

Tender Notification for

SUPPLY OF 66KV GRADE XLPE INSULATED ALUMINIUM CONDUCTOR POWER CABLE OF SIZE 1Cx1000 SQ.MM NIT NO CMC/BR/18-19//FK/PG/653

Due Date for Submission: 04.05.2018, 1700hrs

BSES RAJDHANI POWER LIMITED, BSES Bhawan, Nehru Place, New Delhi-110019 Corporate Identification Number: U74899DL2001PLC111527 Telephone Number: +91 11 3009 9999 Fax Number: +91 11 2641 9833 Website: www.bsesdelhi.com



SECTION – I: REQUEST FOR QUOTATION

1.00 Event Information

BRPL invites sealed tenders in 2 envelopes for SUPPLY OF 66KV GRADE XLPE INSULATED ALUMINIUM CONDUCTOR POWER CABLE OF SIZE 1Cx1000 SQ.MM. from reputed manufacturers. The bidder must qualify the technical requirements as specified in clause 2.0 stated below. All envelopes shall be duly superscribed as — **"BID FOR SUPPLY OF 66KV GRADE XLPE INSULATED ALUMINIUM CONDUCTOR POWER CABLE OF SIZE 1Cx1000 SQ.MM CMC/BR/18-19/FK/PG/653 DUE ON 04.05.2018, 1700HRS"**

SI. No.	Item Description	Technical Specification	Estimate d Cost	Qty.	Delivery at
1	SUPPLY OF 66KV GRADE XLPE INSULATED ALUMINIUM CONDUCTOR POWER CABLE OF SIZE 1Cx1000 SQ.MM	SP-EWH2-01-00	Rs 5.00 Crores	21 KM	New Delhi Stores

Note: Individual Drum Quantity may vary $\pm 5\%$. There will be no positive tolerance on the overall total order quantity. However (-) 2% will be allowed on overall order quantity.

The schedule of specifications with detail terms & conditions can be obtained from address given below against submission of non-refundable demand draft of **Rs.1180/- (With GST**) drawn in favour of BSES Rajdhani Power Ltd, payable at Delhi. The tender documents & detail terms and conditions can also be downloaded from the website "www.bsesdelhi.com --> Tenders --> BSES Rajdhani Power Ltd --> Open Tenders".

In case tender papers are downloaded from the above website, then the bidder has to enclose a demand draft covering the cost of bid documents.

The bids shall be addressed to :

Head of Department Contracts & Materials Deptt. BSES Rajdhani Power Ltd. C&M Deptt. 1st Floor, C Block BSES Bhawan, Nehru Place New Delhi 110019

BRPL reserves the right to accept/reject any or all Tenders without assigning any reason thereof and alter the quantity of materials mentioned in the Tender documents by (\pm) 30% at the time of placing purchase orders.

Tender will be summarily rejected if:

- Earnest Money Deposit (EMD) of value INR 5,00,000/- is not deposited in shape of Bank Draft/Pay Order/Banker's Cheque/BG drawn in favour of BSES Rajdhani Power Ltd, payable at Delhi.
- The offer does not contain "FOR NEW DELHI" price indicating break-up towards all taxes, duties & freight.
- > Complete Technical details are not enclosed.
- > Tender is received after due date and time.



2.0 Qualification Criteria:-

The prospective bidder must qualify all of the following requirements to be eligible to participate in the bidding. Bidders who meet following requirements will be considered as Successful bidder and BRPL has a right to disqualify those bidders who do not meet these requirements.

- a. The bidder must be a manufacturer of 66KV or higher grade HV Power Cable and above having valid Type Test Reports carried out at CPRI/ERDA identical/similar to the construction being offered against present Tender.
- b. The bidder should have qualified technical & qualified QA personnel at various stages of manufacture & testing.
- c. Bidder should have Average Annual Sales Turnover of Rs 300.00 Crores or more in last 3 years.
- d. The bidder should have supplied at least 40 km. or higher to any major utilities/SEB's in last 3 years.
- e. The bidder must possess valid ISO 9001:2000 certification and must possess valid BIS License.
- f. In case of new bidders (not enlisted in BSES), Factory inspection & evaluation shall be carried out to ascertain bidder's manufacturing capabilities and quality procedures.

3.0 Bidding and Award Process.

Bidders are requested to submit their offer strictly in line with this tender document. **NO DEVIATION IS ACCEPTABLE**. BRPL shall respond to the clarifications raised by various bidders and the same will be intimated to all participating bidders through website.

3.01 BID SUBMISSION

The bidders are required to submit the bids in 2(two) parts and submitted in 1 original + 1 duplicate to the following address

Head of Department

Contracts & Material Deptt. BSES Rajdhani Power Ltd 1st Floor, C Block, BSES Bhawan, Nehru Place New Delhi 110019

PART A: TECHNICAL BID comprising of following (in duplicate)

- ✓ EMD
- ✓ Non-refundable demand draft for Rs 1180/- in case the forms are downloaded from website
- ✓ Documentary evidence in support of qualifying criteria
- ✓ Technical Literature/ GTP/Type test report etc
- ✓ Qualified Manpower available
- ✓ Testing Facilities
- ✓ Original Tender documents duly stamped & signed on each page



as token of acceptance

- ✓ Acceptance to Commercial Terms and Conditions viz Delivery schedule/period, Payment terms, BG etc
- ✓ Power of Attorney for signing the bid

PART B: FINANCIAL BID comprising (1 original only)

✓ Price strictly in the Format enclosed in SECTION V indicating Break up of basic price, taxes & duties, Freight etc

3.02 TIME SCHEDULE

The bidders should complete the following within the dates specified as under:

S. No.	Steps	Date
1	Date of sale of bid documents	15.04.2018
2	Last date of Queries, if any	25.04.2018
3	Last date of receipt of bid documents	04.05.2017,1700Hrs
4	Date & time of opening of tender – Part A	07.05.2017,1500Hrs
5	Date & Time of opening of Part B of qualified bidders	Successful bidders will be intimated through website

NOTE: In case last date of submission of bids & date of opening of bids is declared as holiday in BRPL office, the last date of submission will be following working day at the same time.

This is a two part bid process. Bidders are to submit the bids in 2(two) parts

Both these parts should be furnished in separate sealed covers super scribing NIT no. DUE DATE OF SUBMISSION, with particulars as **PART-A TECHNICAL BID & COMMERCIAL TERMS & CONDITIONS and Part-B "FINANCIAL BID and** these sealed envelopes should again be placed in another sealed cover which shall be submitted before the due date & time specified.

<u>Part – A</u>: Technical Bid should not contain any cost information whatsoever and shall be submitted within the due date.

PART B: This envelope will be opened after techno-commercial evaluation and only of the qualified bidders. The date & time of same shall be intimated in due course to the qualified bidders notwithstanding anything stated above; the Purchaser reserves the right to assess bidder's capability to perform the contract, should the circumstances warrant such assessment in the overall interest of the purchaser. In this regard the decision of the purchaser is final.

BIDS RECEIVED AFTER DUE DATE AND TIME MAY BE LIABLE TO REJECTION

4.0 Award Decision

4.01 The purchaser reserves all the rights to award the contract to one or more bidders so as to meet the delivery requirement or nullify the award decision without any reason.

4.02 In the event of your bid being selected by purchaser (and / or its affiliates) and you subsequent DEFAULT on your bid; you will be required to pay purchaser (and / or its affiliates) an amount equal to the difference in your bid and the next lowest bid on the quantity declared in NIT/RFQ.

4.03 In case any supplier is found unsatisfactory during the delivery process, the award will be cancelled and BRPL reserves the right to award other suppliers who are found fit.



4.04 QTY VARIATION: The purchaser reserves the rights to vary the quantity by (\pm) **30%** of the tender quantity.

4.05 Repeat Order: BRPL reserves the right to place repeat order at the same rates & terms and conditions as per this tender against additional requirement subject to mutual agreement between BRPL & supplier

5.0 Market Integrity

We have a fair and competitive marketplace. The rules for bidders are outlined in the Terms & Conditions. Bidders must agree to these rules prior to participating. In addition to other remedies available, we reserves the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the Terms & Condition. Bidders who violates the marketplace rules or engage in behavior that disrupts the fair execution of the marketplace restricts a bidder to length of time, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

- Failure to honor prices submitted to the marketplace.
- Breach of the terms of the published in Request for Quotation/NIT.

6.0 Supplier Confidentiality

All information contained in this RFQ is confidential and shall not be disclosed, published or advertised in any manner without written authorization from BRPL. This includes all bidding information submitted.

All RFQ documents remain the property of BRPL and all suppliers are required to return these documents to BRPL upon request.

Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

7.0 Contact Information

Technical clarification, if any, as regards this RFQ shall be sought in writing and sent by post/courier to following address. The same shall not be communicated through email/phone

	Technical	Commercial
Contact	HOD -CES	Fauzia Khalid
Person	Copy to : Fauzia Khalid	
Address	BSES RAJDHANI Power Ltd ,5th Floor , 20 No Building, Nehru Place, New Delhi 110019	C&M Deptt. 1st Floor , D-Block, BSES RAJDHANI Power Ltd BSES Bhawan, Nehru Place, New Delhi 110019
Email Sheshadri.Krishnapura@relianceada.com		Fauzia.Khalid@relianceada.com



SECTION – II: INSTRUCTION TO BIDDERS

A. <u>GENERAL</u>

1.00

BSES Rajdhani Power Ltd hereinafter referred to as "The Purchaser "are desirous of implementing the various Systems Improvement/Repair & Maintenance works at their respective licensed area in Delhi. The Purchaser has now floated this tender for procurement of material as notified earlier in this bid document.

2.00 SCOPE OF WORK

The scope shall include Design, Manufacture, Testing at works conforming to the Technical Specifications/IS along with Packing, Forwarding, Transportation and Unloading and proper stacking at Purchaser's stores/site.

3.00 DISCLAIMER

3.01 - This Document includes statements, which reflect various assumptions, which may or may not be correct. Each Bidder/Bidding Consortium should conduct its own estimation and analysis and should check the accuracy, reliability and completeness of the information in this Document and obtain independent advice from appropriate sources in their own interest.

3.02 - Neither Purchaser nor its employees will have any liability whatsoever to any Bidder or any other person under the law or contract, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage whatsoever which may arise from or be incurred or suffered in connection with anything contained in this Document, any matter deemed to form part of this Document, provision of Services and any other information supplied by or on behalf of Purchaser or its employees, or otherwise a rising in anyway from the selection process for the Supply.

3.03 - Though adequate care has been taken while issuing the Bid document, the Bidder should satisfy itself that Documents are complete in all respects. Intimation of any discrepancy shall be given to this office immediately.

3.04 - This Document and the information contained herein are Strictly Confidential and are for the use of only the person(s) to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors).

4.00 COST OF BIDDING

The Bidder shall bear all cost associated with the preparation and submission of its Bid and Purchaser will in no case be responsible or liable for those costs.

B. **BIDDING DOCUMENTS**

- **1.0** The Scope of Work, Bidding Procedures and Contract Terms are described in the Bidding Documents are as follows:
 - > Request for Quotation (RFQ) Section I
 - > Instructions to Bidders (ITB) Section II
 - > Terms & Conditions of Contract (T&C) Section -III
 - Delivery schedule Section IV
 - Price Format Section V
 - EMD BG Format Section VI



> Bid Form

- Section VII
- > Technical Specifications (TS) Section VIII (Pages Enclosed)

5.00 The Bidder is expected to examine the Bidding Documents, including all Instructions, Forms, Terms and Specifications. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will may result in the rejection of the Bid.

6.00 AMENDMENT OF BIDDING DOCUMENTS

6.01- At any time prior to the deadline for submission of Bids, the Purchaser may for any reasons, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by Amendment.

6.02- The Amendment shall be part of the Bidding Documents, pursuant to Clause 6.01, and it will be notified in web site <u>www.bsesdelhi.com</u> and the same will be binding on them.

6.03 - In order to afford prospective Bidders reasonable time in which to take the Amendment into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of Bids. The same shall be published as a corrigendum in website **www.bsesdelhi.com**

6.04 - Purchaser shall reserve the rights to following

- extend due date of submission
- modify tender document in part/whole
- cancel the entire tender

6.05 Bidders are requested to visit website regularly for any modification/clarification/ corrigendum/addendum of the bid documents

C. <u>PREPARATION OF BIDS</u>

7.0 LANGUAGE OF BID

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the English Language. Any printed literature furnished by the Bidder may be written in another Language, provided that this literature is accompanied by an English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

8.0 DOCUMENTS COMPRISING THE BID

The Bid prepared and submitted by the Bidder shall comprise the following components:

- ✓ Bid Form, Price & other Schedules (STRICTLY AS PER FORMAT) and Technical Data Sheets completed in accordance with Technical Specification.
- ✓ All the Bids must be accompanied with the required EMD as mentioned in the Section-I against each tender.
- ✓ Tender documents duly stamped and signed on each page by authorized signatory.

9.0 BID FORM

9.01 The Bidder shall submit one"Original'and one"Copy'of the Bid Form and the appropriate Price Schedules and Technical Data Sheets duly filled in as per attached



specification (Section VIII) enclosed with the Bidding Documents.

9.02 EMD

Pursuant to Clause 8.0(b) above, the bidder shall furnish, as part of its bid, a EMD amounting to as specified in the Section-I. The EMD is required to protect the Purchaser against the risk of Bidder's conduct which would warrant forfeiture.

The EMD shall be denominated in any of the following form:

- ✓ Banker's Cheque/Demand Draft/Pay Order drawn in favour of BSES Rajdhani Power Ltd, payable at Delhi.
- ✓ Bank Guarantee valid for Ninety(90) days after due date of submission drawn in favour of BSES Rajdhani Power Ltd

The EMD may be forfeited in case of:

✓ the Bidder withdraws its bid during the period of specified bid validity

or

- ✓ the case of a successful Bidder, if the Bidder does not
 - accept the Purchase Order, or
 - Furnish the required performance security BG.

10.00 BID PRICES

10.01 - Bidders shall quote for the entire Scope of Supply with a break-up of prices for individual items. The total Bid Price shall also cover all the Supplier's obligations mentioned in or reasonably to be inferred from the Bidding Documents in respect of Design, Supply, Transportation to site, all in accordance with the requirement of Bidding Documents The Bidder shall complete the appropriate Price Schedules included herein , stating the Unit Price for each item & total Price.

10.02 - The prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during execution of the supply work, breakup of price constituents, should be there.

Prices quoted by the Bidder shall be **"Firm"** and not subject to any price adjustment during the performance of the Contract. **A Bid submitted with an adjustable price/Price Variation Clause will be treated as non -responsive and rejected.**

11.0 BID CURRENCIES

Prices shall be quoted in Indian Rupees Only.

12.0 PERIOD OF VALIDITY OF BIDS

12.01- Bids shall remain valid for 90 days from the due date of submission of the Bid.

12.02 -Notwithstanding Clause 12.01 above, the Purchaser may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and the responses thereto shall be made in writing and sent by post/courier



13.0 ALTERNATIVE BIDS

Bidders shall submit Bids, which comply with the Bidding Documents. Alternative Bids will not be considered. The attention of Bidders is drawn to the provisions regarding the rejection of Bids in the terms and conditions, which are not substantially responsive to the requirements of the Bidding Documents.

14.0 FORMAT AND SIGNING OF BID

14.01 The original Bid Form and accompanying documents (as specified in Clause 9.0), clearly marked "Original Bid" plus one copy must be received by the Purchaser at the date, time and place specified pursuant to Clauses 15.0 and 16.0. In the event of any discrepancy between the original and the copies, the original shall govern.

14.02 The original and copy of the Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to sign on behalf of the Bidder. Such authorization shall be indicated by written Power-of-Attorney accompanying the Bid.

14.02 The Bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.

D. SUBMISSION OF BIDS

15.0 SEALING AND MARKING OF BIDS

- **15.01** Bid submission: One original & one Copy (hard copies) of all the Bid Documents shall be sealed and submitted to the Purchaser before the closing time for submission of the bid.
- 15.02 The Technical Documents and the EMD shall be enclosed in a sealed envelope and the said envelope shall be superscribed with —"Technical & EMD". The price bid shall be inside another sealed envelope with superscribed as "Financial Bid". Both these envelopes shall be sealed inside another big envelope. All the envelopes should bear the Name and Address of the Bidder and marking for the Original and Copy. The envelopes should be superscribed with —"Tender Notice No.& Due date of opening".
- **15.03** The Bidder has the option of sending the Bids in person. Bids submitted by Email/Telex/Telegram /Fax will be rejected. No request from any Bidder to the Purchaser to collect the proposals from Courier/Airlines/Cargo Agents etc shall be entertained by the Purchaser.

16.0 DEADLINE FOR SUBMISSION OF BIDS

16.01 The original Bid, together with the required copies, must be received by the Purchaser at the address specified no **later than the due date specified earlier**

16.02 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with Clause9.0,in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended

17.0 ONE BID PER BIDDER

Each Bidder shall submit only one Bid by itself. No Joint Venture is acceptable. A Bidder who submits or participates in more than one Bid will cause all those Bids to be rejected.



18.0 LATE BIDS

Any Bid received by the Purchaser after the deadline for submission of Bids prescribed by the Purchaser, pursuant to Clause 16.0, will be declared "Late" and may be rejected and returned unopened to the Bidder.

19.0 MODIFICATIONS AND WITHDRAWAL OF BIDS

The Bidder is not allowed to modify or withdraw its Bid after the Bid's submission.

E. EVALUATION OF BID

20.0 PROCESS TO BE CONFIDENTIAL

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the Purchaser's processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

21.0 CLARIFICATION OF BIDS

To assist in the examination, evaluation and comparison of Bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its Bid. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted.

22.0 PRELIMINARY EXAMINATION OF BIDS / RESPONSIVENESS

22.01 Purchaser 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. Purchaser may ask for submission of original documents in order to verify the documents submitted in support of qualification criteria.

22.02 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.

22.03 Prior to the detailed evaluation, Purchaser will determine the substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the Goods offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.

22.04 Bid determined as not substantially responsive will be rejected by the purchaser and/or the Purchaser and may not subsequently be made responsive by the Bidder by correction of the non -conformity.

23.0 EVALUATION AND COMPARISON OF BIDS

The evaluation of Bids shall be done based on the delivered cost competitiveness basis.

23.01 The evaluation of the Bids shall be a stage-wise procedure. The following stages are identified for evaluation purposes: In the first stage, the Bids would be subjected to a responsiveness check. The Technical Proposals and the Conditional ties of the Bidders would be evaluated.



23.02 Subsequently, the Financial Proposals along with Supplementary Financial Proposals, if any, of Bidders with Techno-commercially Acceptable Bids shall be considered for final evaluation.

23.03 The Purchaser's evaluation of a Bid will take into account, in addition to the Bid price, the following factors, in the manner and to the extent indicated in this Clause:

- Delivery Schedule
- > Conformance to Qualifying Criteria
- > Deviations from Bidding Documents

Bidders shall base their Bid price on the terms and conditions specified in the Bidding Documents.

The cost of all quantifiable deviations and omissions from the specification, terms and conditions specified in Bidding Documents shall be evaluated. The Purchaser will make its own assessment of the cost of any deviation for the purpose of ensuring fair comparison of Bids.

23.04 Any adjustments in price, which result from the above procedures, shall be added for the purposes of comparative evaluation only to arrive at an "Evaluated Bid Price". Bid Prices quoted by Bidders shall remain unaltered.

F. AWARD OF CONTRACT

24.0 CONTACTING THE PURCHASER

24.01 If any Bidder wishes to contact the Purchaser on any matter related to the Bid, from the time of Bid opening to the time of contract award, the same shall be done in writing only.

24.02 Any effort by a Bidder to influence the Purchaser and/or in the Purchaser's decisions in respect of Bid evaluation, Bid comparison or Contract Award, will result in the rejection of the Bidder's Bid.

25.0 THE PURCHASER 'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

Submission of bids shall not automatically construe qualification for evaluation. The Purchaser reserves the right to accept or reject any Bid and to annul 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 Purchaser's action.

26.0 AWARD OF CONTRACT

The Purchaser will award the Contract to the successful Bidder whose Bid has been determined to be the lowest-evaluated responsive Bid, provided further that the Bidder has been determined to be qualified to satisfactorily perform the Contract. Purchaser reserves the right to award order to other bidders in the tender, provided it is required for timely execution of project & provided he agrees to come to the lowest rate. Purchaser reserves the right to distribute the entire tender quantity at its own discretion without citing any reasons thereof.



26.1 Splitting of tendered quantity among two or more bidders:

BSES reserves the right to split the tender quantity among techno- commercially qualified bidders on account of delivery requirement in tender quantity under procurement.

For arranging timely procurement of material and to have uniform practice of distribution of quantity amongst eligible bidders, following procedure shall be applicable:

The tender quantity shall be split in following ratio:

• If the quantity is to be split among 2 bidders, it will be done in the ratio of **70:30** on L1 price.

Any deviation in regards to above will have deviation approval from management.

27.0 THE PURCHASER 'S RIGHT TO VARY QUANTITIES

The Purchaser reserves the right to vary the quantity i.e. increase or decrease the numbers/quantities without any change in terms and conditions during the execution of the Order.

28.0 LETTER OF INTENT/ NOTIFICATION OF AWARD

The letter of intent/ Notification of Award shall be issued to the successful Bidder whose bids have been considered responsive, techno-commercially acceptable and evaluated to be the lowest (L1). The successful Bidder shall be required to furnish a letter of acceptance within 7 days of issue of the letter of intent /Notification of Award by Purchaser.

29.0 PERFORMANCE BANK GAURANTEE

Within 15 days of the receipt of Notification of Award/ Letter of Intent from the Purchaser, the successful Bidder shall furnish the Performance Bank Guarantee for an amount of 10% (Ten percent) of the Contract Price. The Performance Bond shall be valid for a period of 24 months from the date of Commissioning or 30 months from the date of last dispatch whichever is earlier plus 3 months claim period. Upon submission of the performance security, the EMD shall be released.

30.0 CORRUPT OR FRADULENT PRACTICES

30.01 The Purchaser requires that the Bidders observe the highest standard of ethics during the procurement and execution of the Project. In pursuance of this policy, the Purchaser:

(a) Defines, for the purposes of this provision, the terms set forth below as follows:

- "Corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them ,or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and
- "Fraudulent practice" means a misrepresentation of facts in order to influence a
 procurement process or the execution of a contract to the detriment of the Purchaser,
 and includes collusive practice among Bidders (prior to or after Bid submission)
 designed to establish Bid prices at artificial non -competitive levels and to deprive the



Purchaser of the benefits of free and open competition.

- (b) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question ;
- (c) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract.

Furthermore, Bidders shall be aware of the provision stated in the Terms and Condition of Contract.

SECTION - III: TERMS AND CONDITIONS

1.0 General Instructions

1.01 All the Bids shall be prepared and submitted in accordance with these instructions.

1.02 Bidder shall bear all costs associated with the preparation and delivery of its Bid, and the Purchaser will in no case shall be responsible or liable for these costs.

1.03 The Bid should be submitted by the Bidder in whose name the bid document has been issued and under no circumstances it shall be transferred /sold to the other party.

1.04 The Purchaser reserves the right to request for any additional information and also reserves the right to reject the proposal of any Bidder, if in the opinion of the Purchaser, the data in support of RFQ requirement is incomplete.

1.05 The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the Bid Documents. Failure to furnish all information required in the Bid Documents or submission of a Bid not substantially responsive to the Bid Documents in every respect may result in rejection of the Bid. However, the Purchaser's decision in regard to the responsiveness and rejection of bids shall be final and binding without any obligation, financial or otherwise, on the Purchaser.

2.0 Definition of Terms

2.01 "Purchaser" shall mean BSES Rajdhani Power Limited, on whose behalf this bid enquiry is issued by its authorized representative / officers.

2.02 "Bidder" shall mean the firm who quotes against this bid enquiry issued by the Purchaser. "Supplier" or "Supplier" shall mean the successful Bidder and/or Bidders whose bid has been accepted by the Purchaser and on whom the "Letter of Acceptance" is placed by the Purchaser and shall include his heirs, legal representatives, successors and permitted assigns wherever the context so admits.

2.03 "Supply" shall mean the Scope of Contract as described.

2.04 "Specification" shall mean collectively all the terms and stipulations contained in those portions of this bid document known as RFQ, Commercial Terms & Condition, Instructions to Bidders, Technical Specifications and the Amendments, Revisions, Deletions or Additions, as may be made by the Purchaser from time to time.



2.05 "Letter of Acceptance" shall mean the official notice issued by the Purchaser notifying the Supplier that his proposal has been accepted and it shall include amendments thereto, if any, issued by the Purchaser. The "Letter of Acceptance" issued by the Purchaser shall be binding on the "Supplier" The date of Letter of Acceptance shall be taken as the effective date of the commencement of contract.

2.06 "Month" shall mean the calendar month and "Day" shall mean the calendar day.

2.07 "Codes and Standards" shall mean all the applicable codes and standards as indicated in the Specification.

2.08 "Offer Sheet" shall mean Bidder's firm offer submitted to BRPL in accordance with the specification.

2.09 "Contract" shall mean the "Letter of Acceptance/Purchase Order" issued by the Purchaser.

2.10 "Contract Price" shall mean the price referred to in the "Letter of Acceptance/Purchase Order".

2.11 "Contract Period" shall mean the period during which the "Contract" shall be executed as agreed between the Supplier and the Purchaser in the Contract inclusive of extended contract period for reason beyond the control of the Supplier and/or Purchaser due to force Majeure.

2.12 "Acceptance" shall mean and deemed to include one or more of the following as will be stipulated in the specification:

- a) The written acceptance of material by the inspector at suppliers works to ship the materials.
- b) Acceptance of material at Purchaser site stores after its receipt and due inspection/ testing and release of material acceptance voucher.
- c) Where the scope of the contract includes supply, acceptance shall mean issue of necessary equipment / material takeover receipt after installation & commissioning and final acceptance.

3.0 Contract Documents & Priority

3.01Contract Documents: The terms and conditions of the contract shall consist solely of these RFQ conditions and the offer sheet.

4.0 Scope of Supply -General

4.01 The "Scope of Supply" shall be on the basis of Bidder's responsibility, completely covering the obligations, responsibility and supplies provided in this Bid enquiry whether implicit or explicit.

4.02 Bidder shall have to quote for the Bill of quantities as listed in Section – IV of this RFQ.

4.03 Quantity variation and additional requirement if any shall be communicated to successful bidder during project execution.

4.04 All relevant drawings, data and instruction manuals.

5.0 Quality Assurance and Inspection

5.01 Immediately on award of contract, the bidder shall prepare detailed quality assurance plan / test procedure identifying the various stages of manufacture, quality checks performed at each



stage, raw material inspection and the Customer hold points. The document shall also furnish details of method of checking, inspection and acceptance standards / values and get the approval of Purchaser before proceeding with manufacturing. However, Purchaser shall have right to review the inspection reports, quality checks and results of suppliers in house inspection department which are not Customer hold points and the supplier shall comply with the remarks made by purchaser or his representative on such reviews with regards to further testing, rectification or rejection, etc. In case of standard items, BRPL shall forward the standard QAP which is to be follow by vendor during manufacturing.

5.02 Witness and Hold points are critical steps in manufacturing, inspection and testing where the supplier is obliged to notify the Purchaser in advance so that it may be witnessed by the Purchaser. Final inspection is a mandatory hold point. The supplier to proceed with the work past a hold point only after clearance by purchaser or a witness waiver letter from BRPL.

5.03 The performance of waiver of QA activity by Purchaser at any stage of manufacturing does not relieve the supplier of any obligation to perform in accordance with and meet all the requirements of the procurement documents and also all the codes & reference documents mentioned in the procurement document nor shall it preclude subsequent rejection by the purchaser.

5.04 On completion of manufacturing the items can only be dispatched after receipt of dispatch instructions issued by the Purchaser.

5.05 All in-house testing and inspection shall be done without any extra cost. The in-house inspection shall be carried out in presence of BSES/BSES authorized third party inspection agency. Cost of Futile/abortive visit(s) shall be debited from the invoices.

5.06 Purchaser reserves the right to send any material being supplied to any recognized laboratory for testing, wherever necessary and the cost of testing shall be borne by the Bidder. In case the material is found not in order with the technical requirement / specification, the charges along with any other penalty which may be levied is to be borne by the bidder. To avoid any complaint the supplier is advised to send his representative to the stores to see that the material sent for testing is being sealed in the presence of bidder's representative.

6.0 Packing, Packing List & Marking

6.01 Packing: Supplier shall pack or shall cause to be packed all Commodities in crates/boxes/drums/containers/cartons and otherwise in such a manner as shall be reasonably suitable for shipment by road or rail to BRPL, Delhi/New Delhi stores/site without undue risk of damage in transit.

6.02 Packing List: The contents of each package shall be itemized on a detailed list showing the exact weight, extreme outside dimensions (length, width and weight) of each container/box/drum/carton, Item SAP Code, PO No & date. One copy of the packing list shall be enclosed in each package delivered.

7.0 Price basis for supply of materials

Bidder to quote their prices on Landed Cost Basis and separate price for each item. FIRM prices for supply to BRPL site/ stores inclusive of packing, forwarding, loading at manufacturer's premises, payment of Excise Duty, Sales Tax/VAT, Freight, any other local charges. **Octroi is presently not applicable in Delhi and however if applicable shall be reimbursed at actual.**

The above supply prices shall also include unloading at BRPL Delhi/New Delhi stores/site.

Transit insurance will be arranged by Purchaser; however bidder to furnish required details in



advance for arranging the same by Purchaser.

Purchaser shall issue Form 'C' wherever applicable and accordingly bidder to consider applicable taxes in the quoted price.

8.0 Terms of payment and billing

8.01 For Supply of Equipments:

100% payment shall be made within 45 days from the date of receipt of material at store/ site

8.02 Bidder to submit the following documents against dispatch of each consignment:

- **i.** Consignee copy of LR
- **ii.** Supplier detailed invoice showing commodity description, quantity, unit price, total price and basis of delivery.
- **iii.** Original certificate issued by BRPL confirming receipt of material at site and acceptance of the same.
- iv. Dispatch clearance & inspection report issued by the inspection authority
- v. Packing List.
- vi. Test Reports
- vii. Guarantee Certificate.

9.0 Price Validity

9.01 All bids submitted shall remain valid, firm and subject to unconditional acceptance by BRPL Delhi as mentioned earlier, the prices shall remain valid and firm till contract completion.

10.0 Performance Guarantee

10.01 To be submitted within fifteen (15) days from the date of issuance of the Letter of Award /PO, supplier shall establish a performance bond in favor of BRPL in an amount not less than ten percent (10%) of the total price of the Contract (the "Performance Bond"). The Performance Bond shall be valid for a period of 24 months from the date of Commissioning or 30 months from the date of last dispatch whichever is earlier plus 3 months claim period.

10.02 Bank guarantee shall be drawn in favour of BSES Rajdhani Power Ltd as applicable. The performance Bank guarantee shall be in the format as specified by BRPL.

11.0 Forfeiture

Each Performance Bond established under Clause 10.0 shall contain a statement that it shall be automatically and unconditionally forfeited without recourse and payable against the presentation by BRPL of this Performance Bond, to the relevant bank referred to above, together with a simple statement that supplier has failed to comply with any term or condition set forth in the Contract.

Each Performance BG established under will be automatically and unconditionally forfeited without recourse if BRPL in its sole discretion determines that supplier has failed to comply with any term or condition set forth in the contract.

12.0 Release

All Performance Bonds will be released without interest within seven (7) days from the last date up to which the Performance Bond has to be kept valid (as defined in Clause 10.0)



except for the case set forth in Clause 21.0.

13.0 Warranty/Defects Liability Period

13.01 The bidder to guarantee the materials / items supplied against any defect of failure, which arise due to faulty materials, workmanship or design for the entire defects liability period. The Defect liability period shall be 60 months from the date of commissioning or 66 months from the date of delivery whichever is earlier. If during the defects liability period any materials / items are found to be defective, these shall be replaced or rectified by the bidder at his own cost within 30 days from the date of receipt of intimation.

14.0 Return, Replacement or Substitution.

BRPL shall give Supplier notice of any defective Commodity promptly after becoming aware thereof. BRPL may in its discretion elect to return defective Commodities to Supplier for replacement, free of charge to BRPL, or may reject such Commodities and purchase the same or similar Commodities from any third party. In the latter case BRPL shall furnish proof to Supplier of the cost of such substitute purchase. In either case, all costs of any replacement, substitution, shipping, labour and other related expenses incurred in connection with the return and replacement or for the substitute purchase of a Commodity hereunder should be for the account of Supplier. BRPL may set off such costs against any amounts payable by BRPL to Supplier. Supplier shall reimburse BRPL for the amount, if any, by which the price of a substitute Commodity exceeds the price for such Commodity as quoted in the Bid.

15.0 Effective Date of Commencement of Contract:

15.01 The date of the issuance of the Letter of Acceptance/Purchase Order shall be treated as the effective date of the commencement of Contract.

16.0 Time – The Essence of Contract

16.01 The time and the date of completion of the "Supply" as stipulated in the Letter of Acceptance / Purchase order issued to the Supplier shall be deemed to be the essence of the "Contract". The Supply has to be completed not later than the aforesaid Schedule and date of completion of supply.

17.0 The Laws and Jurisdiction of Contract:

17.01 The laws applicable to this Contract shall be the Laws in force in India.

17.02 All disputes arising in connection with the present Contract shall be settled amicably by mutual consultation failing which shall be finally settled as per the rules of Arbitration and Conciliation Act, 1996 at the discretion of Purchaser. The venue of arbitration shall be at Mumbai in India

18.0 Events of Default

- **18.01** Events of Default. Each of the following events or occurrences shall constitute an event of default ("Event of Default") under the Contract:
 - (a) Supplier fails or refuses to pay any amounts due under the Contract;
 - (b) Supplier fails or refuses to deliver Commodities conforming to this RFQ/ specifications, or fails to deliver Commodities within the period specified in P.O. or any extension thereof



- (c) Supplier becomes insolvent or unable to pay its debts when due, or commits any act of bankruptcy, such as filing any petition in any bankruptcy, winding-up or reorganization proceeding, or acknowledges in writing its insolvency or inability to pay its debts; or the Supplier's creditors file any petition relating to bankruptcy of Supplier;
- (d) Supplier otherwise fails or refuses to perform or observe any term or condition of the Contract and such failure is not remediable or, if remediable, continues for a period of 30 days after receipt by the Supplier of notice of such failure from BRPL.

19.0 Consequences of Default.

- (a) If an Event of Default shall occur and be continuing, BRPL may forthwith terminate the Contract by written notice.
- (b) In the event of an Event of Default, BRPL may, without prejudice to any other right granted to it by law, or the Contract, take any or all of the following actions;
 - (i) present for payment to the relevant bank the Performance Bond;
 - (ii) Purchase the same or similar Commodities from any third party; and/or
 - (iii) Recover any losses and/or additional expenses BRPL may incur as a result of Supplier's default.

20.0 Penalty for Delay

20.01 If supply of items / equipments is delayed beyond the supply schedule as stipulated in purchase order then the Supplier shall be liable to pay to the Purchaser as penalty for delay, a sum of 1% (one percent) of the basic (ex-works) price for every week delay or part thereof for individual mile stone deliveries.

20.02 The total amount of penalty for delay under the contract will be subject to a maximum of ten percent (10%) of the basic (ex-works) price

20.03 The Purchaser may, without prejudice to any method of recovery, deduct the amount for such damages from any amount due or which may become due to the Supplier or from the Performance Bond or file a claim against the supplier.

21.0 Statutory variation in Taxes and Duties

The total order value shall be adjusted on account of any variations in Statutory Levies imposed by Competent Authorities by way of fresh notification(s) within the stipulated delivery period only. However, in case of reduction in taxes, duties and levies, the benefits of the same shall be passed on to BUYER.

22.0 Force Majeure

22.01 General

An "Event of Force Majeure" shall mean any event or circumstance not within the reasonable control directly or indirectly, of the Party affected, but only if and to the extent that:

(i) Such event or circumstance materially and adversely affects the ability of the affected



Party to perform its obligations under this Contract, and the affected Party has taken all reasonable precautions, due care and reasonable alternative measures in order to prevent or avoid the effect of such event on the affected party's ability to perform its obligations under this Contract and to mitigate the consequences thereof.

- (ii)For the avoidance of doubt, if such event or circumstance would not have materially and adversely affected the performance of the affected party had such affected party followed good industry practice, such event or circumstance shall not constitute force majeure.
- (iii)Such event is not the direct or indirect result of the failure of such Party to perform any of its obligations under this Contract.
- (iv)Such Party has given the other Party prompt notice describing such events, the effect thereof and the actions being taken in order to comply with above clause.
- **22.02** Specific Events of Force Majeure subject to the provisions of above clause, Events of Force Majeure shall include only the following to the extent that they or their consequences satisfy the above requirements :

(i)The following events and circumstances:

- a) Effect of any natural element or other acts of God, including but not limited to storm, flood, earthquake, lightning, cyclone, landslides or other natural disasters.
- b) Explosions or fires
- (ii) War declared by the Government of India, provided that the ports at Mumbai are declared as a war zone.
- i. Dangers of navigation, perils of the sea.

22.03 Notice of Events of Force Majeure If a force majeure event prevents a party from performing any obligations under the Contract in part or in full, that party shall:

- i) Immediately notify the other party in writing of the force majeure events within 7(seven) working days of the occurrence of the force majeure event
- **ii)** Be entitled to suspend performance of the obligation under the Contract which is affected by force majeure event for the duration of the force majeure event.
- iii) Use all reasonable efforts to resume full performance of the obligation as soon as practicable
- **iv)** Keep the other party informed of all such efforts to resume full performance of the obligation on a regular basis.
- **v)** Provide prompt notice of the resumption of full performance or obligation to the other party.

22.04 Mitigation of Events of Force Majeure Each Party shall:

- Make all reasonable efforts to prevent and reduce to a minimum and mitigate the effect of any delay occasioned by an Event of Force Majeure including recourse to alternate methods of satisfying its obligations under the Contract;
- Use its best efforts to ensure resumption of normal performance after the termination of any Event of Force Majeure and shall perform its obligations to the maximum extent practicable as agreed between the Parties; and
- Keep the other Party informed at regular intervals of the circumstances concerning the event of Force Majeure, with best estimates as to its likely continuation and what measures or contingency planning it is taking to mitigate and or terminate the Event of Force Majeure.



- **22.05** Burden of Proof In the event that the Parties are unable in good faith to agree that a Force Majeure event has occurred to an affected party, the parties shall resolve their dispute in accordance with the provisions of this Agreement. The burden of proof as to whether or not a force majeure event has occurred shall be upon the party claiming that the force majeure event has occurred and that it is the affected party.
- **22.06** Termination for Certain Events of Force Majeure. If any obligation of any Party under the Contract is or is reasonably expected to be delayed or prevented by a Force Majeure event for a continuous period of more than 3 months, the Parties shall promptly discuss in good faith how to proceed with a view to reaching a solution on mutually agreed basis. If a solution on mutually agreed basis cannot be arrived at within a period of 30 days after the expiry of the period of three months, the Contract shall be terminated after the said period of 30 days and neither Party shall be liable to the other for any consequences arising on account of such termination.
- **22.07** Limitation of Force Majeure event. The Supplier shall not be relieved of any obligation under the Contract solely because cost of performance is increased, whether as a consequence of adverse economic consequences or otherwise.
- **22.08** Extension of Contract Period due to Force Majeure event The Contract period may be extended by mutual agreement of Parties by way of an adjustment on account of any period during which an obligation of either Party is suspended due to a Force Majeure event.
- **22.09** Effect of Events of Force Majeure. Except as otherwise provided herein or may further be agreed between the Parties, either Party shall be excused from performance and neither Party shall be construed to be in default in respect of any obligations hereunder, for so long as failure to perform such obligations shall be due to and event of Force Majeure."

23.0 Transfer and Sub-Letting

23.01 The Supplier shall not sublet, transfer, assign or otherwise part with the Contract or any part thereof, either directly or indirectly, without prior written permission of the Purchaser.

24.0 Recoveries

24.01 Whenever under this contract any money is recoverable from and payable by the bidder, the purchaser shall be entitled to recover such sum by appropriating in part or in whole by detecting any sum due to which any time thereafter may become due from the supplier in this or any other contract. Should the sum be not sufficient to cover the full amount recoverable the bidder shall pay to the purchaser on demand the remaining

25.0 Waiver

25.01 Failure to enforce any condition herein contained shall not operate as a waiver of the condition itself or any subsequent breach thereof.

26.01 Indemnification

Notwithstanding contrary to anything contained in this RFQ, Supplier shall at his costs and risks make good any loss or damage to the property of the Purchaser and/or the other Supplier engaged by the Purchaser and/or the employees of the Purchaser and/or employees of the other Supplier engaged by the Purchaser whatsoever arising out of the negligence of the Supplier while performing the obligations



SECTION - IV: PRICE FORMAT

ITEM DESCRIPTION	QTY	UoM	EX- WORKS RATE PER KM	UNIT FREIGHT	<u>GST</u>	UNIT LANDED	TOTAL LANDED COST
Supply of 66KV Grade XLPE Insulated Aluminum Conductor Power Cable Of Size 1Cx1000	21	КМ					



SECTION VI

BID FORM

То

Head of Department Contracts & Material Deptt. BSES Rajdhani Power Ltd 1st Floor, C Block BSES Bhawan, Nehru Place New Delhi 110019

Sir,

1 We understand that BRPL is desirous of procuring of in its licensed distribution network area in Delhi

2 Having examined the Bidding Documents for the above named works, we the undersigned, offer to deliver the goods in full conformity with the Terms and Conditions and technical specifications as may be determined in accordance with the terms and conditions of the contract.

3 If our Bid is accepted, we undertake to deliver the entire goods as) as per delivery schedule mentioned in Section IV from the date of award of purchase order/letter of intent.

4 If our Bid is accepted, we will furnish a performance bank guarantee for an amount of 10% (Ten)percent of the total contract value for due performance of the Contract in accordance with the Terms and Conditions.

5 We agree to abide by this Bid for a period of days from the due date of bid submission and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

6 We declare that we have studied the provision of Indian Laws for supply of equipments /materials and the prices have been quoted accordingly.

7 Unless and until Letter of Intent is issued, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

8 We understand that you are not bound to accept the lowest, or any bid you may receive.

9 There is provision for Resolution of Disputes under this Contract, in accordance with the Laws and Jurisdiction of Contract.

Dated this..... day of 20

Signature...... In the capacity of

.....duly authorized to sign for and on behalf

of

(IN BLOCK CAPITALS).....



ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed & stamped by the bidder alongwith bid)

BSES Rajdhani Power Ltd (BRPL) intends to use reverse auction through SAP-SRM tool as an integral part of entire tendering process. All bidders who are technocommercially qualified on the basis of tender requirements shall participate in the reverse auction.

The following terms and conditions are deemed as accepted by the bidder on participation in the bid:-

- 1. In case of bidding through Internet medium, bidders are advised to ensure availability of all associated infrastructure as required to participate in the reverse auction event. Inability to bid due to telephone glitch, internet response issues, software & hardware hangs/failures, power failures or any other reason shall not be the responsibility of BRPL.
- 2. In case bidder fails to participate in the reverse auction event due to any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid submitted by them as a part of tender shall be considered as bidder's Final No Regret offer. Any off-line price bids received from a bidder in lieu of non-participation in the reverse auction event shall be rejected by BRPL.
- 3. The bidder is advised to understand the auto bid process t safeguard themselves against any possibility of non-participation in the reverse auction event.
- 4. The bidder shall be prepared with competitive price quotes during the day of reverse auction event.
- 5. The prices quoted by bidder in reverse auction event shall be on FOR Landed cost BRPL Store/site basis inclusive of all relevant taxes, duties, levies, transportation charges etc.
- 6. The prices submitted by the bidder during reverse auction event shall be binding on the bidder.
- 7. The bidder agrees to non-disclosure of trade information regarding bid details e.g. purchase, identity, bid process/technology, bid documentation etc.
- 8. BRPL will make every effort to make the bid process transparent. However award decision of BRPL will be final and binding on the bidder.
- 9. The prices submitted during reverse auction event shall be binding on the bidder.
- 10. No request for Time extension of the reverse auction event shall be considered by BRPL.



SECTION VII

FORMAT FOR EMD BANK GUARANTEE

(To be issued in a Non Judicial Stamp Paper of Rs.50/-purchased in the name of the bank)

Whereas [*name of the Bidder*] (herein after called the "Bidder") has submitted its bid dated [*date of submission of bid*] for the supply of [*name and/or description of the goods*] (here after called the "Bid").

KNOW ALL PEOPLE by these presents that WE [name of bank] at [*Branch Name and address*], having our registered office at [*address of the registered office of the bank*] (herein after called the "Bank"), are bound unto BSES Rajdhani Power Ltd., with it's Corporate Office at BSES Bhawan Nehru Place, New Delhi -110019, (herein after called —the "Purchaser") in the sum of

..... only) for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents.

Sealed with the Common Seal of the said Bank this

___day of_____20

TH E CONDITIONS of this obligation are:

If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or

2. If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity:

- (a) fails or refuses to execute the Contract Form , if required; or
- (b) fails or refuses to furnish the performance security, In accordance with the Instructions to Bidders/ Terms and Conditions;

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that is its demand the purchaser will note that amount claimed by it is due to it, owing to the occurrence of one or both of the two condition(s), specifying the occurred condition or condition(s).

This guarantee will remain in force up to and including Ninety(90) days after the due date of submission bid, and any demand in respect thereof should reach the Bank not later than the above date.

(Stamp & signature of the

bank) Signature of the

witness(s)



SI N	Item Description	AS PER BRSPL	BIDDER'S CONFIRMATIO
1	Validity	90 days from the date of offer.	
2	Price basis	 a) Firm, FOR Delhi store basis. Prices shall be inclusive of all taxes & duties, freight up to Delhi stores. b) Unloading at stores shall be in vendor's scope 	
3	Payment terms	100% payment within 45 days after receipt of material at stores	
4	Delivery schedule	Within SIX Months.	
5	Defect Liability period	60 months after commissioning or 66 months from the last date of dispatch, whichever is earlier	
6	Penalty for delay	1% per week of delay of undelivered units or part thereof subject to maximum of 10% of total PO value of undelivered units	
7	Performance Bank Guarantee	10% of total PO value valid for 24 months after commissioning or 30 months from the last date of dispatch, whichever is earlier plus 3 months towards claim period	

COMMERCIAL TERMS AND CONDITIONS

Bidder should also furnish the below details for future communication:-

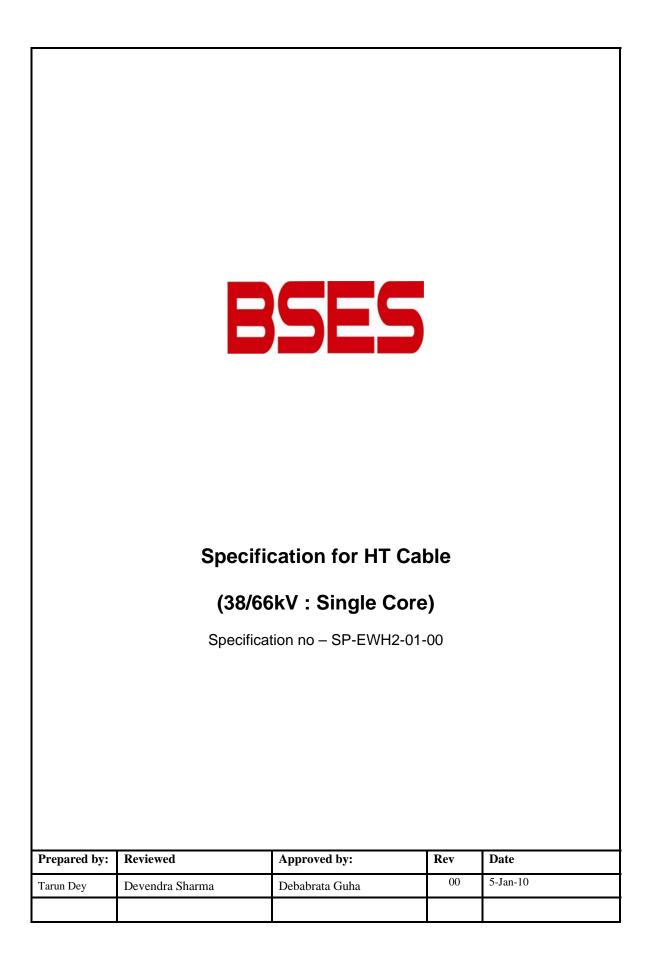
FOR TECHNICAL QUERY:		
CONTACT PERSON & DESIGNATION	NAME	DESIGNATION
E-MAIL	MOBILE NO	TELEPHONE NO

FOR COMMERCIAL QUERY:		
CONTACT PERSON & DESIGNATION	NAME	DESIGNATION
E-MAIL	MOBILE NO	TELEPHONE NO



CHECK LIST

SI No	Item Description	YES/NO
1	INDEX	YES/NO
2	COVERING LETTER	YES/NO
3	BID FORM (UNPRICED) DULY SIGNED (IN DUPLICATE)	YES/NO
4	BILL OF MATERIAL (UNPRICED) (IN DUPLICATE)	YES/NO
5	TECHNICAL BID(IN DUPLICATE)	YES/NO
6	ACCEPTANCE TO COMMERCIAL TERMS AND CONDITIONS	YES/NO
7	FINANCIAL BID (IN SEALED ENVELOPE – 1 ORIGINAL)	YES/NO
8	EMD IN PRESCRIBED FORMAT	YES/NO
9	DEMAND DRAFT OF RS 1000/- DRAWN IN FAVOUR OF	BSES RAJDHANI POWER LTD
10	POWER OF ATTORNEY/AUTHORISATION LETTER FOR SIGNING THE BID	YES/NO





Index

1.0.0	1.0.0 Codes & standards3		
2.0.0	Cable design features3		
3.0	Quality assurance		
4.0	Inspection & testing6		
5.0.0	Drawings, Data & manuals7		
6.0.0	Shipping, Handling and Site support8		
7.0.0	0 Progress reporting9		
8.0	Deviations10		
Anne	xure - A Scope of supply11		
Anne	xure – B Service Conditions13		
Anne	xure – C Guaranteed Technical Particulars (Data by Supplier)14		
Anne	xure –D Cross Sectional Drawing (Data by Supplier)		



1.0.0 Codes & standards

Materials and methods used in the manufacture of Cables shall conform to the latest edition of following –

Indian Standards

IS-8130	Conductor for insulated electric cables & flexible cords	
IS-5831	PVC insulation and sheath of electric cables	
IS-3975	Mild steel wires strips and tapes for armoring cables	
IS-5216	Guide for safety procedures and practices in electrical works	
IS-7098 (Part – III)	Cross-linked polyethylene insulated thermoplastic sheathed cables specification.	
IS – 10810:1984	Methods of test of cables	

IEC Standards

IEC-60811	Common test methods for insulating and sheathing materials of electric cables and optical cables
IEC-60228	Conductor for insulated cables
IEC-60840	Power cable with extruded insulation and their accessories for rated voltage above 30kV up to 150kV- Test methods and requirements

2.0.0 Cable design features

(Refer Annexure – "D")

2.1.0	Manufacturing process	The cable shall be manufactured by "Tripple head
		extrusion process". The conductor screen , Insulation &
		Insulation screen shall ALL be extruded in SINGLE
		POINT AT ONE TIME PROCESS to ensure
		homogeneity and reduction of voids, in the insulation
		and the screening system of the cable, whereby
		enhancing the life of the cable. The cable shall be
		strictly manufactured by "DRY CURED" process.
2.2.0	Conductor	Electrolytic grade aluminium conductor shall consist of
		flexibility class-2 in accordance with IS 8130/IEC 228.
		The shape of conductor shall be compacted, stranded,
		and circular. Milliken type construction will be preferred
		for cable size of 1000 sqmm or greater.



g powder/fibres in the pwder/fibre/yarn shall
water
shall be applied over
ontinuous operating
st of extruded semi-
fully compatible with
ion. Outer surface of
supper smoothing,
to the overlaying
hall be of very high
ckness shall not be
in annexure C. The
shall not be less by
value. Percentage
I not be more than
st of extruded semi-
fully compatible with
reen shall be firmly
Borealis
e acceptable unless
oved by BSES prior
ufacturing of cable.
more than 5%.
apes shall be applied
core screening.
of a layer of copper
pplied in helical form
apes shall be applied



	provided)		
2.13.0	Characteristic of water	a) Nominal thickness = 0.3mm	
	swellable bedding	b) Swell height shall be >= 12mm in one minute.	
2.14.0	Metallic sheath	The metallic sheath shall consist of EITHER lead alloy 'E' seamless sheathing with minimum thickness in accordance with Table-6 of IS 7098 Part – III (1993) OR corrugated aluminium sheathing with minimum thickness of 1.75mm and nominal thickness of 1.8mm, provided with high-viscosity bitumen-based compound coating, in conjunction with textile tape as carrier material for corrosion protection of the outer surface of corrugated aluminium sheathing. Further the corrugations shall be filled with compatible filler material to provide smooth round surface over the aluminium corrugated sheathing, so as to prevent ingress / traveling of water along the corrugations.	
2.15.0	Outer Jacket	The outer jacket shall consist of extruded black colored HDPE type ST 7 with anti termite protection. The minimum thickness at any point shall not fall below 85% of the nominal thickness by more than 0.1mm. Nominal thickness shall be 4mm.	
2.16.0	Semi conductive layer over	Semi conductive layer shall be either extruded or	
	the outer jacket	graphite coating	
2.17.0	Cable Rating	The cable size shall be suitable to carry rated load current on 66KV continuously without exceeding the maximum conductor temperature of 90 deg. C.	
2.18.0	Drum Length	 500 Mtr +- 5 % (short lengths not acceptable except the last length and minimum acceptable short length shall be 250 mtrs.). The overall quantity tolerance shall be as purchase order. Manufacturer shall not be allowed to put two cable pieces of different short length in same cable drum. 	
2.19.0	Embossing	The extruded outer sheath shall be embossed with meter marking at interval of 1 metre. The "A" end meter marking and "Z" end meter marking and the drum lengths shall be printed on the drum flange along with	



other	markings. The outer sheath shall also be			
	C			
embo	ossed with (min.)			
a	a) Voltage designation			
b) Type of construction/cable code (e.g. A2X2Y)			
с	Number of core and nominal cross sectional			
	area.			
d) Type of cable "Electric Cable"			
e) Manufacturers name & trade mark				
f)	Name of buyer (e.g. BSES)			
g) Month & year of manufacturing			
h) Batch no / Lot no.			
i)	Sequential length marking.			
	a b c; d			

3.0 Quality assurance

3.1.0	Vendor quality plan	To be submitted for purchaser approval
3.2.0	Inspection points	To be mutually identified & agreed in quality plan

4.0 Inspection & testing

4.1.0	Routine test	Each drum length of cable shall be subjected to the following tests	
		- Measurement of the electrical resistance of the conductor shall be	
		carried out as per the provisions of Clause 10.5 of I.E.C.	
		Publication No.60840 The measurement shall be made on the	
		conductors of each cable length. The D.C. resistance of the	
		conductor at 20 deg. C shall not exceed the maximum value	
		specified in I.E.C. Publication No.60228.	
		- High voltage test with power frequency alternating voltage applied	
		between conductor and sheath as per clause 9.3 of IEC-60840	
		- Partial discharge test shall be carried out as per clause 9.2 of IEC	
		Publication No.60840.	
		- Test on outer jacket as per Clause 3 of IEC 60229	
		- Measurement of capacitance as per clause 10.10 of IEC60840	
4.2.0	Type test	-The cable shall be of "type tested" quality. Type test report of not	



	1		
		more than five (5) years shall be submitted for the type, size and	
		rating of the cable offered, along with the bid.	
		-If the manufacturer's lab is accredited by govt./authorized body	
		then it shall be acceptable for type testing.	
		-All type tests shall be carried out in accordance with Clause 12 of	
		IEC-60840 and in accordance with the sequence prescribed	
		therein.	
4.3.0	Acceptance	Shall be conducted as per IEC: 60840 / IS: 7098 (P-3) and	
	Tests	approved QA plan for each lot of cable.	
4.4.0	Special Tests	The following tests shall be carried out as special tests	
		- Conductor examination as per Clause 10.4 of IEC-60840.	
		- Measurement of thickness of insulation as per Clause 10.6 of IEC-	
		60840 and Clause 8 of IEC-60811-1-1.	
		- Measurement of thickness and overall dimensions as per Clause	
		8 of IEC-60811-1-1	
		- Measurement of thickness of metallic sheath as per Clause 10.7	
		of IEC-60840	
		-Measurement of external diameter as per Clause 8.3 of	
		IEC-60811-1-1	
		- Hot set test for XLPE insulation as per Clause 10.9 of IEC-60840	
4.5.0	Inspection	-The buyer reserves the right to witness all tests specified on	
		completed cables	
		-The buyer reserves the right to inspect cables at the Seller's works	
		at any time prior dispatch, to verify compliance with the	
		specifications.	
		-In-process and final inspection call intimation shall be given in	
		advance to purchaser.	
4.6.0	Test certificates	Three sets of complete test certificates shall be submitted along	
		with the dispatch documents.	
		I	

5.0.0 Drawings, Data & manuals

5.1.0	То	be	submitted	The seller has to submit:
	alonę	g with	bid	a) Cross sectional drawing of cable.
				b) Completely filled GTP
				c) Type test certificates
				d) Dimensional drawing for pulling eye



		e) Fault level calculation
		f) Complete cable catalogue and manual
5.2.0		Within 15 days, the seller has to submit four sets of above
		mentioned drawings along with one soft copy for buyer's
		approval.
5.3.0	Submittals required	a) Inspection and test reports, carried out in manufacturer's
	prior to dispatch	works (R)
		b) Test certificates of all bought out items.
5.4.0	Drawing and	Standard size paper A0, A1, A2, A3, A4
	document sizes	
5.5.0	No. of drags. /	As per Annexure - A
	Documents required	
	at different stages	

6.0.0 Shipping, Handling and Site support

6.1.0	Packing	-The cable shall be wound on non-returnable steel	
		drums of suitable size of minimum hub diameter of 20D	
		(where D is the overall diameter of the cable) and	
		packed conforming to international standards. The drum	
		shall be fully enclosed by continuous metallic cladding.	
		Cable shall have sea worthy packing in case cables are	
		dispatched by shipping lines.	
6.2.0	Pulling eye & sealing of	-A cable pulling eye shall be provided at "Z" end of	
	Cable ends	cable on each drum. Suitable fillings/putty shall be used	
		for sealing gap between outer sheath and pulling eye.	
		Heat shrinkable sleeves with the pulling eye shall also	
		be provided. The pulling eye shall be directly	
		connected to the conductor and be capable to withstand	
		a tensile load of 30N / sqmm of conductor area. The "A"	
		end of the cable shall be sealed with filling	
		material/putty and heat shrinkable cap.	
6.3.0	Drum identification label	The following information shall be marked on the drum:	
		- Drum identification number.	
		- Trade name or trade mark; if any	



		- Name of manufacturer	
		- Nominal sectional area of the conductor of the cable	
		- Type of cable and voltage for which it is suitable	
		- Length of the cable on the drum, with "A" end and "Z" end markings.	
		- Purchase order number with SAP item code.	
		- Year and month of manufacturing.	
		- Direction of rotation of drum (an arrow) and	
		- Net weight of cable in drum and gross weight of cable with drum.	
		- Batch no or Lot no.	
6.4.0	Shipping	The seller shall give complete shipping information concerning the gross weight, size of each packing.	
6.5.0	Handling & Storage	Manufacturer instruction shall be followed. Detail handling & storage instruction sheet / manual neds to be furnished before commencement of supply.	
6.6.0	Transit damage	The seller shall be responsible for any transit damage due to improper packing.	

7.0.0 Progress reporting

7.1.0	Outline Document	To be submitted for purchaser approval for outline of production, inspection, testing, packing, dispatch, documentation programmer.
7.2.0	Detailed Progress report	 To be submitted to Purchaser once a month containing a) Progress on material procurement. b) Progress on internal stage inspection c) Reason for any delay in total programme. d) Details of test failures if any in manufacturing stages e) Progress on final box up. f) Constraints / forward path



8.0 Deviations

8.0.0	Deviation from the Specification.	Deviations from this Specification shall be
0.0.0	Deviation nom the opecification.	
		stated in writing with the tender by
		reference to the Specification
		clause/GTP/Drawing and a description of
		the alternative offer. In absence of such a
		statement, it will be assumed by the Buyer
		that the Seller complies fully with this
		specification.



Annexure - A Scope of supply

1.0 The scope of supply shall include following

- 1.1 Design, manufacture, testing at manufacturer works before dispatch, packing, delivery including unloading and stacking at site/store of 38/66kV single core cable as per BOQ and submission of all documents.
- 1.2 BOQ as following -

Sr	Purchaser	Material/Equipment	Location	Unit	Quantity
No	Equipment Tag	description			
	No / SAP code				
1			e.g. Delhi	km	e.g. 10
2			e.g. Goa	km	e.g. 10
3					
4					
5					
6					
7					

2.0 Submission of documents

	Along with offer	For Approval	Final after	Remarks
		after award of	approval	
		contract		
Detailed	3 copies (Typical	4 copies	6 copies + 1 soft	
dimensional	drgs)		copy in CD	
cross-sectional				
drawing of the				
cable				
Type test	2 copies (Type		6 copies + 1 soft	Type test and
certificates.	test and sample		copy in CD	sample Routine
	Routine Test)			test reports
Guaranteed	3 copies	4 copies	6 copies + 1 soft	
technical			copy in CD	
particulars of				
each type of				
cable				

SPECIFICATION FOR HT CABLE



Dimensional	3 copies	4 copies	6 copies + 1 soft
drawing for			copy in CD
pulling eye.			
Rating factors	3 copies	4 copies	6 copies + 1 soft
			copy in CD
Complete cable	1 сору		6 copies + 1 soft
catalogue and			copy in CD
Manual			
1 Sec rating	3 copies	4 copies	6 copies + 1 soft
calculation for	(Typical)		copy in CD
metal sheath			
and copper			
screen (if			
applicable)			

3.0 Delivery schedule

- 3.1 Delivery period start date
- 3.2 Delivery period end date
- 3.3 Material dispatch clearance
- from date of LOI
- as agreed with supplier
- after inspection by purchaser

Seismic Zone

Rainfall

e)

f)



Annexure – B Service Conditions

1.0.0	Mumbai Atmospheric conditions	
a)	Average grade atmosphere :	Heavily polluted , salt Laden, dusty, humid with possibility of condensation
	Maximum altitude above sea level	1000 M
b)	Ambient Air temperature	Highest 45 deg C, Average 35 deg C
	Minimum ambient air temperature	deg C
c)	Relative Humidity	95 % Max
d)	Thermal Resistivity of Soil	150 Deg.C cm/W
e)	Seismic Zone	3
f)	Rainfall	3000 mm concentrated in four months
	·	
2.0.0	Delhi Atmospheric conditions	
a)	Average grade atmosphere :	Heavily polluted, dry
	Maximum altitude above sea level	1000 M
b)	Ambient Air temperature	Highest 50 deg C, Average 40 deg C
	Minimum ambient air temperature	Deg C
C)	Relative Humidity	90 % Max
d)	Thermal Resistivity of Soil	150 Deg.C cm/W

4

750 mm concentrated in four months



Sr.	Description	Unit	Data specified by the purchaser	Data to be filled by the manufacturer
4	Nome of monutesturer			
1	Name of manufacturer			
	Country of manufacturer			
4	Type of cable			
4	Standard according to which cable is manufactured			
5	Rated voltage	kV	38/66	
	•	kV kV	72.5	
	Highest system voltage	KV Hz		
7	System frequency No of phases per circuit	Nos	50	
9	System earthing	INUS	Solidly	
9	System eartning		grounded	
10	Rated short time current of	kA	grounded	
10	conductor	KA		
11	Rated short time current of metal	kA		
''	sheath (alone)			
12	Rated short time current of metal	kA		
	screen (if provided)	10 1		
13	Rated short time current of metal	kA	19	
	sheath and screen	10 (10	
14	Duration of short circuit current	Sec	1	
15	Impulse withstand voltage 1.2/50	kVp	325	
	micro sec wave			
16	Power frequency withstand voltage	kV(rms)	140	
17	Conductor			
	Nominal cross sectional area	sqmm	1000 / 630	
b	Type class of conductor.	oqiiiii	Compacted	
Ĩ			Stranded	
			Circular	
С	Material of conductor		Aluminum	
d	Flexibility class of conductor		Class -2	
е	Minimum numbers of strands	Nos		
f	Diameter of strands before	Mm / mm		
	compaction. (nominal / Minimum)			
g	Material of longitudinal water			
Ĭ	sealing filling of conductor			
18	Details of semi conducting tape			
	over the conductor			
19	Conductor Screen			
а	Material and type			
b	Minimum thickness	mm	0.8	
С	Make and grade of semi conducting compound.			
	<u> </u>			

Annexure – C Guaranteed Technical Particulars (Data by Supplier)

SPECIFICATION FOR HT CABLE



Sr.	Description	Unit	Data specified by the purchaser	Data to be filled by the manufacturer
19	Insulation		•	
а	Material of Insulation		XLPE	
В	Nominal thickness	Mm	11	
С	Minimum thickness		9.9	
	Make and grade of insulation			
	compound			
	Maximum dielectric stress at the conductor surface	kV/mm		
20	Insulation screen			
а	Material and type			
b	Minimum thickness	mm	0.8	
С	Make and grade of semi conducting compound.			
21	Inner water swellable tape			
а	Nominal thickness	mm	0.3	
a	Minimum swell height in one minute.	mm	12 mm in one minute	
22	Copper wire screening and the copper tape (if required to meet the short circuit rating)			
а	Number of wire	Nos		
В	Diameter of wire	mm		
С	Thickness and width of copper tape	mm / mm		
23	outer water swellable tape (if required)	mm		
а	Nominal thickness	mm	0.3	
b	Minimum swell height in one minute.	mm	12 mm in one minute	
24	Nominal diameter under metal sheath	mm		
25	Material of the metal sheath		Lead alloy E or corrugated aluminium(with corrosion protection & corrugation filling)	
26	Minimum thickness of lead alloy "E" sheath	mm	2.2	
27	Minimum thickness of Corrugated Aluminium sheath	mm	1.75	
28	Nominal radial clearance allowed under metal sheath (in case of corrugated aluminium sheathing)	mm	As per mfg. stnd.	
29	Nominal diameter over metal sheath	mm		
Sr.	Description	Unit	Data specified	Data to be



30 Outer jacket HDPE type ST 7 a Material and type HDPE type ST 7 b Minimum thickness mm 4 d Anti ternite treated? Yes / No 31 Material of semi-conductive coating/extrusion over the outer jacket Extruded coating/extrusion over the outer dots and the set of the s		filled by manufac	by the purchaser			
b Minimum thickness mm 3.3 c Nominal thickness mm 4 d Anti ternite treated? Yes / No 31 Material of semi-conductive coating/extrusion over the outer jacket Extruded or 32 AC test voltage at works for insulation. FXV(rms) 90 33 DC test voltage at works for outer jacket. KV(rms) 90 41 Overall dia of completed single core cable mm 25 42 Weight per metre of complete cable Kg/m 25 43 Short circuit capacities with maximum conductor temperature of 90 Deg C at the commencement of short circuit) KA 0.5 second duration 1 second duration 2 second duration 1 second duration 3 second duration 3 second duration 44 Minimum radius of bend round is up for cable. mm 45 Maximum D.C .resistance of conductor per KM at 20 deg. C Ohm 46 Maximum AC resistance of conductor per KM at 90 deg. C Ohm 47 Equivalent star reactance per KM Ohm 1 of 3 phase circuit at 50 Hz Ohm 48 Maximum electrostatic pf </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>30</td>						30
c Nominal thickness mm 4 d Anti termite treated? Yes / No 31 Material of semi-conductive coating/extrusion over the outer jacket Extruded or Graphite coating 32 AC test voltage at works for insulation. KV(rms) 90 33 DC test voltage at works for outer jacket. KV (DC) 25 41 Overall dia of completed single core cable mm 25 42 Weight per metre of complete cable Kg/m 26 43 Short circuit capacities with maximum conductor temperature of 250Deg C KA 44 0.5 second duration 1 second duration 2 second duration 3 second duration mm 2 44 Minimum radius of bend round : which cable can be laid a) mm 0.0469 for 630 sqmm and 0.0291 for 1000 sqmm Cable. 45 Maximum D.C. resistance of : conductor per KM at 20 deg. C Ohm/km 0.0469 for 630 sqmm and 0.0291 for 1000 sqmm Cable. 46 Maximum AC resistance of : conductor per KM at 90 deg. C Ohm 2 47 Equivalent star reactance per KM i: conductor per KM at 90 deg. C Ohm 2 48 Maximum electrostatic capacitance : pf 2 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
d Anti termite treated? Yes / No 31 Material of semi-conductive coating/extrusion over the outer jacket or 32 AC test voltage at works for insulation. Graphite coating 33 DC test voltage at works for outer jacket. KV(rms) 90 33 DC test voltage at works for outer jacket. KV (DC) 25 41 Overall dia of completed single core cable Mmm 25 42 Weight per metre of complete cable Kg/m 26 43 Short circuit capacities with maximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) KA 0.5 Second duration 2 2 1 Second duration 2 3 2 Second duration mm 3 3 second duration mm 3 2 second duration mm 3 3 second duration mm 3 2 second duration semm and 0.0291 for 1000 sqmm and 0.0291 for 1000 sqmm and 0.0291 for 1000 sqmm Cable. 45 Maximum AC resistance of Ohm Minimum AC resistance of Ohm Cable.				mm		b
31 Material of semi-conductive coating/extrusion over the outer jacket Extruded or Graphite coating/ 32 AC test voltage at works for insulation. 90 33 DC test voltage at works for outer jacket. KV (DC) 25 41 Overall dia of completed single core cable mm 24 42 Weight per metre of complete kg/m kA aximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) 0.5 second duration 0.0 2 second duration 2 second duration 2 second duration 2 second duration 3 second duration 3 b In ducts 0.0469 for 630 sqmm and 0.0291 for 1000 sqmm Cable. 44 Minimum radius of bend round mm 0.0291 for 1000 sqmm Cable. 45 Maximum D.C. resistance of iconductor temperature of Ohm/km 0.0469 for 630 sqmm and 0.0291 for 1000 sqmm Cable. 46 Maximum AC resistance of iconductor per KM at 20 deg. C Ohm Cable. 47 Equivalent star reactance per KM Ohm Cable. 48 Maximum electrostatic per KM Ohm Gamma cable.				mm		-
coating/extrusion over the outer jacket or 32 AC test voltage at works for insulation. KV(rms) 90 33 DC test voltage at works for outer jacket. KV (DC) 25 41 Overall dia of completed single core cable mm core cable 42 Weight per metre of complete cable Kg/m cable 43 Short circuit capacities with maximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) KA 0.5 second duration 1 second duration 1 second duration a second duration a second duration 2 Weight per KM at 20 deg. C Ohm/km 0.0469 for 630 sqmm and 0.0291 for 1000 sqmm cable. 45 Maximum D.C :resistance of iconductor per KM at 90 deg. C Ohm cable. 46 Maximum AC resistance of iconductor per KM at 90 deg. C Ohm cable. 47 Equivalent star reactance per KM Ohm cable. 48 Maximum electrostatic pf Ohm f 2 id 3 phase circuit at 50 Hz pf capacitance i						
jacket Graphite coating 32 AC test voltage at works for insulation. KV(rms) 90 33 DC test voltage at works for outer jacket. KV (DC) 25 41 Overall dia of completed single core cable mm 25 42 Weight per metre of complete cable KV (DC) 25 43 Short circuit capacities with maximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) KA 0.5 second duration 1 second duration 2 second duration 3 second duration mm						31
Cooking Cooking 32 AC test voltage at works for insulation. KV(rms) 90 33 DC test voltage at works for outer jacket. KV (DC) 25 41 Overall dia of completed single core cable mm 25 42 Weight per metre of complete cable Kg/m 26 43 Short circuit capacities with maximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) KA 0.5 second duration 1 second duration 1 second duration 3 2 second duration mm 3 beck can be laid 0.0469 for 630 a) Direct burial in ground b) In ducts 44 Maximum D.C .resistance of conductor per KM at 20 deg. C Ohm/km 0.0469 for 630 45 Maximum AC resistance of conductor per KM at 90 deg. C Ohm Cable. 46 Maximum AC resistance of conductor per KM at 90 deg. C Ohm Cable. 47 Equivalent star reactance per KM Ohm Cable. 48 Maximum electrostatic capacitance : pf gacitance :					0	
32 AC test voltage at works for insulation. KV(rms) 90 33 DC test voltage at works for outer jacket. KV (DC) 25 41 Overall dia of completed single core cable mm 25 42 Weight per metre of complete cable Kg/m 26 43 Short circuit capacities with maximum conductor temperature of 250Deg C KA KA 43 Second duration tircuit kA KA 0.5 second duration 1 second duration 2 second duration 3 second duration 3 second duration mm 2 44 Minimum radius of bend round mit mm 2 45 Maximum D.C .resistance of .conductor per KM at 20 deg. C Ohm/km 0.0469 for 630 sqmm and 0.0291 for 1000 sqmm Cable. 46 Maximum AC resistance of .conductor per KM at 90 deg. C Ohm 2 47 Equivalent star reactance per KM .coluctor per KM at 90 deg. C Ohm 2 47 Equivalent star reactance per KM .capacitance : pf 2					јаскет	
33 DC test voltage at works for outer jacket. KV (DC) 25 41 Overall dia of completed single core cable mm 25 42 Weight per metre of complete cable Kg/m 26 43 Short circuit capacities with maximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) KA 0.5 second duration 1 second duration 2 second duration 3 second duration 3 second duration 4 Minimum radius of bend round b) mm 44 Minimum radius of bend round b) mm 45 Maximum D.C .resistance of conductor per KM at 20 deg. C Ohm/km 0.0469 for 630 sqmm and 0.0291 for 1000 sqmm Cable. 46 Maximum AC resistance of conductor per KM at 90 deg. C Ohm Cable. 47 Equivalent star reactance per KM Ohm Cable. 48 Maximum electrostatic per KM pf gaacitance :				KV(rms)		32
41 Overall dia of completed single core cable mm 42 Weight per metre of complete cable Kg/m 43 Short circuit capacities with maximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) KA 0.5 second duration 1 1 second duration 2 2 second duration 2 3 second duration 3 2 second duration 2 3 second duration 3 44 Minimum radius of bend round in ground b) mm 44 Maximum D.C. resistance of conductor per KM at 20 deg. C Ohm/km 0.0469 for 630 sqmm and 0.0291 for 1000 sqmm Cable. 45 Maximum AC resistance of in conductor per KM at 20 deg. C Ohm Cable. 46 46 Maximum AC resistance of in conductor per KM at 90 deg. C Ohm Cable. 47 47 Equivalent star reactance per KM Ohm Ohm Cable. 48 48 Maximum electrostatic capacitance : pf graphical for spreadition for spreadition for spreadition for spreadition for spreadition for spreadition for spreaditin for spreadition for spreaditin for spreadition for sp			25	KV (DC)	DC test voltage at works for outer	33
cable KA 43 Short circuit capacities with maximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) KA 0.5 second duration second duration 1 second duration second duration 2 second duration mm 44 Minimum radius of bend round mm which cable can be laid mm a) Direct burial in ground mm b) In ducts 0.0469 for 630 45 Maximum D.C .resistance of Ohm/km 0.0469 for 630 conductor per KM at 20 deg. C sqmm and 0.0291 for 46 Maximum AC resistance of Ohm Cable. 47 Equivalent star reactance per KM Ohm cable 48 Maximum electrostatic pf space 48 Maximum electrostatic pf space				mm	Overall dia of completed single	41
maximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) 0.5 second duration 1 second duration 1 second duration 2 second duration 2 second duration mm 44 Minimum radius of bend round mm which cable can be laid a) a) Direct burial in ground b) In ducts 45 Maximum D.C .resistance of Ohm/km 0.0469 for 630 sqmm and 0.0291 for 1000 sqmm Cable. 46 Maximum AC resistance of Ohm 47 Equivalent star reactance per KM Ohm 48 Maximum electrostatic capacitance : pf				-	cable	
: which cable can be laid a) Direct burial in ground b) In ducts				kA	maximum conductor temperature of 250Deg C : (conductor temperature of 90 Deg C at the commencement of short circuit) 0.5 second duration 1 second duration 2 second duration	43
: conductor per KM at 20 deg. Csqmm and 0.0291 for 1000 sqmm Cable.46Maximum AC resistance of : conductor per KM at 90 deg. COhm47Equivalent star reactance per KM : of 3 phase circuit at 50 HzOhm48Maximum electrostatic capacitance :pf				mm	: which cable can be laid a) Direct burial in ground	44
: conductor per KM at 90 deg. C 47 Equivalent star reactance per KM 0f 3 phase circuit at 50 Hz 48 Maximum electrostatic capacitance :			sqmm and 0.0291 for 1000 sqmm	Ohm/km	:	45
47 Equivalent star reactance per KM Ohm of 3 phase circuit at 50 Hz Ohm 48 Maximum electrostatic capacitance : pf				Ohm	:	46
of 3 phase circuit at 50 Hz 48 Maximum electrostatic capacitance :				Ohm		47
48 Maximum electrostatic pf capacitance :				Cinit	:	
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				Ч	capacitance :	-0
Sr. Description Unit Data specified Data to	to be	Data to	Data specified	Unit		Sr.



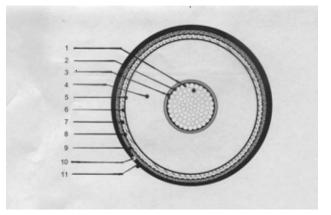
			by the purchaser	filled by the manufacturer
49	Maximum continuous current carrying : Capacity per circuit when laid in ground as per the following parameters (with screens cross bonded) -Maximum continuous conductor temperature of 90Deg C -Maximum conductor temperature during short circuit of 250 Deg C -Ground temperature of 30 DegC -Soil resistivity of 150DegC- cm/Watt -Depth of laying of 150cm	Amp		
	a. In tri-foil touching formation b. In flat formation with d+70cm			
50	Maximum continuous current carrying : Capacity per cable when laid in air with ambient temperature of 40DegC and other parameters as per SI no 49 (with screens cross bonded)	Amp		
	a. In tri-foil touching formation b. In flat formation with d+70cm			
51	Rating factors for ambient air temperature attached(Yes/No)			
52	Rating factors for ground temperature attached(Yes/No)			
53	Rating factors for phase spacing in flat formation attached(Yes/No)			
54	Rating factors for grouping of cable laid in ground in horizontal formation attached(Yes/No)			
55	Rating factors for grouping of cable laid in ground in tri-foil touching formation attached(Yes/No)			
56	Rating factors for thermal resistivity of soil attached(Yes/No)			
57	Rating factors for depth of laying attached(Yes/No)			
58	Max. power factor of charging KVA of : cable when laid direct in the ground at normal voltage frequency at conductor temperature at 90Deg .C			
Sr.	Description	Unit	Data specified	Data to be



			by the purchaser	filled by the manufacturer
59	Max. dielectric power loss of cable per : KM of 3 phase circuit laid direct in ground at normal voltage, frequency and maximum conductor temperature of 90 Deg C	Watt/km		
60	 Sheath loss of cable per KM of 3 phase : circuit at normal voltage frequency at maximum continuous current rating. a) Laid direct in ground b) Drawn into ducts c) Installed in air 	Watt/km		
61	Impedance per KM of 3 phasecircuitat 50 C/s and maximum conductortemperature.a)Positive and negativesequenceb)Zero sequence	Ohm		
62	Standard drum length of cable	Metres	500 +/- 5% (short lengths not acceptable except the last length	
63	The overall quantity tolerance	%		
64	Cable to be wound on non returnable steel drum.	Yes / no	Yes	
65 66	Normal delivery length Cable pulling Eye to be provided at "Z" end	Metres		
67	Tensile load withstand capacity for pulling eye		30 N / sqmm	
68	Approximate shipping weight for the normal deliver length with the drum size (flange dia. in mm and width in mm):	kg		
69	Drum size (Flange dia X flange width X hub dia)			
70	Embossing details on outer jacket			
71	Sequential marking at every meter.		Provided	
72	Process of cross linking of polyethylene.			



Annexure –D Cross Sectional Drawing (Data by Supplier)



Pictorial	Reference	Description	Nominal	Nominal
Label No.	Clause No		Thickness	Diameter in mm
			in mm	
1	4.2 & 4.3	Compacted, stranded,		
		circular aluminium conductor		
2	4.4	Semi-conducting separator		
		tape		
3	4.5	Conductor screen		
4	4.6	XLPE insulation		
5	4.7	Insulation screen		
6	4.8	Inner longitudinal water		
		sealing bedding		
7	4.9	Metal screening of copper		
		wire followed by a copper		
		tape applied in helical form		
		(if required)		
8	4.10	Outer longitudinal water		
		sealing bedding (if required)		
9	4.11	Metallic sheath (Lead Alloy		
		"E" sheath or corrugated		
		aluminium sheathing with		
		coating and filling)		
10	4.12	HDPE outer jacket		
11	4.13	Semi-conductive		
		extrusion/Graphite coating		

Net weight of cable : kg/m

Name of manufacturer: Drawing No and date: