) copies to form a part of the contract immediately after issue of Letter of Award.

9.5 Subsequent to signing of the contract, the contractor at his own cost shall provide the owner with at least thirty) 30 true copies of agreement within thirty(30) days after the signing of the contract.

10.0 ENFORCEMENT OF TERMS

The failure of either party to enforce at any time any of the provisions of this contract or any rights in respect thereto or to exercise any option therein provided, shall in no way be construed to be a waiver of such provisions, rights or options or in any way to affect the validity of the contract. The exercise by either party of any of its rights herein shall not preclude or prejudice either party from exercising the same or any other right it may have under the contract.

B. CONTRACTOR SECURITY AND PAYMENTS

11.0 CONTRACT PERFORMANCE GUARANTEE

The contractor shall furnish Contract Performance Guarantee(s) for the proper fulfillment of the contract in the prescribed form within thirty (30) days of "Notice of Award of Contract". The performance guarantee(s) shall be as per terms prescribed in Section INB, Conditions of Contract Vol..

12.0 PAYMENT

12.1 The payment to the contractor for the performance of the works under the contract will be made by the owner as per the guidelines and conditions specified herein. All payments made during the contract shall be on account payments only. The final payment will be made on completion of all works and on fulfillment by the contractor of all his liabilities under the contract.

12.2 TERMS OF PAYMENT:-The contractor shall present at the end of each month a bill for the work completed and inspected with due certification by the OPTCL Engineer in Charge.

(i) 90% of the value of work done shall be paid within a period of one month on presentation of the bills subject to submission and approval of works performance Guarantee amounting to 5% of the work order value.

(ii) Balance 10% shall be paid against a bank guarantee for similar amount on satisfactory completion of work , valid for 20(Twenty) months over and beyond the date of handing over of the completed work.

(iii) Amount towards taxes to be deducted as per statutory requirement shall be done on the gross amount payable.

12.3 Currency of Payment-

All payments under the contract shall be in Indian Rupees only.

13.0 GUARANTEE -The work done by the contractor as per the contract specification should be guaranteed for satisfactory operation and against any defect in materials and workmanship for a period 18 (Eighteen) month from the date of taking over of the line / substation by OPTCL or 12(Twelve) months from the date on which the transmission line/substation has been put to service whichever is earlier. Any defect noticed during this period should be rectified/ replaced by you free of cost to OPTCL on written notice provided such defects are due to bad workmanship or bad materials used. The above Guarantee certificate shall be furnished in triplicate for approval by OPTCL authority.

14.0 PENALTY: - If the contractor fails to complete the works under the Scope of work order within the phased completion schedule specified in the work order or any extension granted thereof, the

OPTCL shall recover from the contractor as penalty a sum of one-half of one percent (0.5%) of the contract price of the uncompleted portion of work for each calendar week of delay. For this purpose, the date of taking over shall be reckoned as the date of completion. The total penalty shall not exceed 5% (five percent) of the contract price of the uncompleted portion of work.

E. RESOLUTION OF DISPUTES

15.0 SETTLEMENT OF DISPUTES

15.1 Any dispute(s) or difference(s) arising out of or in connection with the contract shall, to the extent possible, be settled amicably between the parties.

15.2 If any dispute or difference of any kind, whatsoever, shall arise between the owner and the contractor arising out of the contract for the performance of the works whether during the progress of the works or after its completion or whether before or after the termination, abandonment or breach of the contract, it shall, in the first place, be referred to and settled by the Engineer, who, within a period of thirty(30) days after being requested by either party to do so, shall give written notice of his decision to the owner and the contractor.

15.3 Save as hereinafter provided, such decision in respect of every matters so referred shall be final and binding upon the parties until the completion of the works and shall forthwith be given effect to by the contractor who shall proceed with the works with all due diligence, whether he or the owner requires arbitration as hereinafter provided or not.

15.4 If after the Engineer has given written notice of his decision to the parties, no claim to arbitration has been communicated to him by either party within thirty(30) days from the receipt of such notice, the said decision shall become final and binding on the parties.

15.5 In the event of the Engineer failing to notify his decision as aforesaid within thirty(30) days after being requested as aforesaid, or in the event of either the owner or the contractor being dissatisfied with any such decision, or within thirty(30) days after the expiry of the first mentioned period of thirty days, as the case may be, either party may require that the matters in dispute be referred to arbitration as hereinafter provided.

16.0 ARBITRATION

16.1 All disputes or differences in respect of which the decision, if any, of the Engineer has not become final or binding as aforesaid shall be settled by arbitration in the manner hereinafter provided.

16.2 The arbitration shall be conducted by three arbitrators, one each to be nominated by the contractor and the owner and the third to be appointed as an umpire by both the arbitrators in accordance with the Indian Arbitration Act. If either of the parties fails to appoint its arbitrator within sixty (60) days after receipt of a notice from the other party invoking the Arbitration clause, the arbitrator appointed by the party invoking the arbitration clause shall become the sole arbitrator to conduct the arbitration.

16.3 The arbitration shall be conducted in accordance with the provisions of the Indian Arbitration Act, 1940 or any statutory modification thereof. The venue of arbitration shall be Bhubaneswar of Odisha state.

16.4 The decision of the majority of the arbitrators shall be final and binding upon the parties. The arbitrators may, from time to time with the consent of all the parties enlarge the time for making the award. In the event of any of the aforesaid arbitrators dying, neglecting, resigning or being unable to act for any reason, it will be lawful for the party concerned to nominate another arbitrator in place of the outgoing arbitrator.

16.5 The arbitrator shall have full powers to review and/or revise any decision, opinion, direction, certification or valuation of the Engineer in accordance with the contract, and neither party shall be limited in the proceedings before such arbitrators to the evidence or arguments put before the Engineer for the purpose of obtaining the said decision.

16.6 No decision given by the Engineer in accordance with the foregoing provisions shall disqualify him as being called as a witness or giving evidence before the arbitrators on any matter whatsoever relevant to the dispute or difference referred to the arbitrators as aforesaid.

16.7 During settlement of disputes and arbitration proceedings, both parties shall be obliged to carry out their respective obligations under the contract.

17.0 RECONCILIATION OF ACCOUNTS

The contractor shall prepare and submit every six months, a statement covering payments claimed and the payments received vis-à-vis the works executed, for reconciliation of accounts with the owner. The contractor shall also prepare and submit a detailed account of Owner Issue materials received and utilized by him for reconciliation purpose in a format to be discussed and finalized with the owner before the award of contract.

All other disputes shall come under HIGH COURT OF ODISHA.

END OF SECTION – GCC

**ANNEXURE – I
DECLARATION FORM**

e-TENDER NOTICE NO. CPC-19 / 2015-16
&TENDER SPECIFICATION NO. Sr. GM-CPC- Tender-OPGW Works-**Rate contract**-19/2015-16

To

Sir,

- 1) Having examined the above specification together with tender conditions referred to therein, I/We undersigned hereby offer to execute the work contract covered there in complete in all respect as per the specification and general conditions, at the rates entered in the Price bid proposal sheet in the tender. Our offer is valid up to 180 days from the date of tender opening and the prices which are on firm basis will remain valid for two years from the date of opening of tender.
- 2) I/We hereby undertake to have the works completed within the time specified in the tender.
- 3) Certify that, I/we have remitted tender cost, tender processing fee and bid security as specified in the tender.
- 4) In the event of work order being decided in my/our favour, I/We agree to furnish the Bank Guarantee in the manner acceptable to OPTCL and for the sum as applicable to me/us as provided in the general conditions of contract (Section-II) of this specification within 30 days of issue of work order, failing which I/We clearly understand that the said work order will be liable to be withdrawn by OPTCL.

Signed this day of2015.

Yours faithfully,

Signature with designation &
Seal of Tenderer.

(This form should be duly filled and scanned copy should be uploaded in tender portal)

ANNEXURE –II

PERSONNEL CAPABILITIES

Name of Applicant:

Details of persons available with necessary qualifications and experience in OPGW Stringing & Maintenance works in EHV Transmission lines, both managerial supervisory & workmen with necessary license/workman permit issued by the Electrical Licensing Board, Odisha shall be furnished in the following formats.

A) PERSONNEL IN MANAGERIAL POSITION:

Sl. No.	Name of person with designation	Educational/ Tech. Qualification	Year of experience	Details of License from ELB (O)

B) PERSONNEL IN SUPERVISORY POSITION:

Sl. No.	Name of person with designation	Educational/ Tech. Qualification	Year of experience	Details of License from ELB(O)

C) PERSONNEL IN WORKMEN CATEGORY:

Sl. No.	Name of person with designation	Educational/ Tech. Qualification	Year of experience	Details of License from ELB(O)

ANNEXURE –III

EQUIPMENT CAPABILITIES

The bidder shall provide as the capability to meet the requirements for each and all items of equipment in their possession, for manufacturing, erection and testing in the following format:

(A) Erection

Sl. No.	Description of equipment	Model/ Power rating	Capacity	Year of manufacture

(B) Testing:

Sl. No.	Description of equipment	Model/ Power rating	Capacity	Year of manufacture

ANNEXURE –IV

FINANCIAL CAPABILITY

Name of the bidder: _____.

(A) ANNUAL TURNOVER:

ANNUAL TURNOVER DATA:

YEAR	TURNOVER	INDIAN RUPEES
2014-15		
2013-14		
2012-13		
2011-12		

* The bidder has to scan and upload the audited account certificate from the Chartered Accountant.

(B) The bidder shall also furnish the following information:

1	Name of the Banker	
2	Address of the Banker	
3	Telephone	
4	Contact Name and Title	

(C) Financial Information:

Sl No	Details	2013-14 (IN INR)	2012-13 (IN INR)	2011-12 (IN INR)
1	Total assets			
2	Current assets			
3	Total liabilities			
4	Current liabilities			
5	Profit before taxes			

(D) Proposed sources of financing:

Sl No	Source of Funding	Amount in INR

(The bidder is requested to complete the information in this Annexure. The information supplied should be the annual turnover duly audited by the Chartered Accountant for preceding three years for work in progress or completed).

ANNEXURE –V

LITIGATION HISTORY

Bidder should provide information on any history of litigation or arbitration resulting from contracts executed in the last five years or currently under execution.

Year.	Award for or against bidder	Name of client, cause of litigation and matter in dispute	Disputed amount (Current value in INR.)

ANNEXURE- VI

PROFORMA FOR BANK GUARANTEE FORM FOR EARNEST MONEY DEPOSIT

Ref _____ Date _____ Bank Guarantee No: _____

To

Sr. General Manager , Central Procurement Cell,
Odisha Power Transmission Corporation Limited.

1) In accordance with invitation to Bid No. _____ Dated _____ of ODISHA POWER TRANSMISSION CORPORATION LTD. [OPTCL][herein after referred to as the OPTCL for the Execution of _____

Messers _____

Address _____

_____ wish/wished to participate in the said tender and as a Bank Guarantee for the sum of Rs. _____ [Rupees _____]

Valid for a period of 240 days [Two hundred forty days] is required to be submitted by the Tenderer. We the _____

[Indicate the Name of the Bank]

[Hereinafter referred to as 'the Bank'] at the request of M/S _____

[Herein after referred to as Contractor (s)] do hereby unequivocally and unconditionally guarantee and undertake to pay during the above said period, on written request by the Sr. General Manager [Procurement] ODISHA POWER TRANSMISSION CORPORATION LTD. _____

[Indicate designation of the _____ purchaser]

an amount not exceeding Rs. _____ to the OPTCL, without any reservation. The guarantee would remain valid up to 4.00 PM of _____

[date] and if any further extension to this is required, the same will be extended on receiving instructions from the _____ on whose

behalf this guarantee has been issued.

2). We the _____ do hereby, further undertake

[Indicate the name of the bank]

to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the OPTCL stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the OPTCL by reason of any breach by the said supplier [s] of any of the terms or conditions or failure to perform the said Bid . Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____

3). We undertake to pay the OPTCL any money so demanded notwithstanding any dispute or disputes so raised by the contractor [s] in any suit or proceeding instituted/pending before any Court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the supplier(s) shall have no claim against us for making such payment.

4). We, the _____ further agree that the guarantee

[Indicate the Name of the Bank]

herein contained shall remain in full force and effect during the aforesaid period of 240 days [two hundred forty days] and it shall continue to be so enforceable till all the dues of the OPTCL under or by virtue of the said Bid have been fully paid and its claims satisfied or discharged or till Managing Director, ODISHA POWER TRANSMISSION CORPORATION LTD. certifies that the terms and

conditions of the said Bid have been fully and properly carried out by the said Supplier [s] and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the _____ we shall be discharged from all liability under this guarantee thereafter.

5). We, the _____ further agree with the OPTCL that
[Indicate the name of the Bank]
the OPTCL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Bid or to extend time of performance by the said Contractor[s] from time to time or to postpone for any time or from time to time any of the powers exercisable by the OPTCL against the said supplier [s] and to forbear or enforce any of the terms and conditions relating to the said bid and we shall not be relieved from our liability by reason of any such variation, postponement or extension being granted to the said Contractors[s] or for any forbearance act or omission on the part of the OPTCL or any indulgence by the OPTCL to the said Contractors[s] or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6). This guarantee will not be discharged due to the change in the name, style and constitution of the Bank or the supplier [s].

7). We, _____ lastly undertake not to revoke this
[Indicate the name of the Bank] Guarantee during its currency except with the previous consent of the OPTCL in writing.

8). We the _____ Bank further agree that this guarantee shall also be invocable at our place of business at Bhubaneswar in the state of Odisha.

‘Notwithstanding anything contained herein above’

a) Our liability under the bank guarantee shall not exceed Rs. _____ (In words Rupees _____).

b) This bank Guarantee shall be valid up to _____.

c) We are liable to pay guaranteed amount or any part thereof under this bank guarantee only if you serve upon us at _____ branch of Bhubaneswar in the state of Odisha a written claim or demand on or before _____ (date of expiry of guarantee).

Date at _____ the, _____ day of _____

For _____
[Indicate the name of Bank]

Dated _____ Day of _____

Witness (Signature, names & address)

- 1.
- 2.

ANNEXURE-VII

PROFORMA FOR COMPOSITE BANK GUARANTEE FOR SECURITY DEPOSIT PAYMENT AND PERFORMANCE

This Guarantee Bond is executed this _____ day of _____
20__ by us the _____ Bank at _____
P.O. _____ P.S. _____
District _____ State _____

(1) WHEREAS the ODISHAPOWER TRANSMISSION CORPORATION LTD., a body corporate constituted under the Electricity Act, 2003 [hereinafter called “the OPTCL” which shall include its successors and assigns has placed Work orders No. _____ Date _____ [hereinafter called “The Agreement”] on M/s. _____ [hereinafter called “The Contractor”] which shall include its successors & assigns for execution of works.

AND WHERE AS the contractor has agreed to execute the work of OPTCL in terms of the said agreement AND

WHEREAS the OPTCL has agreed [1] to exempt the contractor from making payment of Security [2] to release 100% payment of the cost of execution of the work as per the said agreement and [3] to exempt from performance guarantee on furnishing by the Contractor to the OPTCL, a Composite bank Guarantee of the value of 10 % [ten percent] of the contract price of the said agreement.

NOW THEREFORE, in consideration of the OPTCL having agreed [1] to exempt the Supplier from making payment of Security [2] releasing 100% payment to the Supplier and [3] to exempt from furnishing performance guarantee in terms of the said agreement as aforesaid, we, the _____ [Bank][hereinafter referred to as ‘the Bank’] do hereby undertake to pay to the OPTCL an amount not exceeding Rs. _____ [Rupees _____] against any loss or damage caused to or suffered by or would be caused to or suffered by the OPTCL by reason of any breach by the said Contractor [s] of any of the terms or conditions contained, in the said agreement.

(2) We the (_____ Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on demand from the OPTCL stating that the amount claimed is due by way of loss or damage caused to or suffered by the OPTCL by reason of any breach by the said Contractor [s] of any of the terms or conditions, contained in the said agreement or by reason of the Contractor’s failure to perform the said agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ [Rupees _____]

(3) We the _____ Bank } also undertake to pay to the OPTCL any money so demanded notwithstanding any dispute or disputes raised by the Contractor [s] in any suit or proceeding instituted/pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor [s] shall have no claim against us for making such payment.

(4) We, (_____ Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to do so enforceable till all the dues of the OPTCL under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Chairman Cum Managing Director, ODISHA POWER TRANSMISSION CORPORATION LTD.

certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor [s] and accordingly discharges this Guarantee.

Unless a demand or claim under this guarantee is made on us in writing on or before the [Date _____], we shall be discharged from all liability under this guarantee thereafter.

(5) We, (_____ Bank) further agree that the OPTCL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor [s] and we shall not be relieved from our liability by reason of any such variations or extension being granted to the said Contractor [s] or for any forbearance, act or omission on the part of the OPTCL or any indulgence by the OPTCL to the said Contractor [s] or by any such matter or thing whatsoever which under the law relating to sureties would but these provisions have effect of so relieving us.

(6) This guarantee will not be discharged due to the change in the name, style and constitution of the Bank and Contractor [s].

(7) We, [_____ Bank] lastly undertake not to revoke this guarantee during its currency except with the previous consent of the OPTCL in writing.

Date at _____ the, _____ day of _____ Two thousand _____

For _____

[Indicate the name of the bank]

(8) We the _____ Bank further agree that this guarantee shall also be invokable at our place of business at _____ Branch of Bhubaneswar in the state of Odisha.

‘Notwithstanding anything contained herein above’

a) Our liability under the bank guarantee shall not exceed Rs. _____ (In words Rupees _____).

b) This bank Guarantee shall be valid up to _____.

c) We are liable to pay guaranteed amount or any part thereof under this bank guarantee only if you serve upon us at _____ branch of Bhubaneswar in the state of Odisha a written claim or demand on or before _____ (date of expiry of guarantee).

Date at _____ the, _____ day of _____

Witness (Name, Signature & Address)

1.

2.

For _____

[Indicate the name of Bank]

TECHNICAL SPECIFICATION FOR THE OPGW MAINTENANCE WORK

NOTICE INVITING e-TENDER NOTICE NO. CPC-19 / 2015-16
TENDER SPECIFICATION NO. Sr. GM-CPC- Tender-OPGW Works-**Rate contract**-19/2015-16

SECTION-1

1.0 OPGW DE-STRINGING AND STRINGING ALONG WITH ERECTION & COMMISSIONING OF ASSOCIATED HARDWARE FITTINGS.

1.1 SCOPE

This chapter describes broad guidelines for maintenance work of OPGW comprising of survey, testing, de-stringing, stringing of OPGW and commissioning of associated hardware in EHV transmission line of OPTCL system in case of emergency and also during normal work. The work shall, however, be carried out strictly as per the instruction of the MANUFACTURER / EMPLOYER.

1.2 CODES AND STANDARDS

The OPGW work shall comply with the latest applicable standards, regulations, electricity rules and safety codes of the locality where the installation is carried out. Nothing in this specification shall be construed to relieve the CONTRACTOR OF HIS RESPONSIBILITY

1.3 GENERAL

The CONTRACTOR shall transport the equipment where required in actual position.

Erect, assemble all parts of the equipment and test and commission the same.

The CONTRACTOR shall furnish all OPGW installation tools (Robot traction machine, recovery machine, etc.), Jointing & testing tools (OTDR, Splicing tool, Power meter, etc.) , OPGW hardware fitting tool kits etc. required for complete installation, testing and commissioning of the items included in the contract work.

The EMPLOYER may engage specialist Employer to supervise the installation, testing and commissioning of their equipment. The CONTRACTOR shall extend full co-operation to these Employers and carry out the works as per their instructions. The CONTRACTOR'S work shall include minor modifications as may be necessitated during commissioning. Providing such assistance shall be deemed to be included in the CONTRACTOR'S basic scope.

The CONTRACTOR shall co-operate through the EMPLOYER with other contractors at site, in all matters of common interest, so as not to obstruct operation of others and to ensure the safety of all personnel and works covered under this specification.

It will be the CONTRACTORS responsibility to assist the OWNER to obtain approval/ clearance from local statutory authorities including electrical inspector, wherever applicable, for conducting any work or for installation carried out which comes under the purview of such authorities. The work shall be carried out strictly as per the instructions and layout drawings of the EMPLOYER/ manufacturer. In case of any doubt/ misunderstanding as to correct interpretation of the drawings or

instructions, necessary clarifications shall be obtained from the EMPLOYER. The CONTRACTOR shall be held responsible for any damage to the equipment consequent to not following the MANUFACTURER'S instructions correctly..

Any theft of equipment/component parts including executed portion prior to handing over to the EMPLOYER shall be made good by the CONTRACTOR.

In order to avoid hazards to personnel moving around the equipment such as switchgear etc. which is kept charged after installation before commissioning, such equipment shall be suitably cordoned off to prevent any one accidentally going near it.

Safety of the Contractor's personnel engaged in erection and commissioning job will be Contractor's responsibility.

The CONTRACTOR shall ensure workmanship of good quality and shall assign qualified supervisors/Employers and competent labour who are skilled, careful and experienced in their several trades in similar works. The EMPLOYER shall reserve the right to reject non-competent persons employed by the CONTRACTOR, if the workmanship is not of good order.

It shall be the responsibility of the CONTRACTOR to obtain necessary Licence /Authorization, Permit for work from the Licensing Board of the Locality/ state where the work is to be carried out. The persons deputed by the CONTRACTOR'S firm should also hold valid permits issued or recognized by the Licensing Board of the locality/State where the work is to be carried out. A list of the personnel engaged in erection and commissioning work should be submitted to the Employer before commencement of the work.

1.4 Contractors are to conduct site/route survey, the Contractor shall submit to the Employer a survey report on the link and site as per the specific contract. This report shall include at least the following items:

- a) List of all span lengths and the total link length for OPGW.
- b) Suitability of transmission line for OPGW cable installation on the present infrastructure, towers, earthwire, etc.
- c) Tower wise identification of type(s) and numbers of fittings & accessories required.
- d) Measurement of Tower heights, Sag for higher spans.
- e) Proposed splice locations, required cable schedules and types of in-line splice enclosure requirement, if any at each location.
- f) Proposed routing of the approach FO cable from the end tower / gantry to the communication room to be marked on the site layout drawing. The existing cable trenches/ cable raceways proposed to be used shall be identified.
- g) The positions of fibre optic distribution panel (FODP) shall also be finalised during survey and the same shall be indicated in the survey report (in case of new work).

1.5 Contractor's Responsibilities and Obligations

The Contractor shall be responsible for the implementation of the Overhead Fibre Optic Cabling System (OPGW).

Contractor's obligations include, but are not limited to, the following:

- (1) Provide a working system that meets the functional and performance requirements of this specification.
- (2) Obtaining statutory clearances wherever required.
- (3) Development of installation and safety guidelines and procedures for the stringing, mechanical installation
- (4) Development of procedure for splicing of all fibre optic cable, including testing and documentation.
- (5) Site visits, path surveys, and studies necessary to identify the fault in the existing OPGW and provide all equipment needed for restoration of OPGW link.
- (6) Dismantling/Recovering the existing earth wire, defective OPGW & hardware wherever overhead FO cables (OPGW) is to be installed on existing lines.
- (7) Site acceptance testing of all items including associated hardware, accessories etc.
- (8) Shipment of all equipment and documentation to the Employer designated locations and/or staging areas.
- (9) Storing, Staging, maintenance and security of the staging area up to the operational acceptance including the full responsibility for protection from fire and theft of the supplied items.
- (10) Installation of Approach Cable along with associated fitting, hardwares and accessories, In-line splice enclosures, FODP etc.
- (11) All Fibre Optic Distribution frame patch facilities.
- (12) Implement all minor civil works as per site requirement.
- (13) Due diligence in properly planning and executing the work so as to minimise any physical damage.
- (14) The Contractor shall appoint key personnel for the project such as Site Manager, Installation Engineer and Commissioning Engineer.

1.6 The Employer Responsibilities and Obligations

The Employer will provide the following items and services as part of this Project:

- (1) Overall project management of the project.
- (2) Review and approval of the Contractor's designs, drawings, survey reports and recommendations.
- (4) Participation in and approval of site acceptance tests.
- (5) Providing support and access to facilities at the sites.
- (6) Assistance in obtaining statutory clearances from regulatory bodies.
- (7) Appointing executive for monitoring for the project.
- (9) Provide to the extent possible drawings for existing sites and facilities for which OPGW stringing is planned. The details of the survey / Tower schedule carried out by the Transmission Line Contractor along with tower spotting data, mechanical loads etc.
- (10) Compensation for crop, forestry or vegetation damage unavoidably caused by the Contractor during the course of performance of work. The Contractor shall take due diligence in properly planning and executing the work so as to minimize any such damage.
- (11) Provide assistance in routing for fibre optic approach cabling.

1.7 Condition for Emergency / Normal work applicability

(i) Emergency Rate Contract shall be applicable for the following works:

- (a) Restoration of optical fibre link due to breakdown of OPGW attributed to collapse of tower
- (b) Restoration of OPGW link between SLDC and Sub-LDC.
- (C) Restoration of OPGW links in 400 kV Lines.
- (d) Restoration of OPGW links those are leased out for other utilities.

(ii) Normal Rate Contract

All works other than emergency work as mentioned above, 1.7(i), shall be treated as normal work and the normal rate contract shall be applicable thereof. However, work to be executed through normal rate contract should be urgent/ important in nature.

Section-2

Installation of OPGW cabling system

Table of Content

2.0 Introduction

2.1 Contractor's Scope

2.2 OPTCL's Responsibility

2.3 OPGW Cable Installation

2.4 Items to be provided by Employer for installation

2.5 Technical requirements for installation of OPGW Cabling system

2.5.1 Attenuation

2.5.2 Fibre Optic Splice Enclosures (Joint Box

2.5.3 Optical Fibres Splices

2.5.4 Fibre Optic Approach Cable

2.5.4.1 Installation of Approach Cable

2.5.4.2 Service Loops

2.5.5 Optical Fibre Termination/Splicing

2.6 Methodology for Installation and Termination

2.7 Optical Fibre Strain & Sag-tension Chart

2.8 Completion Schedule

Section 2

Installation of OPGW cabling system

This technical specification describes the installation requirements of OPGW cabling and associated hardware fittings & accessories. The technical details described in this specification shall be applicable for all the installation requirements.

2.0 Introduction

There are several transmission lines at voltage level of 400 kV / 220 kV / 132 kV of OPTCL existing throughout the state of Odisha. OPGW is to be installed by replacing earth wire/ faulty existing OPGW. The OPGW required for installation of OPGW shall be provided to the contractor by OPTCL & associated Hardware Fittings recommended for OPGW shall be provided by the contractor unless otherwise specified.

2.1 Contractor's Scope

a) Transportation:

The OPGW required for installation of OPGW shall be provided by OPTCL. The Contractor shall be responsible for transportation of OPGW from store to the site as per requirement.

b) OPGW testing:

Before handing over of OPGW Cable to the contractor the cable shall be tested by the installation agencies in presence of OPTCL representative to ensure healthy condition of OPGW cable.

c) Insurance:

The Contractor shall arrange for Insurance of OPGW, hardware fittings, joint box, approach cable, FODP stored at site till date of Commissioning & taking over of links by employer.

d) Pre-installation Survey:

The Contractor shall carry out pre-installation survey of transmission lines identified for OPGW installation/maintenance to assess the transmission line site conditions and other details for carrying out the installation of OPGW.

e) Submission of Test Procedures:

The Contractor shall submit Installation & Test procedure to employer for Approval.

f) Storage of Material at Site:

The Contractor shall be responsible for proper storage of material at erection site with adequate security.

g) Installation:

The Contractor shall carry out installation of OPGW Cable & associated Hardware and Accessories as per requirement of Technical Specification. The Contractor shall also be responsible for installation of joint box, approach cable, FODP along with splicing of fibres in joint box and FODP. On completion of installation of all the components of the link, SAT (Site Acceptance Test) shall be carried out by the installation agency in presence of OPTCL's representative & submit it for employer's approval.

h) Post-Installation Testing:

The Contractor shall carry out testing as per the requirement specified in Technical Specifications. The variation in attenuation measured after installation of OPGW in comparison to that measured at the time of handing over of OPGW to the contractor shall be negligible and in no case the maximum allowable attenuation shall be more than the values as mentioned in Technical Specification. The variation in attenuation shall be considered as damage to the OPGW cable and contractor shall be required to replace the damaged OPGW at his own cost.

j) Tools & Plants and Test Equipments

Contractor shall be responsible for providing adequate nos. of T&Ps to complete the work within prescribed time.

k) Contractor shall be responsible for dismantling/recovering of the existing earthwire, defective OPGW & hardware wherever overhead FO cables (OPGW) is to be installed on existing lines, and handover the same to the employer.

2.2 OPTCL's Responsibility

a) OPTCL shall provide OPGW and FO approach cable

b) OPTCL shall provide a storage facility in any one of its sub-station near-by to the installation site as per the geographical route of the line.

f) OPTCL shall provide the recommended Sag-Tension Chart. The Contractor shall comply with the Sag-Tension Chart recommendations.

2.3 OPGW Cable Stringing

The OPGW cable shall be installed at the top of the tower by replacing the existing ground wire/ existing faulty OPGW. The Contractor shall carry out re-tensioning of the existing earth wire wherever required to maintain the adequate clearances from the conductor. Moreover, the Contractor shall make necessary arrangements for Stringing and Installation of OPGW cable in case no earthwire is available in a particular stretch.

The jointing of OPGW shall be done on tension tower preferably. But, if required to avoid wastage of material jointing may be taken up on suspension tower also. The testing is to be carried out before and after installation.

2.4 Items to be provided by Employer for installation

a) OPGW and Optical fibre approach cable

2.5 Technical requirements for installation of OPGW Cabling system

2.5.1 Attenuation

The overall optical fibre path attenuation shall not be more than calculated below:

- Maximum attenuation @ 1550 nm: $(0.21 \text{ dB/km} \times \text{total km}) + (0.05 \text{ dB/splice} \times \text{no. of splices}) + (0.5 \text{ dB/connector} \times \text{no. of connectors})$.
- Maximum attenuation @ 1310 nm: $(0.35 \text{ dB/km} \times \text{total km}) + (0.05 \text{ dB/splice} \times \text{no. of splices}) + (0.5 \text{ dB/connector} \times \text{no. of connectors})$.

2.5.2 Fibre Optic Splice Enclosures (Joint Box)

All in-line splices shall be encased in In-Line Fibre Optic Splice Enclosures. Suitable splice enclosures shall be provided to encase the optical cable splices in protective, moisture and dust free environment. In line splice enclosures shall comply to ingress protection class IP 66 or better. The splice enclosures shall be designed for the storage and protection of a minimum of 24 optical fibre splices and equipped with sufficient number of splice trays for splicing all fibres in the cable. In-line splice enclosures shall be suitable for outdoor use with each of the cable types provided under this contract. Splice enclosures shall be appropriate for mounting on EHT transmission towers above anti-climb guard levels at about 10 meters from the ground level and shall accommodate pass through splicing.

2.5.3 Optical Fibre Splices

Splicing of the optical fibre cabling shall be minimized through careful planning. All required splices shall be planned to occur on tower structures. All optical fibre splicing shall comply with the following:

- a. All fibre splices shall be accomplished through Fusion Splicing.
- b. Each fibre splice shall be fitted with a splice protection sheath fitted over the final splice.
- c. For each link, bi-directional attenuation of single mode fusion splices, shall not average more than 0.05 dB and no single splice loss shall exceed 0.1 dB when measured at 1550 nm.

2.5.4 Fibre Optic Approach Cable

For purposes of this specification, a fibre optic approach cable is defined as the Armoured underground fibre optic cable required to connect Overhead Fibre Optic Cable (OPGW) between the final in line splice enclosure on the gantry/ tower forming the termination of the fibre optic cable on the power line and the Fibre Optic Distribution Panel (FODP) installed within the building. The estimated fibre optic approach cabling length shall be decided during site survey or detailed engineering.

The cable shall be suitable for direct burial, laying in trenches & HDPE ducts, laying under false flooring and on indoor or outdoor cable raceways. The Approach Cable shall be a UV resistant, rodent proof, armoured cable with metallic type of armouring. The outer cable jacket for approach cable shall consist of carbon black polyethylene resin to prevent damage from exposure to ultra-violet light, weathering and high levels of pollution. Approach cable shall contain fibres with identical optical/ physical characteristics as those in the OPGW cables. The cable core shall comprise of tensile strength member(s), fibre support/bedding structure, core wrap/bedding, and an overall impervious jacket.

2.5.4.1 Installation of Approach Cable

The contractor shall make its best effort to route the cable through the existing available cable trenches. Where suitable existing cable trenches are not available, suitable alternatives shall be proposed for Employer approval. The approach cable shall be laid in the HDPE pipe in all conditions. In order to utilise the existing trenches, the approach cable may be required to be co-located with HV and LV cables. Accordingly, the approach cable shall be installed in corrosion resistant flexible conduit. Suitable provisions shall be made by the contractor to ensure adequate safety earthing and insulated protection for the approach cable.

All required fittings, supports, accessories, ducts, inner ducts, conduits, risers and any item not specially mentioned but required for lay and installation of approach cables shall be supplied and installed by the contractor.

2.5.4.2 Service Loops

Suitable service loop for approach cable shall be provided by the contractor in consultation with the employer.

2.5.5 Optical Fibre Termination and Splicing

Optical fibre terminations shall be installed in Fibre Optic Distribution Panels (FODP) designed to provide protection for fibre splicing of pre-connectorized pigtailed and to accommodate connectorized termination and coupling of the fibre cables. The contractor shall provide rack mounted Fibre Optic Distribution Panels (FODPs) and shall terminate the fibre optic cabling up to the FODPs.

2.6 Methodology for Installation and Termination

All optical fibre cable termination, installation, stringing and handling plans, guides and procedures shall be submitted to the Employer for review and approval. Installation procedures including details of personnel and time required shall be documented and submitted to Employer for approval. All installation practices shall be field proven.

All cable segments shall include mutually agreed service loops. The maximum allowable stringing tension, maximum allowable torsional shear stress, crush strength and other physical parameters of the cable shall not be exceeded. The preventive measures to be taken shall be documented in details and submitted to the Employer as part of installation document. Optical fibre attenuation shall be measured after installation. Any increase in the attenuation or step discontinuity in attenuation shall not be acceptable and shall constitute a cable segment failure. In the event of cable damage/higher loss, the damage portion shall be replaced by the contractor without any cost to OPTCL.

Any or all additional steel work or modification required to attach the fibre cabling to the overhead transmission/ distribution line towers shall be carried out by the Contractor. It shall be the Contractors responsibility to provide adequate communications among all crew members and support staff to ensure safe and successful installation.

During the course of installation, the Employer shall have full access for inspection and verification of the progress of the work and for checking workmanship and accuracy, as may be required.

2.7 OPGW Hardware fittings

The OPGW hardware fittings and accessories shall follow the general requirements regarding design, materials, dimensions & tolerances, protection against corrosion and markings.

The fittings and accessories described herein are indicative of installation hardware typically used for OPGW installations and shall not necessarily be limited to the following:

(a) Suspension Assemblies: Preformed armour grip suspension clamps or aluminium alloy armour rods/reinforcing rods shall be used. The supply shall include all the components of the suspension assembly including shackles, bolts, nuts, washers, split pins, etc. The suspension clamps shall be designed to carry a minimum vertical load not less than 70% of UTS of OPGW. The suspension clamps slippage shall occur between 8% and 15% of UTS of OPGW

(b) Dead End Clamp Assemblies: All dead end clamp assemblies shall preferably be of performed armoured grip type and shall include all necessary hardware for attaching the assembly to the tower strain plates. Dead end clamps shall allow the OPGW to pass through continuously without cable cutting. The slip strength shall be rated not less than 95% of the rated tensile strength of the OPGW.

(c) Clamp Assembly Earthing Wire: Earthing wire consisting of a 1500 mm length of aluminium or aluminium alloy conductor equivalent in size to the OPGW shall be used to earth suspension and dead end clamp assemblies to the tower structure. The earthing wire shall be permanently fitted with lugs at each end. The lugs shall be attached to the clamp assembly at one end and the tower structure at the other.

(d) Structure Attachment Clamp Assemblies: Clamp assemblies used to attach the OPGW to the structures, shall have two parallel grooves for the OPGW, one on either side of the connecting bolt. The clamps shall be such that clamping characteristics do not alter adversely when only one OPGW is installed. The tower

attachment plates shall locate the OPGW on the inside of the tower and shall be attached directly to the tower legs/cross-members without drilling or any other structural modifications.

(e) Vibration Dampers: Vibration dampers type 4R Stockbridge or equivalent, having four different frequencies spread within the Aeolian frequency bandwidth, shall be used for suspension and tension points in each span. The Bidder shall determine the exact numbers and placement(s) of vibration dampers. Vibration damper clamps shall be made of aluminium or aluminium alloy shall support the dampers during installation and shall maintain the dampers in position without damage to the OPGW and without causing fatigue. Armour or patch rods made of aluminium or aluminium alloy shall be provided as required to reduce clamping stress on the OPGW. The vibration damper body shall be hot-dip galvanized mild steel/cast iron or shall be permanent mould cast zinc alloy.

2.8 Optical Fibre Strain & Sag-tension Chart

The fibre optic cable shall be installed such that the optical fibres experience no strain under all conditions defined in IS 802. Zero fibre strain condition shall apply even after a 25 year cable creep.

For the purpose of specification, the following shall apply:

- *Maximum Working Tension (MWT)* is defined as the maximum cable tension at which there is no fibre strain.
- The *no fibre strain* condition is defined as fibre strain of less than or equal to 0.05%, as determined by direct measurement through IEC/ETSI (FOTP) specified optical reflectometry techniques.
- The *Cable Strain Margin* is defined as the maximum cable strain at which there is no fibre strain.
- The cable *Maximum Allowable Tension (MAT)* is defined as the maximum tension experienced by the Cable under the worst case loading condition.
- The cable *Max Strain* is defined as the maximum strain experienced by the Cable under the worst case loading condition.
- The cable *Every Day Tension (EDT)* is defined as the maximum cable tension on any span under normal conditions.
- The *Ultimate/ Rated Tensile Strength (UTS/RTS/ Breaking Strength)* is defined as the maximum cable tensile load applied and held constant for one minute at which the specimen shall not break.

2.9 Completion Schedule

The Contractor in any case shall complete the entire Installation & Commissioning work and complete the project within scheduled period from the date of LOA. The Contractor shall deploy adequate T&P and manpower to achieve the project completion within the stipulated time frame.

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