



**BSES RAJDHANI POWER LTD.**

**Tender Notification for**

**“AWARD OF WORK FOR RENOVATION OF EXISTING CONTROL AND RELAY PANELS,  
SWITCHGEAR PANELS INCLUDING REPLACEMENT OF OLD RELAYS FOR 66/33/11KV AT  
VARIOUS GRID SUBSTATIONS OF BRPL”**

**NIT NO: CMC/BR/21-22/RB/CR/AG/0966 DT: 27.11.2021**

**Due Date for Submission of Tender: 17.12.2021, 3:45 PM**

**Date and Time of opening: 17.12.2021, 4:00 PM**

**BSES RAJDHANI POWER LIMITED,**

**BSES Bhawan, Nehru Place, New Delhi-110019**

**Corporate Identification Number: U74899DL2001PLC111527**

**Telephone Number: +91 11 49207235**

**Website : [www.bsedelhi.com](http://www.bsedelhi.com)**

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**SECTION - I****REQUEST FOR QUOTATION****1.1 GENERAL:**

BSES RAJDHANI Power Limited invites sealed tenders in **2 envelopes** for “**AWARD OF WORK FOR RENOVATION OF EXISTING CONTROL AND RELAY PANELS, SWITCHGEAR PANELS INCLUDING REPLACEMENT OF OLD RELAYS FOR 66/33/11KV AT VARIOUS GRID SUBSTATIONS OF BRPL**”.

The bidder must qualify the requirements as specified in clause 1.2 stated below. **The sealed envelopes shall be duly superscribed as-**

**“BID FOR AWARD OF WORK FOR RENOVATION OF EXISTING CONTROL AND RELAY PANELS, SWITCHGEAR PANELS INCLUDING REPLACEMENT OF OLD RELAYS FOR 66/33/11KV AT VARIOUS GRID SUBSTATIONS OF BRPL”.**“ NIT NO: CMC/BR/21-22/RB/CR/AG/0966 DT: 27.11.2021”.

Sl. No.	Item Description	Specification	Requirement	Estimated Cost
			Total Qty. In LS	
<b>BRPL,DELHI</b>				
<b>1</b>	<b>RENOVATION OF EXISTING CONTROL AND RELAY PANELS, SWITCHGEAR PANELS INCLUDING REPLACEMENT OF OLD RELAYS FOR 66/33/11KV AT VARIOUS GRID SUBSTATIONS OF BRPL</b>	<b>SECTION V</b>	<b>1</b>	<b>Rs 1.80 CR</b>

The summary details of various schemes covered in this tender are as under:-

S.N	Scheme Number	Details of Grids Covered
1.	ES21MS4003	C Block Vasant Kunj & D Block Vasant Kunj Grid Substations
2.	ES20MS4019	Mathura Road, Sarita Vihar & Alaknanda Grid Substations.
3.	ES20MS4014	Tughlakabad Grid Substation
4.	EW21MS4003	Mukerjee Park & Vishal Grid Substations.
5.	EW21MS4006	G2 Pappankalan Grid Substation.
6.	ES20MS4018	11KV Incomers at Various BRPL Grids.
7.	EW21MS4004	UDYOG NAGAR, Nangloi Water Works & MADIPUR Grid Substation
8.	EW21MS4007	Pankha Road Grid Substation
9.	ES21MS4004	B Block Vasant Kunj & Adhcini Grid Substations

**Note: 1. Quantity may vary to any extent of +/- 30% of above mentioned total qty.**

**2. Major materials like numerical relays and aux relays/control cables, Ethernet switches, MFM etc. will be issued by BRPL as free issue item. However transportation of all free issue materials from BRPL stores to BRPL S/S, handling, safe storage till handing over of the installations to BPRL shall be in the scope of contractor.**

**1.2** The schedule of specifications with detail terms & conditions can be obtained from address given below against demand draft/Pay Order of Rs.1180/- (including GST) per below:

Beneficiary Name : BSES Rajdhani Power Limited  
Bank Name : Bank of Baroda  
A/c No. : 10590200001560  
IFSC Code : BARB0NEHRUP

The sale of tender documents will be issued from **27.11.2021** onwards on all working days upto 17.12.2021. The tender documents & detail terms and conditions can also be downloaded from the website **“www.bsedelhi.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 as stated above in a separate envelope with suitable superscription —“Cost of Bid Documents: Tender Notice Ref: **CMC/BR/21-22/RB/CR/AG/0966 dated 27.11.2021**”. This envelope should accompany the Bid Documents.

**1.3** Offers will be received till **15:45 Hrs. on dt 17.12.2021** as indicated earlier and will be opened on **17.12.2021 at 16:00 Hrs** in the presence of authorized representatives of the bidders. The schedule of specifications with detail terms & conditions are enclosed. It is the sole responsibility of the bidder to ensure that the bid documents reach this office on or before the due date.

Head of Department  
Contracts & Material Dept.  
BSES Rajdhani Power Limited  
I Floor, Tender Room, BSES Bhawan  
Nehru Place  
New Delhi-110019,

**1.4** BSES RAJDHANI POWER LTD 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 at the time of placing purchase orders. Tender will be summarily rejected if:

i) Earnest Money Deposit (EMD) Rs. 3,60,000/- 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 as per below:

Please note that bank details as below have been provided only for the purpose of making BG for EMD.

Beneficiary Name	:	BSES Rajdhani Power Limited
Beneficiary Bank	:	State Bank of India, New Delhi 110001
Beneficiary A/c No.	:	40214783615
Beneficiary Bank IFSC	:	SBIN0009601

(ii) Complete Technical details are not enclosed.

(iii) Tender is received after due time due to any reason.

**1.5** BSES RAJDHANI POWER LTD reserves the right to reject any or all bids or cancel/withdraw the invitation for bids without assigning any reason whatsoever and in such case no bidder/intending bidder shall have any claim arising out of such action till the time of placing purchase orders/Work orders.

## **2.0 QUALIFYING CRITERIA:-**

### **2.1. A. Technical & Commercial:**

The prospective bidder must qualify all of the following requirements to be eligible to participate in the bidding:

**A. TECHNICAL REQUIREMENT:**

- I. The bidder must have supplied C&R panels fabricated and assembled (at its works) or executed similar type of CRP renovation work (Incorporating IEDs at IEC 61850 Protocol) in any industry in India during last three financial years immediately preceding the date of NIT along with the proof of satisfactory execution of orders.
- II. The bidders shall attach relevant work orders and satisfactory performance certificates of executing such type of work in any India during last three financial years.
- III. It is preferred that Bidder is having valid ISO 9001:2015 certification etc.
- IV. For Existing vendors of BRPL, performance shall be measured on earlier executed similar works/ other works and will be taken into account in technical evaluation for qualification of bids.

**B. COMMERCIAL REQUIREMENT**

- 1) Bidder must provide proof of having average annual turn over of Rs. 1 Cr. or above during the last three financial years (FY 18-19, FY 19-20 & FY 20-21). In case the audited balance sheet is not available with the bidder for 20-21, the bidder shall submit the audited balance sheet for FY 17-18 or turnover certified by the auditor of the firm for FY 20-21.
- 2) Bidder must provide proof of having solvency of an amount equal to Rs. 50 Lacs or more from any nationalized/ scheduled commercial bank(Not older than 1st April 2021).
- 3) Bidder should have valid Registration No. of GST.
- 4) Bidder should have PAN No & should fulfill all statutory compliances like PF, ESI registration.
- 5) Duly signed & stamped tender documents submitted with all annexure.
- 6) Bidder should have a valid Electrical License issued by Delhi Govt. for doing electrical works in Delhi region.
- 7) Entities that have been debarred/blacklisted by any Private/central/state government institution including electricity boards in India will not be considered; in this regard a written statement has to be provided on bidder's letterhead along with other documents. Vendors/ Agencies who have been debarred/ blacklisted/ suspended by BRPL in last 3 financial years will not be considered in this tender.
- 8) The bidder should submit an undertaking for "No Litigation" / no legal case is pending with BRPL or its Group Companies. Bidders having any litigation/ legal case pending with BRPL shall not be considered qualified for this tender.

The bidder should give an undertaking on their letterhead that all the documents/certificates/information submitted by them against the tender are genuine/true/correct and the copies of documents have been made from the original document/s. Further in case any of the documents/certificates/information submitted by the bidder is found to be false or forged, BRPL at its sole discretion shall be free to take all actions as permitted under law, including forfeiture of EMD and disqualification from participation in the future tenders for 1 year in BRPL & its group companies.

Please note that by participation in tender and submission of bid, the bidder authorize BRPL to verify the bidder's credentials like work order copies, performance certificates etc. submitted by the bidder from the respective issuing client. If required, BRPL may also direct the bidder to provide the required contact details of the client who can confirm the authenticity of the documents submitted to facilitate the verification process

within the timelines provided by BRPL. That upon demand the bidder shall be providing such details to BRPL within timelines provided by BRPL. Further in case any of the documents/certificates/information submitted by the bidder is found to be false or forged or the default from the side of bidder in providing the details for verification, BRPL at its sole Discretion shall be free to take all actions as permitted under law, including forfeiture of EMD disqualification from participation in the future tenders for 1 year in BRPL & its group companies.

The bidder shall submit all necessary documentary evidence to establish that the Bidder meets the above qualifying requirements.

- a) Firms who are debarred/ blacklisted in other utilities in India will not be considered.
- b) Company reserves the right to carry out technical capability/ infrastructure assessment of the Bidders by factory/office inspection or by any other means and company's decision shall be final in this regard.
- c) No joint ventures/ consortiums are allowed.

Also, the Bidder shall furnish the following commercial & technical information along with the tender:

- a) Last three Financial Years (FY 18-19, FY 19-20 & FY 20-21) audited financial statement.
- b) Bidder to submit UDIN based CA Certificate showing upto date all statutory compliance like GST returns/ PF and ESI returns etc. i.e upto FY 20-21.
- c) Detail of Banker & Cash Credit limit
- d) Details of constitution of the company (Proprietary/ Limited/ Pvt. Ltd. Along with details)
- e) Memorandum & Articles of Association of the Company
- f) Organization Chart of the company
- g) Experience details with credentials

**Please note:** For Existing vendors/ registered vendors of BRPL, evaluation will also include the past performance in the contracts via-a-vis performance in terms of HR issues, all statutory Compliance parameters and wages disbursement by Vendors. BRPL reserves the right to disqualify their bid based on the above performance parameters in spite of them meeting the above qualification criteria.

BRPL reserves the right to disqualify any bidder in spite of the bidders meeting the above Qualifying requirements. The decision of BRPL shall be final & binding on the bidders.

BRPL may ask for any other document as may be required to substantiate/ justify the submissions made by bidders.

**2.2 Bidding and Award Process:-**

Bidders are requested to submit their offer strictly in line with this tender document. NO DEVIATION IS ACCEPTABLE. The bidder should submit complete tender documents signed and stamped with bidder's seal as an acceptance to all terms & conditions of the Tender.

BRPL shall respond to the clarifications raised by various bidders and the same will be distributed to all participating bidders through website.

**2.2.1 BID SUBMISSION:**

The bidders are required to submit the bid in 2 (two) parts and submit in original + one copy to the following address

Head of Department  
Contracts & Material Deptt.  
BSES Rajdhani Power Ltd  
1<sup>st</sup> Floor, Tender room, BSES Bhawan,  
Nehru Place,  
New Delhi 110019

**PART A: TECHNICAL BID** comprising of following:

- EMD of requisite amount
- Non-refundable separate demand draft for Rs. 1180/- In case the forms are downloaded from the website
- Documentary evidence in support of qualifying criteria
- A detailed write up citing strategy, plan methodology and deliverables of the project.
- Technical Literature if any.
- Any other relevant document
- Acceptance to Commercial Terms and Conditions viz Delivery schedule/period, Payment terms, BG etc
- Acceptance to Technical Specifications
- Complete tender documents signed and stamped with bidder's seal as an acceptance to all terms & conditions of the Tender.

**PART B: FINANCIAL BID** comprising of (1 original only)

- Price strictly in the Format enclosed indicating Break up of basic price, taxes & duties, transportation etc.



**Table 1 Bid Process Timelines**

S. No.	Steps	Comprising of	Due date
1	Pre Bid Queries, if any	<p>All Queries related to RFQ shall be clarified Through pre bid meeting. For this the bidder shall send their queries before 13.12.2021 at the following contacts:</p> <p>For Technical queries Mr. Umesh Gupta and Mr. Mukesh Jain, Contact No. 011-4920-9099, Mail ID: <a href="mailto:umesh.gupta@relianceada.com">umesh.gupta@relianceada.com</a>,</p> <p>For Commercial queries: Mr. Ananda Raj (C&amp;M) Mail id: <a href="mailto:ananda.raj@relianceada.com">ananda.raj@relianceada.com</a>, Ms. Anima Gaur, Contact No. 011-4520-9429, mail id : <a href="mailto:anima.gaur@relianceada.com">anima.gaur@relianceada.com</a></p> <p>Pre Bid Meeting shall be through WebEx on 13.12. 2021 at 03:00 PM for addressing all Queries related to RFQ on following link:- <a href="https://bsesbrpl.webex.com/join/rakesh.bansal">https://bsesbrpl.webex.com/join/rakesh.bansal</a></p>	13.12.2021
2	Submission of PART A Technical and Commercial Bid	<p>EMD of requisite amount Non-refundable demand draft for Rs. 1180/- In case the forms are downloaded from the website Documentary evidence in support of qualifying criteria Technical Literature/ list of makes etc Any other relevant document. Acceptance to Commercial Terms and Conditions viz Delivery schedule/period, Payment terms, BG etc.</p>	17.12.2021
3	Submission of PART B Technical and Commercial Bid	<p>Price strictly in the Format enclosed (Section IV) indicating Break up regarding basic price, taxes &amp; duties etc.</p>	17.12.2021

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 envelope which should be super scribed with —“Tender Notice No. & Due date of opening“. The same shall be submitted before the due date & time specified.

**Part – A:** Technical Bid should not contain any cost information whatsoever and shall be submitted within the due date. After technical evaluation, the list of qualified bidders will be posted immediately on BSES website.

**PART B:** This envelope will be opened after technical evaluation and only of the qualified bidders.



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**FINANCIAL BID EVALUATION THROUGH REVERSE AUCTION:**

Reverse auction shall be conducted for finalization of contract and the details of the price bid shall not be shared with bidders.

The qualified bidders will participate in reverse auction through SAP-SRM tool. The reverse auction process shall be governed by the terms and conditions enclosed as APEENDIX-I in this tender document.

Training/details shall be provided to bidders before participation in auction.

Notwithstanding anything stated above, the Company reserves the right to assess bidders' capability to perform the contract, should the circumstances warrant such assessment in the overall interest of the Company. In this regard the decision of the Company is final.

In case RA is not concluded/conducted for any reasons, a "final no regret" financial bid in a sealed envelope will be called for from all qualified bidders.

**BIDS RECEIVED AFTER DUE DATE AND TIME SHALL BE LIABLE TO REJECTION.**

**2.2.2 Award Decision**

a) Company intends to award the business on a lowest bid basis, so contractors are encouraged to submit the bid competitively. The decision to place order/LOI solely depends on Company on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that Company may deem relevant.

b) BSES reserves the right to split the tender quantity amongst techno-commercially qualified bidders on account of delivery requirement in tender etc.

c) Please note that abnormally higher or abnormally lower bids shall not be considered with respect to estimated cost. The criteria decided by BRPL on this shall be final and binding on the bidders.

d) In case any contractor is found unsatisfactory during the execution process, the award will be cancelled and BRPL reserves the right to award other contractors who are found fit.

e) "Nil/Zero" Margin or Administrative Service Charges of Bidders will be considered as "Unresponsive". Abnormally higher or abnormally lower bids shall not be considered with respect to estimated cost. The criteria decided by BRPL on this shall be final and binding on the bidders and will not be open for discussion under any circumstances. Therefore, the bidding firms are advised to quote their Margin / Administrative Service Charges accordingly. BRPL reserves the right to reject the bids quoted with abnormally higher or abnormally lower individual activity rates. The criteria decided by BRPL on this shall be final and binding on the bidders.

BRPL reserves the right to reject the bids quoted with abnormally higher or abnormally lower individual activity rates. The criteria decided by BRPL on this shall be final and binding on the bidders.

**2.2.3 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



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obligations contained in the Terms & Condition. Bidders who violate 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 market place.
- Breach of the terms of the published in Request for Quotation/NIT.

### **2.2.4 Confidentiality**

All information contained in this RFQ is confidential and may 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 bidders are required to return these documents to BRPL upon request.

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

### **2.2.5 Contact Information**

Technical clarification, if any, as regards this RFQ shall be sought in writing and sent by post/courier to following address

	<b>Technical</b>	<b>Commercial</b>
<b>Contact Person</b>	Head (P&C), BRPL Copy to :Head (C&M)	Head (C&M)
<b>Address</b>	BSES Rajdhani Power Ltd , BSES Bhawan. Nehru Place, New Delhi - 110019	C&M Deptt. 1 <sup>st</sup> Floor , C-Block, BSES Rajdhani Power Ltd BSES Bhawan, Nehru Place, New Delhi 110019

**SECTION – II: INSTRUCTION TO BIDDERS****1.0 GENERAL**

- A. 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 Renovation of Control & relay panels including replacement of old relay On Turnkey basis as notified earlier in this bid Document.
- B. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to site conditions, means of access to the site.

**2.0 SCOPE OF WORK**

The complete scope shall include Design, Manufacture, Execution, Testing & Commissioning at works on Turnkey basis, conforming to the Technical Specifications enclosed along with Packing, Forwarding, Freight and Unloading and proper stacking at Purchaser's stores as well as dismantling, erection, testing, commissioning & final handover.

**3.0 DISCLAIMER**

- 3.01 This Document includes statements, which reflect various assumptions, which may or may not be correct. Each Bidder/Bidding 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 arising in any way 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).

**4.0 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.

**5.0 BIDDING DOCUMENTS**

- 5.01 The Scope of Work, Bidding Procedures and Contract Terms are described in the Bidding Documents. In

addition to the covering letter accompanying Bidding Documents, the Bidding Documents include:

- |                                    |                |
|------------------------------------|----------------|
| (a) Request for Quotation (RFQ)    | - Section - I  |
| (b) Instructions to Bidders (ITB)  | - Section – II |
| (c) General Conditions of Contract | - Section -III |
| (d) Bill of Quantity               | - Section –IV  |
| (e) Technical Specifications (TS)  | - Section –V   |

5.02 The Bidder is expected to examine the Bidding Documents, including all Instructions, Forms, Term 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 5.00, and it will be notified in web site [www.bsedelhi.com](http://www.bsedelhi.com), and 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.bsedelhi.com](http://www.bsedelhi.com)**.

Purchaser shall reserve the rights to following:

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

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

## **C. PREPARATION OF BIDS**

### **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:

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

## **9.0 BID FORM**

The Bidder shall submit one "Original" and one "Copy" of the Un-priced Bid Form, Price Schedules & Technical Data Sheets duly filled in as per attached specification/BOM etc enclosed.

## **9.1 EMD**

The bidder shall furnish, as part of its bid, an EMD of requisite amount as already specified in the Section-I. The EMD is required to protect the Company against the risk of Bidder's conduct which would warrant forfeiture. The EMD shall be denominated in any of the following form:

- (a) Demand Draft/Pay Order drawn in favour of BSES Rajdhani Power Ltd, payable at Delhi.
- (b) BG from nationalized / Scheduled bank in favour of BSES Rajdhani Power Limited valid for 6(six) months after last date of receipt of tenders

The bidders who are not technically qualified, EMD shall be refunded after price bid opening. Earnest money given by all the bidders who are techno commercially qualified except the lower bidder shall be refunded within 8 (Eight) weeks after award of the work.

The amount of EMD by the successful bidder shall be returned on submission of CPBG as per tender terms.

The EMD may be forfeited in case of:

- (a) If the Bidder withdraws its bid during the period of bid validity specified by the Bidder in the Bid Form  
or
- (b) in the case of a successful Bidder, if the Bidder does not
  - (i) Accept the Purchase Order/Work Order, or
  - (ii) furnish the required performance security BG.
- (c) If the bidder is found to have submitted false or forged any of the documents/certificates/information.

## **10.0 BID PRICES**

10.01 Bidders shall quote for the entire Scope of work with prices for individual items. The tenderer is required, at his expense, to obtain all the information he may require to enable him to submit his tender including necessary visits to the site to ascertain the local conditions, procurement of necessary materials, labour, etc., requirements of the local/government/public authorities in such matters.

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/PVC will be treated as non-responsive and rejected.**

#### **11.0 BID CURRENCIES**

Prices shall be quoted **in Indian Rupees (RS) Only.**

#### **12.0 PERIOD OF VALIDITY OF BIDS**

12.1 Bids shall remain valid & open for acceptance for a period of 120 days from the date of opening of the Bid.

12.2 Notwithstanding Clause 12.01 above, the Company 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 Fax/post/courier

#### **13.0 ALERNATIVE 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**

14.1 The original Bid Form and accompanying documents (as specified in Clause9.0), clearly marked "Original Bid", plus one duplicate copy must be received by the Purchaser at the date, time and place specified pursuant to Clauses15.0 and16.0. In the event of any discrepancy between the original and the copies,the original shall govern.

14.2 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.

14.3 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**

15.1 Bid submission: One original & one duplicate 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.

15.2 The Technical Documents and the EMD shall be enclosed in a sealed envelope and the said envelope



shall be superscribed with —**Technical & EMD**“. The Financial bid shall be inside another sealed envelope with superscription — **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 submission, Tender opening date.**

15.3 The Bidder has the option of sending the Bids in person.Bids submitted by Telex/Telegram /Fax will not be accepted.No request from any Bidder to the Purchaser to collect the proposals from Airlines/Cargo Agents etc shall be entertained by the Purchaser.

## **16.0 DEADLINE FOR SUBMISSION OF BIDS**

16.1 The original Bid, together with the required copies, must be received by the Purchaser at the address specified at **15:45 Hrs on 17.12.2021**

16.2 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 rejected and returned unopened to the Bidder.

## **19.0 MODIFICATIONS AND WITHDRAWAL OF BIDS**

19.01 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**

- 22.1 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.
- 22.2 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.
- 22.3 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.
- 22.4 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**

- 23.1 The evaluation of Bids shall be done based on the delivered cost competitiveness basis.
- 23.2 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.
- 23.3 Subsequently, the Financial Proposals along with Supplementary Financial Proposals, if any, of Bidders with Techno-commercially Acceptable Bids shall be considered for final evaluation.
- 23.4 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.

23.5 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**

24.1 From the time of Bid submission to the time of contract award, if any Bidder wishes to contact the Purchaser on any matter related to the Bid, it should do so in writing.

24.2 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**

The Purchaser reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at anytime prior toward 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 other bidders in the tender, provided it is required for progress of project & provided he agrees to come to the lowest rate.

Though the contract is for Turnkey in nature, the Purchaser intends to issue 2 (two) separate Purchase/Work Orders viz

- a) Purchase Order for Supply Portion
- b) Work Order for Installation, Testing & Commissioning

### **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 tems 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 with in 7 days of issue of the letter of

intent /Notification of Award by Purchaser. The date of LOI/LOA shall be treated as Start date of work.

## **29.0 CORRUPT OR FRAUDULENT PRACTICES**

29.1 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:
  - (i) "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
  - (ii) "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 forward 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.

29.2 Furthermore, Bidders shall be aware of the provision stated in the General Conditions of Contract.

**SECTION III-COMMERCIAL TERMS & CONDITIONS:****General Instructions:**

1. Bids shall be prepared and submitted in accordance with these instructions.
2. Bidder shall bear all costs associated with the preparation and delivery of its Bid, and the Company will in no case shall be responsible or liable for these costs. Bids shall remain valid & open for acceptance for a period of 120 days from the date of opening of the Bid.
3. 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.
4. Issue of RFQ is not deemed as qualified for the job. BRPL's assessment of the bidders capability to execute the job and decision of BRPL to qualify the bidder shall be final. The Company 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 Company, the data in support of RFQ requirement is incomplete.
5. The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the Bid Documents. No deviation to the terms & conditions shall be accepted. 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 Company's decision in regard to the responsiveness and rejection of bids shall be final and binding without any obligation, financial or otherwise, on the Company.
6. The price format shall legibly handwritten in ink by the bidder. Printed price format shall not be allowed.
7. Company reserves the right to award the work to one or more bidders.
8. The decision to place order/LOI is the sole prerogative of the company.
9. In case any vendor is found unsatisfactory post award of contract, the award will be cancelled and BRPL reserves the right to award other vendors who are found capable.
10. The Company 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 Company's action.

**(A) SUPPLY****A) Definition of Terms Supply:**

- 1.01** "Purchaser" shall mean BSES RAJDHANI POWER LTD Limited, on whose behalf this bid enquiry is issued by its authorized representative / officers.
- 1.02** "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.

- 1.03** “Supply” and “ETC” shall mean the Scope of Contract as described.
- 1.04** “Specification” shall mean collectively all the terms and stipulations contained in those portions of this bid document known as RFQ, Commercial Terms & Condition, and Instructions to Bidders, Technical Specifications and the Amendments, Revisions, Deletions or Additions, as may be made by the Purchaser from time to time.
- 1.05** “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.
- 1.06** “Month” shall mean the calendar month and “Day” shall mean the calendar day.
- 1.07** “Codes and Standards” shall mean all the applicable codes and standards as indicated in the Specification.
- 1.08** “Offer Sheet” shall mean Bidder's firm offer submitted to BSES RAJDHANI POWER LTD in accordance with the specification.
- 1.09** “Contract” shall mean the “Letter of Acceptance” issued by the Purchaser.
- 1.10** “Contract Price” shall mean the price referred to in the “Letter of Acceptance”.
- 1.11** “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.
- 1.12** “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.

### **B.1. EXAMINATION OF SITE AND LOCAL CONDITIONS:**

The contractor is deemed to have visited the site of the work and ascertained therefore all site conditions and information pertaining to his work. The company shall not accept any claim whatsoever arising out of the difficult site/terrain/local conditions, if any.

### **B.2. LANGUAGE AND MEASUREMENT:**

The CONTRACT issued to the contractor by the company and all correspondence and documents relating to the CONTRACT placed on the Contractor shall be written in English language.

Metric System shall be followed for all dimension, units etc.

**2.0 PRIORITY OF CONTRACT DOCUMENTS:**

The several documents forming the Contract are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies, the same shall be explained and adjusted by the company, who shall thereupon issue to the Contractor, instructions thereon. In such event, unless otherwise provided in the Contract, the priority of the documents forming the Contract shall be as follows:

- (i) This Contract Agreement
- (ii) The Letter of Acceptance/ Intent
- (iii) Agreed Minutes of the Tender Negotiation Meetings.
- (iv) Agreed Minutes of the Tender Technical Meetings .
- (v) The Priced Bill of Quantities
- (vi) The Technical Specifications / Scope of work
- (vii) The Tender document, including all Appendices and/or Addenda, Corrigendum the latest taking precedence.

In the event of any conflict between the above-mentioned documents, the more stringent requirement or conditions which shall be favourable to the owner shall govern and the Owners decision shall be final and binding upon the parties.

**Scope of Supply –General****3.0 Scope of Supply –General:**

- 3.01** 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.
- 3.02** Bidder shall have to quote for the Bill of quantities as listed in Section – IV of this RFQ.
- 3.03** Quantity variation and additional requirement if any shall be communicated to successful bidder during project execution.
- 3.04** All relevant drawings, data and instruction manuals

**4.0 RATES:**

The rates finalized for this order shall be firm for the entire duration of work carried out by the Contractor under the order and are not subject to any variation and escalation for any reason whatsoever.

The cost of insurance during loading/unloading of materials/ equipments during its storage and handling/erection at site for installation is included in the contractor's scope and value is included in the unit rates finalized.

The unit rates finalized are also inclusive of barricading and watch & ward during execution and no separate charges shall be paid for the same.

The cost of training of BRPL Official shall be included in the prices quoted by vendor.

## **5.0 PRICE BASIS FOR SUPPLY OF MATERIALS:**

- a) Bidder has to quote their prices on supply bill of quantities.
- b) FIRM prices for supply to BRPL Delhi/New Delhi stores inclusive of packing, forwarding, loading at manufacturer's premises, payment of all taxes, GST, Freight, any other local charges etc.
- c) The above supply prices shall also include unloading at BRPL Delhi/New Delhi stores/site.

## **6.0 PRICE VALIDITY:**

All bids submitted shall remain valid, firm and subject to unconditional acceptance by BSES RAJDHANI POWER LTD Delhi for 120 days post bid-date. For awarded suppliers, the prices shall remain valid and firm till contract completion.

## **7.0 TERMS OF PAYMENT AND BILLING:**

### **A) SUPPLY**

- a) 60% pro-rata of supply value shall be payable against R/A bills for supply of equipment and materials within 30 days against receipt of material at site and submission of following documents duly certified by BRPL Project-in-charge:
  - i. Consignee copy of LR
  - ii. Detailed invoice showing commodity description, qty, unit & total price,
  - iii. Original certificate issued by BRPL confirming receipt of material at site & acceptance
  - iv. Dispatch clearance & inspection report issued by the inspection authority
  - v. Packing List, Test Reports
  - vi. Guarantee Certificate.
- b) 20% pro-rata after installation/erection of equipment duly certified by BRPL Project-in-charge.
- c) 20% pro-rata after completion of successful installation acceptance testing, commissioning and handing over of the entire Installation and duly certified by BRPL.

## **8.0 COMPLETION PERIOD:**

You are required to supply all the materials as stipulated wide supply bill of quantities within 90 days from the date of issue of LOI/PO. All the materials has to be supplied to the BRPL store and drawn from their as per site requirement as per instruction of Engineer In charge.

## **9.0 CONTRACT PERFORMANCE BANK GUARANTEE:**





**BSES RAJDHANI POWER LTD.**

9.1 CONTRACTOR shall furnish the Contract Performance Bank Guarantee in the prescribed format (Appendix I) within 15 days from the date of issue of Order for due performance of the provisions of purchase Order.

9.2 The contract Performance Bank Guarantee shall be of 10% of the total value of order and shall be valid till the completion of defect liability period, plus three (3) months towards claim period.

9.3 The Contract Performance Bank Guarantee shall be issued from any Scheduled /nationalized bank as per company format.

9.4 The Company shall reserve the right to invoke the bank guarantee unconditionally and without recourse to the Contractor, if there is failure to perform any part of the Contract for whatsoever reason. This clause is pertaining to performance of contractual obligations and the decision of Company shall be final in this regard.

9.5 In the event, in Company sole judgment, the Contractor has fulfilled all its obligations under this Contract, Company shall release the Contract performance bank guarantee without interest, within seven (7) days from the last date up to which the performance bank guarantee is to be kept valid or if it is assessed by the Company that Contractor has not fulfilled its obligation then the performance bank guarantee shall be extended by the Contractor till that period as requested by the Company.

#### **10.0 FORFEITURE:**

- 10.1 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.
- 10.2 Each Performance BG established under will be automatically and unconditionally forfeited without recourse if BRPL at its sole discretion determines that supplier has failed to comply with any term or condition set forth in the contract.

#### **11.0 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.

#### **12.0 GUARANTEE OF PERFORMANCE:**

The bidder shall stand guarantee that the equipment and material supplied/service or work rendered under the contract is free from design, manufacturing, material, construction, erection & installation and workmanship & quality defects and is capable of its due, rated and intended quality performance, as an integrated product delivered under the contract for a specific period termed as Guarantee Period. The bidder



should also guarantee that the equipment/material is new and unused except for the usage required for the tests and checks required as part of quality assurance.

**13.0 GUARANTEE PERIOD/DEFECTS LIABILITY PERIOD:**

13.1 SELLER shall guarantee the materials / items supplied against any defects or failure which arise due to faulty materials, workmanship or design (except materials or design furnished by the BUYER) for the entire defects liability period. Sellers guarantee shall expire Twelve (12) months after the date of successful commissioning of GOODS or Eighteen (18) months from the date of completion of delivery of GOODS (last Consignment), whichever is the shorter period (the Defects Liability Period).

13.2 If during the Defects Liability Period any GOODS are found to be defective, they shall be promptly replaced or rectified by SELLER at its own cost (including the cost of dismantling and (reinstallation) on the instructions of BUYER and if removed from SITE for such purpose, shall be removed and re-delivered to SITE by SELLER at its own cost within 30 days from the date of receipt of intimation.

**14.0 RETURN, REPLACEMENT OR SUBSTITUTION:**

BSES RAJDHANI POWER LTD shall give Supplier notice of any defective Commodity promptly after becoming aware thereof. BSES RAJDHANI POWER LTD may in its discretion elect to return defective Commodities to Supplier for replacement, free of charge to BSES RAJDHANI POWER LTD, or may reject such Commodities and purchase the same or similar Commodities from any third party. In the latter case BSES RAJDHANI POWER LTD 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. BSES RAJDHANI POWER LTD may set off such costs against any amounts payable by BSES RAJDHANI POWER LTD to Supplier. Supplier shall reimburse BSES RAJDHANI POWER LTD 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:**

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:**

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:**

The laws applicable to this Contract shall be the Laws in force in India. To the best of their ability, the parties hereto shall endeavor to resolve amicably between themselves all disputes arising in connection with this work order. If the same remain unresolved within thirty (30) days of the matter being raised by either party, either party may refer the dispute for adjudication by arbitration. The arbitration shall be undertaken by the sole arbitrator jointly appointed by the parties. In case the parties fail to arrive at consensus to appoint the sole arbitrator, either party may approach the Court for appointing an arbitrator under Section 11 of the Arbitration and Conciliation Act, 1996 and the award of the said sole arbitrator, shall be final and binding upon the parties. The arbitration proceeding shall be conducted in accordance with this provisions of the Indian Arbitration & Conciliation Act, 1996 (as amended up to date) and the venue of such arbitration shall be the city of New Delhi only. The Arbitration shall be conducted in English language only. The courts at Delhi shall have the exclusive jurisdiction over the subject matter of Arbitration/dispute. The cost of the Arbitration shall be equally shared by the parties as per directions of the Sole Arbitrator.

**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 to Bank for forfeiture 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 LIQUIDATED DAMAGES:**

20.01 If supply of items / equipment is delayed beyond the supply schedule as stipulated in LOI/PO, then the Supplier shall be liable to pay the Purchaser for delay a sum of 0.5% (half percent) of the total price for every week of delay or part thereof for undelivered units.

20.02 The total amount for delay under the contract will be subject to a maximum of ten percent (10%) of the total contract value.

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. The levy payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the Supply on time or from any other part of his obligation and liabilities under the Contract. Once the maximum is reached, the Company reserves the right for termination of contract without any liabilities to the Company.

In the event of an extension of time being granted by the EIC, in writing for the Completion of the works, this clause shall be applicable after the expiry of such an extended period.

**21.0 STATUTORY VARIATION IN TAXES AND DUTIES:**

The total order value shall remain **FIRM** within stipulated delivery period and shall not be adjusted on account of any price increase/variations in commodities & raw materials. However Statutory Taxes, duties and Levies imposed by Competent Authorities by way of fresh notification(s) within the stipulated delivery period shall be borne by BRPL on submission of necessary documents claiming such variation. The variation will be applicable only on such value wherever price breakup of same is submitted by vendor/available in PO/WO.

**22.0 FORCE MAJEURE:****22.1 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.
- (iii) 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:

- (i) 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;
- (ii) 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
- (iii) 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 The Purchaser may terminate the contract after giving 7(seven) days notice if any of following occurs:

- a) Contractor fails to complete execution of works within the approved schedule of works, terms and conditions
- b) In case the contractor commits any Act of Insolvency, or adjudged insolvent
- c) Has abandoned the contract
- d) Has failed to commence work or has suspended the progress of works
- e) Has failed to proceed the works with due diligence and failed to make such due progress

22.08 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.

22.09 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.

22.10 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 an event of Force Majeure."

**24.0 TRANSFER AND SUB-LETTING:**

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.

**25.0 RECOVERIES:**

When ever 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 deducting 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 balance.

**26.0 WAIVER:**

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

**27.0 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 under this contract.

**28.0 DOCUMENTATION:**

The Contractor shall submit the following documents to BRPL prior to commencement of the Services.

28.1 Copy of the document certifying allotment of PF code number by RPFC office.

28.2 Copy of receipt/ insurance policy obtained to comply with the provision of the Workman compensation Act,1923.

28.3 Or Copy of receipt/ insurance policy obtained to comply with the provision of the Employees



BSES RAJDHANI POWER LTD.

State Insurance Act 1948.

28.4 Licenses required under the Electricity Act,

28.5 Nothing contained herein shall limit the nature of documents that Company may require the Contractor to submit to the Company. After verification of the above stated documents, entry permits for the Contractor's personnel shall be issued.

**29.0 COMMISSIONING SPARES:**

Commissioning Spares shall be deemed to be included in the quoted prices.

**30.0 LIMITATION ON LIABILITY:**

Notwithstanding anything to the contrary in the Purchase Order but subject to clause 33 Consequential Damages, the aggregate liability of either Party to the other Party in respect of all claims for Liabilities arising under the Purchase Order shall not exceed the aggregate value of the Purchase Order(s) under which the Liabilities arose except that such limitation shall not apply to the Contractor's indemnification obligations in accordance with clause 29 Indemnification herein.

**31.0 CONSEQUENTIAL DAMAGES:**

Notwithstanding anything to the contrary in the Purchase Order, except for breach of obligations under Non-disclosure and except as expressly provided in a Purchase Order, in no event, as a result of breach of contract or breach of warranty or otherwise, shall either Party hereto or either Party's Affiliates or sub Contractors, be liable under the Purchase Order to the other Party for any consequential, special, indirect, exemplary or incidental damages, and/or for any lost profits, goodwill or revenues of such Party, howsoever arising, before or after Acceptance of the Goods and whether or not such damages are foreseeable.



**(B) ERECTION, TESTING & COMMISSIONING****1. DEFINITIONS and INTERPRETATION:**

The following terms shall have the following meanings:

1.1 “Company”: means BSES Rajdhani Power Ltd, a company incorporated under the Companies Act 1956 and having its office at BSES Bhawan, Nehru Place, New Delhi 110 019, which expression shall include its authorized representatives, agents, successors and assigns.

1.2 “Contractor”: shall mean the successful Tenderer / vendor to whom the contract has been awarded

1.3 “Rate”: The unit rates for the work to be carried out at site shall be as per finalized unit rates through tender. The finalized rates shall be firm for the entire duration of work to be carried out by the Contractor under the work order and are not subject to escalation for any reason whatsoever.

1.4. CONTRACT SPECIFICATION: The terms "CONTRACT Specification" shall mean the Technical specification of the work as agreed by you and description of work as detailed in Annexure-I enclosed herewith and all such particulars mentioned directly/referred to or implied as such in the contract.

1.5 SITE: The terms "Site" shall mean the working location in BRPL area. Under this tender, working location shall be as mentioned elsewhere.

1.6 ENGINEER IN CHARGE: "Engineer In-charge" means the Company's authorized representative for the purpose of carrying out the work.

**B.1. EXAMINATION OF SITE AND LOCAL CONDITIONS:**

The contractor is deemed to have visited the site of the work and ascertained therefore all site conditions and information pertaining to his work. The company shall not accept any claim whatsoever arising out of the difficult site/terrain/local conditions, if any.

**B.2. LANGUAGE AND MEASUREMENT:**

The CONTRACT issued to the contractor by the company and all correspondence and documents relating to the CONTRACT placed on the Contractor shall be written in English language.

Metric System shall be followed for all dimension, units etc.

**2.0 SCOPE OF ETC-GENERAL:**

The scope under this contract also includes loading, unloading and storage at site, storage and construction insurance, assembly, erection, structural, complete pre-commissioning checks, testing and commissioning at site and handing over to owner after successful work with required accessories. Schedule of work shall be as mentioned in the Bill of quantity attached herewith.



- All the labour, cranes, tool and tackles, and technical supervision etc. are including in your scope of work. Adequate number of engineers, supervisors and labours shall be posted at site and the list of the same along with certificate of Qualification of technical staff should be submitted by the Contractor to the Engineer In Charge for checking the adequacy immediately (within seven days) after award of contract.
- The Contractor shall also make his own arrangement for the accommodation/conveyance requirements for its staff at site. All the Contractor's storage may be within the site premises. All the incoming and outgoing materials, equipment, tools, tackles and any other items related to said work shall be entered into the register kept for this purpose and shall be in the custody of Contractor for which he will be responsible for its security and safety, however company does not hold any responsibility for any loss or damage of Contractor's material etc.
- All loading/unloading, of materials at work-site shall be your responsibility. Involvement of Crane/Hydra/Tractor/Trailer for this type of work shall be in your scope. Adequate weather protection shall be provided by the contractor to keep the materials safe from sun & rain by providing covered storage space as well as using tarpaulins.
- The contractor at his own shall arrange Water and Electricity Power at his cost.
- All scraps generated during execution and after completion of work shall be returned to BRPL.
- Any additional work beyond the scope enumerated in the work order above shall be carried out as per the instructions of Engineer-In Charge. The company shall not entertain any claim or increase in the Work Order value due to execution of such additional work if the same is not approved by Engineer in Charge.
- Major materials like numerical relays and aux relays/control cables, Ethernet switches, MFM etc. will be issued by BRPL as free issue item. However transportation of all free issue materials from BRPL stores to BRPL S/S, handling, safe storage till handing over of the installations shall be in the scope of the contractor.

**FREE ISSUES OF MATERIAL AND /OR EQUIPMENT:**

- The Purchaser issued Free Issue Material/Equipment to Vendor in order that Vendor may fulfill its obligations under the Agreement, shall remain the property of Purchaser and shall be clearly labelled as such by Vendor until handing over of the completed installations in accordance with the terms of the Agreement. Risk of loss in respect of all such Free Issue Items shall pass to Vendor upon receipt of such terms by Vendor and remain with Vendor until handing over of the completed installations to Purchaser in accordance with the terms of the Agreement. Vendor shall maintain all such Free Issue Items in good condition and shall use them solely in connection with the requirements of the Agreement.

**3.0 RATES:**

The rates finalized for this order shall be firm for the entire duration of work carried out by the Contractor under the order and are not subject to any variation and escalation for any reason whatsoever.

The cost of insurance during loading/unloading of materials/ equipments during its storage and handling/erection at site for installation is included in the contractor's scope and value is included in the unit rates finalized.

The unit rates finalized are also inclusive of barricading and watch & ward during execution and no separate charges shall be paid for the same.

The cost of training of BRPL Official shall be included in the prices quoted by vendor.

**.4.0 TAXES AND DUTIES:**

All taxes and duties including labour cess (except GST) leviable by State or Central Governments or local bodies shall be to the CONTRACTOR 's account including any taxes and duties which may be levied fresh by the Governments during currency of this Agreement. Income tax will be deducted from your bills as Tax Deduction at Source (TDS).

GST shall be paid extra at actual on submission of GST Registration and self declaration on your letter head stating that you have deposited/or will deposit the Tax as per the applicable GST laws.

**5.0 TERMS OF PAYMENT AND BILLING:****Erection, Testing & Commissioning:**

100% of contract value payable after handing over duly certified by Engineer in charge, submission of Electrical Inspector Clearance Certificate after installation, testing & commissioning of material at site duly certified by Engineer in charge.

**6.0 PRICE VALIDITY:**

All bids submitted shall remain valid, firm and subject to unconditional acceptance by BSES RAJDHANI POWER LTD Delhi for 120 days post bid-date. For awarded suppliers, the prices shall remain valid and firm till contract completion.

**7.0 CONTRACT PERFORMANCE BANK GUARANTEE:**

7.1 CONTRACTOR shall furnish the Contract Performance Bank Guarantee in the prescribed format (Appendix I) within 15 days from the date of issue of Order for due performance of the provisions of work Order.

7.2 The contract Performance Bank Guarantee shall be of 10% of the total value of order and shall be valid till the completion of defect liability period, plus three (3) months towards claim period.

7.3 The Contract Performance Bank Guarantee shall be issued from any Scheduled /nationalized bank as per company format.

7.4 The Company shall reserve the right to invoke the bank guarantee unconditionally and without recourse to the Contractor, if there is failure to perform any part of the Contract for whatsoever reason. This clause is pertaining to performance of contractual obligations and the decision of Company shall be final in this regard.

7.5 In the event, in Company sole judgment, the Contractor has fulfilled all its obligations under this Contract, Company shall release the Contract performance bank guarantee without interest, within seven (7) days from the last date up to which the performance bank guarantee is to be kept valid or if it is assessed by the Company that Contractor has not fulfilled its obligation then the performance bank guarantee shall be extended by the Contractor till that period as requested by the Company.

**8.0 GUARANTEE OF PERFORMANCE:**

The bidder shall stand guarantee that the equipment and material supplied/service or work rendered under the contract is free from design, manufacturing, material, construction, erection & installation and workmanship & quality defects and is capable of its due, rated and intended quality performance, as an integrated product delivered under the contract for a specific period termed as Guarantee Period. The bidder should also guarantee that the equipment/material is new and unused except for the usage required for the tests and checks required as part of quality assurance.

**9.0 GUARANTEE PERIOD/DEFECTS LIABILITY PERIOD:**

9.1 SELLER shall guarantee the materials / items supplied against any defects or failure which arise due to faulty materials, workmanship or design (except materials or design furnished by the BUYER) for the entire defects liability period. Sellers guarantee shall expire Twelve (12) months after the date of successful commissioning of GOODS or Eighteen (18) months from the date of completion of delivery of GOODS (last Consignment), whichever is the shorter period (the Defects Liability Period).

9.2 If during the Defects Liability Period any GOODS are found to be defective, they shall be promptly replaced or rectified by SELLER at its own cost (including the cost of dismantling and (reinstallation) on the instructions of BUYER and if removed from SITE for such purpose, shall be removed and re-delivered to SITE by SELLER at its own cost within 30 days from the date of receipt of intimation.

**10. COMPLETION PERIOD:**

You are required to mobilize your manpower and Tools & Tackles and furnish a list of equipments to be used for erection and commence the execution activity as per instructions of Engineer In-charge. The entire Erection, Testing & Commissioning work should be completed within 120 days from the date of issue of LOI/WO. You shall submit a weekly progress report to Engineer In charge.

**11. CLEANLINESS:**

All debris shall be removed and disposed of at assigned areas on daily basis. Surplus excavated earth shall be disposed of in an approved manner. In short, you shall be fully responsible for keeping the work site clean at all times. In case of non- compliance, company shall get the same done at Bidder's risk and costs.

**12. COMMISSIONING & ACCEPTANCE TEST:**

After completion of the work, the Bidder shall conduct trial run/ operation in the presence of Engineer In charge. During such trial run the system shall be operated under the supervision of the Bidder. If any rectification/modification required during this period the Bidder shall do all necessary measures.

On satisfactory completion of above, the system shall be deemed to have energized and placed in commercial operation. The Engineer-in-Charge will issue an acceptance certificate.

**13. WORK COMPLETION CERTIFICATION, HANDING OVER.**

The work carried out by the Contractor under this order has to be certified by Engineer In-charge for satisfactory completion of work allotted to the contractor / In case of modification/correction to be carried out, contractor shall carry out the said modifications/correction without additional cost. The Contractor shall remain in close contact with Engineer In-Charge at site to report the general findings of the fieldwork during the initial as well as later stage of the work at site.

The contractor shall be solely responsible for any shortage or damage of materials issued to them handling of and / or in storage and erection at site and cost of the same will be recovered from the contractor as certified by Engineer In-Charge. Contractor must submit a periodical material reconciliation statement in the approval format with every Running Bill raise by him or end of every month whichever is earlier. The contractor shall maintain an accurate and exhaustive record detailing out the list of all items received by him for the purpose of erection and keep such record open for the inspection of the company.

**14.0 COMPLIANCE OF APPLICABLE LABOUR LAWS INCLUDING SAFETY RULES AND REGULATIONS:**

The CONTRACTOR confirms and undertakes to comply with all applicable Labour Laws/Model Standing Orders and other statutory provisions as applicable in discharging its functions and duties

under these presents and under specific Work Orders and fully observe applicable safety rules and regulations. The CONTRACTOR will provide protective safety equipments to its employees / workmen deployed. It will be also obligatory on the CONTRACTOR to comply with all the statutory requirements related to work-permit, periodic testing of various tools and tackles, including lifting tools, EHV Training & Testing kits etc. The CONTRACTOR shall ensure adequate safety precautions at site as required under the law of the land and shall be entirely responsible for the complete safety of its workmen as well as other workers, public, equipment, structures etc. at site.

**15.0 NOTICE:**

All notices required or provided for in this Agreement shall be in writing and shall be deemed to have been duly and properly served upon the parties hereto if delivered against acknowledgement or by registered mail with acknowledgement due at the address mentioned herein:

Head of Department  
Contracts & Material Deptt.  
BSES Rajdhani Power Ltd.  
I Floor, Tender room, BSES Bhawan  
Nehru Place  
New Delhi-110019

**16.0 REPRESENTATION, WARRANTIES AND GUARANTEES:**

The Contractor hereby represents warrants and guarantees that:

- i) It is a legally recognized entity under the laws of India;
- ii) The Contract contains valid and binding obligations and is enforceable in accordance with the terms hereof;
- iii) It has studied the technical feasibility, Site conditions and other prevailing conditions and all other operational details and based on these studies carried out, has agreed to provide to the Company the services as contemplated in this Contract;
- (iv) It has appraised itself of all applicable rules and regulations, and shall at all times comply with such rules and regulations;
- v) It shall procure vehicles and manpower suitable for the purposes of this Contract to render services as contemplated in this Contract;
- vi) The Services would be conducted in a safe and efficient manner at the Site and at all times in compliance with Good Industry Practices and requirements of the Company.
- vii) It shall duly pay the duties, taxes and levies as are set out in this Contract, which are to be paid by the Contractor;

There is no action, suit or proceeding, at law or in equity, or to the best of its knowledge, any official investigation before or by any governmental authority, arbitration tribunal or other body pending or, to the best of its knowledge, threatened against or affecting it or any of its property, rights or assets, which

could reasonably be expected to result in a material adverse effect on its ability to perform its obligations under this Contract or on the validity or enforceability of this Contract;

**17.0 HUMAN RESOURCE ISSUES:**

17.1 The CONTRACTOR would execute these works through their own resources.

17.2 The CONTRACTOR shall bear all expenses/cost to be incurred towards salary, allowances, perks, traveling allowances, advances, insurance, safety measures, security, transportation and all other misc. expenses etc. of their employees/ workmen during the tenure of AMC. Also, the CONTRACTOR shall be sole responsible for making payment for Hospitalization, Compensation thereof in case of any accident & injury.

17.3 The CONTRACTOR shall issue Identity Cards to their employees deployed for execution of the assigned works in the District with the consent of Engineer In charge.

17.4 The CONTRACTOR to deploy their manpower immediately for carrying out the work as specified above.

17.5 The CONTRACTOR should ensure that there are no disputes regarding service, payment etc of the persons engaged by him, anytime during the currency of the contract. At no point of time during the currency of contract, the CONTRACTOR's employees shall insist upon the COMPANY for employment, wages, and allowances or any other related matter, payment etc.

17.6 The CONTRACTOR shall not deploy the manpower below the age of 18 years.

17.7 The CONTRACTOR shall not deploy the female manpower between 7 PM to 6 AM.

17.8 The CONTRACTOR shall be directly responsible for any / all disputes arising between him and his persons and keep the COMPANY indemnified against all losses, damages and claims arising thereof. The CONTRACTOR shall resolve any dispute of their manpower. All the legal dues of their manpower is to be paid on due date or within 8 days on the termination of manpower.

17.9 All safety wears required for the CONTRACTOR's manpower during the execution of work such as safety shoes, safety helmets, hand gloves, safety belt, dust mask, goggles etc. must be provided by the

CONTRACTOR at his own cost and he shall ensure that his employees regularly use such safety gears while executing COMPANY's work.

17.10 The CONTRACTOR shall be responsible for discipline of his manpower and shall adhere to the disciplinary procedure set by the COMPANY at site. The COMPANY shall be at liberty to object to the presence of any representative or employees of the CONTRACTOR at the site, if in the opinion of the COMPANY such manpower has done any act of misconduct or negligence or otherwise undesirable, then the CONTRACTOR shall remove such a person objected to and provide a competent replacement immediately.

17.11 The CONTRACTOR shall ensure that he has complied with the following:

- has paid minimum wages to his manpower as per the rate notified from time to time by the Government of National Capital Territory of Delhi.
- Contractor shall disburse the salary of his staff through ECS only. No payment by cheque / cash is acceptable.

17.12 Deduct and deposited ESI and PF contribution. Copies of the same shall be submitted.

17.13 The COMPANY reserves the right to demand the CONTRACTOR's services on holidays as well as beyond the normal working hours.

17.14 The CONTRACTOR will ensure that none of their person is engaged in any unlawful activities subversive of the COMPANY's interest failing which suitable action may be taken against the CONTRACTOR as per the terms and conditions of this tender.

17.15 The CONTRACTOR shall be liable for payment of all taxes and duties as applicable, to the State/ Central Govt. or any local authority.

17.16 The CONTRACTOR's employees shall not be treated as COMPANY's employees / persons for any purpose whatsoever & facilities/ benefits applicable to the COMPANY's employees shall not be applicable to CONTRACTOR's employees. If due to any reasons whatsoever the COMPANY is made liable to meet any obligation under any of the laws & enactment etc, for any reason whatsoever the same shall be recovered from the CONTRACTOR or from any of the bills payable to him or failing which it shall be recovered as per law.



17.17 The CONTRACTOR shall be responsible and shall comply with the provision of all the STATUTORY ACTS APPLICABLE. Special attention of the CONTRACTOR is drawn towards the compliance of provision of the following statutes: (along with the latest amendments/additions):

- 17.1 The Child Labour (Prohibition and Regulation) Act, 1986.
- 17.2 The Contract Labour (Regulation and Abolition) Act, 1970.
- 17.3 The Employee's Pension Scheme, 1995.
- 17.4 The Employee's Provident Funds and miscellaneous provisions Act, 1952.
- 17.5 The Employees State Insurance Act, 1948.
- 17.6 The Industrial Disputes Act, 1947.
- 17.7 The Maternity Benefit Act 1961.
- 17.8 The Minimum Wages Act, 1948.
- 17.9 The Payment of Bonus Act, 1965.
- 17.10 The Payment of Gratuity Act, 1972.
- 17.11 The payment of Wages Act, 1936.
- 17.12 The Delhi Shops & Establishment Act, 1954.
- 17.13 The Workmen's Compensation Act. 1923.
- 17.14 The Employer's Liability Act, 1938

## **18.0 SAFETY CODE:**

The Contractor shall ensure adequate safety precautions at site as required under the law of the land and shall be entirely responsible for the complete safety of their workman as well as other workers at site and premises. The contractor shall not deploy any worker below the age of 18 years.

The contractor shall observe the safety requirements as laid down in the contract and in case of sub-contract (only after written approval of company); it shall be the responsibility of main contractor that all safety requirements are followed by the employees and staff of the sub-contractor.

The contractor employing two hundred employees or more, including contract workers, shall have a safety coordinator in order to ensure the implementation of safety requirements of the contract and a contractor with lesser number of employees, including contract workers, shall nominate one of his employees to act as safety coordinator who shall liaise with the safety officer on matters relating to safety and his name shall be displayed on the notice board at a prominent place at the work site.

The contractor shall be responsible for non-compliance of the safety measures, implications, injuries, fatalities and compensation arising out of such situations or incidents.



In case of any accident, the contractor shall immediately submit a statement of the same to the owner and the safety officer, containing the details of the accident, any injury or casualties, extent of properly damage and remedial action taken to prevent recurrence and in addition, the contractor shall submit a monthly statement of the accidents to the owner at the end of each month.

**19.0 INDEMNIFICATION:**

Contractor shall indemnify and save harmless COMPANY against and from any and all liabilities, claims, damages, losses or expenses arising due to or resulting from:

- a) any breach non-observance or non-performance by contractor or its employees or agents of any of the provisions of this Work Order.
- b) any act or omission of contractor or its employees or agents.
- c) any negligence or breach of duty on the part of contractor, its employees or agents including any wrongful use by it or them of any property or goods belonging to or by COMPANY. Contractor shall at all times indemnify COMPANY against all liabilities to other persons, including he employees or agents of COMPANY or contractor for bodily injury, damage to property or other loss which may arise out of or in consequence of the execution or completion of Works and against all costs charges and expenses that may be occasioned to COMPANY by the claims of such person.

**20.0 ASSIGNMENT**

This Contract shall not be assigned either fully or in part by any Party hereto to any third party without the consent, in writing, of the other Party and only upon such terms as are mutually agreed by both the Parties hereto, except that BRPL may, in whole or in part, assign this Contract to its Affiliates, without the prior written consent of Contractor. In the event this Contract is assigned under the terms of this Clause, the assignees of the respective Parties shall be bound by the terms and conditions of this Contract and shall, if deemed necessary by the Parties at the time of such assignment, undertake in writing to be so bound by this Contract.

**21.0 GOVERNING LAWS AND JURISDICTION:**

This proposed Agreement shall be construed in accordance with and governed by Laws of India. The courts of Delhi shall have the exclusive jurisdiction in all matters arising under this Agreement.

**22.0 STATUTORY OBLIGATIONS:**

The Contractor shall take all steps as may be necessary to comply with the various applicable laws/rules including the provisions of contract labour (Regulation & Abolition Act) 1970 as amended, minimum wages Act, 1948, Workman Compensation Act, ESI Act, PF Act, Bonus Act and all other applicable laws and rules framed there under including any statutory approval required from the Central/State Govt. Ministry of Labour.

The Contractor should obtain the above documents and submit the same to the Engineer-in-charge before commencement of work.

**23.0 WORKMAN COMPENSATION:**

The Contactor shall take insurance policy at his own cost under the Workman Compensation Act to cover such workers who are not covered under ESI and PF by the CONTRACTOR however engaged to undertake the jobs covered under this order and a copy of this insurance policy will be given to Company for reference and records. This insurance policy shall be kept valid at all times. In case there are no worker involve other than those who are covered under ESI and PF by the CONTRACTOR, the CONTRACTOR shall certify for the same.

The CONTRACTOR shall keep the COMPANY indemnified at all times, against all claims of compensation under the provisions of Workmen Compensation Act 1923 as amended from time to time or any compensation payable under any other law for the time being involving workmen engaged by the CONTRACTOR in carrying out the job involved and against costs and expenses, if any, incurred by the COMPANY in connection therewith and without prejudice to make any recovery.

The COMPANY shall be entitled to deduct from any money due to or to become due to the CONTRACTOR, moneys paid or payable by way of compensation as aforesaid or cost or expenses in connection with any claims thereto and the CONTRACTOR shall abide by the decision of the COMPANY as to the sum payable by the CONTRACTOR under the provisions of this clause.

**24.0 STAFF AND WORKMAN**

It shall be responsibility of contractor

(a) To obtain Contract Labour License from the concerned authorities and maintain proper liaison with them. Necessary Forms for obtaining Labour License would be issued by the company. However you will bear all expenses for obtaining Labour license and registration in PF Department for your scope of work. You will deposit PF of your staff/laborer each month and all related documents should be furnished to us.

b) To obtain workman insurance cover against deployment of workers etc.

(II) To maintain, proper records relating to workmen employed, in the form of various Registers, namely,

- a) Register of workmen.
- b) Register of muster roll.
- c) Register of overtime.
- d) Register of wages.
- e) Any other register as per latest amendment Labour Act.

The records shall be in the prescribed formats only.

(III) To disburse monthly wages to your workers/ supervisors in time and in the presence of Company representatives or as directed by the Labour authorities.

(IV) To maintain proper liaison with the Project authorities, local police and all other government and local bodies.

(V) To pay your workmen at least not less than the minimum prescribed wages as per state/Central Labour laws as may be, applicable. The contractor shall, be responsible for compliance of all the provisions of minimum Wages Act, PF, ESIC Act workmen Compensation Act and Contract Labour Regulation & Abolition Act the rules made there under. In case of non- compliance of the statutory requirements. The company would take necessary action at the risk and cost of the Contractor.

(VI) To employ required number of skilled/semi-skilled and unskilled workmen as per site requirement to complete the entire project as per schedule. To provide safety shoes, safety helmets, safety belts, gloves etc. to your worker/staff as per requirement during erection work.

(VII) To employ necessary engineering and supervisory staff for completion of the Project in time. While day-to-day management of the site and supervision of the works shall be the responsibility of your Engineer - In charge, he will report to the Engineer in charge to assist him to discharge the overall responsibility of the execution of the project.

## **25.0 CLEANLINESS & PRECAUTIONS TO BE TAKEN WHILE DOING WORK AT SITE TO PREVENT DUST POLLUTION:**

All debris shall be removed and disposed of at assigned areas on daily basis. Surplus excavated earth shall be disposed of in an approved manner. In short, the contractor shall be fully responsible for keeping the work site clean at all times. In case of non- compliance, company shall get the same done at Contractor's risk and costs.

While carrying out any civil work including road/ pit digging, plinth/ fence making, road restoration etc contractor shall adhere to below mentioned guidelines.

1. No construction material/ debris shall be stored on metalled road.
2. Wind breakers of appropriate height on all sides of ear marked area using CGI sheets shall be raised to ensure that no construction material dust fly outside ear marked area.
3. The construction material i.e. coarse sand, stone aggregates, excavated earth, cement and any other material to and from the site shall be transported under wet and covered condition to ensure their non-slippage en-route to avoid air contamination.
4. The contractor shall provide mask and helmet to every worker working on the construction site and involved in loading/unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.
5. Over loading of vehicles shall be strictly prohibited
6. The construction material at site shall be stored under wet and covered condition.
7. The dumping sites for temporarily storing the excavated earth shall be properly leveled, watered and rehabilitated by plantation to avoid flying of dust.

8. The worker at the site shall be sensitized to adopt / observe the dust controlled measures in true spirit.

9. If any C&D waste is generated at site the same will be transported to the C&D waste site only and the record for the same will be maintained by the agency.

10. Wet jet in grinding and stone cutting is being permitted at site.

11. The necessary record for dust control is being maintained by the department on day to day basis and being monitored regularly.

The Execution vendors shall be responsible for all the preventive and protective environmental steps as per guidelines. Any violations from the above guidelines have been viewed very seriously by the authorities. Concerned agency is liable for the penalties / other action by the authorities, The Agency shall indemnify BRPL from all liabilities on this account.

## **26.0 GUIDELINES REGARDING INSPECTION & MAINTENANCE OF PITS/ DUG AREA WHILE DOING WORK AT SITE IN BRPL AREA:**

The contractor shall ensure strict compliance of the following directions:

a) The sites of all manholes, pits, holes, tanks or any other opening in the ground of any kinds shall be regularly inspected and maintained.

b) Schedule and protocols of inspections and maintenance shall be drawn up and notified to BRPL.

c) These sites shall be cordoned off to render them inaccessible to the public.

d) The existence of these sites shall be clearly & visibly marked by the display of signboards/signages.

e) If they are required to be covered, it shall be ensured that the covers are in place.

The Execution vendors shall be responsible for all the preventive and protective environmental steps as per guidelines.

Any violations from the above guidelines have been viewed very seriously by the authorities. Concerned agency is liable for the penalties / other action by the authorities, The Agency shall indemnify BRPL from all liabilities on this account.

## **27.0 VENDOR CODE OF CONDUCT:**

Contractor confirms to have gone through the Policy of BRPL on legal and ethical code required to be followed by contractor encapsulated in the "Vendor Code of Conduct" displayed on the official website of BRPL ([www.bsesdelhi.com](http://www.bsesdelhi.com)) also, which shall be treated as a part of the contract.

Contractor undertakes that he shall adhere to the Vendor code of Conduct and also agrees that any violation of the Vendor Code of Conduct shall be treated as breach of the contract.

In event of any such breach, irrespective of whether it causes any loss/damage, company (BRPL) shall have the right to recover loss/damage from Contractor.

The Contractor hereby indemnifies and agrees to keep indemnified the company (BRPL) against any claim/litigation arising out of any violation of Vendor Code of Conduct by the Contractor or its officers, agents & representatives etc.

## **28.0 INSURANCE**

### **28.1 THIRD PARTY INSURANCE**

The Contractor shall, before the commencement of work, take a Third Party Insurance of an adequate value, at his own cost and expenses, securing all the risks/losses/damages which may be caused to any

third party and/or BRPL and/or its employees/associates, because of the omission/performance of tasks by the contractor under this agreement. The full and final settlement of claims raised by third parties shall be the sole responsibility of the contractor without any liability to BRPL. It is further agreed by the contractor that in case of defect/damage to the system because of default on the part of the contractor, the contractor shall, at its own cost, be liable to replace/rectify the same at the earliest or make good the loss suffered by BRPL.

**28.2 ACCIDENTAL INSURANCE POLICY FOR LIFE COVER:**

Before commencing the execution of the work the CONTRACTOR shall take Accidental insurance policy for the staff engaged by him for this work to insure against any loss of life which may occur during the contract for the work of the COMPANY. The policy shall have coverage of Rs. 10 Lacs (Table C- Death + Permanent Total Disability + Partial permanent Disability due to external accidents). The Contractor shall be responsible for on the spot same day claim settlement with the victim's legal heirs without waiting for settlement by insurance claim without any liability on BRPL. The premium amount for such life cover policy shall be borne by the contractor. The contractor shall furnish copy of policy when demanded by the company.

**28.3 Guidelines for working in Covid19 situation:**

Looking to the present Covid19 situation, Vendor will ensure that the work carried out in the field by their staff shall be as per the guidelines issued by BRPL & MHA from time to time. Further vendor shall be required to provide to their staff masks/ sanitizers/ all PPE required for working in Covid19 situation. The vendor shall further ensure to work as per the guidelines of BRPL Engineer in charge.

**28.4 Insurance for Covid 19:**

Before commencing the execution of the work the CONTRACTOR shall take insurance policy for covering death against Covid 19 for the staff engaged by him for this work to insure against any loss of life which may occur during the contract. The contractor has to take "No fault liability policy" which shall have coverage of Rs. 10 Lacs per employee. The Contractor shall be responsible for on the spot same day claim settlement with the victim's legal heirs without waiting for settlement by insurance claim without any liability on BRPL. The premium amount for such policy shall be borne by the contractor. The contractor shall furnish copy of policy when demanded by BRPL.

**29.0 NON-EXCLUSIVITY:**

The award of this order to the Contractor shall not preclude the Company from awarding the same order for similar work at the same rates, or on any terms and conditions to other party or parties. The Company at its description places the order on any other party.

**30.0 SECURITY**

Adequate number of trained Security Guards shall be deployed both at the storage yard and stores as well as places of work to prevent theft and pilferage of material and accessories and various other materials. All security rules and safety rules enforced at site by company shall be strictly observed.

### **31.0 ENVIRONMENTAL, HEALTH & SAFETY PLAN:**

Contractor will make ensure that the Environment, Health & Safety (EHS) requirements are clearly understood and faithfully implemented at all levels at site as per instruction of Company. Contractors must comply with these requirements:

- a) Comply with all of the elements of the EHS Plan and any regulations applicable to the work
- b) Comply with the procedures provided in the interests of Environment, Health and Safety
- c) Ensure that all of their employees designated to work are properly trained and competent
- d) Ensure that all plant and equipment they bring on to site has been inspected and serviced in accordance with legal requirement and manufacturer's or suppliers' instructions
- e) Make arrangements to ensure that all employees designated to work on or visit the site present themselves for site induction prior to commencement of work
- f) Provide details of any hazardous substances to be brought onsite
- g) Ensure that a responsible person accompanies any of their visitors to site

All contractors staff is accountable for the following:

1. Use the correct tools and equipment for the job and use safety equipment and protective clothing supplied, e.g. helmets, goggles, ear protection, etc. as instructed
2. Keep tools in good condition
3. Report to the Supervisor any unsafe or unhealthy condition or any defects in plant or equipment
4. Develop a concern for safety for themselves and for others
5. Prohibit horseplay
6. Not to operate any item of plant unless they have been specifically trained and are authorized to do so.

### **32.0 TEST CERTIFICATE & QUALITY ASSURANCE:**

The Contractor shall procure all equipment from genuine sources as approved by the Company and as per Company specifications. The Contractor shall submit all the test certificates and joint inspection reports related to major equipment wherever applicable. The contractor shall ensure for the strict compliance to the specifications and Field Quality Procedures issued by company / Engineer in-charge.

**33.0 AMENDMENT:**

Any modification, amendment or other change to this Agreement shall be affected only by a written instrument signed by the authorized representatives of both the COMPANY and the CONTRACTOR.

**34.0 SUB-CONTRACTING / SUBLETTING:**

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.

**35.0 INDEMNITY:**

Contractor shall indemnify and save harmless COMPANY against and from any and all liabilities, claims, damages, losses or expenses arising due to or resulting from:

- a) any breach non-observance or non-performance by contractor or its employees or agents of any of the provisions of this Work Order.
- b) any act or omission of contractor or its employees or agents.
- c) any negligence or breach of duty on the part of contractor, its employees or agents including any wrongful use by it or them of any property or goods belonging to or by COMPANY.

Contractor shall at all times indemnify COMPANY against all liabilities to other persons, including he employees or agents of COMPANY or contractor for bodily injury, damage to property or other loss which may arise out of or in consequence of the execution or completion of Works and against all costs charges and expenses that may be occasioned to COMPANY by the claims of such person.

**36.0 EVENTS OF DEFAULTS:**

COMPANY may, without prejudice to any of its other rights or remedies under the Work Order or in law, terminate the whole or any part of this Work Order by giving written notice to the Contractor, if in the opinion of COMPANY, contractor has neglected to proceed with the works with due diligence or commits a breach of any of the provisions of this work order including but not limited to any of the following cases:

- a) Failing to complete execution of work within the terms specified in this work order.
- b) Failing to complete works in accordance with the approved schedule of works.
- c) Failing to meet requirements of specifications, drawings, and designs as approved by COMPANY.
- d) Failing to comply with any reasonable instructions or orders issued by COMPANY in connection with the works.
- e) Failing to comply with any of the terms or conditions of this work order.

In the event COMPANY terminates this work order, in whole or in part, on the occurrence of any event of default, COMPANY reserves the right to engage any other subcontractor or agency to



complete the work or any part thereof, and in addition to any other right COMPANY may have under this work order or in law including without limitation the right to penalize for delay under clause 15.0 of this work order, the contractor shall be liable to COMPANY for any additional costs that may be incurred by COMPANY for the execution of the Work.

**37.0 RISK & COST:**

The Company at his option will be entitled to terminate the contract and to carry out work from elsewhere at the risk and cost of the Contractor either the whole or any part which the Contractor has failed to perform, the best and the nearest available substitute there from the Contractor shall be liable for any loss which the Company may sustain by reason of such risk purchases.

**38.0 ARBITRATION:**

To the best of their ability, the parties hereto shall endeavor to resolve amicably between themselves all disputes arising in connection with the proposed Agreement. If the same remain unresolved, within fifteen (15) days of the matter being raised by either party, either party may refer the dispute for settlement by arbitration. The arbitration to be undertaken by a sole arbitrator to be appointed by the company. The decision of the arbitrator is final and binding upon both the parties. The arbitration proceeding shall be conducted in accordance with the provisions of the Indian Arbitration & Conciliation Act, 1996 and the venue of such arbitration shall be New Delhi only.

**39.0 SECRECY CLAUSE:**

The technical information, drawing and other related documents forming part of order and the information obtained during the course of investigation under this order shall be the COMPANY's exclusive property and shall not be used for any other purpose except for the execution of the order. The technical information drawing, records and other document shall not be copied, transferred, or divulged and/or disclosed to third party in full/part, not misused in any form whatsoever except to the extent for the execution of this order. These technical information, drawing and other related documents shall be returned to the COMPANY with all approved copies and duplicates including drawing/plans as are prepared by the Contractor during the executions of this order, if any, immediately after they have been used for agreed purpose.

In the event of any breach of this provision, the contractor shall indemnify the COMPANY against any loss, cost or damage or claim by any party in respect of such breach.

**40.0 TERMINATION:**

During the course of the execution, if at any time the COMPANY observe and forms an opinion that the work under the order is not being performed satisfactory and the performance of the CONTRACTOR not found satisfactory, the COMPANY reserves its right to cancel/ terminate this Agreement giving 30 days notice without assigning any reason and the COMPANY will recover all damages including losses occurred due to loss of time from the CONTRACTOR. On receipt of such notice the CONTRACTOR



shall immediately stop all activities related to the work terminated. This is without prejudice to other rights under the terms of contract. The CONTRACTOR shall hand over the COMPANY all drawing/documents prepared for this contract up to the date of cancellation of order.

**41.0 QUALITY:**

Contractor shall ensure that strict quality is maintained and execution of works under this Work Order and Works are executed in conformity with the Specification.

All tools, tackles, instruments and other equipments used in the execution of the Works shall be duly calibrated as required and Contractor shall maintain proper records of such tools, tackles, instruments and / or equipment.

**42.0 ACCEPTANCE**

Acceptance of this work order implies and includes acceptance of all terms and conditions enumerated in this work order in the technical specification and drawings made available to you consisting of general conditions, detailed scope of work, detailed technical specification & detailed equipment, drawing. Complete scope of work and the Contractor's and Company's contractual obligation are strictly limited to the terms set out in the work order. No amendments to the concluded work order shall be binding unless agreed to in writing for such amendment by both the parties.

However, during the course of the execution of the work order, if at any time the Company's representative observe and form an opinion that the work under the work order is not being performed in accordance with the terms of this work order, the company reserves its right to cancel this work order forthwith without assigning any reason and the Company will recover all damages including losses occurred due to loss of time from the Contractor.

We request you to please sign the duplicate copy of this work order as a token of your acceptance and return to us.

**ANNEXURE -I**

The Contractor must submit the following to Engineer-In-Charge before commencement of work:

1. PF Code No. and all employees to have PF A/c No. under PF every Act, 1952.
2. All employees to have a temporary or permanent ESI Card as per ESI Act.
3. ESI Registration No.
4. PAN No.
5. GST Registration Number.
6. An Electrical license.
7. Certificate of registration under Contract labour (R & A) Act 1970
8. Third party Insurance Policy before start of work.
9. To follow Minimum Wages Act prevailing in the state.
10. Salary/ Wages to be distributed in presence of Company's representative not later than 7th of each month.
11. To maintain Wage- cum - Attendance Register.
12. To maintain First Aid Box at Site.
13. Latest P.F. and E.S.I. challans pertaining to the period in which work was undertaken along with a certificate mentioning that P.F. and E.S.I. applicable to all the employees has been deducted and deposited with the Authorities within the time limits specified under the respective Acts.
14. Workman Compensation Policy.
15. Labor license before start of work.

**SECTION – IV:****Scheme No.1 [ES21MS4003]:**

<b>Supply of Materials Vendor scope For Scheme ES21MS4003</b>				
<b>S No.</b>	<b>Material</b>	<b>Refer s relevant section under Section V (Technical Specification of material)</b>	<b>Qty</b>	<b>UOM</b>
1	Contactors and auxiliary contact	Sec 4.1		No.s
		Sec 4.2	68	No.s
		Sec 4.3		No.s
		Sec 4.4		No.s
		Sec 4.5		No.s
		Sec 4.6		No.s
		Sec 4.7	65	No.s
		Sec 4.8		No.s
		Sec 4.9	4	No.s
		Sec 4.10		No.s
2	Indication Lamps	Sec 5.2	13	No.s
		Sec 5.3	13	No.s
		Sec 5.4	13	No.s
		Sec 5.5	13	No.s
		Sec 5.6	13	No.s
		Sec 5.7	13	No.s
		Sec 5.8	0	No.s

		Sec 5.9	13	No.s
		Sec 5.10		No.s
		Sec 5.11		No.s
		Sec 5.12		No.s
		Sec 5.13		No.s
		Sec 5.14		No.s
		Sec 5.15		No.s
		Sec 5.16		No.s
		Sec 5.17		No.s
		Sec 5.18		No.s
		Sec 5.19		No.s
		Sec 5.20		No.s
		Sec 5.21		No.s
3	Instrumentation Instruments and accessories	Sec 6.1		No.s
		Sec 6.2		No.s
		Sec 6.3		No.s
		Sec 6.4		No.s
		Sec 6.5		No.s
		Sec 6.6		No.s
4	PVC Ducts	Sec 8		Meter
5	Selector switch and Push Buttons	Sec 9.2	4	No.s
		Sec 9.3	10	No.s
		Sec 9.4		No.s
		Sec 9.5	10	No.s

		Sec 9.6	3	No.s
6	Terminal Blocks and accessories(End plate)	Sec 10.2	20	No.s
		Sec 10.3	200	No.s
		Sec 10.4.2	8	No.s
		Sec 10.4.3	14	No.s
7	DIN Rail and accessories(base plate)	Sec 11.1		Meter
		Sec 11.2.2		Meter
		Sec 11.2.3		Meter
8	MCBs	Sec 12.2	10	No.s
		Sec 12.3	7	No.s
		Sec 12.4	7	No.s
		Sec 12.5	3	No.s
		Sec 12.6		No.s
		Sec 12.7		No.s
		Sec 12.8		No.s
		Sec 12.9	4	No.s
		Sec 12.10		No.s
9	Heater and Illumination Equipments	Sec 13.2.1		No.s
		Sec 13.2.2		No.s
		Sec 13.2.3	3	No.s
		Sec 13.2.4		No.s
10	Cable Glands and Cable Trays	Sec 14.2.1	3	No.s
		Sec 14.2.2		No.s
		Sec 14.2.3		No.s

		Sec 14.2.4		No.s
		Sec 14.3.1		Meter
11	Communication Cables	Sec 15.1		Meter
		Sec 15.2		Meter
		Sec 15.3		Meter
12	Ethernet Switch accessories	Sec 16.3		No.s
13	Earthling Strip	Sec 18.1		Meter
14	Semaphore	Sec 19.1.1		No.s
		Sec 19.1.2		No.s
		Sec 19.1.3		No.s
		Sec 19.1.4		No.s
15	Plates and fixtures	Sec 20.1		No.s
		Sec 20.2	2	Sqm
		Sec 20.3		Sqm
		Sec 20.4		No.s
16	Fan	Sec 21.1		No.s

<b>SCOPE OF WORK- Erection [ES21MS4003]</b>				
S No.	Work ( Grids Vasantkunj C&D Blk )	Quantity	UOM	
1	Renovation , Retrofit of 11 KV Switchgear			
1.1	Incomer	4	Panel	
1.2	Cap bank	4	Panel	
1.3	Buscoupler/Outgoing	30	Panel	
	<b>SCOPE OF WORK FOR A CRP</b>			
1.1.1	Material Transport from / to store/site			
1.1.2	Installation of Numerical OC & EF relay, Master trip relay, Trip Ckt Supvn relay, AC& DC Supvn relay etc including complete wiring related to relay i.e CT/PT, input and outputs with in the panel. Scope also include dismantling of old existing relay, making additional cut out in panel for mounting new relays providing colored blank sheet as required			
1.1.3	For Incomers scope also includes Installation of TRAFO Differential Relay on 66/ 33 kv CRP including complete wiring related to relay i.e CT/PT,input and outputs with in the panel making additional cut out in panel for mounting new relays .			
	Scope also include dismantling of old existing relay on 11 KV Switchgear, providing blank sheet as required			

1.1.4	Installation of fixture channels, TBs(as per requirement), MCB, Contactor, CMR, MFMM, Indication lamps, communication cables(with glanding), Relays and other panel wiring/accessories including their new wiring, interpanel wiring. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules & sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC) etc.
1.1.5	Making of proper door locking arrangement by repair/fixing of door of LV Compartment of Switchgear panel and installation/ replacement of dilapidated Gasket (Work Includes supply of Lock, Gasket (Neoprene) and any other accessories by vendor)
1.1.6	Supply of asbuilt schematic drawing of Panel.
1.1.7	Bidder should visit site and assess it self of quantum of work involved any miscellaneous work which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment shall be carried out without any extra charge.
1.1.8	Watch & ward of material during entire execution work shall be in scope of Vendor.



**Scheme No.2 [ES20MS4019]:**

<b>Supply of Materials Vendor scope ES20MS4019</b>				
<b>S No.</b>	<b>Material</b>	<b>Refer relevant section under Section V (Technical Specification of material</b>	<b>Total Items</b>	<b>UOM</b>
1	Contactors and auxiliary contact	Sec 4.1	11	No.s
		Sec 4.2	171	No.s
		Sec 4.3	0	No.s
		Sec 4.4	2	No.s
		Sec 4.5	80	No.s
		Sec 4.6	15	No.s
		Sec 4.7	0	No.s
		Sec 4.8	0	No.s
		Sec 4.9	0	No.s
		Sec 4.10	0	No.s
2	Indication Lamps	Sec 5.2	11	No.s
		Sec 5.3	11	No.s
		Sec 5.4	22	No.s
		Sec 5.5	11	No.s
		Sec 5.6	11	No.s
		Sec 5.7	11	No.s
		Sec 5.8	0	No.s
		Sec 5.9	22	No.s

		Sec 5.10	1	No.s
		Sec 5.11	1	No.s
		Sec 5.12	1	No.s
		Sec 5.13	4	No.s
		Sec 5.14	15	No.s
		Sec 5.15	15	No.s
		Sec 5.16	30	No.s
		Sec 5.17	15	No.s
		Sec 5.18	15	No.s
		Sec 5.19	15	No.s
		Sec 5.20	0	No.s
		Sec 5.21	30	No.s
3	Instrumentation Instruments and accessories	Sec 6.1	11	No.s
		Sec 6.2	0	No.s
		Sec 6.3	6	No.s
		Sec 6.4	2	No.s
		Sec 6.5	11	No.s
		Sec 6.6	8	No.s
4	PVC Ducts	Sec 8	270	Meter
5	Selector switch and Push Buttons	Sec 9.2	26	No.s
		Sec 9.3	48	No.s
		Sec 9.4	11	No.s
		Sec 9.5	26	No.s
		Sec 9.6	26	No.s

6	Terminal Blocks and accessories(End plate)	Sec 10.2	680	No.s
		Sec 10.3	1980	No.s
		Sec 10.4.2	78	No.s
		Sec 10.4.3	189	No.s
7	DIN Rail and accessories(base plate)	Sec 11.1	138	Meter
		Sec 11.2.2	96	Meter
		Sec 11.2.3	90	Meter
8	MCBs	Sec 12.2	26	No.s
		Sec 12.3	74	No.s
		Sec 12.4	37	No.s
		Sec 12.5	50	No.s
		Sec 12.6	7	No.s
		Sec 12.7	26	No.s
		Sec 12.8	11	No.s
		Sec 12.9	59	No.s
		Sec 12.10	15	No.s
9	Heater and Illumination Equipments	Sec 13.2.1	11	No.s
		Sec 13.2.2	11	No.s
		Sec 13.2.3	26	No.s
		Sec 13.2.4	26	No.s
10	Cable Glands and Cable Trays	Sec 14.2.1	168	No.s
		Sec 14.2.2	0	No.s

		Sec 14.2.3	22	No.s
		Sec 14.2.4	80	No.s
		Sec 14.3.1	101	Meter
11	Communication Cables	Sec 15.1	1300	Meter
		Sec 15.2	105	Meter
		Sec 15.3	110	Meter
12	Ethernet Switch accessories	Sec 16.3	3	No.s
13	Earthling Strip	Sec 18.1	11	Meter
14	Semaphore	Sec 19.1.1	10	No.s
		Sec 19.1.2	45	No.s
		Sec 19.1.3	0	No.s
		Sec 19.1.4	0	No.s
15	Plates and fixtures	Sec 20.1	11	No.s
		Sec 20.2	4	Sqm
		Sec 20.3	5	Sqm
		Sec 20.4	0	No.s
16	Fan	Sec 21.1	26	No.s

**Scheme No. 2 [ES20MS4019]:**

<b>SCOPE OF WORK- Erection, Testing and Commissioning [ES20MS4019]</b>					
S No.	Work	CRP type	Quantity	UOM	Unit Price (aapprox)
1	Renovation , Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.1)	66Kv Bays	6	Panel	
1	Renovation , Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.1)	66Kv Bays	5	Panel	
1	Renovation , Retrofit of Control and Relay (CRP) / 11Kv Switchgear Panel as per scope of work (Sec 1.2)	11Kv Bays	15	Panel	
1.1	<b>Scope for Renovation, Retrofit work - ERECTION, TESTING AND COMMISSIONING at 66Kv Mathura Road Grid and 66KV Sarita Vihar Grid (66Kv Side CRP related)</b>				
1.1.1	Identification of control cable from field equipment to Marshalling Box and then from Marshalling box to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays, Front plate and other				

	panel accessories including its tracing and tagging so that cables can be reconnected later as per site requirement
1.1.2	Cutting and fixing of Front plate of CRP. Work also includes related welding/buffering work and supply of ancillaries for fixing. Supply of Front plate is in the Material scope of tender.
1.1.3	Double coat Spray painting of CRP after fixing of blanking plate/Front Plate including supply of related painting material. (Color: Sides and back door - Siemens Grey Inside of CRP -White)
1.1.4	Making of proper door locking arrangement by repair/fixing of new door locks at back of CRP(per panel) and installation/ replacement of Gasket (Work Includes supply of Lock, Gasket(Neoprene) and any other accessories by vendor)
1.1.5	Installation of fixture channels, TBs(as per requirement), MCB, Contactor, Indication lamps, Annunciator, communication cables, Relays and other panel wiring/accessories including their new wiring, interpanel wiring, Fixing of earthing strip of adequate size in CRP. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules, sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC), Mimic etc.
1.1.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles,Tags, other ancillaries on both ends of communication cable.
	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU
	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.

1.1.7	Onsite testing of entire panel as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.
1.1.8	Laying of control cable from site equipment to marshalling kiosk to CRP and CRP interpanel wiring as per site requirement.  Work includes tagging , glanding, crimping of wires. Purchase of necessary Cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.1.9	Dismantling and removal of control cable from trench between CRP and site equipment as per site requirement.
1.1.10	Supply of asbuilt schematic drawing of CRP and Marshalling box.
1.1.11	Supply of Cable Schedule
1.1.12	Fixing of Gland Plate in CRP including glanding of cables. Work also includes related welding/buffering work and supply of ancillaries for fixing. Supply of Gland plate is in Material scope of tender.
1.1.13	Cable tray laying with joint plates, MS angle support and nut bolts  Note - Purchase of required MS Angle Supports with Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.
1.1.14	Material Transport from / to store/site
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.

NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.
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1.2	<b>Scope for Renovation/ Retrofit work - ERECTION, TESTING AND COMMISSIONING at 33Kv Alaknanda Grid (11Kv Side CRP/Switchgear related)</b>
Overview:	At present, 11KV Switchgear Panel(with LV Compartment housing Control wiring/equipments) and “Control &Relay Panel (CRP)” are separate. In execution of work, Relays and other accessories shall be installed at LV Compartment of 11KV Switchgear Panel and existing CRPs shall be dismantled.
1.2.1	Identification of control cable from field equipment to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays and other panel accessories including its tracing and tagging so that cables can be reconnected later as per site requirement.
1.2.2	Making cut-outs / fixing blanking plate on front plate of LV compartment box of 11Kv Switchgear panel for fixing of Relays (Numerical and Auxiliary types) and other panel accessories like MFM, Ammeter, Indication lamps. Work includes necessary buffering and welding work and supply of ancillaries for fixing.
1.2.3	Double coat Spray painting of Switchgear Panel after fixing of blanking plate including supply of related painting material. (Color: Front -Siemens Grey Inside of LV Compartment of Switchgear panel -White)
1.2.4	Making of proper door locking arrangement by repair/fixing of door of LV Compartment of Switchgear panel and installation/ replacement of dilapidated Gasket (Work Includes supply of Lock, Gasket (Neoprene) and any other accessories by vendor)
1.2.5	Installation of fixture channels, TBs(as per requirement), MCB, Contactor, CMR, MFM, Indication lamps, communication cables(with glanding), Relays and other panel wiring/accessories including their new wiring, interpanel wiring. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply



	of petty items like PVC ferrules & sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC) etc.
1.2.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles, tags, other ancillaries on both ends of communication cable.
	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU
	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.
1.2.7	Onsite testing of entire panel as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.
1.2.8	Laying of control cable from 11KV Switchgear panel to marshalling kiosk/RTU and interpanel wiring as per site requirement.
	Work includes tagging , glanding, crimping of wires. Purchase of necessary cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.2.9	Dismantling and removal of control cable from trench between CRP and Switchgear panel / Site equipment as per site requirement.
1.2.10	Supply of asbuilt schematic drawing of Panel.
1.2.11	Cable tray laying with joint plates, MS angle support and nut bolts
	Note - Purchase of required MS Angle Supports with Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.
1.2.12	Dismantling of Old CRP

1.2.13	Material Transport from / to store/site
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.
NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.

**Scheme No. 3 [ES20MS4014]:**

<b>Supply of Materials Vendor scope ES20MS4014</b>				
S No	Material	Refer relevant section under Section V (Technical Specification of material	Total Qty	UOM
1	Contactors and auxiliary contact	Sec 4.1	0	No.s
		Sec 4.2	0	No.s
		Sec 4.3	0	No.s
		Sec 4.4	8	No.s
		Sec 4.5	222	No.s
		Sec 4.6	15	No.s
		Sec 4.7	0	No.s
		Sec 4.8	0	No.s

		Sec 4.9	0	No.s
		Sec 4.10	0	No.s
2	Indication Lamps	Sec 5.2	0	No.s
		Sec 5.3	0	No.s
		Sec 5.4	0	No.s
		Sec 5.5	0	No.s
		Sec 5.6	0	No.s
		Sec 5.7	0	No.s
		Sec 5.8	0	No.s
		Sec 5.9	0	No.s
		Sec 5.10	2	No.s
		Sec 5.11	2	No.s
		Sec 5.12	2	No.s
		Sec 5.13	2	No.s
		Sec 5.14	21	No.s
		Sec 5.15	21	No.s
		Sec 5.16	42	No.s
		Sec 5.17	21	No.s
		Sec 5.18	21	No.s
		Sec 5.19	21	No.s
		Sec 5.20	0	No.s
		Sec 5.21	36	No.s
3	Instrumentation Instruments and accessories	Sec 6.1	6	No.s
		Sec 6.2	15	No.s

		Sec 6.3	4	No.s
		Sec 6.4	2	No.s
		Sec 6.5	21	No.s
		Sec 6.6	6	No.s
4	PVC Ducts	Sec 8	180	Meter
5	Selector switch and Push Buttons	Sec 9.2	21	No.s
		Sec 9.3	33	No.s
		Sec 9.4	6	No.s
		Sec 9.5	21	No.s
		Sec 9.6	21	No.s
6	Terminal Blocks and accessories(End plate)	Sec 10.2	530	No.s
		Sec 10.3	1305	No.s
		Sec 10.4.2	54	No.s
		Sec 10.4.3	117	No.s
7	DIN Rail and accessories(base plate)	Sec 11.1	114	Meter
		Sec 11.2.2	78	Meter
		Sec 11.2.3	60	Meter
8	MCBs	Sec 12.2	21	No.s
		Sec 12.3	47	No.s
		Sec 12.4	27	No.s
		Sec 12.5	35	No.s
		Sec 12.6	4	No.s
		Sec 12.7	21	No.s

		Sec 12.8	6	No.s
		Sec 12.9	39	No.s
		Sec 12.10	15	No.s
9	Heater and Illumination Equipments	Sec 13.2.1	6	No.s
		Sec 13.2.2	6	No.s
		Sec 13.2.3	21	No.s
		Sec 13.2.4	21	No.s
10	Cable Glands and Cable Trays	Sec 14.2.1	112	No.s
		Sec 14.2.2	0	No.s
		Sec 14.2.3	12	No.s
		Sec 14.2.4	20	No.s
		Sec 14.3.1	30	Meter
11	Communication Cables	Sec 15.1	100	Meter
		Sec 15.2	50	Meter
		Sec 15.3	100	Meter
12	Ethernet Switch accessories	Sec 16.3	0	No.s
13	Earthling Strip	Sec 18.1	6	Meter
14	Semaphore	Sec 19.1.1	0	No.s
		Sec 19.1.2	0	No.s
		Sec 19.1.3	5	No.s

		Sec 19.1.4	25	No.s
15	Plates and fixtures	Sec 20.1	6	No.s
		Sec 20.2	4	Sqm
		Sec 20.3	4	Sqm
		Sec 20.4	0	No.s
16	Fan	Sec 21.1	21	No.s

**Scheme No. 3 [ES20MS4014]:**

<b>SCOPE OF WORK- Erection, Testing and Commissioning [ES20MS4014]</b>					
S No.	Work	CRP type	Quantity	UOM	
1	Renovation and Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.1)	33Kv Bays	6	Panel	
2	Renovation and Retrofit of Control and Relay (CRP) / 11Kv Switchgear Panel as per	11Kv Bays	15	Panel	

	scope of work (Sec 1.2)				
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1.1	<b>Scope for Renovation/ Retrofit work - ERECTION, TESTING AND COMMISSIONING at 33Kv Tughlakabad Grid (33Kv Side CRP related)</b>
1.1.1	Identification of control cable from field equipment to Marshalling Box and then from Marshalling box to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays, Front plate and other panel accessories including its tracing and tagging so that cables can be reconnected later as per site requirement
1.1.2	Cutting and fixing of Front plate of CRP. Work also includes related welding/buffering work and supply of ancillaries for fixing. Supply of Front plate is in the Material scope of tender.
1.1.3	Double coat Spray painting of CRP after fixing of blanking plate/Front Plate including supply of related painting material. (Color: Sides and back door -Siemens Grey Inside of CRP -White)
1.1.4	Making of proper door locking arrangement by repair/fixing of new door locks at back of CRP(per panel) and installation/ replacement of Gasket (Work Includes supply of Lock, Gasket(Neoprene) and any other accessories by vendor)
1.1.5	Installation of fixture channels, TBs(as per requirement), MCB, Contactor, Indication lamps, Annunciator, communication cables, Relays and other panel wiring/accessories including their new wiring, interpanel wiring, Fixing of earthing strip of adequate size in CRP. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules, sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC), Mimic etc.
1.1.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles,Tags, other ancillaries on both ends of communication cable.
	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU

	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.
1.1.7	Onsite testing of entire panel as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.
1.1.8	Laying of control cable from site equipment to marshalling kiosk to CRP and CRP interpanel wiring as per site requirement.
	Work includes tagging , glanding, crimping of wires. Purchase of necessary Cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.1.9	Dismantling and removal of control cable from trench between CRP and site equipment as per site requirement.
1.1.10	Supply of asbuilt schematic drawing of CRP and Marshalling box.
1.1.11	Supply of Cable Schedule
1.1.12	Fixing of Gland Plate in CRP including glanding of cables. Work also includes related welding/buffering work and supply of ancillaries for fixing. Supply of Gland plate is in Material scope of tender.
1.1.13	Cable tray laying with joint plates, MS angle support and nut bolts
	Note - Purchase of required MS Angle Supports with Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.
1.1.14	Material Transport from / to store/site
1.1.15	Erection of Renovated CRP at site
1.1.16	Dismantling of Old CRP at site
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.



NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.
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1.2	<b>Scope for Renovation/ Retrofit work - ERECTION, TESTING AND COMMISSIONING at 33Kv Tughlakabad Grid (11Kv Side CRP/Switchgear related)</b>
Overview:	At present, 11KV Switchgear Panel(with LV Compartment housing Control wiring/equipments) and “Control & Relay Panel (CRP)” are separate. In execution of work, Relays and other accessories shall be installed at LV Compartment of 11KV Switchgear Panel and existing CRPs shall be dismantled.
1.2.1	Identification of control cable from field equipment to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays and other panel accessories including its tracing and tagging so that cables can be reconnected later as per site requirement.
1.2.2	Making cut-outs / fixing blanking plate on front plate of LV compartment box of 11Kv Switchgear panel for fixing of Relays (Numerical and Auxiliary types) and other panel accessories like MFM, Ammeter, Indication lamps. Work includes necessary buffering and welding work and supply of ancillaries for fixing.
1.2.3	Double coat Spray painting of Switchgear Panel after fixing of blanking plate including supply of related painting material. (Color: Front -Siemens Grey Inside of LV Compartment of Switchgear panel -White)
1.2.4	Making of proper door locking arrangement by repair/fixing of door of LV Compartment of Switchgear panel and installation/ replacement of dilapidated Gasket (Work Includes supply of Lock, Gasket (Neoprene) and any other accessories by vendor)
1.2.5	Installation of fixture channels, TBs(as per requirement), MCB, Contactor, CMR, MFM, Indication lamps, communication cables(with glanding), Relays and other panel wiring/accessories including their new wiring, interpanel wiring. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules & sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors,

	Legends(METALLIC) etc.
1.2.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles, tags, other ancillaries on both ends of communication cable.
	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU
	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.
1.2.7	Onsite testing of entire panel as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.
1.2.8	Laying of control cable from 11KV Switchgear panel to marshalling kiosk/RTU and interpanel wiring as per site requirement.
	Work includes tagging , glanding, crimping of wires. Purchase of necessary cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.2.9	Dismantling and removal of control cable from trench between CRP and Switchgear panel / Site equipment as per site requirement.
1.2.10	Supply of asbuilt schematic drawing of Panel.
1.2.11	Cable tray laying with joint plates, MS angle support and nut bolts
	Note - Purchase of required MS Angle Supports with Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.
1.2.12	Dismantling of Old CRP

1.2.13	Material Transport from / to store/site
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.
NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.

Supply of Materials Vendor scope EW21MS4003				
S No.	Material	Refer relevant section under Section V (Technical Specification of material)	QTY	UOM
1	Contactors and auxiliary contact	Sec 4.1		No.s
		Sec 4.2		No.s
		Sec 4.3		No.s
		Sec 4.4		No.s
		Sec 4.5	369	No.s
		Sec 4.6	32	No.s
		Sec 4.7		No.s
		Sec 4.8		No.s
		Sec 4.9		No.s
		Sec 4.10		No.s
2	Indication Lamps	Sec 5.2		No.s
		Sec 5.3		No.s
		Sec 5.4		No.s
		Sec 5.5		No.s
		Sec 5.6		No.s
		Sec 5.7		No.s
		Sec 5.8		No.s
		Sec 5.9		No.s

		Sec 5.10	9	No.s
		Sec 5.11	9	No.s
		Sec 5.12	9	No.s
		Sec 5.13	40	No.s
		Sec 5.14	72	No.s
		Sec 5.15	72	No.s
		Sec 5.16	136	No.s
		Sec 5.17	64	No.s
		Sec 5.18	40	No.s
		Sec 5.19	40	No.s
		Sec 5.20		No.s
		Sec 5.21		No.s
3	Instrumentation Instruments and accessories	Sec 6.1		No.s
		Sec 6.2		No.s
		Sec 6.3		No.s
		Sec 6.4		No.s
		Sec 6.5		No.s
		Sec 6.6		No.s
4	PVC Ducts	Sec 8	910	Meter
5	Selector switch and Push Buttons	Sec 9.2	40	No.s
		Sec 9.3	40	No.s
		Sec 9.4		No.s
		Sec 9.5	40	No.s
		Sec 9.6	40	No.s

6	Terminal Blocks and accessories(End plate)	Sec 10.2	1130	No.s
		Sec 10.3	3930	No.s
		Sec 10.4.2		No.s
		Sec 10.4.3		No.s
7	DIN Rail and accessories(base plate)	Sec 11.1		Meter
		Sec 11.2.2	116	Meter
		Sec 11.2.3	121	Meter
8	MCBs	Sec 12.2		No.s
		Sec 12.3	318	No.s
		Sec 12.4		No.s
		Sec 12.5	63	No.s
		Sec 12.6		No.s
		Sec 12.7	88	No.s
		Sec 12.8		No.s
		Sec 12.9	54	No.s
		Sec 12.10		No.s
9	Heater and Illumination Equipments	Sec 13.2.1		No.s
		Sec 13.2.2		No.s
		Sec 13.2.3	40	No.s
		Sec 13.2.4	40	No.s
10	Cable Glands and Cable Trays	Sec 14.2.1	440	No.s
		Sec 14.2.2		No.s

		Sec 14.2.3		No.s
		Sec 14.2.4		No.s
		Sec 14.3.1		Meter
11	Communication Cables	Sec 15.1	200	Meter
		Sec 15.2	70	Meter
		Sec 15.3		Meter
12	Ethernet Switch accessories	Sec 16.3		No.s
13	Earthling Strip	Sec 18.1	12	Meter
14	Semaphore	Sec 19.1.1		No.s
		Sec 19.1.2		No.s
		Sec 19.1.3	8	No.s
		Sec 19.1.4	32	No.s
15	Plates and fixtures	Sec 20.1	8	No.s
		Sec 20.2		Sqm
		Sec 20.3	60	Sqm
		Sec 20.4	7	No.s
16	Fan	Sec 21.1		No.s

**Scheme No. 4 [EW21MS4003]:**

<b>SCOPE OF WORK- Erection, Testing and Commissioning [EW21MS4003]</b>				
S No.	Work	CRP type	Quantity	UOM
1	M. Park Grid Renovation , Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.1).	33 Bays	8	Panel
2	Vishal Grid : Renovation , Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.2)	11Kv Bays	25	Panel
3	M.Park Grid :Renovation , Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.3)	11Kv Bays	7	Panel

1.1	<b>SAMPLE SCOPE OF WORK FOR A CRP : Scope for Renovation/ Retrofit work - ERECTION, TESTING AND COMMISSIONING at 33 KV M.Park Grid : 33 KV CR Panels</b>
1.1.1	Identification of control cable from field equipment to Marshalling Box and then from Marshalling box to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays, Front plate and other panel accessories including its tracing and tagging so that cables can be reconnected later as per site requirement. Pulling of field control cables from Marshalling box to CRP at CRP End in case if Cables comes to be short for connecting in new Terminal blocks.
1.1.2	Cutting/Removing and fixing of NewFront plate of CRP as per site requirement size. Work also includes related welding/buffering work and supply of ancillaries for fixing. Work also includes painting of Back side of panel along with paint material. Closing of inter panel holes/gaps and end extreme end panel holes with appropriate gaskets /



	bakelite sheet. Supply of Front plate is in the Material scope of tender.
1.1.3	Double coat Spray painting of CRP from all sides and surfaces after fixing of blanking plate/Front Plate including supply of related painting material. (Color: Sides and back door -Siemens Grey Inside of CRP -White)
1.1.4	Making of proper door locking arrangement by repair/fixing of new door locks at back of CRP(per panel) and installation/ replacement of Gasket (Work Includes supply of Lock, Gasket(Neoprene) and any other related accessories accessories by vendor)
1.1.5	Installation of fixture channels, TBs(with numbering on each TB & as per requirement), MCB, Contactor, Indication lamps, Annunciator,Energy Meter, communication cables, Relays and other panel wiring/accessories including their new wiring, interpanel wiring, Fixing of Copper earthing strip of adequate size in every CRP. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules, sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC), Mimic etc.
1.1.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles,Tags, other ancillaries on both ends of communication cable.
	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU
	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.
1.1.7	Onsite testing of entire panel alongwith relays as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.
1.1.8	Laying of control cable from site equipment to marshalling kiosk to CRP and CRP interpanel wiring as per site requirement.
	Work includes tagging , glanding, crimping of wires. Purchase of necessary Cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.1.9	Dismantling and removal of control cable from trench between CRP and site equipment as per site requirement. Laying of few control cables from field to CRP in required.

1.1.10	Supply of asbuilt schematic drawing of CRP and Marshalling box.
1.1.11	Supply of Cable Schedule.
1.1.12	Fixing of Gland Plate in CRP including painting of gland plate & glanding of cables. Work also includes related welding/buffering work and supply of ancillaries for fixing. Supply of Gland plate is in Material scope of tender.
1.1.13	Cable tray laying with joint plates, MS angle support and nut bolts
	Note - Purchase of required MS Angle Supports with long screw/ Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.
1.1.14	Material Transport from / to store/site
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.
NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.

1.2	<b>Scope for Renovation/ Retrofit work - ERECTION, TESTING AND COMMISSIONING at 33 KV Vishal Grid : (11Kv Side CRP/Switchgear related)</b>
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Overvie w:	At present, 11KV Switchgear Panel(with LV Compartment housing Control wiring/equipments) and “Control & Relay Panel (CRP)” are separate. In execution of work, Relays ,MFM, TNC,L/R switch, LED’s, Energy Meter and other accessories shall be installed at LV Compartment of 11KV Switchgear Panel. Control cables in/From existing CRP’s to be re routed to Switchgear panel for proper functioning of the switchgear panel .Existing CRPs will not be dismantled but its scada and control wires will be rerouted to swgr panel..
1.2.1	Identification of control cable from field equipment/switchgear panel to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays and other panel accessories including its tracing and tagging in both switchgear panel LV compartment/ CRP so that cables can be reconnected later as per site requirement.
1.2.2	Making cut-outs / fixing blanking plate on front plate of LV compartment box of 11Kv Switchgear panel for fixing of Relays (Numerical and Auxiliary types) and other panel accessories like MFM, Ammeter, Indication lamps, Energy Meter, TNC, L/R Switch. Work includes necessary buffering, Painting and welding work and supply of ancillaries for fixing.
1.2.3	Double coat Spray painting of Switchgear Panel after fixing of blanking plate including supply of related painting material. (Color: Front -Siemens Grey Inside of LV Compartment of Switchgear panel -White)
1.2.4	Making of proper door locking arrangement by repair/fixing of door of LV Compartment of Switchgear panel and installation/ replacement of dilapidated Gasket (Work Includes supply of Locks, Gasket (Neoprene) and any other accessories by vendor)
1.2.5	Installation of fixture channels, TBs(with numbering & as per requirement),cables trays, PVC channels for control cables, MCB, Contactor, CMR, MFM, Indication lamps, communication cables(with glanding), Relays and other panel wiring/accessories including their new wiring, interpanel wiring. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules & sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC) etc.
1.2.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles, tags, glands used in IT Switch box where RJ45 wires will be terminated, other ancillaries on both ends of communication cable. Laying of

	supply cable from power supply to IT Switch box.
	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU
	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.
1.2.7	Onsite testing of entire panel along with relays as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.
1.2.8	Laying of control cable from 11KV Switchgear panel to marshalling kiosk/RTU and inter panel wiring as per site requirement.
	Work includes tagging , glanding, crimping of wires. Purchase of necessary cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.2.9	Dismantling and removal of control cable from trench between CRP and Switchgear panel / Site equipment as per site requirement.
1.2.10	Supply of asbuilt schematic drawing of Panel for both 11 KV Switchgear Panel LV compartment & existing CRP panel.
1.2.11	Cable tray laying with joint plates, MS angle support and nut bolts
	Note - Purchase of required MS Angle Supports with lon screw/Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.
1.2.13	Material Transport from / to store/site
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.
NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.

**Scheme No. 5 [EW21MS4006]:**

<b>Supply of Materials Vendor scope EW21MS4006</b>				
<b>S No.</b>	<b>Material</b>	<b>Refer s relevant section under Section V (Technical Specification of material</b>	<b>Qty</b>	<b>UOM</b>
1	Contactors and auxiliary contact	Sec 4.1	7	No.s
		Sec 4.2	98	No.s
		Sec 4.3		No.s
		Sec 4.4		No.s
		Sec 4.5		No.s
		Sec 4.6		No.s

		Sec 4.7		No.s
		Sec 4.8		No.s
		Sec 4.9		No.s
		Sec 4.10		No.s
2	Indication Lamps	Sec 5.2	7	No.s
		Sec 5.3	7	No.s
		Sec 5.4	14	No.s
		Sec 5.5	7	No.s
		Sec 5.6	7	No.s
		Sec 5.7		No.s
		Sec 5.8		No.s
		Sec 5.9	14	No.s
		Sec 5.10	4	No.s
		Sec 5.11	4	No.s
		Sec 5.12	4	No.s
		Sec 5.13	0	No.s
		Sec 5.14		No.s

		Sec 5.15		No.s
		Sec 5.16		No.s
		Sec 5.17		No.s
		Sec 5.18		No.s
		Sec 5.19		No.s
		Sec 5.20		No.s
		Sec 5.21		No.s
3	Instrumentation Instruments and accessories	Sec 6.1	7	No.s
		Sec 6.2		No.s
		Sec 6.3	6	No.s
		Sec 6.4		No.s
		Sec 6.5	7	No.s
		Sec 6.6	6	No.s
4	PVC Ducts	Sec 8	105	Meter
5	Selector switch and Push Buttons	Sec 9.2	7	No.s
		Sec 9.3	7	No.s
		Sec 9.4	7	No.s

		Sec 9.5	7	No.s
		Sec 9.6	7	No.s
6	Terminal Blocks and accessories(End plate)	Sec 10.2	300	No.s
		Sec 10.3	1000	No.s
		Sec 10.4.2	28	No.s
		Sec 10.4.3	84	No.s
7	DIN Rail and accessories(base plate)	Sec 11.1	42	Meter
		Sec 11.2.2	21	Meter
		Sec 11.2.3	35	Meter
8	MCBs	Sec 12.2	7	No.s
		Sec 12.3	36	No.s
		Sec 12.4	14	No.s
		Sec 12.5	21	No.s
		Sec 12.6		No.s
		Sec 12.7	7	No.s
		Sec 12.8	7	No.s
		Sec 12.9	14	No.s



		Sec 12.10		No.s
9	Heater and Illumination Equipments	Sec 13.2.1		No.s
		Sec 13.2.2		No.s
		Sec 13.2.3	7	No.s
		Sec 13.2.4	7	No.s
10	Cable Glands and Cable Trays	Sec 14.2.1	84	No.s
		Sec 14.2.2		No.s
		Sec 14.2.3		No.s
		Sec 14.2.4		No.s
		Sec 14.3.1	40	Meter
11	Communication Cables	Sec 15.1	200	Meter
		Sec 15.2	50	Meter
		Sec 15.3	30	Meter
12	Ethernet Switch accessories	Sec 16.3	1	No.s
13	Earthing Strip	Sec 18.1	7	Meter

14	Semaphore	Sec 19.1.1	7	No.s
		Sec 19.1.2	28	No.s
		Sec 19.1.3		No.s
		Sec 19.1.4		No.s
15	Plates and fixtures	Sec 20.1	7	No.s
		Sec 20.2		Sqm
		Sec 20.3	3	Sqm
		Sec 20.4		No.s
16	Fan	Sec 21.1	7	No.s

**Scheme No.5 [EW21MS4006]:**

<b>SCOPE OF WORK- Erection [EW21MS4006]</b>			
S No.	Work ( Grids G-2 PPK )	Quantity	UOM

1	Renovation, Retrofit of 66KV Control and Relay (CRP) as per scope of work.	7	CRP
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1.1	<b>SAMPLE SCOPE OF WORK FOR A CRP : Scope for Renovation/ Retrofit work - ERECTION, TESTING AND COMMISSIONING at 66 KV CR Panels</b>
1.1.1	Identification of control cable from field equipment to Marshalling Box and then from Marshalling box to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays, Front plate and other panel accessories including its tracing and tagging so that cables can be reconnected later as per site requirement. Pulling of field control cables from Marshalling box to CRP at CRP End in case if Cables comes to be short for connecting in new Terminal blocks.
1.1.2	Cutting/Removing and fixing of New Front plate of CRP as per site requirement size. Work also includes related welding/buffering work and supply of ancillaries for fixing. Work also includes painting of Back side of panel along with paint material. Closing of inter panel holes/gaps and end extreme end panel holes with appropriate gaskets / bakelite sheet. Supply of Front plate is in the Material scope of tender.
1.1.3	Double coat Spray painting of CRP from all sides and surfaces after fixing of blanking plate/Front Plate including supply of related painting material. (Color: Sides and back door -Siemens Grey Inside of CRP -White)
1.1.4	Making of proper door locking arrangement by repair/fixing of new door locks at back of CRP(per panel) and installation/ replacement of Gasket (Work Includes supply of Lock, Gasket(Neoprene) and any other related accessories accessories by vendor)
1.1.5	Installation of fixture channels, TBs(with numbering on each TB & as per requirement), MCB, Contactor, Indication lamps, Annunciator,Energy Meter, communication cables, Relays and other panel wiring/accessories including their new wiring, interpanel wiring, Fixing of Copper earthing strip of adequate size in every CRP. Insertion, Glanding, Crimping and thimbling of control cable/wire in

	CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules, sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC), Mimic etc. Installation of MIMIC diagram metallic for double bus bar
1.1.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles,Tags, other ancillaries on both ends of communication cable.
	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU
	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.
1.1.7	Onsite testing of entire panel alongwith relays as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.
1.1.8	Laying of control cable from site equipment to marshalling kiosk to CRP and CRP interpanel wiring as per site requirement.
	Work includes tagging , glanding, crimping of wires. Purchase of necessary Cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.1.9	Dismantling and removal of control cable from trench between CRP and site equipment as per site requirement. Laying of few control cables from field to CRP in required.
1.1.10	Supply of asbuilt schematic drawing of CRP and Marshalling box.
1.1.11	Supply of Cable Schedule.
1.1.12	Fixing of Gland Plate in CRP including painting of gland plate & glanding of cables. Work also includes related welding/buffering work and supply of ancillaries for fixing. Supply of Gland plate is in Material scope of tender.
1.1.13	Cable tray laying with joint plates, MS angle support and nut bolts

	Note - Purchase of required MS Angle Supports with long screw/ Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.
1.1.14	Material Transport from / to store/site to site.
	Digging & preparation of trench with metal trench cover laying for CRP installation, 1500mm width approx for each panels. Removal of control board (bench type) installed adjacent to existing two CRP's. Grouting of revamp panels.
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.
NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.

**Scheme No.6 [EW20MS4018]:**

<b>Supply of Materials Vendor scope ES20MS4018</b>				
S No.	Material	Refer relevant section under Section V (Technical Specification of	Qty	UOM

		material		
1	Contactors and auxiliary contact	Sec 4.1		No.s
		Sec 4.2	100	No.s
		Sec 4.3		No.s
		Sec 4.4		No.s
		Sec 4.5	100	No.s
		Sec 4.6		No.s
		Sec 4.7	10	No.s
		Sec 4.8	10	No.s
		Sec 4.9	8	No.s
		Sec 4.10	12	No.s
2	Indication Lamps	Sec 5.2	10	No.s
		Sec 5.3	10	No.s
		Sec 5.4	10	No.s
		Sec 5.5	10	No.s
		Sec 5.6	25	No.s
		Sec 5.7	10	No.s
		Sec 5.8		No.s
		Sec 5.9		No.s
		Sec 5.10	5	No.s
		Sec 5.11	15	No.s
		Sec 5.12	5	No.s
		Sec 5.13		No.s
		Sec 5.14	15	No.s

		Sec 5.15	15	No.s
		Sec 5.16		No.s
		Sec 5.17	15	No.s
		Sec 5.18		No.s
		Sec 5.19	10	No.s
		Sec 5.20		No.s
		Sec 5.21	15	No.s
3	Instrumentation Instruments and accessories	Sec 6.1		No.s
		Sec 6.2		No.s
		Sec 6.3		No.s
		Sec 6.4		No.s
		Sec 6.5		No.s
		Sec 6.6		No.s
4	PVC Ducts	Sec 8		Meter
5	Selector switch and Push Buttons	Sec 9.2	15	No.s
		Sec 9.3	20	No.s
		Sec 9.4		No.s
		Sec 9.5	15	No.s
		Sec 9.6	20	No.s
6	Terminal Blocks and accessories(End plate)	Sec 10.2	400	No.s
		Sec 10.3	700	No.s
		Sec 10.4.2	20	No.s
		Sec 10.4.3	40	No.s
7	DIN Rail and accessories(base	Sec 11.1	20	Meter

	plate)	Sec 11.2.2	20	Meter
		Sec 11.2.3	20	Meter
8	MCBs	Sec 12.2	30	No.s
		Sec 12.3	30	No.s
		Sec 12.4	30	No.s
		Sec 12.5	30	No.s
		Sec 12.6	20	No.s
		Sec 12.7	10	No.s
		Sec 12.8		No.s
		Sec 12.9	20	No.s
		Sec 12.10		No.s
9	Heater and Illumination Equipments	Sec 13.2.1		No.s
		Sec 13.2.2		No.s
		Sec 13.2.3	30	No.s
		Sec 13.2.4	30	No.s
10	Cable Glands and Cable Trays	Sec 14.2.1	100	No.s
		Sec 14.2.2		No.s
		Sec 14.2.3		No.s
		Sec 14.2.4		No.s
		Sec 14.3.1		Meter
11	Communication Cables	Sec 15.1		Meter
		Sec 15.2		Meter



		Sec 15.3		Meter
12	Ethernet Switch accessories	Sec 16.3		No.s
13	Earthing Strip	Sec 18.1		Meter
14	Semaphore	Sec 19.1.1		No.s
		Sec 19.1.2		No.s
		Sec 19.1.3		No.s
		Sec 19.1.4		No.s
15	Plates and fixtures	Sec 20.1		No.s
		Sec 20.2	10	Sqm
		Sec 20.3	15	Sqm
		Sec 20.4		No.s
16	Fan	Sec 21.1		No.s

**Scheme No.6 [ES20MS4018]:**

<b>SCOPE OF WORK- Erection [ES20MS4018]</b>			
S	Work ( Grids Vasantkunj C&D Blk )	Quantity	UOM

No.			
1	Renovation , Retrofit of 11 KV Switchgear		
1.1	Incomer	45	Panel

1.1	SCOPE OF WORK FOR A CRP
1.1.1	Material Transport from / to store/site
1.1.2	Installation of Numerical OC & EF relay, Master trip relay, Trip Ckt Supvn relay, AC& DC Supvn relay etc including complete wiring related to relay i.e CT/PT, input and outputs with in the panel. Scope also include dismantling of old existing relay, making additional cut out in panel for mounting new relays providing colored blank sheet as required
1.1.3	For Incomers scope also includes Installation of TRAF0 Differential Relay on 66/ 33 kv CRP including complete wiring related to relay i.e CT/PT,input and outputs with in the panel making additional cut out in panel for mounting new relays .  Scope also include dismantling of old existing relay on 11 KV Switchgear, providing blank sheet as required
1.1.4	Installation of fixture channels, TBs(as per requirement), MCB, Contactor, CMR, MFM, Indication lamps, communication cables(with glanding), Relays and other panel wiring/accessories including their new wiring, interpanel wiring. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules & sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC) etc.

1.1.5	Making of proper door locking arrangement by repair/fixing of door of LV Compartment of Switchgear panel and installation/ replacement of dilapidated Gasket (Work Includes supply of Lock, Gasket (Neoprene) and any other accessories by vendor)
1.1.6	Supply of asbuilt schematic drawing of Panel.
1.1.7	Bidder should visit site and assess it self of quantum of work involved any miscellaneous work which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment shall be carried out without any extra charge.
1.1.8	Watch & ward of material during entire execution work shall be in scope of Vendor.

**Scheme No.7 [EW21MS4004]:**

<b>Supply of Materials Vendor scope EW21MS4004</b>				
S	Material	Refer relevant	Qty	UOM

No.		section under Section V (Technical Specification of material		
1	Contactors and auxiliary contact	Sec 4.1		No.s
		Sec 4.2	260	No.s
		Sec 4.3	15	No.s
		Sec 4.4		No.s
		Sec 4.5	204	No.s
		Sec 4.6		No.s
		Sec 4.7		No.s
		Sec 4.8		No.s
		Sec 4.9		No.s
		Sec 4.10		No.s
2	Indication Lamps	Sec 5.2		No.s
		Sec 5.3		No.s
		Sec 5.4		No.s
		Sec 5.5		No.s
		Sec 5.6		No.s
		Sec 5.7		No.s
		Sec 5.8		No.s
		Sec 5.9		No.s
		Sec 5.10	24	No.s
		Sec 5.11	24	No.s
		Sec 5.12	24	No.s

		Sec 5.13		No.s
		Sec 5.14	51	No.s
		Sec 5.15	51	No.s
		Sec 5.16	150	No.s
		Sec 5.17	99	No.s
		Sec 5.18	36	No.s
		Sec 5.19	36	No.s
		Sec 5.20		No.s
		Sec 5.21		No.s
3	Instrumentation Instruments and accessories	Sec 6.1		No.s
		Sec 6.2		No.s
		Sec 6.3		No.s
		Sec 6.4		No.s
		Sec 6.5		No.s
		Sec 6.6		No.s
4	PVC Ducts	Sec 8	1056	Meter
5	Selector switch and Push Buttons	Sec 9.2	36	No.s
		Sec 9.3	36	No.s
		Sec 9.4		No.s
		Sec 9.5	36	No.s
		Sec 9.6	36	No.s
6	Terminal Blocks and accessories(End plate)	Sec 10.2	1376	No.s
		Sec 10.3	5250	No.s
		Sec 10.4.2		No.s

		Sec 10.4.3		No.s
7	DIN Rail and accessories(base plate)	Sec 11.1		Meter
		Sec 11.2.2	158	Meter
		Sec 11.2.3	158	Meter
8	MCBs	Sec 12.2		No.s
		Sec 12.3	367	No.s
		Sec 12.4		No.s
		Sec 12.5	99	No.s
		Sec 12.6		No.s
		Sec 12.7	66	No.s
		Sec 12.8		No.s
		Sec 12.9	64	No.s
		Sec 12.10		No.s
9	Heater and Illumination Equipments	Sec 13.2.1		No.s
		Sec 13.2.2		No.s
		Sec 13.2.3	36	No.s
		Sec 13.2.4	36	No.s
10	Cable Glands and Cable Trays	Sec 14.2.1	770	No.s
		Sec 14.2.2		No.s
		Sec 14.2.3		No.s
		Sec 14.2.4		No.s
		Sec 14.3.1		Meter

11	Communication Cables	Sec 15.1		Meter
		Sec 15.2		Meter
		Sec 15.3		Meter
12	Ethernet Switch accessories	Sec 16.3		No.s
13	Earthing Strip	Sec 18.1	60	Meter
14	Semaphore	Sec 19.1.1		No.s
		Sec 19.1.2		No.s
		Sec 19.1.3	21	No.s
		Sec 19.1.4	84	No.s
15	Plates and fixtures	Sec 20.1	21	No.s
		Sec 20.2		Sqm
		Sec 20.3	80	Sqm
		Sec 20.4	15	No.s
16	Fan	Sec 21.1		No.s

**Scheme No.7 [EW21MS4004]:****SCOPE OF WORK- Erection, Testing and Commissioning [EW21MS4004]**

S No.	Work	CRP type	Quantity	UOM
1	Madipur Grid : Renovation , Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.1)	33 KV Bays	5	Panel
2	Udyog Nagar Grid : Renovation , Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.1)	33 KVBays	7	Panel
3	Nangloi Water Works Grid : Renovation , Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.1)	66KV Bays	9	Panel
4	Nangloi Water Works Grid : Renovation , Retrofit of Control and Relay (CRP) as per scope of work (Sec 1.4)	11KV Bays	15	Panel

1.1	<b>SAMPLE SCOPE OF WORK FOR A CRP : Scope for Renovation/ Retrofit work - ERECTION, TESTING AND COMMISSIONING at 33</b>
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<b>KV Madipur Grid : 33 KV CR Panels</b>	
1.1.1	Identification of control cable from field equipment to Marshalling Box and then from Marshalling box to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays, Front plate and other panel accessories including its tracing and tagging so that cables can be reconnected later as per site requirement. Pulling of field control cables from Marshalling box to CRP at CRP End in case if Cables comes to be short for connecting in new Terminal blocks.
1.1.2	Cutting/Removing and fixing of New Front plate of CRP as per site requirement size. Work also includes related welding/buffering work and supply of ancillaries for fixing. Work also includes painting of Back side of panel along with paint material. Closing of inter panel holes/gaps and end extreme end panel holes with appropriate gaskets / bakelite sheet. Supply of Front plate is in the Material scope of tender.
1.1.3	Double coat Spray painting of CRP from all sides and surfaces after fixing of blanking plate/Front Plate including supply of related painting material. (Color: Sides and back door -Siemens Grey Inside of CRP -White)
1.1.4	Making of proper door locking arrangement by repair/fixing of new door locks at back of CRP(per panel) and installation/ replacement of Gasket (Work Includes supply of Lock, Gasket(Neoprene) and any other related accessories accessories by vendor)
1.1.5	Installation of fixture channels, TBs(with numbering on each TB & as per requirement), MCB, Contactor, Indication lamps, Annunciator,Energy Meter, communication cables, Relays and other panel wiring/accessories including their new wiring, interpanel wiring, Fixing of Copper earthing strip of adequate size in every CRP. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules, sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC), Mimic etc. Installation of MIMIC diagram metallic for double bus bar

1.1.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles,Tags, other ancillaries on both ends of communication cable.
	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU
	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.
1.1.7	Onsite testing of entire panel alongwith relays as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.
1.1.8	Laying of control cable from site equipment to marshalling kiosk to CRP and CRP interpanel wiring as per site requirement.
	Work includes tagging , glanding, crimping of wires. Purchase of necessary Cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.1.9	Dismantling and removal of control cable from trench between CRP and site equipment as per site requirement. Laying of few control cables from field to CRP in required.
1.1.10	Supply of asbuilt schematic drawing of CRP and Marshalling box.
1.1.11	Supply of Cable Schedule.
1.1.12	Fixing of Gland Plate in CRP including painting of gland plate & glanding of cables. Work also includes related welding/buffering work and supply of ancillaries for fixing. Supply of Gland plate is in Material scope of tender.
1.1.13	Cable tray laying with joint plates, MS angle support and nut bolts
	Note - Purchase of required MS Angle Supports with long screw/ Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.

1.1.14	Material Transport from / to store/site
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.
NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.

1.4	<b>Scope for Renovation/ Retrofit work - ERECTION, TESTING AND COMMISSIONING at 66 KV NAngloi Water Works Grid : (11Kv Side CRP/Switchgear related)</b>
Overview:	<p>At present, 11KV Switchgear Panel(with LV Compartment housing Control wiring/equipments) and “Control &amp;Relay Panel (CRP)” are separate. It is proposed to provide new LV Compartment box of size as per site ( roughly 1m x 1m x 0.7m) and it will be installed and fitted above 11 KV Switchgear panel LV compartment box with suitable fittings and fixtures(fixing of this panel, nut, bolts, screw/ welding work will be in the scope of the vendor), Relays ,MFM, TNC,L/R switch, LED’s, Energy Meter and other accessories shall be installed at this newly installed LV Compartment of 11KV Switchgear Panel (cutting of front facia for fitting of all the relays and auxiliaries will be under scope of vendor). Control cables in/From existing CRP’s to be re routed to Switchgear panel for proper functioning of the switchgear panel .Existing CRPs will not be dismantled but its scada and control wires will be rerouted to swgr panel.. Removal and installation of fire system suppression system and cylinders/ its connected pipes from existing LV Switchgear compartment and reinstallation of these cylinders and its attached system back after fitting of new LV compartment box above existing LV compartment box(Material &amp; TNP required for its removal and reconnection will be in vendor scope).</p>

1.4.1	Identification of control cable from field equipment/switchgear panel to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays and other panel accessories including its tracing and tagging in both switchgear panel LV compartment/ CRP so that cables can be reconnected later as per site requirement.
1.4.2	Making cut-outs / fixing blanking plate on front plate of LV compartment box of 11Kv Switchgear panel for fixing of Relays (Numerical and Auxiliary types) and other panel accessories like MFM, Ammeter, Indication lamps, Energy Meter,TNC, L/R Switch. Work includes necessary buffering, Painting and welding work and supply of ancillaries for fixing.
1.4.3	Double coat Spray painting of Switchgear Panel, LV Compartment Box New & Old after fixing of blanking plate including supply of related painting material. (Color: Front -Siemens Grey Inside of LV Compartment of Switchgear panel -White)
1.4.4	Making of proper door locking arrangement by repair/fixing of door of LV Compartment of Switchgear panel and installation/ replacement of dilapidated Gasket (Work Includes supply of Locks, Gasket (Neoprene) and any other accessories by vendor)
1.4.5	Installation of fixture channels, TBs(with numbering & as per requirement),cables trays, PVC channels for control cables, MCB, Contactor, CMR, MFM, Indication lamps, communication cables(with glanding), Relays and other panel wiring/accessories including their new wiring, interpanel wiring. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules & sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC) etc.
1.4.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles, tags, glands used in IT Switch box where RJ45 wires will be terminated, other ancillaries on both ends of communication cable. Laying of supply cable from power supply to IT Switch box.

	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU
	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.
1.4.7	Onsite testing of entire panel along with relays as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.
1.4.8	Laying of control cable from 11KV Switchgear panel to marshalling kiosk/RTU and inter panel wiring as per site requirement.  Work includes tagging , glanding, crimping of wires. Purchase of necessary cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.4.9	Dismantling and removal of control cable from trench between CRP and Switchgear panel / Site equipment as per site requirement.
1.4.10	Supply of asbuilt schematic drawing of Existing CR Panel, New LV Compartment box at 11 kv switchgear panel and Existing LV Compartment box also .
1.4.11	Cable tray laying with joint plates, MS angle support and nut bolts  Note - Purchase of required MS Angle Supports with long screw/Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.
1.4.13	Material Transport from / to store/site
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.
NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.

**Scheme No.8 [EW21MS4007]:**

<b>Supply of Materials Vendor scope EW21MS4007</b>				
S No.	Material	Refer relevant section under Section V (Technical Specification of material	Qty	UOM
1	Contactors and auxiliary contact	Sec 4.1	10	No.s
		Sec 4.2	170	No.s
		Sec 4.3		No.s
		Sec 4.4		No.s
		Sec 4.5	52	No.s
		Sec 4.6		No.s
		Sec 4.7		No.s
		Sec 4.8		No.s
		Sec 4.9		No.s
		Sec 4.10		No.s
2	Indication Lamps	Sec 5.2	10	No.s

		Sec 5.3	10	No.s
		Sec 5.4	20	No.s
		Sec 5.5	10	No.s
		Sec 5.6	10	No.s
		Sec 5.7	10	No.s
		Sec 5.8		No.s
		Sec 5.9	20	No.s
		Sec 5.10	4	No.s
		Sec 5.11	4	No.s
		Sec 5.12	4	No.s
		Sec 5.13	0	No.s
		Sec 5.14	12	No.s
		Sec 5.15	12	No.s
		Sec 5.16	12	No.s
		Sec 5.17	12	No.s
		Sec 5.18	12	No.s
		Sec 5.19	12	No.s
		Sec 5.20		No.s
		Sec 5.21	12	No.s
3	Instrumentation Instruments and accessories	Sec 6.1	10	No.s
		Sec 6.2		No.s
		Sec 6.3	6	No.s
		Sec 6.4		No.s
		Sec 6.5	10	No.s

		Sec 6.6	6	No.s
4	PVC Ducts	Sec 8	175	Meter
5	Selector switch and Push Buttons	Sec 9.2	13	No.s
		Sec 9.3	10	No.s
		Sec 9.4	10	No.s
		Sec 9.5	10	No.s
		Sec 9.6	13	No.s
6	Terminal Blocks and accessories(End plate)	Sec 10.2	500	No.s
		Sec 10.3	1450	No.s
		Sec 10.4.2	66	No.s
		Sec 10.4.3	146	No.s
7	DIN Rail and accessories(base plate)	Sec 11.1	40	Meter
		Sec 11.2.2	30	Meter
		Sec 11.2.3	50	Meter
8	MCBs	Sec 12.2	10	No.s
		Sec 12.3	55	No.s
		Sec 12.4	20	No.s
		Sec 12.5	30	No.s
		Sec 12.6		No.s
		Sec 12.7	10	No.s
		Sec 12.8	10	No.s
		Sec 12.9	20	No.s
		Sec 12.10		No.s



9	Heater and Illumination Equipments	Sec 13.2.1	10	No.s
		Sec 13.2.2	10	No.s
		Sec 13.2.3	14	No.s
		Sec 13.2.4	20	No.s
10	Cable Glands and Cable Trays	Sec 14.2.1	135	No.s
		Sec 14.2.2		No.s
		Sec 14.2.3		No.s
		Sec 14.2.4		No.s
		Sec 14.3.1	110	Meter
11	Communication Cables	Sec 15.1	1050	Meter
		Sec 15.2	90	Meter
		Sec 15.3	120	Meter
12	Ethernet Switch accessories	Sec 16.3		No.s
13	Earthling Strip	Sec 18.1	10	Meter
14	Semaphore	Sec 19.1.1	10	No.s
		Sec 19.1.2	40	No.s
		Sec 19.1.3		No.s
		Sec 19.1.4		No.s
15	Plates and fixtures	Sec 20.1	10	No.s
		Sec 20.2	1	Sqm

		Sec 20.3	5	Sqm
		Sec 20.4		No.s
16	Fan	Sec 21.1	10	No.s

**Scheme No.8 [EW21MS4007]:**

<b>SCOPE OF WORK- Erection [EW21MS4007]</b>			
S No.	Work ( Grid Pankha Road )	Quantity	UOM
1	Renovation , Retrofit of 11 KV Switchgear		
1.1	Incomer	3	Panel
1.2	Cap bank	3	Panel
1.3	Buscoupler/Outgoing	17	Panel
	Renovation , Retrofit of 66KV CRP		
2	Renovation, Retrofit of 66KV Control and Relay (CRP) as per scope of work.	10	CRP

1.1	SAMPLE SCOPE OF WORK FOR A CRP : Scope for Renovation/ Retrofit work - ERECTION, TESTING AND COMMISSIONING at 66 KV & 11KV CR Panels
1.1.1	Identification of control cable from field equipment to Marshalling Box and then from Marshalling box to CRP, and also identification of Inter-panel Wiring from that CRP (including tagging of all above mentioned cable/wiring) and Dismantling and removal of old cable/wiring, relays, Front plate and other panel accessories including its tracing and tagging so that cables can be reconnected later as per site requirement. Pulling of field control cables from Marshalling box to CRP at CRP End in case if Cables comes to be short for connecting in new Terminal blocks.

1.1.2	Cutting/Removing and fixing of New Front plate of CRP as per site requirement size. Work also includes related welding/buffering work and supply of ancillaries for fixing. Work also includes painting of Back side of panel along with paint material. Closing of inter panel holes/gaps and end extreme end panel holes with appropriate gaskets / bakelite sheet. Supply of Front plate is in the Material scope of tender.
1.1.3	Double coat Spray painting of CRP from all sides and surfaces after fixing of blanking plate/Front Plate including supply of related painting material. (Color: Sides and back door -Siemens Grey Inside of CRP -White)
1.1.4	Making of proper door locking arrangement by repair/fixing of new door locks at back of CRP(per panel) and installation/ replacement of Gasket (Work Includes supply of Lock, Gasket(Neoprene) and any other related accessories accessories by vendor)
1.1.5	Installation of fixture channels, TBs(with numbering on each TB & as per requirement), MCB, Contactor, Indication lamps, Annunciator,Energy Meter, communication cables, Relays and other panel wiring/accessories including their new wiring, interpanel wiring, Fixing of Copper earthing strip of adequate size in every CRP. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules, sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC), Mimic etc. Installation of MIMIC diagram metallic for double bus bar
1.1.6	Laying (interpanel /over cable tray) , termination, tagging, glanding, dressing, crimping, ferruling of Communication cables (IED (RJ45),MFM (RS485)) along with supply of necessary connectors / thimbles,Tags, other ancillaries on both ends of communication cable.
	RS485 Cable (Armoured, Unarmoured) to be laid –interpanel between MFM, From MFM to RTU
	RJ45 Cable (Armoured, Unarmoured) to be laid –interpanel between relays, From relays to Ethernet switch / RTU, From Ethernet switch to RTU/Router.
1.1.7	Onsite testing of entire panel alongwith relays as per schematic drawing under the supervision of Protection engineers of BRPL. Testing kit , Tnp for execution of work to be provided by vendor.

1.1.8	Laying of control cable from site equipment to marshalling kiosk to CRP and CRP interpanel wiring as per site requirement. Work includes tagging , glanding, crimping of wires. Purchase of necessary Cable tags, Lugs, Ferrules, sleeves Comes Under Bidder Scope for all cable terminations.
1.1.9	Dismantling and removal of control cable from trench between CRP and site equipment as per site requirement. Laying of few control cables from field to CRP in required.
1.1.10	Supply of asbuilt schematic drawing of CRP and Marshalling box.
1.1.11	Supply of Cable Schedule.
1.1.12	Fixing of Gland Plate in CRP including painting of gland plate & glanding of cables. Work also includes related welding/buffering work and supply of ancillaries for fixing. Supply of Gland plate is in Material scope of tender.
1.1.13	Cable tray laying with joint plates, MS angle support and nut bolts Note - Purchase of required MS Angle Supports with long screw/ Joint Plates & Nut Bolts for Cable trays( 1 Set equivalent to 2 numbers of Joint Plates + 8 No's Nut & Bolts + 16 Washers)comes under vendor Scope.
1.1.14	Material Transport from / to store/site to site.
NOTE1:	Any material , accessory or service which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment (Control and Relay panel) shall be furnished without any extra charge.
NOTE2:	Watch & ward of material during entire execution work shall be in scope of Vendor.

**Scheme No.9 [ES21MS4004]:****Supply of Materials Vendor scope ES21MS4004**

S No.	Material	Refer relevant section under Section V (Technical Specification of material	Qty	UOM
1	Contactors and auxiliary contact	Sec 4.1		No.s
		Sec 4.2	35	No.s
		Sec 4.3		No.s
		Sec 4.4		No.s
		Sec 4.5	52	No.s
		Sec 4.6	35	No.s
		Sec 4.7	50	No.s
		Sec 4.8	2	No.s
		Sec 4.9	3	No.s
		Sec 4.10	6	No.s
2	Indication Lamps	Sec 5.2	6	No.s
		Sec 5.3	6	No.s
		Sec 5.4	6	No.s
		Sec 5.5	6	No.s
		Sec 5.6	6	No.s
		Sec 5.7		No.s
		Sec 5.8		No.s
		Sec 5.9		No.s
		Sec 5.10	6	No.s
		Sec 5.11		No.s
		Sec 5.12		No.s

		Sec 5.13	10	No.s
		Sec 5.14	10	No.s
		Sec 5.15	10	No.s
		Sec 5.16	10	No.s
		Sec 5.17		No.s
		Sec 5.18	10	No.s
		Sec 5.19		No.s
		Sec 5.20	10	No.s
		Sec 5.21		No.s
3	Instrumentation on Instruments and accessories	Sec 6.1		No.s
		Sec 6.2		No.s
		Sec 6.3		No.s
		Sec 6.4		No.s
		Sec 6.5		No.s
		Sec 6.6		No.s
4	PVC Ducts	Sec 8	6	Meter
5	Selector switch and Push Buttons	Sec 9.2	10	No.s
		Sec 9.3		No.s
		Sec 9.4	15	No.s
		Sec 9.5	7	No.s
		Sec 9.6	30	No.s
6	Terminal Blocks and accessories( End plate)	Sec 10.2	300	No.s
		Sec 10.3	12	No.s
		Sec 10.4.2	16	No.s

		Sec 10.4.3		No.s
7	DIN Rail and accessories(base plate)	Sec 11.1		Meter
		Sec 11.2.2		Meter
		Sec 11.2.3	20	Meter
8	MCBs	Sec 12.2	8	No.s
		Sec 12.3	8	No.s
		Sec 12.4	7	No.s
		Sec 12.5		No.s
		Sec 12.6		No.s
		Sec 12.7		No.s
		Sec 12.8	5	No.s
		Sec 12.9		No.s
		Sec 12.10		No.s
9	Heater and Illumination Equipments	Sec 13.2.1		No.s
		Sec 13.2.2	7	No.s
		Sec 13.2.3		No.s
		Sec 13.2.4	7	No.s
10	Cable Glands and Cable Trays	Sec 14.2.1		No.s
		Sec 14.2.2		No.s
		Sec 14.2.3		No.s
		Sec 14.2.4		No.s
		Sec 14.3.1		Meter

11	Communication Cables	Sec 15.1		Meter
		Sec 15.2		Meter
		Sec 15.3		Meter
12	Ethernet Switch accessories	Sec 16.3		No.s
13	Earthing Strip	Sec 18.1		Meter
14	Semaphore	Sec 19.1.1		No.s
		Sec 19.1.2		No.s
		Sec 19.1.3		No.s
		Sec 19.1.4		No.s
15	Plates and fixtures	Sec 20.1	3	No.s
		Sec 20.2		Sqm
		Sec 20.3		Sqm
		Sec 20.4		No.s
16	Fan	Sec 21.1		No.s

**Scheme No. 9 [ES21MS4004]:**

<b>SCOPE OF WORK- Erection [ES21MS4004]</b>			
S No.	Work ( Grids Vasantkunj B Blk & Adchini )	Quantity	UOM
1	Renovation , Retrofit of 11 KV Switchgear		
1.1	Incomer	5	Panel
1.2	Cap bank	5	Panel



1.3	Buscoupler/Outgoing	35	Panel
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1.1	<b>SCOPE OF WORK FOR A CRP</b>
1.1.1	Material Transport from / to store/site
1.1.2	Installation of Numerical OC & EF relay, Master trip relay, Trip Ckt Supvn relay, AC& DC Supvn relay etc including complete wiring related to relay i.e CT/PT, input and outputs with in the panel. Scope also include dismantling of old existing relay, making additional cut out in panel for mounting new relays providing colored blank sheet as required
1.1.3	For Incomers scope also includes Installation of TRAFO Differential Relay on 66/ 33 kv CRP including complete wiring related to relay i.e CT/PT,input and outputs with in the panel making additional cut out in panel for mounting new relays .
	Scope also include dismantling of old existing relay on 11 KV Switchgear, providing blank sheet as required
1.1.4	Installation of fixture channels, TBs(as per requirement), MCB, Contactor, CMR, MFM, Indication lamps, communication cables(with glanding), Relays and other panel wiring/accessories including their new wiring, interpanel wiring. Insertion, Glanding, Crimping and thimbling of control cable/wire in CRP along with its proper tagging as per schematic drawing including supply of petty items like PVC ferrules & sleeves, copper lugs/Thimbles, cable ties and cable tags, connectors, Legends(METALLIC) etc.
1.1.5	Making of proper door locking arrangement by repair/fixing of door of LV Compartment of Switchgear panel and installation/ replacement of dilapidated Gasket (Work Includes supply of Lock, Gasket (Neoprene) and any other accessories by vendor)
1.1.6	Supply of asbuilt schematic drawing of Panel.
1.1.7	Bidder should visit site and assess it self of quantum of work involved any miscellaneous work which may not have been specifically mentioned but which is necessary or usual for satisfactory and trouble-free operation and maintenance of the equipment shall be carried out without any extra charge.
1.1.8	Watch & ward of material during entire execution work shall be in scope of Vendor.

**SECTION – V:****TECHNICAL SPECIFICATION(TS)**

**“AWARD OF WORK FOR RENOVATION OF EXISTING CONTROL AND RELAY PANELS,  
SWITCHGEAR PANELS INCLUDING REPLACEMENT OF OLD RELAYS FOR 66/33/11KV AT  
VARIOUS GRID SUBSTATIONS OF BRPL”**

**Annexure –A (Supply of Material)**

All equipment and material shall conform to the latest IS applicable standards (few stated below) for installation and operation in Grid Substations. Equipment complying with other internationally recognized standards will also be considered if it ensures performance equivalent or superior to Indian standards. One copy of such standard DESCRIPTION in English language shall be enclosed with the tender.

The equipment provided shall also comply with the latest revisions of Indian Electricity act and Indian Electricity rules and any other applicable statutory provisions, rules and regulations.

<b>Standard Code</b>	<b>Standard Description</b>
IS-1248, Part 1- 1993	Direct acting indicating analogue electrical measuring instruments and their accessories.
IS-3231, Part 1- 1986 Part 2 &3 -1987	Electrical relays for power system protection
IS-9000 Part 1 -1988	Basic environmental testing procedures for electronics & electrical items
IS-13703 1993	Low voltage fuses for Voltages not exceeding 1000V AC or 1500 V DC
IS-13947 Part 1 - 1993	Low voltage switchgear & control gear
IEC-60255 - 1989	DESCRIPTION for electrical relays
IEC 60688 1997	Electrical measuring transducers

<b>4</b>		<b>Contactors</b>
<b>4.1</b>	<b>Type-1</b>	<b>OR-ING DIODE UNIT- 220VDC</b>
<b>4.1.1</b>	<b>Purpose</b>	<b>DC Change-over scheme</b>
<b>4.1.2</b>	<b>Coil rating</b>	<b>220VDC ; Range: (70% to 120%)</b>
<b>4.1.3</b>	<b>Output Contacts</b>	<b>At least 2NO +2NC with current carrying capacity not less than 30A at rated voltage</b>
<b>4.1.4</b>	<b>Make Acceptable</b>	<b>ABB, Alstom, Schneider, Siemens or equivalent (with BRPL approval)</b>
<b>4.2</b>	<b>Type-2</b>	<b>Medium Duty Contactor</b>
<b>4.2.1</b>	<b>Purpose</b>	<b>Field Input's contact multiplication</b>
<b>4.2.2</b>	<b>Coil rating</b>	<b>220VDC ; Range: (70% to 120%)</b>
<b>4.2.3</b>	<b>Output Contacts</b>	<b>At least 4NO +1NC with current carrying capacity not less than 5A at rated voltage</b>
<b>4.2.4</b>	<b>Make Acceptable</b>	<b>ABB, Alstom, Schneider, Siemens</b>
<b>4.3</b>	<b>Type-3</b>	<b>Medium Duty Contactor</b>
<b>4.3.1</b>	<b>Purpose</b>	<b>AC Supervision scheme</b>
<b>4.3.2</b>	<b>Coil rating</b>	<b>220VAC ; Range: (70% to 120%)</b>
<b>4.3.3</b>	<b>Output Contacts</b>	<b>At least 1NO +3NC with current carrying capacity not less than 5A at rated voltage</b>
<b>4.3.4</b>	<b>Make Acceptable</b>	<b>ABB, Alstom, Schneider, Siemens</b>

<b>4.4</b>	<b>Type-4</b>	<b>OR-ING DIODE Unit -48V DC</b>
<b>4.4.1</b>	<b>Purpose</b>	<b>DC Change-over scheme</b>
<b>4.4.2</b>	<b>Coil rating</b>	<b>48VDC ; Range: (70% to 120%)</b>
<b>4.4.3</b>	<b>Output Contacts</b>	<b>At least 2NO +2NC with current carrying capacity not less than 30A at rated voltage</b>
<b>4.4.4</b>	<b>Make Acceptable</b>	<b>ABB, Alstom, Schneider, Siemens or equivalent(with BRPL approval)</b>
<b>4.5</b>	<b>Type-5</b>	<b>Medium Duty Contactor</b>
<b>4.5.1</b>	<b>Purpose</b>	<b>Field Input's contact multiplication and Circuit breaker control application</b>
<b>4.5.2</b>	<b>Coil rating</b>	<b>48VDC ; Range: (70% to 120%)</b>
<b>4.5.3</b>	<b>Output Contacts</b>	<b>At least 4NO +1NC with current carrying capacity not less than 5A at rated voltage</b>
<b>4.5.4</b>	<b>Make Acceptable</b>	<b>ABB, Alstom, Schneider, Siemens</b>
<b>4.6</b>	<b>Type-6</b>	<b>CMR-AC Supervision</b>
<b>4.6.1</b>	<b>Purpose</b>	<b>AC Supervision scheme in 11Kv Switchgear Panel</b>
<b>4.6.2</b>	<b>Coil rating</b>	<b>220VAC ; Range: (70% to 120%)</b>
<b>4.6.3</b>	<b>Output Contacts</b>	<b>At least 2C/O with current carrying capacity not less than 5A at rated voltage – With Indication flag/LED</b>
<b>4.6.4</b>	<b>Make Acceptable</b>	<b>ABB, Alstom, Schneider, Siemens</b>
<b>4.7</b>	<b>Type-7</b>	<b>OEN Type CMR (with Base)</b>
<b>4.7.1</b>	<b>Purpose</b>	<b>Field contact multiplication</b>

4.7.2	Coil rating	220VDC ; Range: (70% to 120%)
4.7.3	Output Contacts	At least 3NO+1NC with current carrying capacity not less than 5A at rated voltage – With Indication flag/LED
4.7.4	Make Acceptable	ABB, Alstom, Schneider, Siemens, OEN
4.8	Type-8	OEN Type CMR (with Base)
4.8.1	Purpose	Field contact multiplication
4.8.2	Coil rating	48VDC ; Range: (70% to 120%)
4.8.3	Output Contacts	At least 3NO+1NC with current carrying capacity not less than 5A at rated voltage – With Indication flag/LED
4.8.4	Make Acceptable	ABB, Alstom, Schneider, Siemens, OEN
4.9	Type-9	Bistable contact multiplier (with base)
4.9.1	Purpose	Field contact multiplication
4.9.2	Coil rating	220VDC ; Range: (70% to 120%)
4.9.3	Output Contacts	PSU14n-2X ABB make (7NO+7NC)
4.9.4	Make Acceptable	ABB Make PSU14n-2X
4.10	Type-10	Bistable contact multiplier (with base)
4.10.1	Purpose	Field contact multiplication
4.10.2	Coil rating	48VDC ; Range: (70% to 120%)
4.10.3	Output Contacts	PSU14n-2X ABB make (7NO+7NC)

4.10.4	Make Acceptable	ABB Make PSU14n-2X
4.11	Type-11	Medium Duty Contactor
4.11.1	Purpose	PT Selection
4.11.2	Coil rating	110VAC; Range: (70% to 120%)
4.11.3	Output Contacts	At least 4NO +1NC with current carrying capacity not less than 5A at rated voltage
4.11.4	Make Acceptable	ABB, Alstom, Schneider, Siemens
5	Indicating Lamps	
5.1.1	General Features	<ul style="list-style-type: none"> <li>• Flush mounted Clustered LED type with rear terminal connections. Lamp Cover to be screwed tye an moulded from heat resistant material.</li> <li>• 1.5W, Diameter - 22.5 sq mm</li> </ul>
5.1.2	Make Acceptable	Teknic , ABB, Alstom, Schneider, Siemens,
5.2	Type-1	Colour- RED; suitable for 250V dc
5.3	Type-2	Colour-Green; suitable for 250V dc
5.4	Type-3	Colour-White; suitable for 250V dc
5.5	Type-4	Colour- Amber; suitable for 250V dc
5.6	Type-5	Colour- Amber; suitable for 250V ac
5.13	Type-6	Colour- Blue; suitable for 250V dc
5.8	Type-13	Colour- Orange; suitable for 250V dc
5.9	Type-8	Colour- Yellow; suitable for 250V dc
5.10	Type-9	Colour- Red; suitable for 63.5 ac
5.11	Type-10	Colour- Yellow; suitable for 63.5 ac

5.12	Type-11	Colour- Blue; suitable for 63.5 ac
5.13	Type-12	Colour- Orange; suitable for 63.5 ac
5.14	Type-13	Colour- RED; suitable for 50V dc
5.15	Type-14	Colour-Green; suitable for 50V dc
5.16	Type-15	Colour-White; suitable for 50V dc
5.17	Type-16	Colour- Amber; suitable for 50V dc
5.18	Type-17	Colour- Amber; suitable for 240V ac
5.19	Type-18	Colour- Blue; suitable for 50V dc
5.20	Type-19	Colour- Orange; suitable for 50V dc
5.21	Type-20	Colour- Yellow; suitable for 50V dc

6	<b>Instrumentation Instruments and accessories</b>	
6.1	<b>Ammeter Type-1</b>	
6.1.1	<b>General DESCRIPTION</b>	<b>Taut Band; Moving Iron Type, Size: 144sq mm CTR: As per site, ACCURACY CLASS: 0.5 OR BETTER, SCALE: 240DEG, SCALE:100%</b>
6.1.2	<b>Make Acceptable</b>	<b>AE / Rishabh</b>
6.2	<b>Ammeter Type-2</b>	
6.2.1	<b>General DESCRIPTION</b>	<b>Taut Band; Moving Iron Type, Size: 96sq mm CTR:As per site , ACCURACY CLASS: 0.5 OR BETTER, SCALE: 240DEG, SCALE:100%</b>
6.2.2	<b>Make Acceptable</b>	<b>AE / Rishabh</b>
6.3	<b>Voltmeter Type-1</b>	



6.3.1	<b>General DESCRIPTION</b>	<b>Taut Band; Moving Iron Type, Size: 144sq mm ACCURACY CLASS: 0.5 OR BETTER, PT RATIO:As per site, SCALE: 240DEG</b>
6.3.2	<b>Make Acceptable</b>	<b>AE / Rishabh</b>
6.4	<b>Voltmeter Type-2</b>	
6.4.1	<b>General DESCRIPTION</b>	<b>Taut Band; Moving Iron Type, Size: 96sq mmACCURACY CLASS: 0.5 OR BETTER, PT RATIO: As per site, SCALE: 240DEG</b>
6.4.2	<b>Make Acceptable</b>	<b>AE / Rishabh</b>
6.5	<b>Ammeter Selector Switch</b>	
6.5.1	<b>General DESCRIPTION</b>	<b>Ammeter Selector Switch with 4 position current rating not less than 10A, size 135 mm;440VAC</b>
6.5.2	<b>Make Acceptable</b>	<b>Teknic, Switron,</b>
6.6	<b>Voltmeter Selector Switch</b>	
6.6.1	<b>General DESCRIPTION</b>	<b>Voltmeter Selector Switch with 6 Position (RY-YB-BR-RN-YN-BN) Suitable at 440V ac with current rating not less than 10A; 440VAC; size 135 mm</b>
6.6.2	<b>Make Acceptable</b>	<b>Teknic, Switron,</b>
8	<b>PVC Channels/ducts for enclosure of wiring</b>	
8.1.1	<b>General DESCRIPTION</b>	<b>PVC type ;Non brittle, non inflammable. Fire retardent Length: 1metre per piece</b>

8.1.2	Note	Size to be decided by bidder as per approved schematic drawing and wiring schedule
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9	SELECTOR SWITCHES & PUSH BUTTONS	
9.1	Make Acceptable for material mentioned in 9.2,9.3,9.4, 9.5,9.6	Teknic, Areva, Switron,
9.2	TNC switch	Pistol grip, Lockable type with Spring Return to Neutral position, ,Angular movement:, Contacts:3C,3T. Suitable for Control and Trip application of Circuit Breaker. upto 250V DC, 16A
9.3	Push Button	Flush Mounted with shrouded terminals, Contacts:2NO, YELLOW Knob, Diameter: 22.5mm. Suitable for control application upto 250VDC  Note: order includes supply of fixture channel
9.4	Toggle Switch	Toggle switch 250V 10A 2POLE for Space Heater control application  Note: order includes supply of fixture channel for switch
9.5	Door Interlock switch	Door interlock/Limit switch 250VAC 10A with 1NO+1NC Contact. Application: Control of Illumination ckt, Fan control  Note: order includes supply of fixture channel for limit switch
9.6	Selector Switch	Selector Switch for Control Application (Local And SCADA mode)  4 Pole, 2 Way , 250V DC, 16A

<b>10</b>	<b>TERMINAL BLOCKS and Accessories</b>	
<b>10.1.1</b>	<b>Rating and Type</b>	<b>1100V grade, minimum 10 amps continuous rating, Nylon 66, molded piece, complete with insulated barriers, screw driver operated stud Type terminals; White fiber markings strip with clear plastic, slip on/clip on terminal covers to be provided.</b>
<b>10.1.2</b>	<b>Suitability</b>	<p><b>Unless otherwise specified, terminal blocks shall be suitable for connecting the following conductors of cable on each side:</b></p> <p><b>a)All circuits including current / voltage transformer circuits:4 sq.mm copper.</b></p> <p><b>b)AC/DC power supply circuits: One No. of 6 sq.mm Cu</b></p>
<b>10.1.3</b>	<b>Make Acceptable</b>	<b>Connectwell, Elmex, Phoenix contact</b>
<b>10.2</b>	<b>Type1</b>	<b>Disconnecter(self shorting) type Terminal Blocks; mountable on DIN Rail of size 32mm</b>
<b>10.3</b>	<b>Type2</b>	<b>Non-Disconnecter type Terminal Blocks; mountable on DIN Rail of size 32mm</b>
<b>10.4</b>	<b>End plate for TERMINAL BLOCKS</b>	
<b>10.4.1</b>	<b>Make Acceptable</b>	<b>Connectwell, Elmex, Phoenix contact</b>
<b>10.4.2</b>	<b>Type1</b>	<b>Suitable with TBs mentioned in 10.2. Also end clamp to be provided with each end plate</b>
<b>10.4.3</b>	<b>Type2</b>	<b>Suitable with TBs mentioned in 10.3 Also end clamp to be provided with each end plate</b>
<b>11</b>	<b>DIN Rail and accessories</b>	
<b>11.1</b>	<b>Base Plate</b>	
<b>11.1.1</b>	<b>General DESCRIPTION</b>	<b>Base plate suitable for mounting Din rail, PVC Channels/ducts mentioned in above sections</b>

<b>11.2</b>	<b>DIN Rail</b>	
<b>11.2.1</b>	<b>Purpose</b>	<b>Mounting of MCBs, TBs, Contactors, CMRs, etc. Non-corrosive</b>
<b>11.2.2</b>	<b>Type-1</b>	<p style="text-align: center;"><b>Din rail -Top Hat type;</b></p> <p style="text-align: center;"><b>Length:1m size: 35x13.5 sqmm.</b></p> <p style="text-align: center;"><b>Supply should includes 2 No.s of suitable end clamps, support brackets per DIN Rail.</b></p>
<b>11.2.3</b>	<b>Type-2</b>	<p style="text-align: center;"><b>Din rail - G type; Un-perforated;</b></p> <p style="text-align: center;"><b>Length:1m size: 32 mm.</b></p> <p style="text-align: center;"><b>Supply should includes 2 No.s of suitable end clamps, support brackets per DIN Rail.</b></p>

<b>12</b>	<b>MCBs</b>	
<b>12.1</b>	<b>Make Acceptable</b>	<b>Schneider / Siemens / L&amp;T/ABB</b>
<b>12.2</b>	<b>Type-1</b>	<b>DC MCB SUITABLE upto 250V dc, 4A, DP</b>
<b>12.3</b>	<b>Type-2</b>	<b>DC MCB SUITABLE upto 250v DC, 6A, DP</b>
<b>12.4</b>	<b>Type-3</b>	<b>DC MCB SUITABLE upto 250V DC, 10A, DP</b>
<b>12.5</b>	<b>Type-4</b>	<b>DC MCB SUITABLE upto OR 250V DC, 16A, DP</b>
<b>12.6</b>	<b>Type-5</b>	<b>AC MCB SUITABLE upto 440V AC,2A, DP, C Characteristics 10kA</b>
<b>12.7</b>	<b>Type-6</b>	<b>AC MCB SUITABLE upto 440V AC, 6A, DP, C Characteristics 10kA</b>
<b>12.8</b>	<b>Type-7</b>	<b>AC MCB SUITABLE upto 440V AC,16A, DP, C Characteristics 10kA</b>

12.9	Type-8	AC MCB, 2A, 4Pole , suitable upto 440V ac, C Characteristics 10kA, with a changeover type add-on contact
12.10	Type-9	AC MCB SUITABLE upto 440V AC,10A, DP, C Characteristics 10kA

13	<b>Heater and Illumination Accessories</b>	
13.1	Make Acceptable	Havells /Bajaj / Surya / Phillips/ Anchor / Reputed make
13.2.1	Cubicle Space heater	Thermostat controlled 80W, 240V ac, Industrial Grde Cubicle heater & plug socket circuit provided with individual switch fuse unit.
13.2.2	Thermostat	30 to 90 deg, Rating: 15A, 230V AC, Industrial Grde
13.2.3	Universal Socket and Switch	240V ac Universal Socket and Switch 5&15A box type (Industrial Grade)
13.2.4	Compact LED lamp with fitting	Compact LED lamp with fitting, 11W, 230V AC

14	<b>Cable Glands and Cable Tray</b>		
14.1	Make Acceptable	For glands	COMEX
		For Cable Tray	SCADA to specify
14.2.1	Single compression Metal Glands	Type-1 Metal Gland Size: As per site requirement	

14.2.2	Brass Glands  PLASTIC GLANDS	Type-2  Plastic Gland  Size: As per site requirement
14.2.3		Single compression Metal Glands 1 inch Make : COMEX
14.2.4		Single compression Metal Glands 1/2 inch Make : COMEX
14.3.1	Cable Tray	Specs to be provided by SCADA

15	Communication Cables	
15.1	Ethernet Cable	
15.1.1	General Description	4 Pair, CAT-6 UTP Cables with Armor.  SPECS to be provided by SCADA team.
15.1.2	Make Acceptable	SPECS to be provided by SCADA team.
15.2	RS485 Cable- Armoured	
15.2.1	General Description	Armored RS485, Twisted pair, 22gauge Belden 81361 or equivalent.  SPECS to be provided by SCADA team.
15.2.2	Make Acceptable	
15.3	RS485 Cable- UnArmoured	
15.3.1	General Description	RS485, Twisted pair, 22gauge Belden 81361 or equivalent.  SPECS to be provided by SCADA team.
15.3.2	Make Acceptable	SPECS to be provided by SCADA team.

<b>16</b>	<b>Ethernet Switch and accessories</b>	
<b>16.1.1</b>	<b>General Description</b>	<b>SPECS to be provided by SCADA team.</b>
<b>16.1.2</b>	<b>Make Acceptable</b>	
<b>16.2.1</b>	<b>Type-1</b>	<b>24 Port Switch with wall mount cabinet</b>
<b>16.2.2</b>	<b>Type-2</b>	<b>xx Port Switch with wall mount cabinet</b>
<b>16.3</b>	<b>Rack for ETH Panel</b>	<b>Reck DESCRIPTIONs for ETH Panel</b>

<b>18</b>	<b>Earthing Strip</b>	
<b>18.1</b>	<b>General Description</b>	<b>25mm*6mm Copper flat Earthing Strip with holes suitable to Screw 4 sq mm single core flexible wire</b>

<b>19</b>	<b>Semaphore</b>	
<b>19.1</b>	<b>General Description</b>	<b>Semaphore : Suitable for Dual position monitoring along with monitoring of intermidiate postion. LED type</b> <b>Fire retardant</b> <b>Acceptable Make: Multimode ,AVANA,</b>
<b>19.1.1</b>	<b>Type-1</b>	<b>Size: 48sqmm</b> <b>Control voltage: 220VDC 130% - 110% Vdc.</b>
<b>19.1.2</b>	<b>Type-2</b>	<b>Size: 36sqmm</b> <b>Control voltage: 220VDC 130% - 110% Vdc.</b>
<b>19.1.3</b>	<b>Type-3</b>	<b>Size: 48sqmm</b> <b>Control voltage: 48VDC 130% - 110% Vdc.</b>

19.1.4	Type-4	<p>Size: 36sqmm</p> <p>Control voltage: 48VDC 130% - 110% Vdc.</p>
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20	PLATES and FIXTURES	
20.1	Front Facia Plate for Control and Relay Panel (CRP)	
20.1.1	General Description	<p>Front facia Plate of 66KV and 33Kv CRP suitable for mounting Relays, Annunciator, MFM, Meter and other panel accessories.</p> <p>Order includes making cut-outs on Face Plate for mounting Relays, Annunciator, MFM, Meter and other panel accessories as per approved Schematics.</p> <p>The plate should completely fit and clamp into the existing Control and Relay panel</p>
20.1.2	Material	<p>MS Sheet(gauge: 16SWG ) or Cold-rolled sheet steel of thickness not less than 2.0 mm.</p> <p>Note : Stiffeners shall be provided wherever necessary.</p>
20.1.3	Dimensions:	<p>Approximate- (1060mm x 2310mm)</p> <p>Actual- As per CRP Dimension</p>
20.1.4	Paint	<p>Powder coated. Pure Polyester base Grade-A, structure finish.</p> <p>Paint Shade: RAL13032 ‘Siemens Grey’</p> <p>Paint Thickness: Minimum 50 microns</p>
20.1.5	MIMIC on Front facia Plate	<p>Colored mimic diagram and symbols showing the exact representation of the system shall be provided on the front facia sheet of control panel and it shall be properly align with all Semaphore and control switch of panels.</p> <p>Material: Mimic diagram shall be made preferably of painted Aluminum or plastic of approved fast color material, which shall be screwed on to the panel. The mimic bus shall be 2-3 mm thick. The width of the mimic bus shall be 12mm for bus bars and 10 mm for other</p>



		<b>connections</b>
<b>20.2</b>	<b>Blanking Plate for Control and Relay Panel (CRP) or Switchgear Panel</b>	
<b>20.2.1</b>	<b>General Description</b>	<b>Blanking Plate suitable for mounting Relays, Annunciator, MFM, Meter and other panel accessories.</b>
<b>20.2.2</b>	<b>Material</b>	<b>MS Sheet(gauge: 16SWG ) or Cold-rolled sheet steel of thickness not less than 2.0 mm.</b>  <b>Note : Stiffeners shall be provided wherever necessary.</b>
<b>20.2.3</b>	<b>Dimensions:</b>	<b>Actual- As per site requirement</b>  <b>UOM: Sqmt</b>
<b>20.2.4</b>	<b>Paint</b>	<b>Powder coated. Pure Polyester base Grade-A, structure finish.</b>  <b>Paint Shade: RAL13032 ‘Siemens Grey’</b>  <b>Paint Thickness: Minimum 50 microns</b>
<b>20.3</b>	<b>Gland Plate for CRP</b>	
<b>20.1.1</b>	<b>General Description</b>	<b>Gland Plate for cable entry.</b>  <b>Order includes making necessary holes as per gland size</b>  <b>The plates shall be removable type</b>
<b>20.1.2</b>	<b>Material</b>	<b>CRCA sheet steel of thickness not less than 3.0 mm.</b>
<b>20.1.3</b>	<b>Dimensions:</b>	<b>Actual- As per site requirement</b>  <b>UOM: Sqmt</b>
<b>20.4</b>	<b>Cubicle for Installation of IEDs and accessories over 11Kv Switchgear Panel</b>	
<b>20.4.1</b>	<b>General Description</b>	<b>BY WEST-1 TEAM</b>
<b>20.4.2</b>	<b>Material</b>	<b>BY WEST-1 TEAM</b>
<b>20.4.3</b>	<b>Dimensions:</b>	<b>BY WEST-1 TEAM</b>

20.4.4	<b>Paint</b>	<b>Powder coated. Pure Polyester base Grade-A, structure finish.</b> <b>Paint Shade: RAL13032 ‘Siemens Grey’</b> <b>Paint Thickness: Minimum 50 microns</b>
21	<b>Fan</b>	
21.1	<b>General Description</b>	<b>Industrial Grade Axial Fan for air circulation in CRP. Mountable on door of control panel.</b> <b>240V AC Operated</b> <b>Power: 113 W</b> <b>Dimensions:</b> <b>Fan: 4.13 x 4.13 x 1.5 in</b> <b>Collar: 5.5in</b> <b>Order includes supporting fixture and filter plate, collars and other accessories for fixing on Door of CRP</b>

## Annexure –IIA

### PRICE FORMAT FOR SUPPLY

S No	Material	Refer below mentioned sections in Annexure-A for Technical Specification of material	UNIT	South-2	South-I						Common					Total Qty	
					ES20MS4014			ES20MS4019			EW21MS4003	EW21MS4006	ES20MS4018	EW21MS4004	EW21MS4007		ES21MS4004
					Tughlakabad- 33Kv CRP	Tughlakabad-11KV CRP	Tughlakabad – SCADA related Mat	M Road	Sarita Vihar	Alaknanda							
1	Contactors and auxiliary contact	Sec 4.1	No.s		0	0	0	6	5	0		7			10		28
		Sec 4.2	No.s	68	0	0	0	86	85	0		98	100	260	170	35	902
		Sec 4.3	No.s		0	0	0	0	0	0				15			15
		Sec 4.4	No.s		6	2	0	0	0	2							10
		Sec 4.5	No.s		102	120	0	0	0	80	369		100	204	52	52	1079
		Sec 4.6	No.s		0	15	0	0	0	15	32					35	97
		Sec 4.7	No.s	65									10			50	125
		Sec 4.8	No.s										10			2	12
		Sec 4.9	No.s	4									8			3	15
		Sec 4.10	No.s										12			6	18
		Sec 4.11	No.s							4		2				6	
2	Indication Lamps	Sec 5.2	No.s	13	0	0	0	6	5	0		7	10		10	6	57
		Sec 5.3	No.s	13	0	0	0	6	5	0		7	10		10	6	57

		Sec 5.4	No.s	13	0	0	0	12	10	0		14	10		20	6	85
		Sec 5.5	No.s	13	0	0	0	6	5	0		7	10		10	6	57
		Sec 5.6	No.s	13	0	0	0	6	5	0		7	25		10	6	72
		Sec 5.7	No.s	13	0	0	0	6	5	0			10		10		44
		Sec 5.8	No.s	0	0	0	0	0		0							0
		Sec 5.9	No.s	13	0	0	0	12	10	0		14			20		69
		Sec 5.10	No.s		2	0	0	0	1	0	9	4	5	24	4	6	55
		Sec 5.11	No.s		2	0	0	0	1	0	9	4	15	24	4		59
		Sec 5.12	No.s		2	0	0	0	1	0	9	4	5	24	4		49
		Sec 5.13	No.s		2	0	0	3	1	0	40	0			0	10	56
		Sec 5.14	No.s		6	15	0	0		15	72		15	51	12	10	196
		Sec 5.15	No.s		6	15	0	0		15	72		15	51	12	10	196
		Sec 5.16	No.s		12	30	0	0		30	136			150	12	10	380
		Sec 5.17	No.s		6	15	0	0		15	64		15	99	12		226
		Sec 5.18	No.s		6	15	0	0		15	40			36	12	10	134
		Sec 5.19	No.s		6	15	0	0		15	40		10	36	12		134
		Sec 5.20	No.s		0	0	0	0		0						10	10
		Sec 5.21	No.s		6	30	0	0		30			15		12		93
3	Instrumentation Instruments and accessories	Sec 6.1	No.s		6	0	0	6	5	0		7			10		34
		Sec 6.2	No.s		0	15	0	0	0	0							15
		Sec 6.3	No.s		4	0	0	2	4	0		6			6		22
		Sec 6.4	No.s		0	2	0	0	0	2							4
		Sec 6.5	No.s		6	15	0	6	5	0		7			10		49
		Sec 6.6	No.s		4	2	0	2	4	2		6			6		26
4	PVC Ducts	Sec 8	Meter		90	90	0	105	75	90	910	105		1056	175	6	2702
5	Selector switch and Push	Sec 9.2	No.s	4	6	15	0	6	5	15	40	7	15	36	13	10	172
		Sec 9.3	No.s	10	18	15	0	18	15	15	40	7	20	36	10		204
		Sec 9.4	No.s		6	0	0	6	5	0		7			10	15	49

	Buttons	Sec 9.5	No.s	10	6	15	0	6	5	15	40	7	15	36	10	7	172
		Sec 9.6	No.s	3	6	15	0	6	5	15	40	7	20	36	13	30	196
6	Terminal Blocks and accessories( End plate)	Sec 10.2	No.s	20	290	24	0	240	200	240	113	300	400	1376	500	300	5236
		Sec 10.3	No.s	200	855	45	0	830	700	450	393	100	700	5250	1450	12	15827
		Sec 10.4.2	No.s	8	24	30	0	28	20	30		28	20		66	16	270
		Sec 10.4.3	No.s	14	72	45	0	84	60	45		84	40		146		590
7	DIN Rail and accessories( base plate)	Sec 11.1	Meter		24	90	0	28	20	90		42	20		40		354
		Sec 11.2.2	Meter		18	60	0	21	15	60	116	21	20	158	30		519
		Sec 11.2.3	Meter		30	30	0	35	25	30	121	35	20	158	50	20	554
8	MCBs	Sec 12.2	No.s	10	6	15	0	6	5	15		7	30		10	8	112
		Sec 12.3	No.s	7	32	15	0	32	27	15	318	36	30	367	55	8	942
		Sec 12.4	No.s	7	12	15	0	12	10	15		14	30		20	7	142
		Sec 12.5	No.s	3	18	17	0	18	15	17	63	21	30	99	30		331
		Sec 12.6	No.s		2	2	0	2	3	2			20				31
		Sec 12.7	No.s		6	15	0	6	5	15	88	7	10	66	10		228
		Sec 12.8	No.s		6	0	0	6	5			7			10	5	39
		Sec 12.9	No.s	4	24	15	0	24	20	15	54	14	20	64	20		274
	Sec 12.10	No.s		0	15	0	0	0	15							30	
9	Heater and Illumination Equipments	Sec 13.2.1	No.s		6	0	0	6	5						10		27
		Sec 13.2.2	No.s		6	0	0	6	5						10	7	34
		Sec 13.2.3	No.s	3	6	15	0	6	5	15	40	7	30	36	14		177

		Sec 13.2.4	No.s		6	15	0	6	5	15	40	7	30	36	20	7	187	
10	Cable Glands and Cable Trays	Sec 14.2.1	No.s	3	82	30	0	75	63	30	440	84	100	770	135		1812	
		Sec 14.2.2	No.s		0	0	0	0										0
		Sec 14.2.3	No.s		0	0	12	2	2	18								34
		Sec 14.2.4	No.s		0	0	20	20	20	40								100
		Sec 14.3.1	Meter		0	0	30	15	16	70		40				110		281
11	Communication Cables	Sec 15.1	Meter		0	0	100	300	300	700	200	200			1050		2850	
		Sec 15.2	Meter		0	0	50	25	30	50	70	50			90		365	
		Sec 15.3	Meter		0	0	100	30	30	50		30			120		360	
12	Ethernet Switch accessories	Sec 16.3	No.s		0	0	0	1	1	1		1					4	
13	Earthing Strip	Sec 18.1	Meter		6	0	0	6	5		12	7		60	10		106	
14	Semaphore	Sec 19.1.1	No.s		0	0	0	5	5			7			10		27	
		Sec 19.1.2	No.s		0	0	0	25	20			28			40		113	
		Sec 19.1.3	No.s		5	0	0	0			8			21			34	
		Sec 19.1.4	No.s		25	0	0	0			32			84			141	



**BSES RAJDHANI POWER LTD.**

15	Plates and fixtures	Sec 20.1	No.s		6	0	0	6	5		8	7		21	10	3	66
		Sec 20.2	Sqm	2	0	4	0	0	0	4			10		1		21
		Sec 20.3	Sqm		4	0	0	3	2	0	60	3	15	80	5		172
		Sec 20.4	No.s								7			15			22
16	Fan	Sec 21.1	No.s		6	15	0	6	5	15		7		10		64	

## Annexure –IIB

### PRICE FORMAT FOR SUPPLY

S No	Material	Refer below mentioned sections in Annexure-A for Technical Specification of material	UNIT				
				Total Qty (Ref Annexure IIA scheme wise detailed breakup of the qty)	Unit rate	<u>GST</u>	Total Amount
1	Contactors and auxiliary contact	Sec 4.1	No.s	28			
		Sec 4.2	No.s	902			
		Sec 4.3	No.s	15			
		Sec 4.4	No.s	10			
		Sec 4.5	No.s	1079			
		Sec 4.6	No.s	97			
		Sec 4.7	No.s	125			
		Sec 4.8	No.s	12			
		Sec 4.9	No.s	15			
		Sec 4.10	No.s	18			
				Sec 4.11	No.s	6	
2	Indication Lamps	Sec 5.2	No.s	57			
		Sec 5.3	No.s	57			
		Sec 5.4	No.s	85			
		Sec 5.5	No.s	57			
		Sec 5.6	No.s	72			
		Sec 5.7	No.s	44			
		Sec 5.8	No.s	0			
		Sec 5.9	No.s	69			



		Sec 5.10	No.s	55			
		Sec 5.11	No.s	59			
		Sec 5.12	No.s	49			
		Sec 5.13	No.s	56			
		Sec 5.14	No.s	196			
		Sec 5.15	No.s	196			
		Sec 5.16	No.s	380			
		Sec 5.17	No.s	226			
		Sec 5.18	No.s	134			
		Sec 5.19	No.s	134			
		Sec 5.20	No.s	10			
		Sec 5.21	No.s	93			
3	Instrumentation Instruments and accessories	Sec 6.1	No.s	34			
		Sec 6.2	No.s	15			
		Sec 6.3	No.s	22			
		Sec 6.4	No.s	4			
		Sec 6.5	No.s	49			
		Sec 6.6	No.s	26			
4	PVC Ducts	Sec 8	Meter	2702			
5	Selector switch and Push Buttons	Sec 9.2	No.s	172			
		Sec 9.3	No.s	204			
		Sec 9.4	No.s	49			
		Sec 9.5	No.s	172			
		Sec 9.6	No.s	196			
6	Terminal Blocks and accessories( End plate)	Sec 10.2	No.s	5236			
		Sec 10.3	No.s	15827			
		Sec 10.4.2	No.s	270			

		Sec 10.4.3	No.s	590			
7	DIN Rail and accessories( base plate)	Sec 11.1	Meter	354			
		Sec 11.2.2	Meter	519			
		Sec 11.2.3	Meter	554			
8	MCBs	Sec 12.2	No.s	112			
		Sec 12.3	No.s	942			
		Sec 12.4	No.s	142			
		Sec 12.5	No.s	331			
		Sec 12.6	No.s	31			
		Sec 12.7	No.s	228			
		Sec 12.8	No.s	39			
		Sec 12.9	No.s	274			
		Sec 12.10	No.s	30			
9	Heater and Illumination Equipments	Sec 13.2.1	No.s	27			
		Sec 13.2.2	No.s	34			
		Sec 13.2.3	No.s	177			
		Sec 13.2.4	No.s	187			
10	Cable Glands and Cable Trays	Sec 14.2.1	No.s	1812			
		Sec 14.2.2	No.s	0			

		Sec 14.2.3	No.s	34			
		Sec 14.2.4	No.s	100			
		Sec 14.3.1	Meter	281			
11	Communication Cables	Sec 15.1	Meter	2850			
		Sec 15.2	Meter	365			
		Sec 15.3	Meter	360			
12	Ethernet Switch accessories	Sec 16.3	No.s	4			
13	Earthing Strip	Sec 18.1	Meter	106			
14	Semaphore	Sec 19.1.1	No.s	27			
		Sec 19.1.2	No.s	113			
		Sec 19.1.3	No.s	34			
		Sec 19.1.4	No.s	141			
15	Plates and fixtures	Sec 20.1	No.s	66			
		Sec 20.2	Sqm	21			
		Sec 20.3	Sqm	172			
		Sec 20.4	No.s	22			
16	Fan	Sec 21.1	No.s	64			

**Grand Total amount in Rs.**

**PRICE FORMAT FOR ETC**

SR.NO.	ITEM DESCRIPTION	Unit	Rate
1	As detailed vide Scope of work description under Scheme No ES21MS4003	Lumpsum	
2	As detailed vide Scope of work description under Scheme No ES20MS4019	Lumpsum	
3	As detailed vide Scope of work description under Scheme No ES20MS4014	Lumpsum	
4	As detailed vide Scope of work description under Scheme No EW21MS4003	Lumpsum	
5	As detailed vide Scope of work description under Scheme No EW21MS4006	Lumpsum	
6	As detailed vide Scope of work description under Scheme No ES20MS4018	Lumpsum	
7	As detailed vide Scope of work description under Scheme No EW21MS4004	Lumpsum	
8	As detailed vide Scope of work description under Scheme No EW21MS4007	Lumpsum	
9	As detailed vide Scope of work description under Scheme No ES21MS4004	Lumpsum	
		Total	
		GST	
		Total including GST in Rs.	

**Note: Major materials like numerical relays and aux relays/control cables, Ethernet switches, MFM etc. will be issued by BRPL as free issue item. However transportation of all free issue materials from BRPL stores to BRPL S/S, handling, safe storage till handing over of the installations to BPRL shall be in the scope of contractor.**

**Appendix -IV****TERMS & CONDITIONS FOR REVERSE AUCTION**

In a bid to make our entire procurement process more fair and transparent, BRPL intends to use the reverse auctions through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as techno commercially qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

Reverse auction shall be governed by following terms and conditions:

1. BRPL shall provide the user id and password to the authorized representative of the bidder. (Duly signed Authorization Letter in lieu of the same shall be submitted along with the bid).
2. BRPL will make every effort to make the bid process transparent. However, the award decision by BRPL would be final and binding on the bidder.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of BRPL, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. Bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, Internet response issues, software or hardware hangs; power failure or any other reason shall not be the responsibility of BRPL.
6. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be outrightly rejected by BRPL.
7. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
8. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at BRPL site/ store
9. The prices submitted by a bidder during the auction event shall be binding on the bidder.
10. No requests for time extension of the auction event shall be considered by BRPL.
11. The discount received after the RA and final negotiation, w.r.t. the initial financial bid shall be applied on all the items on a pro rata basis.
12. In case RA is not conducted /concluded for any reasons, a "final no regret" financial bid in a sealed envelope will be called for from all qualified bidders.

**SECTION V****VENDOR CODE OF CONDUCT,**

Purchaser is committed to conducting its business in an ethical, legal and socially responsible manner. To encourage compliance with all legal requirements and ethical business practices, Purchaser has established this Vendor Code of Conduct (the "Code") for Purchaser's Vendors. For the purposes of this document, "Vendor" means any company, corporation or other entity that sells, or seeks to sell goods or services, to Purchaser, including the Vendor's employees, agents and other representatives. Fundamental to adopting the Code is the understanding that a business, in all of its activities, must operate in full compliance with the laws, rules and regulations of the countries in which it operates. This Code encourages Vendors to go beyond legal compliance, drawing upon internationally recognized standards, in order to advance social and environmental responsibility.

**I. Labour and Human Rights**

Vendors must uphold the human rights of workers, and treat them with dignity and respect as understood by the international community.

- Fair Treatment - Vendors must be committed to a workplace free of harassment. Vendors shall not threaten workers with or subject them to harsh or inhumane treatment, including sexual harassment, sexual abuse, corporal punishment, mental coercion, physical coercion, verbal abuse or unreasonable restrictions on entering or exiting company provided facilities.
- Antidiscrimination - Vendors shall not discriminate against any worker based on race, colour, age, gender, sexual orientation, ethnicity, disability, religion, political affiliation, union membership, national origin, or marital status in hiring and employment practices such as applications for employment, promotions, rewards, access to training, job assignments, wages, benefits, discipline, and termination. Vendors shall not require a pregnancy test or discriminate against pregnant workers except where required by applicable laws or regulations or prudent for workplace safety. In addition, Vendors shall not require workers or potential workers to undergo medical tests that could be used in a discriminatory way except where required by applicable law or regulation or prudent for workplace safety.
- Freely Chosen Employment - Forced, bonded or indentured labour or involuntary prison labour is not to be used. All work will be voluntary, and workers should be free to leave upon reasonable notice. Workers shall not be required to hand over government-issued identification, passports or work permits as a condition of employment.
- Prevention of Under Age Labour - Child labour is strictly prohibited. Vendors shall not employ children. The minimum age for employment or work shall be 15 years of age, the minimum age for employment in that country, or the age for completing compulsory

education in that country, whichever is higher. This Code does not prohibit participation in legitimate workplace apprenticeship programs that are consistent with Article 6 of ILO Minimum Age Convention No. 138 or light work consistent with Article 7 of ILO Minimum Age Convention No. 138.

- Juvenile Labour - Vendors may employ juveniles who are older than the applicable legal minimum age for employment but are younger than 18 years of age, provided they do not perform work likely to jeopardize their health, safety, or morals, consistent with ILO Minimum Age Convention No. 138.
- Minimum Wages - Compensation paid to workers shall comply with all applicable wage laws, including those relating to minimum wages, overtime hours and legally mandated benefits. Any disciplinary wage deductions are to conform to local law. The basis on which workers are being paid is to be clearly conveyed to them in a timely manner.
- Working Hours - Studies of good manufacturing practices clearly link worker strain to reduced productivity, increased turnover and increased injury and illness. Work weeks are not to exceed the maximum set by local law. Further, a work week should not be more than 60 hours per week, including overtime, except in emergency or unusual situations. Workers should be allowed at least one day off per seven-day week.
- Freedom of Association - Open communication and direct engagement between workers and management are the most effective ways to resolve workplace and compensation issues. Vendors are to respect the rights of workers to associate freely and to communicate openly with management regarding working conditions without fear of reprisal, intimidation or harassment. Workers' rights to join labour unions, seek representation and or join worker's councils in accordance with local laws should be acknowledged.

II. Health and Safety Vendors must recognize that in addition to minimizing the incidence of work-related injury and illness, a safe and healthy work environment enhances the quality of products and services, consistency of production and worker retention and morale. Vendors must also recognize that ongoing worker input and education is essential to identifying and solving health and safety issues in the workplace.

The health and safety standards are:

- Occupational Injury and Illness - Procedures and systems are to be in place to prevent, manage, track and report occupational injury and illness, including provisions to: a) encourage worker reporting; b) classify and record injury and illness cases; c) provide

necessary medical treatment; d) investigate cases and implement corrective actions to eliminate their causes; and e) facilitate return of workers to work.

- Emergency Preparedness - Emergency situations and events are to be identified and assessed, and their impact minimized by implementing emergency plans and response procedures, including: emergency reporting, employee notification and evacuation procedures, worker training and drills, appropriate fire detection and suppression equipment, adequate exit facilities and recovery plans.
- Occupational Safety - Worker exposure to potential safety hazards (e.g., electrical and other energy sources, fire, vehicles, and fall hazards) are to be controlled through proper design, engineering and administrative controls, preventative maintenance and safe work procedures (including lockout/tagout), and ongoing safety training. Where hazards cannot be adequately controlled by these means, workers are to be provided with appropriate, well-maintained, personal protective equipment. Workers shall not be disciplined for raising safety concerns.
- Machine Safeguarding - Production and other machinery is to be evaluated for safety hazards. Physical guards, interlocks and barriers are to be provided and properly maintained where machinery presents an injury hazard to workers.
- Industrial Hygiene - Worker exposure to chemical, biological and physical agents is to be identified, evaluated, and controlled. Engineering or administrative controls must be used to control overexposures. When hazards cannot be adequately controlled by such means, worker health is to be protected by appropriate personal protective equipment programs.
- Sanitation, Food, and Housing - Workers are to be provided with ready access to clean toilet facilities, potable water and sanitary food preparation, storage, and eating facilities. Worker dormitories provided by the Participant or a labour agent are to be maintained clean and safe, and provided with appropriate emergency egress, hot water for bathing and showering, and adequate heat and ventilation and reasonable personal space along with reasonable entry and exit privileges.
- Physically Demanding Work - Worker exposure to the hazards of physically demanding tasks, including manual material handling and heavy or repetitive lifting, prolonged standing and highly repetitive or forceful assembly tasks is to be identified, evaluated and controlled.

### III. Environmental

Vendors should recognize that environmental responsibility is integral to producing world class products. In manufacturing operations, adverse effects on the environment and natural resources are to be minimized while safeguarding the health and safety of the public.

The environmental standards are:



- Product Content Restrictions - Vendors are to adhere to applicable laws and regulations regarding prohibition or restriction of specific substances including labeling laws and regulations for recycling and disposal. In addition, Vendors are to adhere to all environmental requirements specified by Purchaser.
- Chemical and Hazardous Materials -Chemical and other materials posing a hazard if released to the environment are to be identified and managed to ensure their safe handling, movement, storage, recycling or reuse and disposal.
- Air Emissions - Air emissions of volatile organic chemicals, aerosols, corrosives, particulates, ozone depleting chemicals and combustion by-products generated from operations are to be characterized, monitored, controlled and treated as required prior to discharge.
- Pollution Prevention and Resource Reduction -Waste of all types, including water and energy, are to be reduced or eliminated at the source or by practices such as modifying production, maintenance and facility processes, materials substitution, conservation, recycling and re-using materials.
- Wastewater and Solid Waste - Wastewater and solid waste generated from operations, industrial processes and sanitation facilities are to be monitored, controlled and treated as required prior to discharge or disposal.
- Environmental Permits and Reporting - All required environmental permits (e.g. discharge• monitoring) and registrations are to be obtained, maintained and kept current and their operational and reporting requirements are to be followed.

#### IV. Ethics

Vendors must be committed to the highest standards of ethical conduct when dealing with workers, Vendors, and customers.

- Corruption, Extortion, or Embezzlement - Corruption, extortion, and embezzlement, in any form, are strictly prohibited. Vendors shall not engage in corruption, extortion or embezzlement in any form and violations of this prohibition may result in immediate termination as an Vendor and in legal action.
- Disclosure of Information - Vendors must disclose information regarding its business activities, structure, financial situation, and performance in accordance with applicable laws and regulations and prevailing industry practices.
- No Improper Advantage - Vendors shall not offer or accept bribes or other means of obtaining undue or improper advantage.
- Fair Business, Advertising, and Competition - Vendors must uphold fair business standards in• advertising, sales, and competition.

- Business Integrity - The highest standards of integrity are to be expected in all business interactions. Participants shall prohibit any and all forms of corruption, extortion and embezzlement. Monitoring and enforcement procedures shall be implemented to ensure conformance.
- Community Engagement - Vendors are encouraged to engage the community to help foster social and economic development and to contribute to the sustainability of the communities in which they operate.
- Protection of Intellectual Property - Vendors must respect intellectual property rights; safeguard customer information; and transfer of technology and know-how must be done in a manner that protects intellectual property rights.

#### V. Management System

Vendors shall adopt or establish a management system whose scope is related to the content of this Code. The management system shall be designed to ensure (a) compliance with applicable laws, regulations and customer requirements related to the Vendors' operations and products; (b) conformance with this Code; and (c) identification and mitigation of operational risks related to this Code. It should also facilitate continual improvement.

The management system should contain the following elements:

- Company Commitment - Corporate social and environmental responsibility statements affirming Vendor's commitment to compliance and continual improvement.
- Management Accountability and Responsibility - Clearly identified company representative[s] responsible for ensuring implementation and periodic review of the status of the management systems.
- Legal and Customer Requirements - Identification, monitoring and understanding of applicable laws, regulations and customer requirements.
- Risk Assessment and Risk Management - Process to identify the environmental, health and safety and labour practice risks associated with Vendor's operations. Determination of the relative significance for each risk and implementation of appropriate procedural and physical controls to ensure regulatory compliance to control the identified risks.
- Performance Objectives with Implementation Plan and Measures - Areas to be included in a risk assessment for health and safety are warehouse and storage facilities, plant/facilities support equipment, laboratories and test areas, sanitation facilities (bathrooms), kitchen/cafeteria and worker housing /dormitories. Written standards, performance objectives, targets and implementation plans including a periodic assessment of Vendor's performance against those objectives.

- Training - Programs for training managers and workers to implement Vendor's policies, procedures and improvement objectives.
- Communication - Process for communicating clear and accurate information about Vendor's performance, practices and expectations to workers, Vendors and customers.
- Worker Feedback and Participation - Ongoing processes to assess employees' understanding of and obtain feedback on practices and conditions covered by this Code and to foster continuous improvement.
- Audits and Assessments - Periodic self-evaluations to ensure conformity to legal and regulatory requirements, the content of the Code and customer contractual requirements related to social and environmental responsibility.
- Corrective Action Process - Process for timely correction of deficiencies identified by internal or external assessments, inspections, investigations and reviews.
- Documentation and Records - Creation of documents and records to ensure regulatory compliance and conformity to company requirements along with appropriate confidentiality to protect privacy.
- The Code is modeled on and contains language from the Recognized standards such as International Labour Organization Standards (ILO), Universal Declaration of Human Rights (UDHR), United Nations Convention against Corruption, and the Ethical Trading Initiative (ETI) were used as references in preparing this Code and may be useful sources of additional information.