

# **NOTICE INVITING TENDER (NIT)**

# **SUPPLY**

**OF** 

POWER CABLE 33 KV, 3CX400 SQ. MM. (A2XWY)

NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]

**Due Date for Submission: 05.06.2025, 15:00 HRS** 

BSES YAMUNA POWER LIMITED (BYPL)
CONTRACTS & MATERIALS DEPT.,
SHAKTI KIRAN BUILDING, KARKARDOOMA,
DELHI-110032
CIN: U40109DL2001PLC111525

WEBSITE: www.bsesdelhi.com

This document is a property of BYPL. This document is meant for the exclusive purpose of bidding against this NIT Number/Specification and shall not be transferred, reproduced, or otherwise used for purposes other than that for which it is specifically issued.



# **NIT INDEX**

S No.	DOCUMENT DESCRIPTION	PAGE NO			
VOLUME	VOLUME – I				
1	INFORMATION TO BIDDER (ITB)	1 To 17			
1.00	APPENDIX I				
1.01	BID INDEX FOR PART-A (TECHNICAL BID)				
1.02	BID FORM				
1.03	TENDER FEE DETAILS				
1.04	EMD DETAILS				
1.05	FORMAT FOR EMD BANK GUARANTEE				
1.06	COMMUNICATION DETAILS OF THE BIDDER				
1.07	MANUFACTURER AUTHORIZATION FORM				
1.08	QUALIFYING CRITERIA COMPLIANCE INDEX - TECHNICAL CRITERIA				
1.09	LIST OF PURCHASE ORDERS EXECUTED & DELIVERY DETAILS IN SUPPORT OF QUALIFYING REQUIREMENT	1. To 22			
1.10	LIST OF PERFORMANCE CERTIFICATES IN SUPPORT OF QUALIFYING REQUIREMENT	1 To 22			
1.11	SCHEDULE OF DEVIATIONS - TECHNICAL				
1.12	TYPE TEST REPORTS (SEQUENCE OF TESTS SHALL BE STRICTLY IN ACCORDANCE WITH RELEVANT IS/IEC)				
1.13	SAMPLE SUBMISSION DETAILS (IF APPLICABLE AS PER SPECIFICATION)				
1.14	QUALIFYING CRITERIA COMPLIANCE INDEX - COMMERCIAL CRITERIA				
1.15	UNDERTAKINGS				
1.16	SCHEDULE OF DEVIATIONS - COMMERCIAL				
1.17	ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT				
1.18	CODE OF CONDUCT FOR SUPPLIERS				
2	GENERAL CONDITION OF CONTRACT - SUPPLY	1 To 19			
2.00	APPENDIX II				
2.01	FORMAT FOR PERFORMANCE BANK GUARANTEE				
2.02	BENEFICIARY'S BANK DETAILS WITH IFSC CODE	1 To 6			
2.03	FORMAT OF WARRANTY/GUARANTEE CERTIFICATE	1100			
2.04 FORMAT OF UNDERTAKING GST					
2.05	SUMMARY OF COMMERCIAL TERMS AND CONDITIONS				
VOLUME	– II - PRICE BID FORMAT	1 To 2			
VOLUME	- III - TECHNICAL SPECIFICATIONS	1 To 41			



INFORMATION TO BIDDER (ITB)
NIT NO: CMC/BY/25-26/RS/SkS/SV/3
[RFx Number: 2200000122]

Page **1** of **17** 

Bidders seal & Signature

# **SECTION – I: REQUEST FOR QUOTATION**

## 1.00 EVENT INFORMATION

1.01 BSES Yamuna Power Ltd (hereinafter referred to as **"BYPL"**) invites **Open Tender** in the E-Tender Bidding Process on a "Single Stage: Two Parts" from interested Bidders as detailed below:

Tender Description	Tender Fee (₹)	Estimated Cost (₹)	EMD Amount (₹)	Delivery at
Supply of Power Cable 33 kV, 3C x 400 sq. mm. (A2XWY)	1,180	1.35 Crore	2.70 Lakh	Delhi Store(s)/ Site(s)

The bidder must qualify the requirements as specified in clause 2.0 stated below.

- 1.02 The tender document is available for downloading from our website <a href="www.bsesdelhi.com">www.bsesdelhi.com</a> --> BSES YAMUNA POWER LTD --> Tender --> Open Tenders or through our E-Tendering portal link (https://srmprdportal.bsesdelhi.com:50001/irj/portal).
- 1.03 **Tender Fee**: The bidder has to compulsorily submit the non-refundable tender fee of **₹ 1,180/** as demand draft or online transfer of the requisite amount through IMPS/NEFT/RTGS covering the cost of bid documents. Any such bid submitted without this Fee shall be rejected.
- 1.04 **Earnest Money Deposit (EMD)** of ₹ 2,70,000/- (Two Lakh and Seventy Thousand only) valid for 120 days from the due date of bid submission in the form of BG/FD/online transfer of the requisite amount through IMPS/NEFT/RTGS. Any such bid submitted without EMD shall be rejected.

## 1.05 TIME SCHEDULE

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

S. No.	Events	Due date & Time
1	Date of availability of tender documents from BYPL Website & SRM	up to 05.06.2025, 15:00 Hours
2	Date & Time of Pre-Bid Meeting Pre-Bid Meeting will be done online, Register in advance for this meeting via, the Zoom Meeting link: <a href="https://zoom.us/meeting/register/4DNCROOMR9qr">https://zoom.us/meeting/register/4DNCROOMR9qr</a> j89sPjkFw After registering, you will receive a confirmation email containing information about joining the meeting.	21.05.2025, 15:30 Hours
3	Last Date of receipt of pre-bid queries, if any (Queries to be submitted via e-mail)	21.05.2025 up to 18:00 Hours
4	Last Date of replies to all the pre-bid queries as received	24.05.2025 up to 17:00 Hours
5	Last date and time of receipt of Complete Bids (Tender Fees, EMD, Part A & Part B)	05.06.2025, 15:00HRS
6	Date & Time of Opening of PART A – EMD and Technical Bid	05.06.2025, 16:00HRS
7	Date & Time of opening of Price/RA of qualified bids	Will be notified to the qualified bidders through our website/e- mail

INFORMATION TO BIDDER (ITB)	Page <b>2</b> of <b>17</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3		
[RFx Number: 2200000122]		

**Note:** In the event of the last date specified for submission of bids and the date of opening of bids is declared as a closed holiday for the BSES office, the last date of submission of bids and date of opening of bids will be the following working day at the appointed times.

1.06 The Bid shall be submitted online in two (02) parts. Details of the parts are as follows:

# Part A – Techno Commercial Bid

#### Part B – Price Bid

Bids will be submitted online and received up to **05.06.2025**, **15:00 Hr.** at the address given below.

Part A of the Bid shall be opened online on **05.06.2025**, **16:00 Hr.** 

Part B of the Bid will be opened in case of Techno-Commercially Qualified Bidders and the date of opening of same shall be intimated in due course. It is the sole responsibility of the bidder to ensure that the bid documents are submitted online and reach this office on or before the last date.

Head of Department
Contracts & Materials Deptt.
BSES Yamuna Power Ltd
Reception, Ground Floor
Shaktikiran Building, Karkardooma
Delhi 110032

All envelopes shall be duly superscribed "Bid for Supply of Power Cable 33 kV, 3C x 400 sq. mm. (A2XWY)" "CMC/BY/25-26/RS/SkS/SV/3 [RFx No. 2200000122] DUE ON 05.06.2025, 15:00 Hr."

- 1.07 BSES Yamuna Power Ltd reserves the right to accept/reject any or all tenders without assigning any reason thereof in the event of the following:
  - a) Tender is received after the due date and time.
  - b) Tender fee of requisite value is not submitted.
  - c) Earnest Money Deposit (EMD) of requisite value & validity is not submitted in the shape of a Bank Guarantee drawn in favour of BSES Yamuna Power Ltd, payable at Delhi or Online transfer of requisite amount through IMPS/NEFT/RTGS.
  - d) Price Bid as per the Price Schedule is not submitted.
  - e) Incomplete Bids.
  - f) Necessary documents against compliance to Qualification Requirements mentioned in Section 1 Clause 2.0 of this Tender Document.
  - g) Complete documents/details are not enclosed as per the Bid Index for Part-A (Technical Bid) at APPENDIX I ANNEXURE 1.01.
  - h) Filled in Schedule of Deviations as per Annexure is not submitted.

# 2.00 QUALIFICATION CRITERIA

The prospective bidder must qualify for all of the following requirements and shall be eligible to participate in the bidding who meets the following requirements and management has a right to disqualify those bidders who do not meet these requirements.

#### 2.01 Technical Criteria:

S. No.	Criteria	Documents to be submitted by the bidder
1	The Bidder should have its own manufacturing facility in India for the last three (03) years for 33KV or higher voltage	
	grade Power Cables.	locations and works from where supply

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>3</b> of <b>17</b>	Bidders seal & Signature
---	----------------------------	--------------------------

		against this tender shall be proposed to be furnished.
2	The bidder must have a Dry cure and Dry cooling CCV/VCV line for manufacturing of the offered or higher voltage grade cables.	Self-Undertaking
3	The bidder should have supplied at least 100km of cable size 33KV 3CX400 MM2 or higher voltage or higher size & rating in the last 5 years to any utilities/ SEB's/ PSU's/ reputed companies wherein the end-user shall be utilities/ SEB's/ PSU's.	i. Summary list of executed Purchase orders (Details to be submitted as per the format enclosed in APPENDIX I - ANNEXURE – 1.09) ii. Purchase order copies iii. Material delivery clearance certificate copy or Invoice Copies or Delivery completion/ Performance certificate
3	Performance certificate for minimum 2-year satisfactory performance for cable size 33KV 3CX400 MM2 or higher voltage or higher size & rating supplied in last 7 years from the date of bid opening from at least two utilities/ SEB's/ PSU's/ reputed companies wherein the end-user shall be utilities/ SEB's/PSU's.  In case of bidder has a previous association with BRPL/BYPL for similar product and service, the performance feedback for that bidder by BRPL/BYPL shall only be considered irrespective of performance certificate issued by any third organization.	Performance Certificates  (Details to be submitted as per the format enclosed in APPENDIX I - ANNEXURE – 1.10)
4	The bidder should have a manufacturing capacity of a minimum 20 km per month for the offered or higher voltage grade Power Cables.	Installed Manufacturing Capacity (duly certified by the CE/CA/DIC/Self-Undertaking/ Government Organization/others)
5	The bidder must possess valid ISO 9001:2015 certification.	Valid copy of Certification
6	The bidder must possess valid BIS Licence.	Valid copy of Licence

# 2.02 **Commercial Criteria:**

S. No.	Criteria	Documents to be submitted by the bidder
7	Bidder should have an Average Annual Sales Turnover of Rs 300 Crores or more in the last three (3) Financial Years (i.e., FY 2021- 22, 2022-23, 2023-24).	Balance Sheet / Copy of audited P&L Account / Duly certified CA certificate having UDIN to be submitted (Details to be submitted as per the format enclosed in APPENDIX I - ANNEXURE – 1.14)
8	The Bidder shall submit an undertaking that "No Litigation" is pending with the BYPL or its Group/Associates Companies as on date of bid opening.	Self-Undertaking (as per the format enclosed in APPENDIX I - ANNEXURE – 1.15)

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>4</b> of <b>17</b>	Bidders seal & Signature
---	----------------------------	--------------------------

		(Details to be submitted as per the format enclosed in APPENDIX I - ANNEXURE – 1.14)
9	An undertaking (self-certificate) that the bidder has not been blacklisted/debarred by any central/state government institution/Electricity utilities as on date of bid opening.	Self-Undertaking (as per the format enclosed in APPENDIX I - ANNEXURE – 1.15) (Details to be submitted as per the format enclosed in APPENDIX I - ANNEXURE – 1.14)
10	The bidder must have valid PAN No., and GST Registration Number, in addition to other statutory compliances. The bidder must submit copy of registrations and submit an undertaking that the bidder shall comply with all the statuary compliances as per the laws/rules etc. before the start of the supply/work.	Relevant Statutory Documents Copy/ Self Undertaking (as per the format enclosed in APPENDIX I - ANNEXURE – 1.15) (Details to be submitted as per the format enclosed in APPENDIX I - ANNEXURE – 1.14)

Notwithstanding anything stated above, BYPL reserves the right to assess the bidder's capability to perform the contract, assess the capability and installed capacity of the Bidder for carrying out the supplies, should the circumstances warrant such assessment in the overall interest of the purchaser. In this regard the decision of the purchaser is final.

# 3.00 BIDDING AND AWARD PROCESS

Bidders are requested to submit their offer strictly in line with this tender document. Normally, the deviations to tender terms are not admissible and the bids with deviations are liable for rejection. Hence, the bidders are advised to refrain from taking any deviations on this Tender. Still, in case of any deviations, all such deviations shall be set out by the Bidders, clause by clause in the "Annexure - Schedule of Deviations" and the same shall be submitted as a part of the Technical Bid.

#### 3.01 BID SUBMISSION

# **BIDS ARE INVITED THROUGH THE E-PROCUREMENT PORTAL:**

BSES will carry out E-Procurement through its e-procurement portal (https://srmprdportal.bsesdelhi.com:50001/irj/portal).

Interested Non-registered bidders are requested to obtain the portal user name and password (if not available) for bid submission. For participating in e-Tenders of BYPL, please write a mail to

- 1. Mr Rakesh Sharma, E-mail: Rakesh.Ku.Sharma@reliancegroupindia.com,
- 2. Mr Sumit Verma, E-mail: <u>Sumit.Ra.Verma@@reliancegroupindia.com</u>, with your details as per below:
- a) Existing Vendor Code with BYPL or its Group/Associates Companies (if available): ......
- b) Trade Name: .....
- c) Address of Principal Place of Business: .....
- d) Contact Person's Name: .....
- e) Contact Person's Designation: .....
- f) Contact Person's Mobile No.: .....
- g) Contact Person's email ID: .....
- h) Also, attach a valid copy of the Power of Attorney in favour of the above-mentioned Contact Person for being authorized to receive user ID and password on behalf of their organization.

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>5</b> of <b>17</b>	Bidders seal & Signature
---	----------------------------	--------------------------

The login ID details shall be sent through email to the email ID mentioned by you for the same.

Bids shall be submitted in 2 (Two) parts on the assigned folder of the e-procurement site. Please refer to the user manual available at <a href="https://srmprdportal.bsesdelhi.com:50001/irj/portal">https://srmprdportal.bsesdelhi.com:50001/irj/portal</a> and enclosed with the tender.

Bids have to be mandatorily submitted only through the e-procurement portal of BSES Delhi. Bids submitted through any other form/ route shall not be admissible.

However, documents that necessarily have to be submitted in originals like Tender Fee (in the form of DD) or EMD (in the form of BG/FD/DD as applicable) and any other documents mentioned in the tender documents have to be submitted at the BYPL office before the due date & time of submission.

Please mention our NIT Number: - ...... on the Tender and drop the same in our Tender Box placed at BSES Yamuna Power Ltd, Reception, Ground Floor, Shaktikiran Building, Karkardooma, Delhi 110032

The bids and the outer envelope shall be addressed to the following:

**Head of Department** 

**Contracts & Materials Deptt.** 

**BSES Yamuna Power Ltd, Shaktikiran Building, Karkardooma, Delhi 110032** Kindly Note:

- The bidder has to ensure that the tender is dropped in the correct box designated for tender submission only.
- > BYPL shall not be responsible for any wrong placement of tender documents by the bidder.

This is a two-part bid process. Bidders are to submit the bids online in 2(Two) parts **PART-A TECHNICAL BID & COMMERCIAL TERMS & CONDITIONS** and **Part-B FINANCIAL BID** and shall be submitted before the due date & time specified.

**PART A:: TECHNICAL BID** comprising of the following, do not contain any cost information whatsoever and shall be submitted within the due date:

S. No.	Descriptions	Type of Documents/Format
A.1	Bid Details	
1	Bid Index for Part-A (Technical Bid)	In the prescribed format enclosed at APPENDIX I ANNEXURE – 1.01
2	Cover Letter, if any	Standard Format
3	Bid Form (Unpriced) Duly Signed	Duly Signed Bid Form as per enclosed format at APPENDIX I ANNEXURE – 1.02
4	Tender Fee	Non-refundable demand draft or online transfer of the requisite amount through IMPS/NEFT/RTGS for Rs $1,180/-$ , Duly filled and signed as per enclosed format at APPENDIX I ANNEXURE $-1.03$
5	EMD	Online transfer of the requisite amount through IMPS/NEFT/RTGS or FD or BG in the prescribed stamp paper & format enclosed at APPENDIX I ANNEXURE – 1.05, EMD Details Duly filled and signed as per enclosed format at APPENDIX I ANNEXURE – 1.04
6	Power-of-Attorney/ Authorization Letter	In the standard stamp paper/letter
A.2	Technical Bid	

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3	Page <b>6</b> of <b>17</b>	Bidders seal & Signature
[RFx Number: 2200000122]		

	I =			
7	Communication Details of the Bidder	Duly filled and signed as per enclosed format at APPENDIX I ANNEXURE – 1.06		
8	Manufacturer	Duly filled and signed as per enclosed format at		
	Authorization Form (as	APPENDIX I ANNEXURE – 1.07		
	applicable)			
9	Technical Qualifying	Documentary evidence in support of qualifying criteria		
,	Criteria Compliance	mentioned in Section 1 Clause 2.00. Duly filled and signed		
	Index & Documents	as per enclosed format at APPENDIX I ANNEXURE – 1.08,		
	Thuex & Documents	ANNEXURE – 1.09 & ANNEXURE – 1.10		
10	Schedule of Deviations	Duly filled and signed as per enclosed format at		
	- Technical	APPENDIX I ANNEXURE – 1.11		
11	Technical Details/	Bidder shall submit duly filled GTP with all Technical		
	Filled in Guaranteed	documents		
	Technical particulars	45545.15		
	(GTP) as per			
	specification			
12	Technical Drawings as	Bidder shall submit all Drawings as per the specification		
	per specification	The state of the specification		
13	Type Test Reports	Bidders shall submit a copy of type test reports in their		
10	Type rest Reports	technical bids in support of technical specifications. Duly		
		filled and signed as per enclosed format at APPENDIX I		
		ANNEXURE – 1.12		
14	Sample Submission	Duly filled and signed as per enclosed format at		
14		APPENDIX I ANNEXURE – 1.13		
	Details (if applicable	APPENDIA I ANNEXURE - 1.13		
15	as per specification)	Diddous shall submit a sawy of the musdoct satisfaction in		
15	Product Catalogue (If	Bidders shall submit a copy of the product catalogue in		
1.0	applicable)	their technical bids in support of technical specifications		
16	Manufacturer's Quality	Bidders shall submit a copy of MQP in their technical bids		
	Assurance Plan	in support of technical specifications		
17	Other drawings/	Bidders shall submit a copy of documents in their		
	documents mentioned	technical bids in support of technical specifications		
	in technical			
	specification			
18	Testing Facilities	Bidder shall submit the details of testing facilities		
		available at their works/factory.		
A.3	Commercial Bid			
19	Company Profile,	Bidder shall submit the details of Organization &		
	Organization Chart &	Manpower with qualification and experience.		
	Manpower Details.			
20	Commercial Qualifying	Documentary evidence in support of qualifying criteria		
	Criteria Compliance	mentioned in Section 1 Clause 2.00. Duly filled and signed		
	Index & Documents	as per enclosed format at APPENDIX I ANNEXURE – 1.14		
21	Undertakings	Duly signed self-undertakings as per enclosed format at		
		APPENDIX I ANNEXURE – 1.15		
22	Schedule of Deviations	Duly filled and signed as per enclosed format at		
	- Commercial	APPENDIX I ANNEXURE – 1.16		
23	Acceptance Form For	Duly signed Acceptance Form For Participation In		
	Participation in	Reverse Auction Event as per enclosed format at		
	Reverse Auction Event	APPENDIX I ANNEXURE – 1.17		
24	Commercial Terms and	Acceptance of Commercial Terms and Conditions viz.		
47	Conditions	Delivery Schedule/Period, Payment terms, PBG etc. Duly		
	Conditions	Delivery Schedule/renou, rayinent terms, rod etc. Duly		

	INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>7</b> of <b>17</b>	Bidders seal & Signature
--	---	----------------------------	--------------------------

		filled and signed as per enclosed format at APPENDIX II ANNEXURE – 2.05
25	Un price Bid Duly Signed	Item wise marked as "Quoted" & Duly Signed Un price Bid as per enclosed format at VOLUME – II - PRICE BID FORMAT
26	Signed Tender document	Original Tender documents duly stamped & signed on each page as a token of acceptance

#### **PART B:: FINANCIAL BID** comprising of

- Price strictly in the Format enclosed at VOLUME II PRICE BID FORMAT indicating Break up of basic price, taxes & duties, etc.
- The Bidder has to submit the item-wise price bifurcation in the bid. An unpriced copy must be attached with the Part A (Technical Bid).

This will be opened internally after techno-commercial evaluation and only of the qualified bidders.

**REVERSE AUCTION CLAUSE**:: Purchaser reserves the right to use the reverse auction as an optional tool through SAP-SRM as an integral part of the entire tendering process. All technocommercially qualified bidders shall participate in the reverse auction. Reverse Auction will be carried out on individual item-wise rates or Package-wise.

Notwithstanding anything stated above, the Purchaser reserves the right to assess the bidder's capability to perform the contract, should the circumstances warrant such assessment in the overall interest of the purchaser. In this regard the decision of the purchaser is final. Bidder is to submit their acceptance as per the format APPENDIX I ANNEXURE -1.17.

## BIDS RECEIVED AFTER THE DUE DATE AND TIME MAY BE LIABLE FOR REJECTION

#### 4.00 AWARD DECISION

- 4.01 Purchaser intends to award the business on the lowest bid basis, so suppliers are encouraged to submit the bid competitively. The decision to place a LOI/Purchase Order solely depends on the purchaser on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that Purchaser may deem relevant.
- 4.02 In the event of your bid being selected by the purchaser (and/or its affiliates) and you subsequent DEFAULT on your bid; you will be required to pay the purchaser (and/or its affiliates) an amount equal to the difference in your bid and the next lowest bid on the quantity declared in NIT/RFQ.
- 4.03 In case any supplier is found unsatisfactory during the delivery process, the award may be cancelled and BYPL reserves the right to award other suppliers who are found fit.
- 4.04 Rate shall remain FIRM till the validity of the Contract.
- 4.05 Quantity Variation: The purchaser reserves the right to vary the quantity by (±) 30% of the tender quantity during the execution of the contract.
- 4.06 Quantity Splitting: The purchaser reserves the right to distribute the procurable quantity on one or more than one of the eligible tenders. If the quantity is to be split, quantity distribution shall be in the manner detailed below:
  - a) If the quantity is split among 2 bidders, it will be done at 70:30 on the L1 price.
  - b) If the quantity is split among 3 bidders, it will be done at 50:30:20 on the L1 price.

Note: If quantity needs to be distributed and order splitting is required, quantity distribution shall be maximum among three (3) bidders.

INFORMATION TO BIDDER (ITB)	Page <b>8</b> of <b>17</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3		
[RFx Number: 2200000122]		

#### 5.00 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 before participating. In addition to other remedies available, we reserve the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the Terms & Conditions. Bidders who violate the marketplace rules or engage in behaviour that disrupts the fair execution of the marketplace restrict a bidder to the length of time, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

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

#### 6.00 SUPPLIER CONFIDENTIALITY

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

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

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

## 7.00 CONTACT INFORMATION

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

Address	Name/ Designation	E-mail Address
	Techi	nical
CES Dept. 3 <sup>rd</sup> Floor, B-Block, BSES Yamuna	Vijender Goyal Manager (CES)	Vijender.Goyal@reliancegroupindia.com
Power Ltd Shaktikiran Building,	Srinivas Gopu GM (CES)	Srinivas.Gopu@reliancegroupindia.com
Karkardooma, Delhi 110032	Gaurav Sharma Addl. VP (HOD-CES)	Gaurav.A.Sharma@reliancegroupindia.com
Comm		ercial
C&M Dept. 3 <sup>rd</sup> Floor, A-Block, BSES Yamuna	Sumit Verma GM (C&M)	Sumit.Ra.Verma@reliancegroupindia.com
Power Ltd Shaktikiran Building,	Santosh Singh Addl. VP (Head- Procurement)	Santosh.Kum.Singh@reliancegroupindia.com
Karkardooma, Delhi 110032	Robin Sebastian VP (HOD-C&M)	Robin.Sebastian@reliancegroupindia.com

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>9</b> of <b>17</b>	Bidders seal & Signature
---	----------------------------	--------------------------

## **SECTION – II: INSTRUCTION TO BIDDERS**

#### A. GENERAL

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

#### 2.00 SCOPE OF WORK

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

## 3.0 DISCLAIMER

- 3.01 This Document includes statements, which reflect various assumptions, which may or may not be correct. Each Bidder/Bidding Consortium should conduct its 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 interest.
- 3.02 Neither Purchaser nor its employees will have any liability whatsoever to any Bidder or any other person under the law or contract, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage whatsoever which may arise from or be incurred or suffered in connection with anything contained in this document, any matter deemed to form part of this Document, provision of Services and any other information supplied by or on behalf of Purchaser or its employees, or otherwise a rising in 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 the 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 COST OF BIDDING

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

# **B. BIDDING DOCUMENTS**

- 5.01 The Scope of Work, Bidding Procedures and Contract Terms are described in the Bidding Documents.
- 5.02 The Bidder is expected to examine the Bidding Documents, including all Instructions, Forms, Terms and Specifications. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect may result in the rejection of the Bid.

### 6.0 **AMENDMENT OF BIDDING DOCUMENTS**

- 6.01 At any time before the deadline for submission of Bids, the Purchaser may for any reason, whether at its 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 5.01, and it will be notified on the website <a href="https://www.bsesdelhi.com">www.bsesdelhi.com</a> and the same will be binding on them.
- 6.03 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 on the website <a href="https://www.bsesdelhi.com">www.bsesdelhi.com</a>
- 6.04 Purchaser shall reserve the rights to the following:
  - a) Extend the due date of submission,
  - b) Modify the tender document in part/whole,
  - c) Cancel the entire tender
- 6.05 Bidders are requested to visit the 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) All the Bids must be accompanied by the required Tender Fees and EMD as mentioned in the tender.
- (b) PART A Technical Bid and
- (c) PART B Financial Bid
- 9.0 **BID FORM**
- 9.01 The Bidder shall submit Bid Form with the Bidding Documents.

# 9.02 **EMD**

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

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

- (a) Bank Guarantee drawn in favour of BSES Yamuna Power Ltd, payable at Delhi or
- (b) Fixed Deposit (lien marked in favour of BSES Yamuna Power Limited) payable at Delhi.

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>11</b> of <b>17</b>	Bidders seal & Signature
---	-----------------------------	--------------------------

(c) Online transfer of requisite amount through IMPS/NEFT/RTGS to BYPL account mentioned herein in Appendix II - **BYPL BANK DETAILS WITH IFSC CODE**.

EMD shall be valid for One Hundred Twenty (120) days after the due date of submission drawn in favour of BSES Yamuna Power Ltd.

The EMD may be forfeited in the case of:

(a) the Bidder withdraws its bid during the period of specified bid validity

or

- (b) the case of a successful Bidder, if the Bidder does not
  - (i) Accept the Purchase Order, or
  - (ii) Furnish the required performance security BG.

#### 10.0 **BID PRICES**

- 10.01 Bidders shall quote for the entire Scope of Supply/Work with a break-up of prices for individual items. The total Bid Price shall also cover all the Supplier's obligations mentioned in or reasonably to be inferred from the Bidding Documents in respect of Design, Supply, and Transportation to the site, all in accordance with the requirement of the Bidding Documents. The Bidder shall complete the appropriate Price Schedules included herein, stating the Unit Price for each item & total Price.
- 10.02 The prices offered shall be inclusive of all costs as well as Duties, Taxes or Levies paid or payable during the execution of the supply work, a breakup of price constituents, should be there.
- 10.03 Prices quoted by the Bidder shall be "Firm" and not subject to any price adjustment during the performance of the Contract. A Bid submitted with an adjustable price/ Price Variation Clause will be treated as non-responsive and rejected.

#### 11.0 BID CURRENCIES

11.01 Prices shall be guoted in Indian Rupees Only.

#### 12.0 PERIOD OF VALIDITY OF BIDS

- 12.01 Bids shall remain valid for 120 days from the due date of submission of the Bid.
- 12.02 Notwithstanding Clause 12.01 above, the Purchaser may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and the responses thereto shall be made in writing and sent by post/courier.

# 13.0 **ALTERNATIVE BIDS**

13.01 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.

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>12</b> of <b>17</b>	Bidders seal & Signature
---	-----------------------------	--------------------------

#### 14.0 FORMAT AND SIGNING OF BID

- 14.01 The original Bid Form and accompanying documents, must be received by the Purchaser at the date, time and place specified pursuant to Clauses 15.0 and 16.0.
- 14.02 The original 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. The Bid submitted on behalf of companies registered with the Indian Companies Act, for the time being in force, shall be signed by persons duly authorized to submit the Bid on behalf of the Company and shall be accompanied by certified true copies of the resolutions, extracts of Articles of Association, special or general Power of Attorney etc. to show clearly the title, authority and designation of persons signing the Bid on behalf of the Company. Satisfactory evidence of the authority of the person signing on behalf of the Bidder shall be furnished with the bid. A bid by a person who affixes to his signature the words 'President', 'Managing Director', 'Secretary', 'Agent' or other designations without disclosing his principal will be rejected.

The Bidder's name stated on the Proposal shall be the exact legal name of the firm.

14.03 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 initiated by the person or persons signing the Bid.

#### D. SUBMISSION OF BIDS

#### 15.0 **SEALING AND MARKING OF BIDS**

- 15.01 Bid submission: Bids have to be mandatorily submitted only through the e-procurement portal of BSES Delhi. Bids submitted through any other form/ route shall not be admissible.
- 15.02 However, documents that necessarily have to be submitted in originals like EMD or Tender Fee (in the form of BG/ DD /FD as applicable) and any other documents mentioned in the tender documents have to be submitted at the BYPL office before the due date & time of submission. The Technical Documents and the EMD shall be enclosed in a sealed envelope and the said envelope shall be superscribed with "Technical Bid & EMD". All the envelopes should bear the Name and Address of the Bidder and mark for the Original. The envelopes should be superscribed with "Tender No. & Due date of opening".
- 15.03 The Bidder has the option of sending the Bids in person. Bids submitted by Email/Telex/Telegram /Fax will be rejected. No request from any Bidder to the Purchaser to collect the proposals from Courier/Airlines/Cargo Agents etc. shall be entertained by the Purchaser.

# 16.0 **DEADLINE FOR SUBMISSION OF BIDS**

- 16.01 The Bid must be received by the Purchaser on or before the due date & time of submission.
- 16.02 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with Clause 6.0, 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**

17.01 Each Bidder shall submit only one Bid by itself. No Joint venture is acceptable. A Bidder who submits

INFORMATION TO BIDDER (ITB)	Page <b>13</b> of <b>17</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3	-	
[RFx Number: 2200000122]		

or participates in more than one Bid will cause all those Bids to be rejected.

#### 18.0 **LATE BIDS**

18.01 No Bid will be received by the Purchaser after the deadline for submission of Bids prescribed by the Purchaser, pursuant to Clause 16.0.

#### 19.0 MODIFICATIONS AND WITHDRAWAL OF BIDS

19.01 The Bidder is not allowed to modify or withdraw its Bid after the Bid's due date & time of submission subject to any corrigendum/addendum/modifications in the tender documents uploaded to the website.

#### E. EVALUATION OF BID

#### 20.0 **PROCESS TO BE CONFIDENTIAL**

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

#### 21.0 CLARIFICATION OF BIDS

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

#### 22.0 PRELIMINARY EXAMINATION OF BIDS / RESPONSIVENESS

- 22.01 Purchaser will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and whether the Bids are generally in order. Purchaser may ask for submission of original documents to verify the documents submitted in support of qualification criteria.
- 22.02 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.
- 22.03 Prior to the detailed evaluation, Purchaser will determine the substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the Goods offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.
- 22.04 Bid determined as not substantially responsive will be rejected by the Purchaser and/or the Purchaser and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

#### 23.0 **EVALUATION AND COMPARISON OF BIDS**

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>14</b> of <b>17</b>	Bidders seal & Signature
---	-----------------------------	--------------------------

- 23.01 The evaluation of Bids shall be done based on the delivered cost competitiveness basis.
- 23.02 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 will be subjected to a responsiveness check. The Technical & qualifying Proposals and the Conditional ties of the Bidders will be evaluated.
  - Subsequently, the Financial Proposals along with Supplementary Financial Proposals, if any, of Bidders with Techno-commercially Acceptable Bids shall be considered for final evaluation.
- 23.03 The Purchaser's evaluation of a Bid will take into account, in addition to the Bid price, the following factors, in the manner and to the extent indicated in this Clause:
  - (a) Delivery Schedule
  - (b) Conformance to Qualifying Criteria
  - (c) 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 the Bidding Documents shall be evaluated. The Purchaser will make its own assessment of the cost of any deviation to ensure a fair comparison of Bids.

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

# F. AWARD OF CONTRACT

# 24.0 **CONTACTING THE PURCHASER**

- 24.01 If any Bidder wishes to contact the Purchaser on any matter related to the Bid, from the time of Bid opening to the time of contract award, the same shall be done in writing only.
- 24.02 Any effort by a Bidder to influence the Purchaser and/or in the Purchaser's decisions in respect of Bid evaluation, Bid comparison or Contract Award, will result in the rejection of the Bidder's Bid.

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

Submission of bids shall not automatically construe qualification for evaluation. The Purchaser reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at any time prior to the award of the 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 the order to other bidders in the tender, provided it is required for the timely execution of the project & provided he agrees to come to the lowest rate. Purchaser reserves the right to distribute the entire tender quantity at its own discretion without citing any reasons thereof.

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3	Page <b>15</b> of <b>17</b>	Bidders seal & Signature
[RFx Number: 2200000122]		

# 27.0 THE PURCHASER'S RIGHT TO VARY QUANTITIES

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

# 28.0 LETTER OF INTENT/ NOTIFICATION OF AWARD

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

# 29.0 **PERFORMANCE BANK GUARANTEE (PBG)**

To be submitted within twenty-eight (28) days from the date of issuance of the Letter of Intent/Award/PO. Bidder shall submit PBG equivalent to 10% of the PO value (including GST) valid for a period of 30 months from the date of last receipts at site/stores plus 3 months claim period.

#### 30.0 CORRUPT OR FRAUDULENT PRACTICES

- 30.01 The Purchaser requires that the Bidders observe the highest standard of ethics during the procurement and execution of the Project. In pursuance of this policy, the Purchaser:
  - (a) Defines, for this provision, the terms set forth below as follows:
    - (i) "Corrupt practice" means behaviour 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 contract execution; and
    - (ii) "Fraudulent practice" means a misrepresentation of facts to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among Bidders (before or after Bid submission) designed to establish Bid prices at artificial non -competitive levels and to deprive the Purchaser of the benefits of free and open competition.
  - (b) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
  - (c) Will declare a firm ineligible, either indefinitely or for a stated period, 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.
- 30.02 Furthermore, Bidders shall be aware of the provision stated in the Terms and Conditions of the Contract.

#### 31.0 STATUTORY GUIDELINES & REGULATIONS

The bidder shall make himself fully aware & familiarize himself with all applicable laws/guidelines/regulations.

# 32.0 **SAFETY**

INFORMATION TO BIDDER (ITB) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>16</b> of <b>17</b>	Bidders seal & Signature
---	-----------------------------	--------------------------

Safety related requirements as mentioned in our safety Manual put on the Company's website which can be accessed at <a href="http://www.bsesdelhi.com">http://www.bsesdelhi.com</a>. All bidders shall strictly abide by the guidelines provided in the safety manual at all relevant stages during the contract period.

#### 33.0 **PRIORITY OF CONTRACT DOCUMENTS**

The several documents forming the Agreement 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, accordingly, issue suitable instructions thereon to the Contractor. In such event, unless otherwise provided in the agreement or explained by way of instructions by the company, as mentioned above, the priority of the documents forming the Agreement shall be as follows:

- i) Contract Agreement/Purchase Order.
- (a)Special Conditions of Contract
- (b)General Conditions of Contract
- (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 company shall govern and the decision of the company/BYPL shall be final and binding upon the parties.



INFORMATION TO BIDDER (ITB)
NIT NO: CMC/BY/25-26/RS/SkS/SV/3
[RFx Number: 2200000122]

Page **17** of **17** 

Bidders seal & Signature

# **BID INDEX FOR PART-A (TECHNICAL BID)**

(To be filled & submitted on Bidder Letter Head, Bidders document submission should have following main categories as outlined below and should have page numbers printed at the bottom of each page with this page as page number 1. The page number should be in "Page X of Y" format. Separator with document description shall be provided before each document)

# NIT & RFX No.: Bidder's Name:

Bidder's Bid Reference No. & Date:

S.	Posticulous	Bid Pdf F	Page No.
No.	Particulars	From	То
A.1	Bid Details		
1.	Bid Index for Part-A (Technical Bid) as per APPENDIX I ANNEXURE - 1.01	1	
2.	Cover Letter, If any		
3.	Bid Form (Unpriced) Duly Signed as per APPENDIX I ANNEXURE - 1.02		
4.	Tender Fee Details as per APPENDIX I ANNEXURE - 1.03		
5.	EMD Details as per APPENDIX I ANNEXURE - 1.04 & 1.05		
6.	Power-of-Attorney / Authorization Letter		
	Technical Bid		
7.	Communication Details of the Bidder as per APPENDIX I ANNEXURE - 1.06		
8.	Manufacturer Authorization Form (as applicable) as per APPENDIX I ANNEXURE - 1.07		
9.	Technical Qualifying Criteria Compliance Index & Documents as per APPENDIX I ANNEXURE - 1.08, 1.09, 1.10		
10.	Schedule of Technical Deviations (along with soft editable Excel copy) as per APPENDIX I ANNEXURE - 1.11		
11.	Guaranteed Technical particulars (GTP) as per specification		
12.	All Drawings as per specification		
13.	Type Test Reports (Sequence of Tests shall be strictly in accordance with relevant IS/IEC) as per APPENDIX I ANNEXURE - 1.12		
14.	Sample Submission Details (If applicable as per Specification) as per APPENDIX I ANNEXURE - 1.13		
15.	Product Catalogue (If applicable)		
16.	Manufacturer's quality assurance plan (as applicable)		
17.	Other drawings/ documents mentioned in technical specification		
	Testing Facilities		
A.3	Commercial Bid		
19.	Company Profile/Organogram/Organization Chart & Manpower Details		
20.	Commercial Qualifying Criteria Compliance Index & Documents as per APPENDIX I ANNEXURE - 1.14		
21.	Undertakings as per APPENDIX I ANNEXURE - 1.15		
22.	Schedule of Commercial Deviations (along with soft editable Excel copy) as per APPENDIX I ANNEXURE - 1.16		
21.	Acceptance form for participation in reverse auction event as per APPENDIX I ANNEXURE - 1.17		
24.	Acceptance of Commercial Terms and Conditions as per APPENDIX II ANNEXURE - 2.05		
25.	Un Price Bid Duly Signed (Volume - II Price Bid Format)		
26.	NIT Document complete Signed & Stamped		

APPENDIX I NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>1</b> of <b>22</b>	Bidders seal & Signature
--	----------------------------	--------------------------

#### **BID FORM**

Tο

Head of Department Contracts & Material Deptt. BSES Yamuna Power Ltd Shaktikiran Building, Karkardooma, Delhi 110032

Sir,

- Having examined the Bidding Documents for the above-named works, we the undersigned, offer
  to deliver the goods in full conformity with the Terms and Conditions and technical specifications for
  the sum indicated in the Price Bid or such other sums as may be determined in accordance with the
  terms and conditions of the contract. The amounts are in accordance with the Price Schedules attached
  herewith and are made part of this bid.
- 3. If our Bid is accepted, we undertake to deliver the entire goods as per the delivery schedule mentioned in Section IV from the date of award of the purchase order/letter of intent.
- 4. If our Bid is accepted, we will furnish a performance bank guarantee for due performance of the Contract in accordance with the Terms and Conditions.
- 5. We agree to abide by this Bid for 120 days from the due date of bid submission and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- 6. We declare that we have studied the provision of Indian Laws for the supply/services of equipments/materials and the prices have been quoted accordingly.
- 7. Unless and until Letter of Intent is issued, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
- 8. We understand that you are not bound to accept the lowest or any bid you may receive.
- 9. There is provision for Resolution of Disputes under this Contract, by the Laws and Jurisdiction of Contract.

Dated this	day of	20XX
Signature	In th	ne capacity of
		duly authorized to sign for and on behalf o
(IN BLOCK CAPITAL	S)	

APPENDIX I	Page <b>2</b> of <b>22</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	3.	ğ

# **TENDER FEE DETAILS**

a. Amount (Rs.)	: 1,180/- (One Thousand One Hundred Eighty Only)
b. Mode of Payment	: DD or online transfer through IMPS/NEFT/RTGS (select any one)
c. DD /UTR No. (As applicable)	:
d. Dated	
e. Bidders Bank Account No.	:
f. Name of the Bank	
g. Address of the Bank	
h. IFSC Code of the Bank	

# **EMD DETAILS**

a. EMD Amount (Rs.)	i
b. Mode of Payment	: BG/FD/online transfer through IMPS/NEFT/RTGS (select any one)
c. BG/FD/UTR No. (As applicable	e):
d. Dated	
e. BG valid up to	
f. BG Claim period up to	
g. Bidders Bank Account No.	
h. Name of the Bank	
i. Address of the Bank	
j. IFSC Code of the Bank	

APPENDIX I	Page <b>4</b> of <b>22</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	-	Ç
[M X Mamber 2200000122]		

# (FORMAT FOR EMD BANK GUARANTEE)

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

Whereas [name of the Bidder] (hereinafter called the "Bidder") has submitted its bid dated [date of

submission of bid] for the supply of [name and/or description of the goods] (hereafter called the "Bid").
KNOW ALL PEOPLE by these presents that WE [name of bank] at [Branch Name and address], having our registered office at [address of the registered office of the bank] (hereinafter called the "Bank"), are bound unto BSES Yamuna Power Ltd., with its Corporate Office at Shaktikiran Building, Karkardooma, Delhi - 110032, (hereinafter called - the "Purchaser") in the sum of Rs
Sealed with the Common Seal of the said Bank this day of 20
The conditions of this obligation are:
1 If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
<ul> <li>2. If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity: <ul> <li>(a) fails or refuses to execute the Contract Form, if required; or</li> <li>(b) fails or refuses to furnish performance security, In accordance with the Instructions to Bidders/Terms and Conditions;</li> </ul> </li> <li>We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that is its demand the purchaser will</li> </ul>
note that amount claimed by it is due to it, owing to the occurrence of one or both of the two condition(s), specifying the occurred condition or condition(s).
This guarantee will remain in force up to and including One Hundred Twenty (120) days after the due date of submission bid, and any demand in respect thereof should reach the Bank not later than the above date.
(Stamp & signature of the bank)
Signature of the witness

APPENDIX I NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>5</b> of <b>22</b>	Bidders seal & Signature
--	----------------------------	--------------------------

# **COMMUNICATION DETAILS OF THE BIDDER**

S. No.	Designation	Name	Mobile No.	E-mail id
1	CEO / MD			
2	Sales / Marketing Head			
3	Sales Representative / Key Account Manager (KAM)			
4	Technical Head			
5	Manufacturer Plant / Operations Head			
6	Post Order Execution In Charge			
7	Authorized contact person (Primary responsibility for the Bid)		7	
8	Authorized contact person (Secondary responsibility for the Bid)		_	

APPENDIX I Pa NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	of 22 Bidders seal & Signature	
---	--------------------------------	--

# MANUFACTURER AUTHORIZATION FORM (To be submitted on OEM's Letter Head)

Date: Tender No.:
То
Head of Department Contracts & Material Deptt. BSES Yamuna Power Ltd Shaktikiran Building, Karkardooma, Delhi 110032
Sir,
WHEREAS M/s. [name of OEM], who are official manufacturers of having factories at [address of
OEM] do hereby authorize M/s [name of bidder] to submit a Bid in relation to the Invitation for Bids
indicated above, the purpose of which is to provide the following Goods, manufactured by us
and to subsequently negotiate and
sign the Contract.
We hereby extend our full guarantee and warranty by the Conditions of the Contract or as mentioned elsewhere in the Tender Document, concerning the Goods offered by the above firm in reply to this Invitation for Bids.
We hereby confirm that in case, the channel partner fails to provide the necessary services as per the Tender Document referred above, M/s [name of OEM] shall provide standard warranty on the materials supplied against the contract. The warranty period and inclusion/exclusion of parts in the warranty shall remain the same as defined in the contract issued to our channel partner against this tender.
Yours Sincerely, For
Authorized Signatory

APPENDIX I NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>7</b> of <b>22</b>	Bidders seal & Signature
--	----------------------------	--------------------------

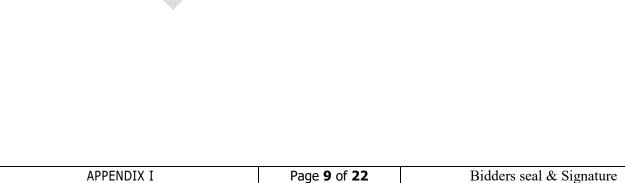
	QUALIFYING CRITERIA COMPLIANCE INDEX - TECHNICAL CRITERIA								
S	Qualifying Criteria Description as per section	Documentary Proof	Documentary Proof Enclosed on Bid Page No.						
No	1 clause 2.00	Description	From	То					
1									
2									
3									
4									
5									



APPENDIX I	Page <b>8</b> of <b>22</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3		-
[RFx Number: 2200000122]		

L.	LIST OF PURCHASE ORDERS EXECUTED & DELIVERY DETAILS IN SUPPORT OF QUALIFYING REQUIREMENTS												
S No		Iter	n Details						Customer Name	End User (shall be Utility/ SEB's/ PSU's)	PO copy, MDCC /Delivery completion certificates/ Invoice Copies enclosed on Bid Page no.		
	Item	Model	Voltage Rating (kV)	Current Rating (A)	PO No	PO Date	PO Qty	Executed Qty	Execution Year		name and details	From	То
Tota	al						Σ	Σ	<b>)</b>				

Note – Only items relevant as per qualifying requirements should be included in the list.



NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]

Page **9** of **22** 

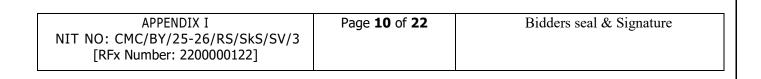
Bidders seal & Signature

# ANNEXURE - 1.10

	LIST OF PERFORMANCE CERTIFICATES IN SUPPORT OF QUALIFYING REQUIREMENT													
S No				PO No		olied/ ssioning	Performance Certificate Issue Date	e Certificate Issued		Contact Deta Issuing Per		Enclo on E Page	Bid	
	Item	Model	Voltage Rating (kV)	Current Rating (A)		Qty.	Date			Name	Email	Mobile	From	То
								A						
							A							
Tot	al					Σ								

## Note -

- 1. Only items relevant as per qualifying requirement should be included in the list.
- 2. Only Performance certificates issued by End User (utilities/ SEB's/PSU's only) will be accepted as per qualifying requirement.



# **SCHEDULE OF DEVIATIONS - TECHNICAL**

Vendor shall refrain from taking any deviations on this TENDER. Still, in case of any deviations, all such deviations from this tender shall be set out by the Bidder, Clause by Clause in this schedule and submit the same as a part of the Technical Bid.

Unless **specifically** mentioned in this schedule, the tender shall be deemed to confirm the BYPL's specifications:

# **Technical Deviations:-**

S. No.	NIT Pdf Page No.	NIT Clause No.	NIT Clause Descriptions	Details of Clarification/deviation with justifications

Note – Please enclose detailed GTP and drawings as per specification after the technical deviation sheet

Seal of the Bidder	:
--------------------	---

Signature:

Name:

TY	TYPE TEST REPORTS (SEQUENCE OF TESTS SHALL BE STRICTLY IN ACCORDANCE WITH RELEVANT IS/IEC)									
S No	Test Description	Reference Standard	Reference Standard Clause No.	Name of Testing Lab	Test Report Reference	Date of Issue of	Report E on Bid Pa			
			Clause No.	Lab	Number	Report	From	То		
1										
2										
3				_						
4										
5			A							
6										
7				A						



APPENDIX I	Page <b>12</b> of <b>22</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	-	

# ANNEXURE - 1.13

	SAMPLE SUBMISSION DETAILS (IF APPLICABLE AS PER SPECIFICATION)						
S No	Description	Bidder's Response					
1	Samples submitted with the bid	Yes/No					
1	Sample Type -1						
1.1	Model Number						
1.2	Number of samples						
2	Sample Type -2						
2.1	Model Number						
2.2	Number of samples						



APPENDIX I NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>13</b> of <b>22</b>	Bidders seal & Signature

QUALIFYING CRITERIA COMPLIANCE INDEX - COMMERCIAL CRITERIA					
S	Qualifying Criteria Description as per section 1 clause 2.00	Documentary Proof Description	Documentary Proof Enclosed on Bid Page No.		
No			From	То	
1					
2					
3					
4					
5					



APPENDIX I	Page <b>14</b> of <b>22</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	_	

# UNDERTAKINGS (To be submitted on Bidders Letter Head)

Date:
Tender No.:
То
Head of Department Contracts & Material Deptt. BSES Yamuna Power Ltd Shaktikiran Building, Karkardooma, Delhi 110032
Sir,
<ul> <li>We M/s [name of bidder], do hereby undertake that</li> <li>[name of bidder] has "No Litigation" pending with the BYPL or its Group/Associates Companies as on the date of bid opening.</li> <li>[name of bidder] has not been blacklisted/debarred by any central/state government institution/Electricity utilities as on the date of bid opening.</li> <li>[name of bidder] shall comply with all the statuary compliances as per the laws/rules etc. before the start of the supply/work.</li> </ul>
Yours Sincerely,
For Authorized Signatory

APPENDIX I	Page <b>15</b> of <b>22</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]		

# **SCHEDULE OF DEVIATIONS - COMMERCIAL**

Vendor shall refrain from taking any deviations on this TENDER. Still, in case of any deviations, all such deviations from this tender shall be set out by the Bidder, Clause by Clause in this schedule and submit the same as a part of the Technical Bid.

Unless **specifically** mentioned in this schedule, the tender shall be deemed to confirm the BYPL's specifications:

# **Commercial Deviations:-**

S. No.	NIT Pdf Page No.	NIT Clause No.	NIT Clause Descriptions	Details of Clarification/deviation with justifications

By signing this document we hereby withdraw all the deviations whatsoever taken anywhere in this bid document and comply with all the terms and conditions, technical specifications, scope of work etc. as mentioned in the standard document except those mentioned above.

Seal of the Bidder:			
Scar of the Blader.			
Signatura			
Signature:			
Name:			

APPENDIX I NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>16</b> of <b>22</b>	Bidders seal & Signature
--	-----------------------------	--------------------------

#### **ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT**

(To be signed and stamped by the bidder)

BSES Yamuna Power Ltd (hereinafter referred to as **"BYPL"**) intends to use the reverse auction through the SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as techno commercial qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

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

- 1. BYPL shall provide the user ID and password to the authorized representative of the bidder. (Authorization letter in lieu of the same be submitted along with the signed and stamped acceptance form)
- 2. BYPL will make every effort to make the bid process transparent. However, the award decision by BYPL would be final and binding on the bidder.
- 3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of BYPL, bid process, bid technology, bid documentation, bid details, etc.
- 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. In case of bidding through internet medium, 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 glitches, internet response issues, software or hardware hangs; power failure or any other reason shall not be the responsibility of BYPL.
- 6. In case of intranet medium, BYPL shall provide the infrastructure to bidders, further, BYPL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders from submitting the bids to ensure fair & transparent competitive bidding. In case an auction event is restarted, the best bid already available in the system shall become the start price for the new auction.
- 7. In case the bidder fails to participate in the auction event due to 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 outright rejected by BYPL.
- 8. The bidder shall be prepared with competitive price quotes on the day of the reverse auction event.
- 9. 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 Landed Cost basis at the BYPL site.
- 10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
- 11. No requests for time extension of the auction event shall be considered by BYPL.
- 12. The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all-inclusive prices offered during the conclusion of the auction event to arrive at the contract amount.

Signature & seal of the Bidder

APPENDIX I NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>17</b> of <b>22</b>	Bidders seal & Signature	
--	-----------------------------	--------------------------	--

#### **CODE OF CONDUCT FOR SUPPLIERS**

BSES expects suppliers including their personnel (employees or sub-contractors) to support, embrace and enact the following Code of Conduct (CoC), apart from complying with all national and international regulations and laws that are applicable at any given time. BSES encourages its suppliers to go beyond compliance and embrace the principles of sustainability. BSES will support training and capacity-building programmes undertaken by suppliers, which promote awareness on sustainability and responsible business practices. BSES shall incorporate regulatory compliance and ESG performance as key criteria based on requirements as stated in the Code during evaluation of the suppliers.

#### A. Promote Environmental Sustainability

All suppliers support a precautionary approach to environmental issues and undertake initiatives to promote better environmental responsibility. To this end, suppliers will

- 1. Reduce resource consumption and conserve natural resources:
- 1.1. Conduct all operations, sourcing, manufacture, distribution of products and the supply of services with the aim of protecting and preserving the environment.
- 1.2. Use natural resources rationally and work towards reducing resource consumption (water, energy, fuel, electricity, other materials etc.) and GHG emissions.
- 1.3. Identify environmental risks and set up appropriate prevention measures.
- 2. Prevent pollution and reduce waste generation
- 2.1. Maintain all required official permits, licenses and registrations.
- 2.2. Prevent contamination, limit waste generation, and avoid or minimise adverse impact on the environment and biodiversity by facilitating reusing and recycling material.
- 2.3. Clearly monitor the precautions to be taken during operations & maintenance in case of emission of heat, vibrations, radioactive rays, noise or similar.
- 2.4. Use only those chemicals and aerosols with very low or zero ODP (Ozone Depletion Potential), which are allowed as per the regulatory provisions.
- 2.5. Ensure that all the chemical and hazardous substances are accompanied by the manufacturer MSDS (Material Safety Data Sheet) during transport, storage, use and disposal, and that instructions mandated be strictly followed. No chemical and hazardous substance shall be received without a MSDS document. All the applicable regulatory guidelines shall be adhered strictly for the procurement, transport, storage, use and disposal of such harmful and hazardous chemicals.
- 2.6. Provide written instructions about handling and/or disposal of equipment and product during the life cycle if special handling is required.

#### B. Commitment to Human Rights, Labour and the Society

Suppliers shall support, respect and protect human and labour rights and make sure their organisation/entity is not complicit in any kind of abuses and/or violations. In this regard, the suppliers must:

- 1. Fair working conditions
- 1.1. Provide and maintain healthy and safe working conditions and welfare facilities for the employees in its establishment.
- 1.2. Ensure that that wages and benefits of their employees and subcontractors are fair and comply with applicable national and local laws as well as with contractual agreements.

APPENDIX I NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>18</b> of <b>22</b> Bidders seal & Signature
--	--

1.3. Provide all workers, both permanent and non-permanent, with employment documents that are freely agreed to and which respect their legal and contractual rights.

#### 2. Health & Safety

Ensure that the activities of suppliers do not harm the health and safety of their own employees, suppliers and subcontractors, local communities/population, and finally the users of its products and services, which is in accordance with the BSES's Mission Zero Harm in Health and Safety.

#### Child Labour

- 3.1. No person below 18 years shall be employed or permitted to work in any occupation or process.
- 3.2. Zero tolerance for any kind of child labour in their establishments and supply chain.

#### 4. Forced Labour

- 4.1. Under no circumstance shall suppliers use forced labour<sup>1</sup>, whether in form of compulsory or trafficked labour, indentured labour, bonded labour or other forms, through direct or indirect use of force and/or intimidation.
- 4.2. Any kind of slavery, mental and physical coercion, human trafficking and debt bondage in the supply chain shall not be tolerated.

#### 5. Wages and Working hours

- 5.1. Ensure that all applicable regulations related to wages, overtime compensation and other legally mandated benefits of their employees and subcontractors are fair and comply with applicable national and local laws as well as with contractual agreements. Minimum wages are applicable as per applicable in central Act and State rules.
- 5.2. Ensure that maximum working hours laid down and are adhered to.

#### 6. Freedom of Association and Collective Bargaining

- 6.1. Recognise and respect the rights of workers to freedom of association and collective bargaining. Workers are not intimidated or harassed in the exercise of their right to join or refrain from joining any organisation.
- 6.2. Ensure that all employees can communicate with the management regarding working conditions.

#### 7. Non-Discrimination and Equal opportunity

- 7.1. Commit, within the scope of prevailing laws and statutes, to oppose all forms of discrimination<sup>2</sup>.
- 7.2. Maintain a work environment free from any form of discrimination and harassment.
- 7.3. Refrain from discrimination in hiring and employment practices on grounds of skin colour, age, caste, gender, race, ethnicity, nationality, socio-economic background, physical or mental disability, religion, sexual orientation, marital status, pregnancy, dependants, political or religious opinion, ideology, union membership and personal or social circumstances. Special attention must be paid to the rights of workers most vulnerable to discrimination.

#### 8. Zero Tolerance towards Harassment

- 8.1. Treat all employees with respect and dignity and furthermore ensure that their own suppliers treat their employees in the same manner.
- 8.2. No tolerance towards unacceptable treatment of employees, such as physical punishment or torture, sexual harassment<sup>3</sup>, or abuse, mental or physical coercion or verbal abuse, or the threat of any such treatment.

APPENDIX I NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>19</b> of <b>22</b>	Bidders seal & Signature
--	-----------------------------	--------------------------

8.3. No worker should be subjected to any physical, sexual, psychological, or verbal harassment, abuse or other form of intimidation.

#### C. Ethical Integrity and Legality

Suppliers shall demonstrate the highest standard of integrity, ethics, and business conduct.

- 1. Compliance with Applicable laws and regulations:
- 1.1. All activities must be carried out in compliance with the legislation that is applicable in the countries in which the suppliers operate.
- 1.2. All other applicable international laws and regulations must be complied with, including those relating to international trade (such as those relating to sanctions, export controls and reporting obligations), data protection and antitrust/ competition laws.
- 1.3. Avoid any conduct that could tarnish or damage the reputation of BSES.

#### 2. Anti-Corruption & Anti Bribery

- 2.1. All forms of bribery and corruption are prohibited
- 2.2. Adequate measures and procedures should be in place to prevent bribery in all commercial dealings.
- 2.3. Maintain a policy of 'Zero Tolerance' of any practice that may be deemed to be corruption, either active or passive.
- 2.4. No tolerance for unacceptable conduct, which includes, but not limited to, non-compliance with anti- corruption laws and, directly or indirectly offering, promising, hiring or authorising payments in cash or in kind to any BSES employee, public official or any other person or entity, with intention of a) obtaining or retaining business b) Influencing business decisions; and/or c) securing an unfair advantage.

#### 3. Conflict of Interest

- 3.1. All and any conflict of interest in any business dealings with BSES, of which the suppliers are aware, should be declared to BSES so that appropriate action can be taken.
- 3.2. Avoid a situation where there is a real or potential conflict of interest with BSES employees, or with their family or closely associated persons, that could affect the independence or objectivity of their professional actions or decisions. If avoidance is not possible, the suppliers should inform BSES of the situation so that appropriate action can be taken.

#### 4. Insider Trading and Other Economic Crimes

- 4.1. Ensure that all business and commercial dealings are transparently performed and accurately recorded in the books and records.
- 4.2. Comply with applicable anti-money laundering laws, conduct business only with ethically responsible partners and receive funds only from legitimate sources.
- 4.3. Avoid actual or attempted participation in economic offences, such as (but not limited to) money laundering, criminal breach of trust, counterfeiting, criminal misappropriation of properties, forgery, cheating, extortion, embezzlement and fraud.
- 4.4. Refrain from insider trading. No confidential information regarding BSES is used to either engage, facilitate or support insider trading in BSES's shares.
- 4.5. Take necessary measures to detect and prevent any illicit or suspicious forms of payment and inform and/or report through established channels if it has any suspicion or concern in this regard.

#### 5. Gifts & Hospitality

5.1. Any business entertaining/hospitality with BSES should be modest in value, appropriate, and

APPENDIX I	Page <b>20</b> of <b>22</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]		

- compliant with the law and company policies, entirely for the purpose of maintaining good business relations and not intended to influence in any way BSES's decisions on future business relationship.
- 5.2. Only gifts/honorarium of nominal value accepted or offered on festivals, at conferences, etc. will be permitted. Such gifts should comply with local laws and customs (including cultural and religious festivals) and should not be prohibited under applicable law and should not include cash or cash equivalents, gold or other precious metals, gems or stones.
- 5.3. Neither receive nor offer or make, directly or indirectly, any illegal payments, remunerations, gifts, donations or comparable benefits that are intended, or perceived, to obtain uncompetitive favours for the conduct of its business with BSES.
- 5.4. Neither directly or indirectly offer any gift, entertainment, trip, discount, service, or other benefit to any official of BSES or his/her close relations which would or be capable of compromising, influencing, liable to corrupt the integrity and objectivity of that person.
- 6. Competition, Confidentiality and Data Privacy
- 6.1. All market survey/other entities information must be obtained and used legitimately and in compliance with all applicable laws and regulations.
- 6.2. No attempt should be made to divulge to BSES any information about any other entity in violation of any law or agreement.
- 6.3. Likewise, BSES's confidential information must not be shared with any Supplier unless expressly permitted by BSES in writing by authorised signatory under the respective purchase order or agreement, as the case may be.
- 7. Transparency and Ethics

#### 7.1 Fair competition

Avoid any action that may constitute an illegal practice of unfair competition and ensure compliance with applicable competition laws.

#### 7.2 Corporate image and reputation

Suppliers must NOT:

- Make false statements or provide any misleading information regarding its products/services.
- Give the impression of representing or being the spokesperson of BSES while getting associated with any religious/political party or for activities in their personal capacity.
- 8. Protection of Intellectual Property and No Misuse or Improper use of BSES's assets/ property
- 8.1. Respect and protect all confidential information and intellectual property of BSES.
- 8.2. Do not misuse and share assets of BSES and employ them only for the purpose of conducting the business for which they are duly authorised by BSES. These include tangible assets such as equipment and machinery, systems, facilities, materials, and resources and intangible assets such as intellectual property rights, processes, know how & technology, proprietary information, etc.
- 8.3. Safeguard, secure, and protect BSES's assets and information technology from theft, destruction, misappropriation, wastage, and abuse.
- 8.4. Promptly report loss, theft or destruction of any intellectual property and data of the Company or that of any Supplier.
- 9. Financial Records and Accuracy in Books
- 9.1. Have accounting practices in place to ensure accuracy of its financial books and records.
- 9.2. Ensure accurate accounting and proper reporting of information pertaining to the business and

APPENDIX I NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>21</b> of <b>22</b>	Bidders seal & Signature
--	-----------------------------	--------------------------

- financial results in accordance with applicable Accounting Standards [Generally Accepted Accounting Principles (GAAP)].
- 9.3. Ensure compliance to applicable laws and regulations with respect to accounting and taxation and timely discharge of tax liability.

#### 10. Sanction Laws

- 10.1 Do not engage in any dealings or transactions with any person, or in any country or territory that are subject to global / regional sanctions as mentioned herein below in clause 10.2. BSES is vigilant of its suppliers who may be on a sanctions list or have a related company in a country subject to global/regional sanctions. In case of any concerns, the supplier should immediately report to BSES.
- 10.2 Do not be subject to or the target of any economic or financial sanctions or trade embargoes imposed, administered or enforced by the U.S. Government including without limitation by the World Bank or by the United Nations Security Council, the European Union, the United Kingdom including by Her Majesty's Treasury or the Department of Business, Innovation and Skills, a relevant regulatory authority or the Minister of Foreign Affairs of Canada under the Special Economic Measures Act or the United Nations Act or legislation or regulations with similar purpose or effect or any other relevant sanctions authority of any other country (collectively, 'Sanctions Laws') nor is the Company or any of its subsidiaries / affiliates located, organised or resident in a country or territory that is the subject of the target of Sanctions Laws
- 10.3 Do not take any action which places or is likely to place BSES in violation of Sanctions Laws and/ or breaches affecting the reputation and/ or business interests of BSES

#### 11. Responsible Sourcing

Ensure that goods and materials are not sourced in a suspicious or illegal way and implement measures for sustainable procurement practices<sup>3</sup> to ensure compliance with laws and regulations.

#### 12. Quality of Product and Services

Products and services should meet the specifications, quality, safety and environmental criteria specified in the relevant contract documents and required by applicable laws

#### 13. Corporate Citizenship

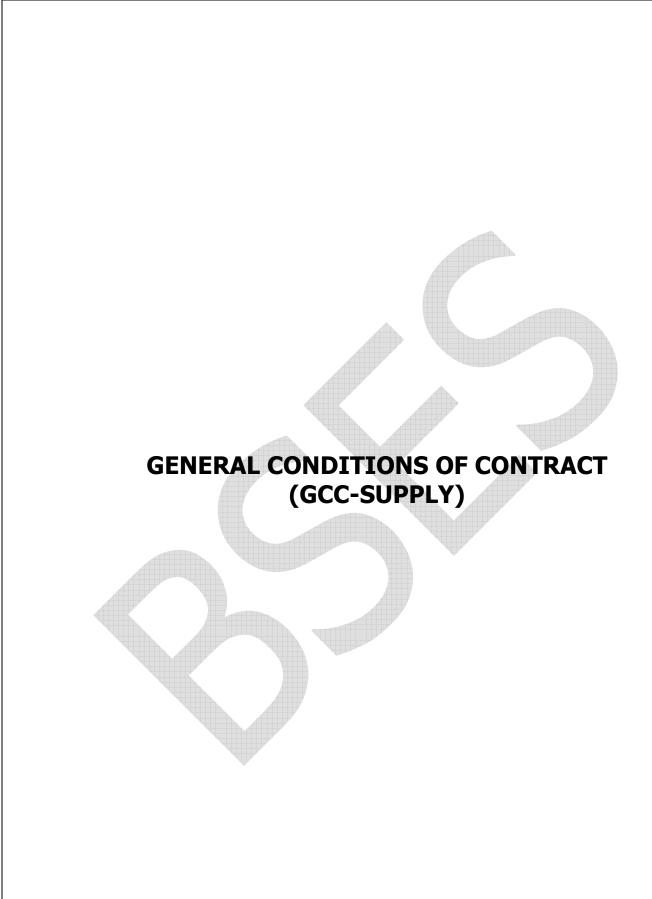
Suppliers shall be committed to be good corporate citizens, not only in compliance with all relevant laws and regulations, but also by assisting and supporting initiatives to improve the quality of life of local communities/regions in which it operates. The activities may be, but not limited to, community health and family welfare, vocational training, education and literacy and employment.

<sup>&</sup>lt;sup>3</sup> Sustainability shall mean to device a practice & procedure proactively to sustain resources of organisation and society at present levels with reasonable degradation. Sustainable procurement or sourcing is the process of making purchasing decisions that meet an organisation's needs for goods and services in a way that benefits not only the organisation but society, while minimising its impact on the environment. Organisation integrates the sustainability into business model as a resultant of ESG principles. This is achieved by ensuring that the working conditions of its suppliers' employees are decent, the products or services purchased are sustainable, where possible, and that socio- economic issues, such as inequality and poverty, are addressed.

APPENDIX I	Page <b>22</b> of <b>22</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	-	

<sup>&</sup>lt;sup>1</sup> 'Forced Labour' or 'Involuntary Labour' refers to all work or service that is extracted under the menace of penalty. It also includes terms such as, bonded labour and modern slavery. It also includes any labour for which the worker receives less than the government stipulated minimum wage.

<sup>&</sup>lt;sup>2</sup> 'Discrimination' refers to unjust or prejudicial treatment of people, especially on the grounds of, but not limited to, caste, creed, gender, race, ethnicity, age, colour, religion, disability, socio-economic status or sexual orientation.



GENERAL CONDITIONS OF CONTRACT(GCC)
NIT NO: CMC/BY/25-26/RS/SkS/SV/3
[RFx Number: 2200000122]

Page **1** of **19** 

Bidders seal & Signature

# GENERAL CONDITIONS OF CONTRACT (GCC)-SUPPLY

The General Condition of Contract shall form a part of specifications, contract document.

#### 1.0 General Instructions

- 1.01 All the Bids shall be prepared and submitted in accordance with these instructions.
- 1.02 Bidder shall bear all costs associated with the preparation and delivery of its Bid, and the Purchaser will in no case be responsible or liable for these costs.
- 1.03 The Bid should be submitted by the Bidder in whose name the bid document has been issued and under no circumstances it shall be transferred/sold to the other party.
- 1.04 The Purchaser reserves the right to request any additional information and also reserves the right to reject the proposal of any Bidder if, in the opinion of the Purchaser, the data in support of RFQ requirement is incomplete.
- 1.05 The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the Bid Documents. Failure to furnish all information required in the Bid Documents or submission of a Bid not substantially responsive to the Bid Documents in every respect may result in rejection of the Bid. However, the Purchaser's decision in regard to the responsiveness and rejection of bids shall be final and binding without any obligation, financial or otherwise, on the Purchaser.

#### 2.0 Definition of Terms

- 2.01 "Purchaser/ Company / Owner / Buyer / Customer" shall mean BSES Yamuna Power Limited, on whose behalf this bid enquiry is issued by its authorized representative/officers.
- 2.02 "Bidder / Seller / Contractor / Agency / Manufacturer" shall mean the firm who quotes against this bid enquiry issued by the Purchaser. "Supplier" or "Supplier" shall mean the successful Bidder and/or Bidders whose bid has been accepted by the Purchaser and on whom the "Letter of Acceptance" is placed by the Purchaser and shall include his heirs, legal representatives, successors and permitted assigns wherever the context so admits.
- 2.03 "Supply" shall mean the Scope of Contract as described.
- 2.04 "Specification" shall mean collectively all the terms and stipulations contained in those portions of this bid document known as RFQ, Commercial Terms & Conditions, Instructions to Bidders, Technical Specifications and the Amendments, Revisions, Deletions or Additions, as may be made by the Purchaser from time to time.
- 2.05 "Letter of Acceptance" shall mean the official notice issued by the Purchaser notifying the Supplier that his proposal has been accepted and it shall include amendments thereto, if any, issued by the Purchaser. The "Letter of Acceptance" issued by the Purchaser shall be binding on the "Supplier" The date of Letter of Acceptance shall be taken as the effective date of the commencement of contract.
- 2.06 "Month" shall mean the calendar month and "Day" shall mean the calendar day.
- 2.07 "Codes and Standards" shall mean all the applicable codes and standards as indicated in the Specification.

GENERAL CONDITIONS OF CONTRACT(GCC) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>2</b> of <b>19</b>	Bidders seal & Signature
---	----------------------------	--------------------------

- 2.08 "Offer Sheet" shall mean Bidder's firm offer submitted to BYPL in accordance with the specification.
- 2.09 "Contract" shall mean the "Letter of Acceptance/Purchase Order" issued by the Purchaser.
- 2.10 "Contract Price" shall mean the price referred to in the "Letter of Acceptance/Purchase Order".
- 2.11 "Contract Period" shall mean the period during which the "Contract" shall be executed as agreed between the Supplier and the Purchaser in the Contract inclusive of the extended contract period for reason beyond the control of the Supplier and/or Purchaser due to force majeure.
- 2.12 "Acceptance" shall mean and deemed to include one or more of the following as will be stipulated in the specification:
  - a) The written acceptance of material by the inspector at suppliers works to ship the materials.
  - b) Acceptance of material at Purchaser site stores after its receipt and due inspection/ testing and release of material acceptance voucher.
  - c) Where the scope of the contract includes supply, acceptance shall mean issue of necessary equipment / material takeover receipt after installation & commissioning and final acceptance.

## 3.0 Contract Documents & Priority

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

#### 4.0 Governing Laws & Jurisdiction

- 4.01 The laws applicable to this Contract shall be the Laws in force in India.
- 4.02 All disputes arising in connection with the present Contract shall be settled amicably by mutual consultation failing which shall be finally settled as per the rules of Arbitration and Conciliation Act, 1996 at the discretion of Purchaser. The venue of arbitration shall be Delhi, India

#### 5.0 Scope of Supply -General

- 5.01 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.
- 5.02 Bidder shall have to quote for the Bill of quantities as listed in Section IV of this RFQ.
- 5.03 Quantity variation and additional requirements if any shall be communicated to successful bidder during project execution.
- 5.04 All relevant drawings, data and instruction manuals.

#### 6.0 Quality Assurance and Inspection

6.01 Immediately on award of contract, the bidder shall prepare detailed quality assurance plan/test procedure identifying the various stages of manufacture, quality checks performed at each stage, raw material inspection and the Customer hold points. The document shall also furnish details of method of checking, inspection and acceptance of standards/values and get the approval of Purchaser before proceeding with manufacturing. However, Purchaser shall have right to review the inspection reports, quality checks and results of suppliers in-house inspection department which

GENERAL CONDITIONS OF CONTRACT(GCC)	Page <b>3</b> of <b>19</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3		
[RFx Number: 2200000122]		

- are not Customer hold points and the supplier shall comply with the remarks made by purchaser or his representative on such reviews with regards to further testing, rectification or rejection, etc.
- 6.02 Witness and Hold points are critical steps in manufacturing, inspection and testing where the supplier is obliged to notify the Purchaser in advance so that it may be witnessed by the Purchaser. Final inspection is a mandatory hold point. The supplier is to proceed with the work past a hold point only after clearance by purchaser or a witness waiver letter from BYPL.
- 6.03 The performance of waiver of QA activity by Purchaser at any stage of manufacturing does not relieve the supplier of any obligation to perform in accordance with and meet all the requirements of the procurement documents and also all the codes & reference documents mentioned in the procurement document nor shall it preclude subsequent rejection by the purchaser.
- 6.04 On completion of manufacturing the items can only be dispatched after receipt of dispatch Instructions issued by the Purchaser.
- 6.05 All in-house testing and inspection shall be done without any extra cost. The in-house inspection shall be carried out in presence of BSES/BSES authorized third-party inspection agency. Cost of Futile/abortive visit(s) shall be debited from the invoices.
- 6.06 Purchaser reserves the right to send any material being supplied to any recognized laboratory for testing, wherever necessary and the cost of testing shall be borne by the Bidder. In case the material is found not in order with the technical requirement/specification, the charges along with any other penalty that may be levied are to be borne by the bidder.

#### 7.0 Inspection & Test Charges

- 7.01 GOODS shall be inspected by BUYER and/or third-party inspection agency nominated by BUYER. Inspection shall carry out stage-wise/final inspection as per agreed QA /QC procedure. In addition, inspection of GOODS shall be carried out at our Site/stores. SELLER shall, however, repair/replace the damaged/rejected GOODS to the satisfaction of BUYER at no extra cost.
- 7.02 Inspection charges are included in total order value, however, BUYER will bear third-party inspection charges. In case of a futile/abortive visit of BUYER's inspector at SELLER'S works, the cost towards the same shall be debited from the SELLER's invoices.
- 7.03 GOODS covered by this PURCHASE ORDER shall not be dispatched in whole or in part until SELLER has received a written Release for Shipment Notice from BUYER or their designated representative.
- 7.04 Inspection call shall be raised a minimum of 7 (seven) days in advance from the delivery schedule mentioned in the PO and duly filled Format issued by BYPL.

#### 8.0 Handling and Storage

8.01 Material Safety Data Sheet (MSDS), detail handling & storage instruction sheet/manual, wherever applicable, to be furnished before the commencement of supply and one copy is to be submitted in store/site with First Lot.

#### 9.0 Packing, Packing List & Marking

9.01 **Packing:** Supplier shall pack or shall cause to be packed all Commodities in crates/boxes/drums/containers/cartons and otherwise in such a manner as shall be reasonably

GENERAL CONDITIONS OF CONTRACT(GCC)	Page <b>4</b> of <b>19</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3		
[RFx Number: 2200000122]		

- suitable for shipment by road or rail to BYPL, Delhi/New Delhi stores/site without undue risk of damage in transit. All the packaging materials as prescribed shall be supplied preferably with bio-degradable packing- materials.
- 9.02 Packing List: The contents of each package shall be itemized on a detailed list showing the exact weight, extreme outside dimensions (length, width & weight) of each container/box/drum/carton, Item SAP Code, PO No & date. One copy of the packing list shall be enclosed in each package delivered.

#### 10.0 Documentation

10.01 The Bidder shall procure all equipment from BYPL-approved sources as per the attached specifications. The Bidders shall submit copies of Material/Type Test Certificates, O&M Manuals, and Approved & As-built drawings, related to various equipment (as applicable). The Bidder shall ensure strict compliance with the specifications and Field Quality Procedures issued by BYPL.

#### 11.0 Price Validity

11.01 All bids submitted shall remain valid, firm and subject to unconditional acceptance by BYPL Delhi for 120 days from the due date of submission. For awarded suppliers, the prices shall remain valid till contract completion.

#### 12.0 Effective Date of Commencement of Contract

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

#### 13.0 Delivery Period For PO

- 13.01 The contractual delivery for the Goods covered under this Contract shall be completed as per the schedule.
- 13.02 Delivery shall mean delivery at F.O.R BYPL DELHI STORES/SITES.
- 13.03 Request for delivery date extension, if any, shall be submitted to BYPL 7(seven) days prior to the contractual delivery date/ schedule mentioning proper justifications/ reasoning for the delay. Any reason which is not attributable to BYPL may not be entertained.

#### 14.0 Delivery Terms & Address

- 14.01 The GOODS shall be delivered at BYPL Shahdara Store. The goods shall be dispatched on FOR destination basis including payment of local taxes and duties, if any.
- 14.02 Unloading at BYPL store/site shall be done by Vendor.
- 14.03 Wherever applicable, the Vendor shall be responsible for issuing required transit documents / E Way Bills for the movement of Goods and the logistic partner/transporter shall not be liable for any loss arising due to confiscation of goods by government agencies on account of lack of proper documents or any mis-declaration.

GENERAL CONDITIONS OF CONTRACT(GCC) NIT NO: CMC/BY/25-26/RS/SkS/SV/3	Page <b>5</b> of <b>19</b>	Bidders seal & Signature
[RFx Number: 2200000122]		

#### 15.0 Transportation

- 15.01 Bidder shall arrange transportation of GOODS from Vendor's/Sub-Vendor's works/warehouse(s) to BUYER's Stores/SITE.
- 15.02 Charges for transportation of GOODS from Bidder's works to Store/Site are included in total order value.

#### 16.0 Transit Insurance

- 16.01 Transit Insurance shall be arranged by the Bidder.
- 16.02 DAMAGE / LOSS OF CARGO IN TRANSIT: The vendor shall be solely responsible for coordinating with the concerned insurance company for procuring insurance for material and/or Goods, processing claims lodgment and settlement. Notwithstanding the insurance cover, in case of loss/damage to material and/or Goods, in any manner and for any cause whatsoever, Vendor shall cause the damaged cargo to be replaced and delivered to the Purchaser with new material and/or Goods within 30 days of such loss/damage. The Vendor shall be solely responsible for all expenses in relation to the replacement and delivery in such circumstances.

#### 17.0 Acceptance Of Goods

- 17.01 GOODS shall be accepted subject to Receipt of Material Dispatch Clearance Certificate.
- 17.02 The Purchaser shall not accept materials if LR/ RR / Bilty and the Original Tax Invoice (Transporter Copy) are not handed over at store/site. The Vendor shall draw all dispatch documents in favour of Purchaser as Consigned to and billed to.
- 17.03 The materials shall be supplied during working hours from 10AM to 5PM. No delivery shall be effected after this time unless prior intimation is given to the Purchaser.
- 17.04 The Vendor shall take signature of the authorized person at store/site with Purchaser's seal duly receipting the materials and the quantities in the absence of which payment shall not be made by the Purchaser.
- 17.05 The Vendor shall ensure exact quantities are supplied as per standard packaging and if the quantities are short-supplied, as per verification at the Vendor's store/site, the same shall be adjusted and net payment shall be made accordingly.
- 17.06 The Purchaser has the exclusive right to reject the goods if not supplied strictly as per the terms and conditions of this Order.

#### 18.0 Prices/Rates/Taxes

#### 18.01 Price basis for supply of materials

- a) Bidder to quote their prices on Landed Cost Basis and separate price for each item for supply to BYPL Delhi/New Delhi stores inclusive of packing, forwarding, loading at manufacturer's premises, payment of GST, Freight, and any other local charges. **Octroi is presently not applicable in Delhi and however if applicable shall be reimbursed at actuals.**
- b) The above supply prices shall also include unloading at BYPL Delhi/New Delhi stores/sites.
- c) Transit insurance will be arranged by Bidder

NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]
--

#### 19.0 Taxes & Duties

- 19.01 Prices for Goods are on Ex- Works basis. For the Goods covered under the GST laws, all taxes that are applicable under CGST, SGST, UGST, IGST and GST Compensation Cess shall be payable extra.
- 19.02 For the Goods not covered in the GST laws, the applicable ED, VAT / CST shall be payable extra at applicable rates.
- 19.03 GSTIN of BSES YAMUNA POWER LTD 07AABCC8569N1Z0
  CST No of BSES YAMUNA POWER LTD 07740254593
  TIN NO of BSES YAMUNA POWER LTD 07740254593
  PAN NO of BSES YAMUNA POWER LTD AABCC8569N
- 19.04 At the end of each month, the SELLER must submit their detail of invoices and amount thereof to the concerned officer in charge, within 07 days after the close of the respective month to which supply relates. Non-submission of the said request would be treated as good as the SELLER has no requirement for reconciliation.

#### 20.0 Variation in Taxes, Duties & Levies

- 20.01 The total order value shall be adjusted on account of any variations in Statutory Levies imposed by Competent Authorities by way of fresh notification(s) within the stipulated delivery period only. In case of reduction in taxes, duties and levies, the benefits of the same shall be passed on to BUYER.
- 20.02 No other Taxes, Duties or levies other than those specified above will be payable by BUYER except in case of new Levies, Taxes or duties imposed by the Competent Authorities by way of fresh notification(s) after the issue of PURCHASE ORDER but within the stipulated delivery period.
- 20.03 Notwithstanding what has been stated above, changes in Taxes, Duties & Levies shall apply only to that portion of PURCHASE ORDER not executed on the date of notification by the Competent Authority. Further, changes in Taxes, Duties & Levies after the due date of Delivery shall not affect PURCHASE ORDER Terms and Value.
- 20.04 PURCHASE ORDER value shall not be subject to any variation on account of variation in Exchange rate(s).

#### 21.0 Taxes & Duties on raw materials & bought out components

- Taxes & Duties on raw materials & bought-out components are included in Order Value and are not subject to any escalation or variation for any reason whatsoever.
- Taxes & Duties on raw materials & bought-out components procured indigenously are included in Order Value and are not subject to any escalation or variation for any reason whatsoever.

#### 22.0 Tax Indemnity Clause

22.01 Vendor (along with its affiliates in India or overseas including any agent/ third party contractor or any other person appointed by such affiliates for this agreement) agrees that it will be solely responsible for performing all compliances and making payments of all taxes (direct tax or indirect tax including but not limited to income-tax, transfer pricing, value added tax, SGST, CGST, IGST, UTGST, GST Compensation Cess custom duty, excise duty, Research and Development Cess, etc.), cesses, interest, penalties or any other tax/ duty/ amount/ charge/ liability arising either out of

	<u> </u>	3 , , 3
GENERAL CONDITIONS OF CONTRACT(GCC)	Page <b>7</b> of <b>19</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3		
[RFx Number: 2200000122]		

- laws/ regulations applicable in India and overseas or because of a demand/ recovery initiated by any revenue authority under laws/ regulations applicable in India or overseas.
- 22.02 In case any tax liability (including but not limited to income tax, transfer pricing, value added tax, SGST, CGST, IGST, UTGST, GST Compensation Cess, custom duty, excise duty, Research and Development Cess, etc.), cesses, interest, penalties or any other tax/ duty/ amount/ charge/ liability becomes payable by Purchaser due to failure of the Vendor, or any of its affiliates in India or overseas including any agent/ third party contractor or any other person appointed by such affiliates for this agreement, to comply with the relevant laws/ regulations applicable in India or overseas, Vendor undertakes to indemnify Purchaser for an amount equal to amount payable by Purchaser.
- 22.03 Further, Vendor undertakes to keep Purchaser indemnified at all times against and from all other actions, proceedings, claims, loss, damage, costs and expenses which may be brought against Purchaser or suffered or incurred by Purchaser and which shall have arisen either directly or indirectly out of or in connection with failure of The Vendor, or any of its affiliates in India or overseas including any agent/ third party contractor or any other person appointed by such affiliates for this agreement, to comply with relevant obligations/ compliance under any law/ regulations applicable in India and overseas.
- 22.04 The parties agree to follow the following process in case any communication of demand, arising out of non-compliance by Vendor (along with its affiliates in India or overseas including any agent/ third party contractor or any other person appointed by such affiliates for this agreement), is received by Purchaser:
- 22.04.1 On Purchaser receiving any communication from a competent authority demanding tax liability (including but not limited to income tax, transfer pricing, value added tax, SGST, CGST, IGST, UTGST, GST Compensation Cess custom duty, excise duty, Research and Development Cess, etc.), cesses, interest, penalties or any other tax/ duty/ amount/ charge/ liability, Purchaser shall, within 5 common working days from the date of receipt of such communication (save where the period to respond to the relevant authority is less than five days, in which case, as soon as reasonably possible) inform Vendor in writing of such communication.
- 22.04.2 Pursuant to receiving communication from Purchaser, Vendor shall suggest to accept the communication and pay the demand amount to the competent authority. In such an event, Vendor shall reimburse such amount paid to Purchaser within 5 working days from the date of payment by Purchaser to the competent authority.
- 22.04.3 If Vendor advises in writing and Purchaser agrees to dispute the demand, then Purchaser shall dispute the matter with competent authority as per due process prescribed under the regulations and Purchaser shall not pay the Tax Demand. In such scenario, cost of litigation including but not limited to Counsel cost, filing fees, other related charges, should be reimbursed by Vendor to Purchaser. Additionally, If any coercive steps of recovery are initiated by the department, then Purchaser would pay such amount (including by way of adjustment of refunds due to it) and the same would be reimbursed by Vendor within 5 working days from date of such recovery from Purchaser. Purchaser will take all necessary steps to avoid such recovery measures.
- 22.04.4 On determination of the demand through an Order issued by a Tribunal or any other similar Authority, by whatever name called, under any law applicable in India or overseas, if the demand or any part thereof becomes payable and is paid by Purchaser, then Vendor undertakes to reimburse such amount to Purchaser within 10 days from the date of payment. Alternatively, if on determination of the demand through an Order, no amount is payable by Purchaser then any

GENERAL CONDITIONS OF CONTRACT(GCC)
NIT NO: CMC/BY/25-26/RS/SkS/SV/3
[RFx Number: 2200000122]

refund arising to Purchaser due to such an Order shall be passed on to Vendor within 10 days from the date of receipt of refund.

#### 23.0 Invoicing Instructions

- 23.01 Invoices in triplicate [1) Original for recipient, 2) Duplicate for Transporter, 3) Triplicate for supplier] shall be made out and delivered to the following address: BSES YAMUNA POWER LIMITED, SHAKTI KIRAN BUILDING, KARKARDOOMA, DELHI-110032.
  - MDCC will be released separately for Capex & Opex. Invoice will be submitted by the supplier as per the MDCC.
- 23.02 Vendor shall obtain GST registration in the State from where the supply will be carried out. Vendors supplying Goods to the Purchaser shall have a valid GST registration number and shall submit GST Tax Invoice and other documents as per SGST Act, CGST Act, IGST Act, UTGST Act, GST Compensation Cess Act and Rules made there under. Failure to submit GST Tax Invoice shall be liable for withholding SGST, CGST, IGST, UTGST, GST Compensation Cess amount charged by the vendor while releasing the payment.
- 23.03 Invoice will be in the name of BSES YAMUNA POWER LIMITED & address of the store/site mentioned in the MDCC. Invoice should contain all information as required under GST Invoice, Debit Note and Credit Rules. The government has notified rules of invoicing under GST along with a template of invoice(GST INV-01) covering the elements such as supplier's details, GSTIN No, HSN Codes, item details, GST tax rates, etc that need to be presented by the supplier.
- 23.04 Vendor to carefully examine and charge relevant CGST / SGST, UGST, IGST and GST compensation cess as applicable to the transactions.
- 23.05 Timely provision of invoices / Debit Notes / Credit Notes:
- 23.05.1 Vendor to timely provide invoice / Debit note / Credit note to enable Purchaser to claim tax benefit on or before stipulated time period. All necessary adjustment entries (Credit Notes, Purchase Returns, Debit Notes) shall be made within the timelines prescribed under the GST Laws.
- 23.05.2 In case of receipt of advance, the Vendor undertakes to raise the tax invoice. Purchaser, upon payment of advance, shall issue payment voucher as per applicable GST laws and rules. Four copies of the invoices need to be provided by suppliers and wherever the law requires, an Electronic Reference Number for each invoice.

Documents and devices to be carried by a person in charge of a conveyance under.

- 23.05.3 Any Vendors / Contractors / Service providers 'shall' mention the following minimum requirements in 'invoice' while furnishing Invoices with us:
  - 1. Invoice / Credit Note Number and Date.
  - 2. Address of supplier/service provider and GSTN.
  - 3. Customer Name and Address as per GST Registration Certificate and GST registration Number.
  - 4. 'Shipped to' and 'Billed to' addresses.
  - 5. Place of Supply.
  - 6. Description of Goods/Service along with unit of measurements.
  - 7. HSN / SAC Code.
  - 8. Taxable value (Gross & deduct Discount separately if allowed)
  - 9. Rate and amount of Tax separately for CGST, SGST and IGST as applicable.
  - 10. Signature of Supplier. (For e-invoices physical signature is not required)
  - 11. Whether Reverse Charge is applicable or not.

GENERAL CONDITIONS OF CONTRACT(GCC) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>9</b> of <b>19</b>	Bidders seal & Signature

23.06 E Way Bills/transit documents for movement of Goods:

Wherever applicable, the Vendor shall be responsible for issuing required transit documents / E Way Bills for the movement of Goods and the logistic partner/transporter shall not be liable for any loss arising due to confiscation of goods by government agencies on account of lack of proper documents or any misdeclaration. The Supplier is responsible for complying with rules applicable to the E-way bill. Any violation in provision of E-way Bill will attract penalties and seizure of Transit Material. Any Penalty and Pre-Deposit due to violation of rules/provisions shall be paid and borne by the Supplier. Also, the Supplier is responsible for releasing goods from the Authority whether CGST/SGST. Delay in supply from the contractual date due to the seizure of goods shall also attract liquidated damages.

#### 24.0 Terms of Payment and Billing

24.01 For Supply of equipment/item:

100% payment shall be made within 45 days from the date of receipt & acceptance of material at store/site against submission of the following documents against dispatch of each consignment at our Vendor Support Cell (VSC):

- a) Signed copy of accepted Purchase Order (for first payment)
- c) LR / RR / BL as applicable
- d) Challan as applicable
- e) One (01) copy of the Supplier's detailed Recipient Invoice showing Commodity description, quantity, unit price, total price and basis of delivery, and is 100% of the value of the consignment claimed.
- f) One (01) copy of Supplier's transporter invoice duly receipted by BYPL Store & Original certificate issued by BYPL confirming receipt of the subject material at Store/Site and acceptance of the same as per the provisions of the contract.
- g) One (01) copy Packing List / Detailed Packing List
- h) Approved Test certificates / Quality certificates, if applicable
- i) Certificate of Origin, if applicable
- j) Material Dispatch Clearance Certificate (MDCC)
- k) Warranty / Guarantee Certificate, if applicable
- I) Checklist for bill submission.
- Purchaser has the right to recover tax loss, interest and penalty suffered due to any non-compliance of tax laws by the Vendor. In the event, Purchaser is not able to avail of any tax credit due to any shortcoming on the part of the Vendor (which otherwise should have been available to Purchaser in the normal course), then the Vendor at his own cost and effort will get the short coming rectified. If for any reason the same is not possible, then the Vendor will make 'good' the loss suffered by Purchaser due to the tax credit it lost. In such event, any amount paid to the Vendors shall be first attributable to the tax (GST) charged in the invoice and the balance shall be considered towards the 'value' of supply of goods/ services.
- 24.03 Purchaser shall deduct "Tax Deducted at Source" wherever applicable and at the rate prescribed under the GST Laws or any other Indian law and remit the same to the Government. Necessary TDS certificates as per law shall be issued by the purchase to the vendor.
- 24.04 Any liability arising out of dispute on the tax rate, classification under HSN, calculation and payment of tax to the Government will be to the Vendor's account.
- 24.05 Where the supply of Goods is liable to GST under reverse charge mechanism, then the supplier should clearly mention the category under which it has been registered and also that "the liability of payment of GST is on the Recipient of Supply".

GENERAL CONDITIONS OF CONTRACT(GCC) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>10</b> of <b>19</b>	Bidders seal & Signature
---	-----------------------------	--------------------------

#### 25.0 Performance Guarantee

- 25.01 To be submitted within twenty-eight (28) days from the date of issuance of the Letter of Intent/Award/PO. Bidder shall submit PBG equivalent to 10% of the PO value (including GST) valid for a period of 30 months from the date of last receipts at site/stores plus 3 months claim period.
- 25.02 Bank guarantee shall be drawn in favour of BSES Yamuna Power Ltd as applicable. The performance Bank guarantee shall be in the format specified by BYPL.

#### 26.0 Forfeiture

- 26.01 Each Performance Bond established under Clause 25.0 shall contain a statement that it shall be automatically and unconditionally forfeited without recourse and payable against the presentation by BYPL 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 outlined in the Contract.
- 26.02 Each Performance BG established under will be automatically and unconditionally forfeited without recourse if BYPL in its sole discretion determines that supplier has failed to comply with any term or condition outlined in the contract.

#### 27.0 Release

27.01 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 25.0) except for the case outlined in Clause 26.0.

#### 28.0 Defects Liability Period/Guarantee/Warranty

- 28.01 The bidder is to Guarantee the materials/items supplied against any defect or failure, which arises due to faulty materials, workmanship or design for the entire defects liability period. The Defect liability period shall be 66 months from the date of receipt of each unit at store(s)/site(s).
- 28.02 If during the Defects Liability Period, any GOODS are found to be defective, they shall be promptly replaced or rectified by BIDDER 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 BIDDER at its own cost.

#### 29.0 Return, Replacement or Substitution

BYPL shall give Supplier notice of any defective Commodity promptly after becoming aware thereof. BYPL may at its discretion elect to return defective Commodities to Supplier for replacement, free of charge to BYPL or may reject such Commodities and purchase the same or similar Commodities from any third party. In the latter case, BYPL 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. BYPL may set off such costs against any amounts payable by BYPL to the Supplier. Supplier shall reimburse BYPL for the amount, if any, by which the price of a substitute Commodity exceeds the price for such Commodity as quoted in the Bid. BUYER at its sole discretion shall have the opinion to dispose of the material or GOODS so rejected and not taken back within forty-five days from the date of intimation of rejection.

GENERAL CONDITIONS OF CONTRACT(GCC)
NIT NO: CMC/BY/25-26/RS/SkS/SV/3
[RFx Number: 2200000122]

#### **30.0** Time – The Essence Of Contract

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

#### 31.0 Penalty for Delay

- 31.01 If supply of items/equipments is delayed beyond the supply schedule as stipulated in the purchase order then the Supplier shall be liable to pay to the Purchaser as penalty for delay, a sum of 1% (one percent) of the basic (ex-works) price for every week delay of undelivered units or part thereof for individual milestone deliveries.
- 31.02 The total amount of penalty for delay under the contract will be subject to a maximum of ten percent (10%) of the basic (ex-works) price of total undelivered units.
- 31.03 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.
- 31.04 If the Penalty is levied as per the Order terms & conditions; BYPL will raise the Invoice for the penalty amount along with applicable GST rates. Accordingly, after setting off the penalty Invoice amount, net payment shall be made.

#### 32.0 Recoveries

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

#### 33.0 The Micro, Small and Medium Enterprises (MSME)

33.01 If the SELLERS establishment is covered under the purview of The Micro, Small and Medium Enterprises Development Act, 2006 and its amendments, he shall declare so within the bid of its status failing which it will be presumed that it is a non-MSME unit. Also, submit a copy of Udyog Aadhaar (UA) & Udyam Registration Number.

#### 34.0 Transfer and Sub-Letting

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

#### 35.0 Intellectual Property Rights and Royalties

35.01 The Supplier shall indemnify the Purchaser and the Purchaser's Representative from and against all claims and proceedings on account of infringement (or alleged infringement) of any patent rights, registered designs, copyright, design, trademark, trade name, know-how or other intellectual property rights (hereinafter collectively referred to as "**Intellectual Property Rights**") in respect of the Works, Supplier's Equipment, machines, Works method, Plant, Materials, or anything whatsoever required for the execution of the Works and from and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. In the event of an infringement of any Intellectual Property Rights of any third party as a

GENERAL CONDITIONS OF CONTRACT(GCC)	Page <b>12</b> of <b>19</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3		
[RFx Number: 2200000122]		

result of the execution of the Works (or any part thereof) by the Supplier, the Supplier shall rectify, modify or replace, at its own cost, the Works, Plant or Materials or anything whatsoever required for the Works so that infringement ceases to exist or, in the alternative, the Supplier shall procure necessary rights/ licenses from the affected third party so that there is no infringement of Intellectual Property Rights.

- 35.02 The Supplier shall be promptly notified of any claim made against the Purchaser. The Supplier shall, at its cost, conduct negotiations for the settlement of such claim, and any litigation or arbitration that may arise from it. The Purchaser or the Purchaser's Representative shall not make any admission that might be prejudicial to the Supplier unless the Supplier has failed to take over the conduct of the negotiations, litigation or arbitration within a reasonable time after having been so requested. In the event of the Supplier failing to act at the Purchaser's Representative's notice, the Purchaser shall be at full liberty to deduct any such amount of pending claim from any amount due to the Supplier under the Contract or any other contract and the balance portion of claim shall be treated as debt due from the Supplier.
- 35.03 All Intellectual Property Rights in respect of any Plant, Materials, Drawings and Designs, plans, documents, specifications, data, materials, know-how, charts, information, etc., provided to the Supplier by the Purchaser pursuant to this Contract for the execution of the Works, belongs to and shall continue to belong to the Purchaser and the Supplier shall not have any rights in the same other than the limited right for its use for the purpose of execution of the Works.
- 35.04 Intellectual Property Rights in respect of any Plant, Materials, Drawings and Designs, plans, calculations, drawings, documents, know-how and information relating to the Works which are proprietary to the Supplier and/ or its third-party licensors ("Supplier's IPR") shall continue to vest with the Supplier and/ or its third-party licensors and the Supplier shall grant and/ or procure from its third party licensors, at its own cost, a worldwide, perpetual, royalty-free, non-exclusive license (along with the right to sub-license) to use and reproduce such Supplier's IPR for the use, operation, maintenance and repair of the Works.
- 35.05 If any patent, trademark, trade name, registered design or software is developed by the Supplier or its SubSupplier specifically for the execution of the Works, then all Intellectual Property Rights in respect of such design, trademark, trade name or software shall be the absolute property of the Purchaser and shall not be utilized or retained by the Supplier (or its SubSuppliers) for any purpose other than with the prior written consent of the Purchaser.
- If the Supplier uses proprietary software (whether customized or off the shelf) for the purpose of storing or utilizing records in relation to the Works, the Supplier shall obtain at its own expense, the grant of a worldwide, royalty-free, perpetual licence or sublicence (including the right to sublicense) to use such software, in favour of the Purchaser provided that the use of such software under the licence or the sublicense may be restricted to use any such software only for the design, construction, reconstruction, manufacture, installation, completion, reinstatement, extension, repair and operation of the Works or any part thereof.
- 35.07 If any software is used by the Supplier for the execution of the Works over which the Supplier or a third party holds pre-existing title or other rights, the Supplier shall obtain for the Purchaser, a worldwide, royalty-free, perpetual license for the right to use and apply that software (together with any modifications, improvements and developments thereof).

#### 36.0 Vendor Code of Conduct

36.01 Vendor confirms to have gone through the Policy of BYPL on legal and ethical code required to be followed by Vendors encapsulated in the "Vendor Code of Conduct" displayed on the official website of BYPL (www.bsesdelhi.com) also, which shall be treated as a part of the agreement/contract/PO/WO.

GENERAL CONDITIONS OF CONTRACT(GCC)	Page <b>13</b> of <b>19</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3	_	
[RFx Number: 2200000122]		

- 36.02 Vendor 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 agreement/contract/PO/WO.
- 36.03 In event of any such breach, irrespective of whether it causes any loss/damage, company (BYPL) shall have the right to recover loss/damage including liquidated damages from Vendor .
- 36.04 The Vendor hereby indemnifies and agrees to keep indemnified the company (BYPL) against any claim/litigation/liability/penalty including litigation cost arising out of any violation of Vendor Code of Conduct by the Vendor or its officers, agents & representatives etc.

#### 37.0 Limitation of Liability

- 37.01 Except for willful misconduct or gross negligence, neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or any other indirect or consequential loss or damage which may be suffered by the other Party in connection with the Contract. The total liability of the Supplier to the Purchaser under the Contract shall not exceed the Contract Value. Except that this Clause shall not limit the liability of the Supplier:
  - (a) In cases of fraud, willful misconduct or illegal or unlawful acts, or
  - (b) In cases of acts or omissions of the Supplier that are contrary to the most elementary rules of diligence that a conscientious Supplier would have followed in similar circumstances.

#### 38.0 Liability of Suppliers

- 38.01 Subject to the due discharge of its obligations under the Contract and except in case of gross negligence or willful misconduct on the part of the Supplier or on the part of any person acting on behalf of the Supplier, with respect to any loss or damage caused by the Supplier to the Purchaser's property or the Site, the Supplier shall not be liable to the Purchaser for the following:
  - (a) For any indirect or consequential loss or damage; and
  - (b) For any direct loss or damage that exceeds:
  - (i) The total payments made and expected to be made to the Supplier under the Contract including reimbursements, if any; or
  - (ii) The insurance claim proceeds that the Supplier may be entitled to receive from any insurance purchased by the Supplier to cover such a liability, whichever is higher.
- 38.02 This limitation of liability shall not affect the supplier's liability, if any, for damage to third-party property or injury or death of a person due to negligence of the Contractor or any Person or firm acting on behalf of the supplier in executing the order.
- 38.03 Notwithstanding anything contained in the Contract, the Supplier shall not be liable for any gross negligence or willful misconduct on the part of the Purchaser or any of its affiliates, any vendor, or any party, other than Supplier and/or, its directors, officers, agents or representatives or its affiliates, or SubSupplier, or the vendor or any third party engaged by it.
- 38.04 Notwithstanding anything contained in the Contract, including but not limited to approval by the Purchaser of any drawings, documents, vendor list, supply of information or data or the participation of the Purchaser in any meeting and/or discussion or otherwise, shall not absolve the Supplier from any of its liabilities or responsibilities arising in relation to or under the Contract.

#### 39.0 Indemnification

39.01 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

GENERAL CONDITIONS OF CONTRACT(GCC) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>14</b> of <b>19</b>	Bidders seal & Signature
[IX X Number 220000122]		

engaged by the Purchaser whatsoever arising out of the negligence of the Supplier while performing the obligations under this contract.

#### 40.0 Events of Default

- 40.01 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 BYPL.

#### 41.0 Consequences of Default.

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

#### 42.0 Force Majeure

#### 42.01 General

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

- (i) Such event or circumstance materially and adversely affects the ability of the affected Party to perform its obligations under this Contract, and the affected Party has taken all reasonable precautions, due care and reasonable alternative measures 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.

ERAL CONDITIONS OF CONTRACT(GCC NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	, ,	Bidders seal & Signature
---	-----	--------------------------

- (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 to comply with the above clause.
- 42.02 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.
  - (iii) Dangers of navigation, perils of the sea.

Note: Causes like power breakdowns/strikes, accidents etc do not fall under Force Majeure.

- 42.03 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.
- 42.04 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.
- 42.05 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.
- 42.06 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.

The Purchaser may terminate the contract after giving 7 (seven) days' notice if any of the following occurs:

GENERAL CONDITIONS OF CONTRACT(GCC)
NIT NO: CMC/BY/25-26/RS/SkS/SV/3
[RFx Number: 2200000122]

- Bidder fails to complete the execution of works within the approved schedule of works, terms and conditions.
- ii. In case the Bidder commits any Act of Insolvency, or is adjudged insolvent
- iii. Has abandoned the contract
- iv. Has failed to commence work or has suspended the progress of works
- v. Has failed to proceed with the works with due diligence and failed to make such due progress
- 42.07 Limitation of Force Majeure event. The Supplier shall not be relieved of any obligation under the Contract solely because the cost of performance is increased, whether as a consequence of adverse economic consequences or otherwise.
- 42.08 Extension of Contract Period due to Force Majeure event The Contract period may be extended by mutual agreement of Parties by way of an adjustment on account of any period during which an obligation of either Party is suspended due to a Force Majeure event.
- 42.09 Effect of Events of Force Majeure. Except as otherwise provided herein or may further be agreed between the Parties, either Party shall be excused from performance and neither Party shall be construed to be in default in respect of any obligations hereunder, for so long as the failure to perform such obligations shall be due to an event of Force Majeure."

#### 43.0 SEVERABILITY

43.01 If any provision of this Agreement is or becomes invalid or unenforceable by the courts of any jurisdiction to which it is subject, such invalidity or unenforceability shall not prejudice the remaining provisions of this Agreement, which shall continue in full force and effect.

#### 44.0 Waiver of Rights

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

#### 45.00 Termination for convenience of Purchaser

- 45.01 Purchaser at its sole discretion may terminate the contract by giving 30 days prior notice in writing or through email to the Supplier. Purchaser shall pay the Supplier for all the supplies/ services rendered till the actual date of contract termination against submission of invoice by the Supplier to that effect.
- 45.02 Payment of such compensation is the sole and exclusive remedy of the supplier for termination of this Agreement by Purchaser hereunder and the supplier shall not be entitled to, and hereby waives, claims for lost profits and all other damages and expenses.
- 45.03 Supplier hereby agrees that substantiation for settlement of any claims submitted by supplier shall be complete and in sufficient detail to allow Purchaser's evaluation. Terminate all sub-contracts except those that have been/ to be assigned to the Purchaser all rights, titles and benefits of the Suppliers/Vendor as the case may be.

GENERAL CONDITIONS OF CONTRACT(GCC)
NIT NO: CMC/BY/25-26/RS/SkS/SV/3
[RFx Number: 2200000122]

#### 46.0 Acceptance

- 46.01 Vendor confirms to have gone through the Policy of BYPL on legal and ethical code required to be followed by vendors encapsulated in the "Vendor Code of Conduct" displayed on the official website of BYPL (www.bsesdelhi.com) also, which shall be treated as a part of the contract/PO/WO. The vendor 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/PO/WO. In the event of any such breach, irrespective of whether it causes any loss/damage, Purchaser (BYPL) shall have the right to recover loss/damage from Vendor. The Contractor/Vendor hereby indemnifies and agrees to keep indemnified the Purchaser (BYPL) against any claim/litigation arising out of any violation of Vendor Code of Conduct by the Contractor/Vendor or its officers, agents & representatives etc.
- 46.02 Acceptance of the CONTRACT implies and includes acceptance of all terms and conditions enumerated in the CONTRACT in the technical specification and drawings made available to Contractor consisting of general conditions, detailed scope of work, detailed technical specification, detailed equipment drawing and complete scope of work.
- 46.03 Bidder and Company contractual obligations are strictly limited to the terms set out in the CONTRACT. No amendments to the concluded CONTRACT shall be binding unless agreed to in writing for such amendment by both parties.
- 46.04 We expect your services and supplies to be aligned to our Vision, Mission and Values. Please refer to the following link to know about our Vision, Mission and Values; https://www.bsesdelhi.com/web/bypl/about-bses.



# **QUANTITY AND DELIVERY REQUIREMENTS**

SI. No	BYPL SAP Code	Item Description	Specification	Total Qty. (Meter)	Tentative Delivery Schedule	Destination
1	2100004702	CBL,PWR,400MM2;3C; 33KV;AL;XLPE	BSES-TS-09- 33CBL-R0	5,000	5 km per month	Delhi Store(s)/ Site(s)

The delivery schedule shown above is tentative. PO(s) will be released as per the actual requirement. However, the supplier has to deliver the material within the delivery schedule provided.

Schemes may be executed in a phased manner.



GENERAL CONDITIONS OF CONTRACT(GCC) NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]	Page <b>19</b> of <b>19</b>	Bidders seal & Signature
---	-----------------------------	--------------------------

# **APPENDIX II**

# ANNEXURE - 2.01

# FORMAT OF PERFORMANCE BANK GUARANTEE (To be executed on a Non-Judicial Stamp Paper of appropriate value)

This Gu	uarantee made at this [] d	day of [] 20XX			
1.	WHEREAS M/s BSES Yamuna Power I Companies Act, 1956 having its Register India hereinafter referred to as the " context or meaning thereof include its	ered Office at Shaktikiran Owner ", (which expres	Building, Karkardoa, Delhi 110032, ssion shall unless repugnant to the		
2.	AND WHEREAS the Owner has entered	Linto a contract for	(Please specify the nature		
	of contract here ) vide Contract No.				
	the "Contract") with M/s				
	expression shall unless repugnant to				
	include each of their respective success	-			
	conditions as more particularly detailed	- ,			
	,				
3.	AND WHEREAS as per clauseof 0	Conditions of Contract, t	he Suppliers are obliged to provide		
	to the Owners an unconditional bank g	guarantee for an amount	equivalent to ten percent (10%) of		
	the total Contract Value for the timel	ly completion and faithf	ul and successful execution of the		
	Contract from [] pl. s	specify the name of Ban	k) having its head/registered office		
4	at [] through its bran	nch in( <i>pl. specify</i>	the name of Branch through which		
	B.G is issued) hereinafter referred to a	as "the Bank", (which exp	pression shall unless it be repugnant		
	to the context or meaning thereof be d	deemed to include its suc	ccessors and permitted assigns).		
4.	NOW THEREFORE, in consideration into	er alia of the Owner gran	nting the Suppliers the Contract, the		
	Bank hereby unconditionally and irrevo	ocably guarantees and u	ndertakes, on a written demand, to		
	immediately pay to the Owner any ar	mount so demanded (b	y way of one or more claims) not		
	exceeding in the aggregate [Rs. ]	•			
	or protest and/or without reference to		•		
	show to the Bank, grounds or reason	• •	- ,		
	demanded.	, <b>,</b> , ,	,		
5.	The decision of the Owner to invoke	this Guarantee and as	s to whether the Supplier has not		
	performed its obligations under the Cor	ntract shall be binding or	n the Bank. The Bank acknowledges		
	APPENDIX II	Page <b>1</b> of <b>6</b>	Bidders seal & Signature		
NTI N	NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [REx Number: 2200000122]				

that any such demand by the Owner of the amounts payable by the Bank to the Owner shall be final, binding and conclusive evidence in respect of the amounts payable by the Supplier to the Owner. Any such demand made by the Owner on the Bank shall be conclusive and binding, notwithstanding any difference between the Owner and the Supplier or any dispute raised, invoked, threatened or pending before any court, tribunal, arbitrator or any other authority.

- 6. The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor without proceeding against the Suppliers notwithstanding any other security or other guarantee that the Owner may have in relation to the Supplier's liabilities.
- 7. The Bank hereby waives the necessity for the Owner first demanding the aforesaid amounts or any part thereof from the Suppliers before making payment to the Owner and further also waives any right the Bank may have of first requiring the Owner to use its legal remedies against the Suppliers, before presenting any written demand to the Bank for payment under this Guarantee.
- 8. The Bank's obligations under this Guarantee shall not be reduced by reason of any partial performance of the Contract. The Bank's obligations shall not be reduced by any failure by the Owner to timely pay or perform any of its obligations under the Contract.
- 9. The Bank further unconditionally and unequivocally agrees with the Owner that the Owner shall be at liberty, without the Bank's consent and without affecting in any manner its rights and the Bank's obligation under this Guarantee, from time to time, to:
  - (i) vary and/or modify any of the terms and conditions of the Contract;
  - (ii) Forebear or enforce any of the rights exercisable by the Owner against the Suppliers under the terms and conditions of the Contract; or
  - (iii) Extend and/or postpone the time for performance of the obligations of the Suppliers under the Contract;

and the Bank shall not be relieved from its liability by reason of any such act or omission on the part of the Owner or any indulgence shown by the Owner to the Suppliers or any other reason whatsoever which under the law relating to sureties would, but for this provision, have the effect of relieving the Bank of its obligations under this Guarantee.

10. This Guarantee shall be a continuing bank guarantee and shall not be discharged by any change in the constitution or composition of the Suppliers, and this Guarantee shall not be affected or

APPENDIX II	Page <b>2</b> of <b>6</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3		
[RFx Number: 2200000122]		

	the Suppliers or any of them or any other circumstances whatsoever.
11.	This Guarantee shall be in addition to and not in substitution or in derogation of any other security
	held by the Owner to secure the performance of the obligations of the Suppliers under the Contract
12.	NOTWITHSTANDING anything herein above contained, the liability of the BANK under this
	Guarantee shall be restricted to(insert an amount equal to ten percent
	(10%) of the Contract Value) and this Guarantee shall be valid and enforceable and expire or
	(pl. specify date) or unless a suit or action to enforce a claim under this Guarantee
	is filed against the Bank on or before the date of expiry.
13.	On termination of this Guarantee, all rights under the said Guarantee shall be forfeited and the
	Bank shall be relieved and discharged from all liabilities hereunder.
14.	The Bank undertakes not to revoke this Guarantee during its validity except with the prior writter
	consent of the Owner and agrees that any change in the constitution of the Bank or the Suppliers
	shall not discharge our liability hereunder.
15.	This Guarantee shall be governed by the laws of India. Any suit, action, or other proceeding arising
	out of, connected with, or related to this Guarantee or the subject matter hereof shall be subject
	to the exclusive jurisdiction of the courts of <b>Delhi</b> , India.
	Dated this day of
4	(Signature)
	(Nama)
	(Name)
	(Designation with Bank Stamp)
	Attorney as per Power of Attorney No
	Date

discharged by the liquidation, winding-up, bankruptcy, reorganization, dissolution or insolvency of

APPENDIX II NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]

# ANNEXURE - 2.02

### **BYPL BANK DETAIL WITH IFSC CODE:**

1. Name of the Bank: Axis Bank Limited

2. Branch Name & Full Address: C-58, Basement & Ground Floor, Preet Vihar, Main Vikas Marg,

New Delhi 110092

3. Branch Code: 055

4. Bank Account No: 911030003596085

5. IFSC Code: UTIB0000055

6. Swift Code: AXISINBB055

**ANNEXURE - 2.03** 

#### FORMAT OF WARRANTY/GUARANTEE CERTIFICATE

BSES YAMUNA POWER LIMITED Shaktikiran Building, Karkardooma, Delhi -110032.

Ref. Purchase Order No.:

Dear Sir,

We hereby confirm that the......dispatched to BSES YAMUNA POWER LTD vide invoice no.......

DT.....is exactly of the same nature and description as per above mentioned Purchase Order.

We further confirm that we will replace/repair our......free of cost if any manufacturing defect

during.....months from the date of dispatch of material or.....months from the date of commissioning

whichever is earlier.

Vendor Name & Signature

**ANNEXURE - 2.04** 

## **UNDERTAKING GST**

The Vendor shall give an undertaking in the following words on each invoice in the absence of which tax payment as on the Vendor's invoice may be withheld.

"The tax component as mentioned in the invoice shall be deposited with the GST Department as per law by way of actual payment or by way of legal set off as per law. The turnover billed shall be duly declared in my GST returns a copy of which shall be filed with the Purchaser. Should the input tax credit to the Purchaser be denied by way of any lapse on the part of the Vendor, the same shall be paid on demand and in any case the Purchaser is authorized to deduct the tax equivalent amount from the amount payable to the Vendor"

APPENDIX II
NIT NO: CMC/BY/25-26/RS/SkS/SV/3
[RFx Number: 2200000122]

Page **5** of **6** 

Bidders seal & Signature

# ANNEXURE – 2.05 SUMMARY OF COMMERCIAL TERMS AND CONDITIONS - SUPPLY

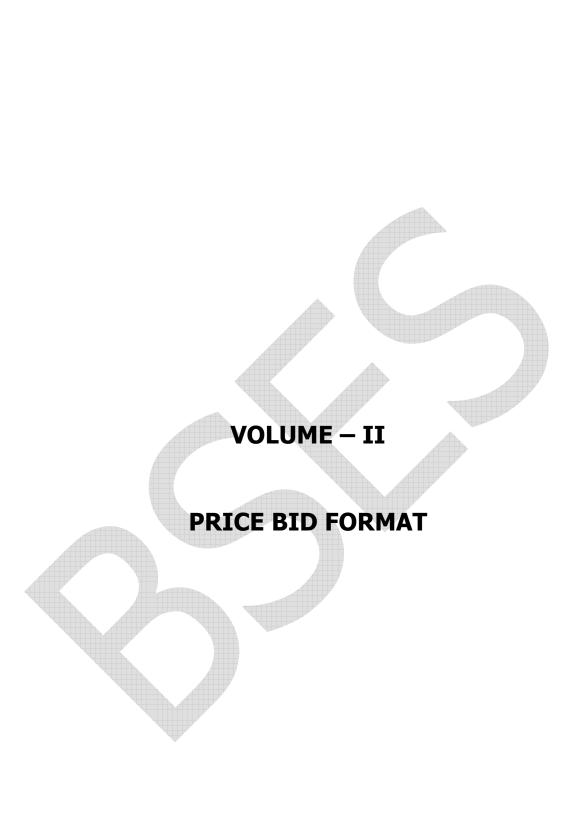
	SUMMART U	<u>F COMMERCIAL TERMS AND CONDITIONS - :</u>	<u>SUPPLY</u>
SL NO	PARTICULARS	CLAUSE AS PER TENDER	BIDDER'S CONFIRMATION
1	Validity	120 days from the date of submission of the bid	
2	Price Basis	"Firm", FOR Delhi store(s)/site(s) basis. Prices shall be inclusive of all taxes & duties, freight up to Delhi store(s)/site(s).	
3	Unloading	Unloading at stores/sites shall be in vendor's scope	
4	Transit Insurance	Transit insurance in Bidder's scope	
5	Payment Terms	100% payment shall be paid within 45 days from the date of receipt and acceptance of GOODS at store/site against submission of documents.	
6	Delivery Schedule	Transmittal Approval Documents (GTP/Drawings/QAP/etc.) are to be submitted within 10 days to the concerned official in BYPL for approval. BYPL shall approve/provide comments on the submitted drawings within 7 days of first submission. In case resubmission is required, it shall be completed by the supplier within next 5 days. The timelines for approval by BYPL shall be 5 days in case of every resubmission. However, repetitive submissions are not desirable. Delivery shall be completed within 10 Weeks from the LOI/PO date or completion as per the PO schedule.	
7	Defect Liability Period	66 months from the date of receipt of each unit at store(s)/site(s), whichever is earlier.	
8	Penalty For Delay	1% (One) of the basic value (ex-works value) of undelivered units per week of delay or part thereof, subject to maximum of 10% (Ten) of the total basic value (ex-works value) of undelivered units.	
9	Bank Guarantee	To be submitted within twenty-eight (28) days from the date of issuance of the Letter of Intent/Award/PO. Bidder shall submit PBG equivalent to 10% of the PO value (including GST) valid for a period of 30 months from the date of last receipts at site/stores plus 3 months claim period.	
10	Reverse Auction	Acceptance for participation in Reverse Auction event	
	Zindelizinininin'		

500	of th	a Di	44	O M I
Seal	OT TO	ΔКІ	$\boldsymbol{n}$	or.

Signature:

Name:

APPENDIX II	Page <b>6</b> of <b>6</b>	Bidders seal & Signature
NIT NO: CMC/BY/25-26/RS/SkS/SV/3 [RFx Number: 2200000122]		
[]		



PRICE BID FORMAT
NIT NO: CMC/BY/25-26/RS/SkS/SV/3
[RFx Number: 2200000122]

Page 1 of 2

Bidders seal & Signature

ALL PRICES IN INR (₹)

S. DESCRIPTION OF GOODS  Supply of Power Cable 33 1 kV, 3C x 400 sq. mm. (A2XWY) (conventional)  SRAND TOTAL LANDED VALUE (₹)  HSN CODE (8 Digit Mandat ory)  Weter 5,000  QTY  UNIT BASIC CESS AS APPLICABLE (CGST & (All Inclusive))  RATE (All Inclusive)  (A)  (B)  Weter 5,000  GRAND TOTAL LANDED VALUE (₹)  COST & SGST/UTGST or Inclusive)  (C) (C) (C) (D=B+C)  (E=DXA)										
S. No. DESCRIPTION OF GOODS					QTY	UNIT	UNI	T GST &	UNIT	TOTAL
S. No. DESCRIPTION OF GOODS (8 Digit Mandat ory)    Mandat ory   Mand						BASIC	CI	ESS AS	LANDED	LANDED
DESCRIPTION OF GOODS  (8 Digit Mandat ory)  (A)  (B)  (B)  (C)  (C)  (C)  (C)  (C)  (D=B+C)  (E=DXA)  Meter 5,000  In words  In words			HSN			PRICE	APP	LICABLE	RATE	VALUE (₹)
No. DESCRIPTION OF GOODS (8 Digit or lociusive)    Mandat ory   Mandat ory   Mandat ory	c		CODE			INCL	(0	CGST &	(All	
Mandat ory)   (₹)   IGST) (₹) (₹) (C) (C) (D=B+C) (E=DXA)     Supply of Power Cable 33   1 kV, 3C x 400 sq. mm. (A2XWY) (conventional)   Meter   5,000   GRAND TOTAL LANDED VALUE (₹)   IGST) (₹) (₹) (₹) (₹) (₹) (T) (D=B+C) (E=DXA)     In words   Mandat ory)   (₹) (₹) (₹) (₹) (₹) (₹) (₹) (₹) (₹) (₹)	_	DESCRIPTION OF GOODS	(8 Digit	UoM		FREIGHT	SGST	/UTGST or	Inclusive)	
Supply of Power Cable 33 1 kV, 3C x 400 sq. mm. (A2XWY) (conventional)  GRAND TOTAL LANDED VALUE (₹)  In words  (A) (B) (C) (M) (B) (AMT (D=B+C) (E=DXA) (E=DXA)	INO.		Mandat			(₹)		IGST)	(₹)	
Supply of Power Cable 33 1 kV, 3C x 400 sq. mm. (A2XWY) (conventional)  GRAND TOTAL LANDED VALUE (₹)  In words  (A) (B) % AMT (D=B+C) (E=DXA)			ory)					(₹)		
Supply of Power Cable 33  1 kV, 3C x 400 sq. mm. (A2XWY) (conventional)  GRAND TOTAL LANDED VALUE (₹)  In words								(C)		
1 kV, 3C x 400 sq. mm.   Meter 5,000   GRAND TOTAL LANDED VALUE (₹)					(A)	(B)	%	AMT	(D=B+C)	(E=DXA)
1 kV, 3C x 400 sq. mm.   Meter 5,000   GRAND TOTAL LANDED VALUE (₹)		Supply of Power Cable 33								
(A2XWY) (conventional)  GRAND TOTAL LANDED VALUE (₹)  In words	1	kV, 3C x 400 sq. mm.		Meter	5,000					
In words								b		
In words	GRAND TOTAL LANDED VALUE (₹)									
	In words									

NOTE: Cost of all tests as per technical specification is to be included. No separate charges will be paid.

The Un-priced bid should be marked as "Quoted" and be submitted with Part – A

We declare that the following are our quoted prices in INR for the entire package.

Date:	Bidders Name:
Place:	Bidders Address:
Signature:	Designation:
Printed Name:	Common Seal:

PRICE BID FORMAT	
NIT NO: CMC/BY/25-26/RS/SkS/SV/3	
[RFx Number: 2200000122]	





# Technical Specification for

33 kV 3Cx400 sq mm cable

Specification No: BSES-TS-09-33CBL-R0

Rev:		0
Date:		8 Apr 2022
D	Abhishek Vashistha	diff
Prepared by	Gautam Deka/Pronab Bairagi	(Dus 8/04/22 200/2022
	Puneet Duggal	10
Reviewed by	Amit Tomar	601.4122
A d b	Gaurav Sharma	Carran
Approved by	K. Sheshadri	212

Page 1 of 38



# Technical Specification for 33 kV 3Cx400 sq mm cable

# Index

SI no	Description	Page no
1	General Specification	3
2	Annexure A:	17
	Scope, Documentation and Delivery Schedule	17
3	Annexure B:	18
	General Technical Particulars (GTP)	10
4	Annexure C:	25
4	List of BSES approved Sub-Vendors	23
5	Annexure D :	27
	Service Conditions	21
6	Annexure E:	28
	General Arrangement Drawing for End-sealing Cap	20
7	Annexure-F	29
,	General Arrangement Drawing for Cable pulling eye	20
	Annexure G:	
8	BSES format (typical) for Quality Assurance Plan (QAP) for H. T.	30
	Cables	
	Annexure H:	
9	Testing and manufacturing process requirements w. r. t. TR- XLPE	38
	insulation	
10	Annexure I:	38
10	Deviation format	30



Technical Specification for 33 kV 3Cx400 sq mm cable

# **General Specification**

#### 1.0.0 Codes & Standards

The cables shall be designed, manufactured and tested in accordance with the following National Standards and IEC Standards.

#### **National Standards**

IS 7098 Part-2	Cross linked polyethylene (XLPE) insulated PVC sheathed cables for working voltages from 3.3 kV up to and including 33 kV.
IS 5831 : 1984	PVC insulation & sheath of electric cables.
IS 10810 : 1984	Methods of test for cables.
IS 8130 : 1984	Conductors for insulated electric cables and flexible cords.
IS 3975 : 1999	Mild steel wires, formed wires and tapes for armouring of cables.
IS 0462 (Part 1) / 1983	Fictitious Calculation Method for determination of dimensions of protective covering of cables

#### **International Standards**

	<del>_</del>
IEC 60183	Guide to the selection of high voltage cables
IEC 60228	Conductors of insulated cables. Guide to the dimensional limits of
	circular conductors.
	Circulal corluctors.
IEC 60332 - 3	Tests on electric cables under fire conditions.
	Part 3: Tests on bunched wires or cables.
	1 4.1. 6. 1. 5.1. 5.1. 5.1. 5.1. 5.1. 5.1.
IEC 60502 - 2	Power cables for rated voltages from 6 kV (Um = 7.2 kV) up to 30
	kV (Um = 36 kV)
	( )
IEC 60811	Common test methods for insulating and sheathing materials of
Pts 1 through 5	electric cables.
IEC 885	Electric test methods for electric cables.
Pts 1 through 3	
IEC 28	International Standard of Resistance for Copper
IEC 332	Test on Electric Cables under fire conditions

#### 2.0.0 Cable Construction Features

This Specification generally covers following types / sizes of XLPE H. T. Cables used in BSES network in Delhi Discom area, mostly under-ground (buried, with chances of flooding by water) or for laying on racks, in ducts, trenches, conduits, and so on.



#### Technical Specification for 33 kV 3Cx400 sq mm cable

Note: (Ref.: Table stating Cable sizes given below.)

#### Cable Code:

2X

As per IS, cable designations comprise of following codes / options, as applicable for this Specification:

#### (N.A. - Not applicable for Specification)

-	(with Copper conductor)	(N.A.)
Α	Aluminium conductor	

-----

XLPE insulation

\_\_\_\_\_

W	Steel round Wire armour	(N.A.)

- ("un-armoured" or without armour) (N.A.)

\_\_\_\_\_

#### Y PVC outer sheath

Sr. No.	Description	Conductor Material	Cable Code
1.	33 kV, 3C x 400 sq. mm.	Al	A 2X W Y

Description of each item mentioned in the Specification (the text, BOQ, GTP or any site specific requirement) shall be followed, along with IS: 7098 – Part 2.

2.1.1	Conductor	a)	Electrolytic	Grade	Stranded	Aluminium
			Conductor			
		b)	Grade: H2 as	s per IS: 8	130 / 1984 (F	or AI)
		c)	Stranded, co	mpacted a	nd circular in	shape





Technical Specification for 33 kV 3Cx400 sq mm cable d) Class 2 e) "Longitudinal Water-Blocking Arrangement" (or water-tight construction or water barrier protection) shall be provided within the Conductor by water swelling yarns/tapes in the interstices of the conductor. The fiber/yarn shall turn into jelly/swell, when in contact with water making the conductor water tight as per IEC 60502-2 f) Semi-conducting water blocking tapes shall be applied over the conductor, suitable for continuous operating conductor temperature of 90 deg C. g) All detailed constructional features shall be shown in the cross-sectional drawing. 2.1.2 **Conductor Screen** Extruded semi-conducting material. (Also refer Cl. 2.1.3.) (Tapes are not acceptable) 2.1.3 Insulation a) Extruded XLPE (Cross-Linked Poly-Ethylene) Insulation, with water-tree retardant (WTR) property b) The required compound used shall be from BSES-approved sub-vendors and not from any other (refer Annexure – C). c) Uniform thickness of insulation shall be within the permissible values as per IEC Standards; eccentricity check shall be carried out to ensure this. d) Insulation Color: natural 2.1.4 Insulation Screen a) Freely-strippable semi-conducting screen, which should not require application of heat for its removal.

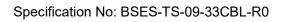




Technical Specification for 33 kV 3Cx400 sq mm cable (Refer Cl. 2.1.3.) b) Text "Do not Heat - Freely Strippable" to be printed on insulation screen (at every 600 mm interval). c) Round shape over the outer semi-con shall be within the permissible limits as per IEC standards; Ovality check shall be carried out to ensure this. d) Compound used shall be suitable for the operating temperature of the Cable and shall be compatible with the insulation used. 2.1.5 **XLPE Process** 2.1.5.1 33 KV Dry Cure and Dry Cooling process only. 2.1.5.2 Extrusion The Conductor Screen, Insulation and Insulation Screen shall be extruded simultaneously, in a Single One-Time Process (i.e. as a triple-head extrusion) to ensure homogeneity of layers over the conductor, and absence of voids. Any deviation from Approved Makes mentioned in 2.1.5.3 Make of Compounds for Insulation and Semi-Annexure-C shall not be acceptable, unless the deviation has been specifically approved by BSES, conducting prior to sourcing the compounds and taking up manufacturing of cable. 2.1.6 **Water-Swellable Tape** a) Semi-Conducting Water-Sellable Tape shall be provided, under the copper tape, on each core. b) Nominal thickness: 0.3 mm c) Weight: 118 gm / sq. m apprx. d) Swell height: ≥ 12 mm in 1 min. e) Compatible to strippable / non-strippable semicon, over which it is applied. 2.1.7 **Core Identification** a) For 3-core cables, cores shall be identified by coloured strips (Red, Yellow, Blue), applied



helically / longitudinally below the copper tape.  The coloured strips shall carry the name of manufacturer permanently printed at 1 meter intervals; this is to provide additional identification of manufacturer of the cable.  2.1.8 Copper Tape  Copper Tape of minimum thickness 0.1 mm shall be applied helically over the layer formed after application of insulation screen, water-swellable tape and identification strip.  Zero Negative tolerance in thickness of copper tape  2.1.9 Filler  a) All interstices, including center interstices shall be filled by PP filler.  b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc.  c) PVC filler is not acceptable.  d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape  As per manufacturer's standard  2.1.11 Inner Sheath  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables:  Galvanised Steel round wire armour  b) Minimum area of coverage of armouring shall be 90 % (min.) At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:  • Diameter of armour wire		Technical Specificat	tion for 33 kV 3Cx400 sq mm cable
manufacturer permanently printed at 1 meter intervals; this is to provide additional identification of manufacturer of the cable.  2.1.8 Copper Tape Copper Tape of minimum thickness 0.1 mm shall be applied helically over the layer formed after application of insulation screen, water-swellable tape and identification strip.  Zero Negative tolerance in thickness of copper tape  2.1.9 Filler a) All interstices, including center interstices shall be filled by PP filler.  b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc.  c) PVC filler is not acceptable.  d) Filler is not applicable for single-core cables.  2.1.10 Inner Sheath Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:			helically / longitudinally below the copper tape.
intervals; this is to provide additional identification of manufacturer of the cable.  2.1.8 Copper Tape  Copper Tape of minimum thickness 0.1 mm shall be applied helically over the layer formed after application of insulation screen, water-swellable tape and identification strip.  Zero Negative tolerance in thickness of copper tape  2.1.9 Filler  a) All interstices, including center interstices shall be filled by PP filler. b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc. c) PVC filler is not acceptable. d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape  As per manufacturer's standard  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.11 Inner Sheath  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			The coloured strips shall carry the name of
2.1.8 Copper Tape  Copper Tape of minimum thickness 0.1 mm shall be applied helically over the layer formed after application of insulation screen, water-swellable tape and identification strip.  Zero Negative tolerance in thickness of copper tape  2.1.9 Filler  a) All interstices, including center interstices shall be filled by PP filler.  b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc.  c) PVC filler is not acceptable.  d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape  As per manufacturer's standard  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour  b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:			manufacturer permanently printed at 1 meter
2.1.8 Copper Tape  Copper Tape of minimum thickness 0.1 mm shall be applied helically over the layer formed after application of insulation screen, water-swellable tape and identification strip.  Zero Negative tolerance in thickness of copper tape  2.1.9 Filler  a) All interstices, including center interstices shall be filled by PP filler.  b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc.  c) PVC filler is not acceptable.  d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape  As per manufacturer's standard  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour  b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:			intervals; this is to provide additional identification of
applied helically over the layer formed after application of insulation screen, water-swellable tape and identification strip.  Zero Negative tolerance in thickness of copper tape  2.1.9 Filler  a) All interstices, including center interstices shall be filled by PP filler. b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc. c) PVC filler is not acceptable. d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape  As per manufacturer's standard  2.1.11 Inner Sheath  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			manufacturer of the cable.
applied helically over the layer formed after application of insulation screen, water-swellable tape and identification strip.  Zero Negative tolerance in thickness of copper tape  2.1.9 Filler  a) All interstices, including center interstices shall be filled by PP filler. b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc. c) PVC filler is not acceptable. d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape  As per manufacturer's standard  2.1.11 Inner Sheath  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			
application of insulation screen, water-swellable tape and identification strip.  Zero Negative tolerance in thickness of copper tape  2.1.9 Filler  a) All interstices, including center interstices shall be filled by PP filler. b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc. c) PVC filler is not acceptable. d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape  As per manufacturer's standard  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:	2.1.8	Copper Tape	Copper Tape of minimum thickness 0.1 mm shall be
and identification strip.  Zero Negative tolerance in thickness of copper tape  2.1.9  Filler  a) All interstices, including center interstices shall be filled by PP filler. b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc. c) PVC filler is not acceptable. d) Filler is not applicable for single-core cables.  2.1.10  Binder Tape  As per manufacturer's standard  2.1.11  Inner Sheath  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12  Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			applied helically over the layer formed after
Zero Negative tolerance in thickness of copper tape  2.1.9 Filler  a) All interstices, including center interstices shall be filled by PP filler.  b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc.  c) PVC filler is not acceptable.  d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape  As per manufacturer's standard  2.1.11 Inner Sheath  Extruded Inner Sheath of Black PVC type ST-2  (IS 5831)  2.1.12 Armour  a) For 3-core Cables:  Galvanised Steel round wire armour  b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:			application of insulation screen, water-swellable tape
2.1.9 Filler  a) All interstices, including center interstices shall be filled by PP filler.  b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc.  c) PVC filler is not acceptable.  d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape  As per manufacturer's standard  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour  b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:			and identification strip.
be filled by PP filler.  b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc.  c) PVC filler is not acceptable.  d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape As per manufacturer's standard  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour a) For 3-core Cables: Galvanised Steel round wire armour  b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:			Zero Negative tolerance in thickness of copper tape
be filled by PP filler.  b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc.  c) PVC filler is not acceptable.  d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape As per manufacturer's standard  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour a) For 3-core Cables: Galvanised Steel round wire armour  b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:	0.4.0	Filler	a) All intensions including containing the set
b) PP Filler shall be non-hygroscopic, not having any effect on other compounds used, stable at cable temperatures, etc. c) PVC filler is not acceptable. d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape As per manufacturer's standard  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:	2.1.9	riller	,
any effect on other compounds used, stable at cable temperatures, etc. c) PVC filler is not acceptable. d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape As per manufacturer's standard  2.1.11 Inner Sheath Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			
cable temperatures, etc. c) PVC filler is not acceptable. d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape As per manufacturer's standard  Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			
c) PVC filler is not acceptable. d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape As per manufacturer's standard  2.1.11 Inner Sheath Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			·
d) Filler is not applicable for single-core cables.  2.1.10 Binder Tape As per manufacturer's standard  2.1.11 Inner Sheath Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			·
2.1.10 Binder Tape As per manufacturer's standard  2.1.11 Inner Sheath Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			· ·
2.1.11 Inner Sheath Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			d) Filler is not applicable for single-core cables.
2.1.11 Inner Sheath Extruded Inner Sheath of Black PVC type ST-2 (IS 5831)  2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:	2 1 10	Binder Tane	As per manufacturer's standard
2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:			To por managetaror o etamana
2.1.12 Armour  a) For 3-core Cables: Galvanised Steel round wire armour b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire. c) Zero negative tolerance is for:	2.1.11	Inner Sheath	Extruded Inner Sheath of Black PVC type ST-2
Galvanised Steel round wire armour  b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:			
Galvanised Steel round wire armour  b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:			
<ul> <li>b) Minimum area of coverage of armouring shall be 90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.</li> <li>c) Zero negative tolerance is for :</li> </ul>	2.1.12	Armour	a) For 3-core Cables :
90 % (min.). At any time, the gap between any two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for:			Galvanised Steel round wire armour
two adjacent armour wires shall not be more than the diameter of wire.  c) Zero negative tolerance is for :			b) Minimum area of coverage of armouring shall be
than the diameter of wire. c) Zero negative tolerance is for :			90 % (min.). At any time, the gap between any
c) Zero negative tolerance is for :			two adjacent armour wires shall not be more
			than the diameter of wire.
Diameter of armour wire			c) Zero negative tolerance is for :
			Diameter of armour wire





	Technical Spec	sification for 33 kV 3Cx400 sq mm cable	
2.1.13			
2.1.14	Outer Sheath	a) Extruded outer sheath of PVC (ST-2 as per IS	
		5831) with termite-repellant and anti-rodent	
		properties. Color - Blue	
		(Outer Sheath shall be FRLS-type, if chosen by	
		purchaser.)	
		b) Shape of the cable over the outer sheath shall	
		be circular, when manufactured / completed.	
		Regular Ovality check shall be carried out at	
		factory, to detect any abnormality.	
		Manufacturing quality shall be such that cable	
		will retain its circular shape, even after it is laid	
		at site.	
		c) The Outer Sheath shall be embossed as well as	
		laser printed with following minimum text at a	
		interval of 1 mtr:	
		The voltage designation	
		2. Type of construction / cable code	
		(e.g. A2XWY)	
		3. Manufacturer's Name and Trade-mark	
		4. Number of cores and nominal cross-	
		sectional area of conductor	
		5. Name of buyer / purchaser,	
		6. Month & Year of manufacturing	
		7. IS reference, i.e. IS: 7098	
		8. Batch No. / Lot No.	
		(For traceability purpose, in case of any, in	
		case of any manufacturing defect or	
		otherwise arising in the cable in future.)	
		9. Purchase Order Number & date	
		10. Word 'FRLSH', in case the cable is of	
		FRLSH type.	
		Note:	
		<ul> <li>Drum no and Progressive length marking</li> </ul>	



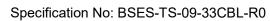


	Technical Specificat	ion for 33 kV 3Cx400 sq mm cable
		shall be provided by Laser printing at every meter with proper contrast in colouring  • Progressive (sequential) length marking of cable shall be at every meter, starting from zero for every drum
	Pulling-eye Assembly	a) A cable pulling-eye assembly Drg. No.
	and	MISC/E/4-1131/1699 (see Annexure-F) shall be
	Sealing-end Cap	provided at the loose end (outer end) of the
2.1.15	(for Cables)	cable on each drum. Sealing material shall be filled in inside the spaces / gaps between the pulling-eye assembly and cable outer sheath. Further, a heat-shrinkable sleeve shall be provided over the pulling-eye assembly and outer sheath of cable.  b) Other end (inner end) of the cable shall be sealed as per MISC/E/4-1131/1698 (see Annexure-E.) One PVC cap with Polyurethane compound shall be provided as primary sealing and heat-shrink end-cap shall form a secondary sealing over the PVC cap.
0.00	(This	
3.0.0	(This number not used.)	
4.0.0	Testing & Inspection	Tests shall be carried out in accordance with IS 7098 (Part-2).
	a) Type Tests	1) To Qualify in Tender:
		Cables must be of type tested quality. Type Test
		Reports shall be submitted for the type, size and
		voltage rating of cable offered in the bid.  For participation in the tender Type Test report
		shall be submitted from CPRI/ERDA only and
		shall not be more than 5 years old from the date
		of tender. If the report is more than 5 years and





Technical Specifica	ation for 33 kV 3Cx400 sq mm cable
	but less than 10 years old than bidder to submit
	undertaking that there is no design changes
	from the Type test conducted.
	2) Type Test Required After Award of PO:
	Type test on one cable drum of each type/rating
	from any lot shall be conducted at CPRI/ERDA
	on sample basis as per relevant IS/IEC. Sample
	shall be sealed by BSES during inspection of
	cable. This type test is applicable subject to
	BSES requirement and cost shall be borne by
	BSES.
b) BSES QAP	In general, all tests mentioned in the BSES QAP
(Typical)	(Characteristics – Typical) mentioned in Annexure-G
	shall be included in the Routine Tests, Type Tests
	and Acceptance Tests stated above.
c) Routine Tests	Measurement of Electrical Resistance
	2. HV Test with power frequency AC voltage
	3. PD test
	4. "Strippability Test" at both the ends of cable for
	each drum, to check the freely-strippable
	property of the Insulation Screen (outer semi-
	con).
	5. Impulse voltage test of one drum
	6. Armour coverage measurement
	7. Physical test-Dimensions of each and every layer
	and components.
	Test results from the above tests must appear in
	the documents forwarded by the vendor for
	Inspection call / waiver.
d) Inspection	The Buyer reserves the right to witness all tests
	specified on completed cables.
	2. The Buyer reserves the right to inspect cables at
	Sellers works at any time prior to dispatch, to
	verify compliance with the specifications.
	3. In-process (stage inspection) and final





Technical Specificati	on for 33 kV 3Cx400 sq mm cable
	inspection call intimation shall be given
	sufficiently in advance to the purchaser.
	4. Minimum lot size of Cables to be offered for
	inspection shall be mutually agreed between
	Purchaser and Vendor, before placing the order.
	Vendor shall raise inspection call only after a
	minimum lot size is ready and with due factory
	routine tests already carried out.
e) Acceptance Tests	Acceptance Tests shall be conducted as per Cl. 18.2
	of IS 7098 (Part-2) and the approved Quality
	Assurance Plan (QAP) in each lot of cables.
	Following tests shall also be carried out during the
	Acceptance Tests :
	a) "Wafer Boil Test" for checking integrity of semi-
	conducting layers.
	b) "Void-and-contamination Test" for the Insulation
	c) "Strippability Test" at both the ends of cable for
	each drum, to check freely-strippable property of
	the Insulation Screen (outer semi-con).
	d) "Water Penetration Test (WPT)", as per
	applicable IEC standards, to check adequacy of
	water-blocking arrangement provided inside the
	conductor.
	e) Heating cycle test along with potential shall be
	applicable on sample basis once in a PO.
	Jointing and Termination kits required for this
	test shall be in the scope of bidder.
	f) Impulse voltage test
	Internal type test shall be carried out once
	against each tender, on sample basis at
	manufacturer lab.
f) Test Certificates (TC)	Three sets of complete Test Certificates (Routine
	tests and Acceptance tests) shall be submitted along
	with the delivery of cables.
	Soft copy of the TCs shall be separately e-mailed to





Technical Specification for 33 kV 3Cx400 sq mm cable the Purchaser. Note: Make/grades of critical materials (such as, for conductor screen, insulation, insulation screen, etc.), actually used during manufacturing of cables for order-on-hand, shall be clearly stated in the TCs forwarded by the Manufacturer, enabling references in future. 5.0.0 Drawing, Data and a) Refer Annexure-A regarding Document Manuals Submission. b) Cross-Sectional Drawing shall show every feature of construction, including the thickness / diameter over every layer. This drawing shall also state the text to be embossed over the outer sheath - i.e. type/size, etc. of the cable, drum no./lot no., sequential marking over every meter, printing text on outer semi-con ("Do Not Heat-Freely Strippable"), font sizes to be used, additional text, if any, etc. Also, drum details, markings to be made on both sides of the drum, and so on. 5.0.1 Documents to be The vendor shall submit: submitted along with bid a) Cross-sectional drawing b) GTP (all data to appear) c) Type Test certificates d) Dimensional drawing for pulling eye e) Fault Level Calculation for armour and copper tape screen f) Complete Cable Catalogue and Manual g) Armour Coverage Calculation 5.0.2 Documents after award Within 15 days, the seller has to submit four sets of of contract above-mentioned drawings, along with one soft copy



	Technical Specificat	ion for 33 kV 3Cx400 sq mm cable
		for buyer's approval.
5.0.3	Final As-Built Drawings	One soft copy of all documents, including type &
		routine test certificates.
6.0.0	Drum length &	Cable length per drum
	tolerance	
6.0.1	a) 33 KV, Three core	a) 300 mtr +/- 5 %
6.0.2	Overall tolerance	- 2 % for the total cable length for the entire order.
6.0.3	Short length of cables	Manufacturer shall take prior approval from
		Purchaser for any supply of short length cables.
		For 33 KV, cables, minimum acceptable short length
		cable can be 150 meter In any case, manufacturer
		shall not put two cable pieces of different short
		lengths in same cable drum.
7.0.0	Packing, Shipping,	
	Handling & Storage	
	a) Packing	
		1. Both the ends of the cables shall be properly
		sealed to prevent any deterioration of the cable,
		due to ingress of water, etc.
		2. Cable inner end (starting end) shall project,
		outside the completely wound cable, by
		sufficient length enabling verify cable details,
		including the initial length marking.
		3. Similarly, outer end of the cable shall be saddled
		/ secured to the drum properly to prevent any
		external damage to the end at any time.
		4. Before putting on wooden planks, protective
		covers (thick plastic sheets, etc.) shall be
		secured over the wound cable, to avoid any
		abrasion by wooden planks, over the outer





Technical Specification for 33 kV 3Cx400 sq mm cable be put as protective covers. 5. After providing the protective covers, the cable drums shall be finally closed by wooden planks (with saddles), without leaving any gaps between the planks; i.e. 100 % covering shall be ensured. Drum Identification Direct marking (i.e. text painting through stencils, b) Markings: etc.) shall be done on the drums, instead of attaching labels, which may be misplaced/lost over a period of time. 1. Drum identification number Cable voltage grade 3. Cable code (e.g. A2XWY, etc.) 4. Number of cores and cross sectional area 5. Cable quantity, i.e. cable length (metre) 6. Purchase order number & date 7. SAP item code 8. Total weight of cable and drum (kg) 9. Manufacturer's Name 10. Buyer's name 11. Month & Year of Manufacturing 12. Direction of rotation of drum 13. Cable length final end-markings (i.e., reading at the inner end and reading at the outer end, just before packing, shall be marked on the drum.) The seller shall give complete shipping information c) Shipping information concerning the weight, size of each package d) Transit damage The seller shall be responsible for any transit damage due to improper packing. e) Type of Drum Non Returnable Steel drums, as per relevant IS / IEC. (Steel drums shall be with M.S. spindle plate with nut-bolts) f) Cable Drum handling The drums shall be with M.S. spindle plate (with nut-



	Technical Specification for 33 kV 3Cx400 sq mm cable			
		bolts) of adequate size to suit the spindle rods,		
		normally required for handling the drums, according		
		to expected weight of the cable drums.		
8.0.0	Quality Assurance Plan (QAP)			
8.0.1	Vendor's QAP	Manufacturer shall submit QAP in line with BSES		
		QAP format (Annexure-G) for purchaser's approval.		
8.0.2	Inspection Points	To be mutually identified and agreed upon in QAP.		
9.0.0	Progress Reporting			
9.0.1	Outline Document	To be submitted for purchaser's approval for outline		
		of programmes for production, stage-inspection,		
		testing, final inspection, packing, dispatch and		
		documentation.		
9.0.2	Detailed Progress Report	To be submitted to Purchaser once a month containing:		
		i) Progress on material procurement		
		ii) Progress on fabrication (as applicable)		
		iii) Progress on assembly (as applicable)		
		iv) Progress on internal stage-inspection		
		v) Reason for any delay in total programme		
		vi) Details of test failures, if any, during manufacturing stages.		
		vii) Progress on final box-up Constraints / Forward Path		
10.0.0	Deviation	a) Deviations from this specification are only		
		acceptable, where the Seller has listed in his		
		quotation the requirements he cannot, or does		
		not, wish to comply with, and the Buyer has		
		accepted, in writing, the deviations before the		
		order is placed.		
		b) In the absence of any list of deviation, it will be		



Technical Specificati	on fo	or 33 kV 3Cx400 sq mm cable
		assumed by the Buyer that the Seller complies
		fully with this specification.
	c)	Any deviations mentioned in any other submitted
		bid documents (i.e.in filled GTP, Catalog, BSES
		old approval, buyer's/seller's standards etc) by
		seller without separate deviation sheets with
		BSES acceptance, will not be considered as a
		deviation from this tech spec at any stage of
		contract.



Technical Specification for 33 kV 3Cx400 sq mm cable

#### Annexure - A

#### Scope, Documentation and Delivery schedule

Document/Drawing submission shall be as per the matrix given below:

- a. All documents/drawings shall be provided in soft copy only in returnable Pen drives
- b. Language of the documents shall be English only.
- c. Incomplete submission shall be liable for rejection.
- d. Document check sheet compliance shall be the first sheet for each submission stage i.e. Technical bid, Drawing Approval, Pre Dispatch, Pre closure
- e. No submission is acceptable without check list compliance.
- f. Deficient/ improper document/ drawing submission shall be liable for rejection.
- g. Order of documents shall be strictly as per the check list.
- h. Any document not included in the below table but necessary for detailed engineering shall be deemed to be included in bidder's scope

S.No.	Detail of Document	For Tender	For Approval/Review	Final Submission
1	Guaranteed Technical Particulars (GTP)	Required	Required	Required
2	Deviation Sheet, if any	Required	Required	Required
3	Detailed cross sectional drawing of cable and drum	Required	Required	Required
4	Installation Instructions		Required	Required
5	Manual/Catalogue	Required	Required	Required
6	Cable de-rating factors		Required	Required
7	Type test reports of offered type and rating of cable	Required	Required	Required
8	BIS certificate	Required		
9	Make of Raw Materials	Required	Required	Required
10	Inspection and test reports, carried out in manufacturer's works			Required
11	Routine Test Certificates			Required
12	Test certificates of all the raw materials			Required



Technical Specification for 33 kV 3Cx400 sq mm cable

#### Annexure - B

## GUARANTEED TECHNICAL PARTICULARS (GTP)

#### Note:

- 1) For every type / size of cable, every data shall be mentioned.
- 2) Seller may submit separate GTP for every type / size of cable, as suitable.
- 3) GTP requirements are generally as per IS: 7098 (Part-II).
- 4) GTP shall be read in line with purchaser's Project Site Specific Requirement.

Sr. No.	Description	Buyer's requirement	Unit	Seller's Data
1101		10401101110		
1.0	Purchase Req. No.	-		
2.0	Guarantee Period (Min.)	60 Months (from date of commissioning) / 66 Months (from date of receipt at		
		purchaser's store) whichever is earlier		
3.0	Applicable IS / IEC Standard followed by vendor	IS 7098 Part-2 / IEC 60502-2		
4.0	Make	-		
5.0	Туре			
	a) 33 kV, 3c x 400 sq. mm.	A2XWY		
6.0	Voltage Grade			
	a) 33 kV, 3c	19 / 33	kV	
7.0	Maximum Conductor temperature			
	A Continuous	90	deg. C	
	3 Short time	250	deg. C	
8.0	Conductor			
	A Material and Grade	As per Cl. 2.1.1		
	3 Size	As shown under 5.0 above		
(	Wires in each conductor	As per Table 2 of IS 8130	Nos.	
]	Conductor Shape	As per Cl. 2.1.1		





Technical Specification for 33 kV 3Cx400 sq mm cable Manufacturer E Dia. of wires in each conductor before compaction Standard F Diameter over conductor mm G | Maximum Conductor resistance at 20 ° C c) 33 kV, 3c x 400 sq. mm. 0.0778 ohm/km Longitudinal Water Blocking Is it provided and Arrangement within shown in the crossconductor sectional drawing? (Yes / No) Semiconducting water Yes/No blocking tape over conductor Short circuit current-carrying kΑ for 1 sec. capacity of conductor 9.0 **Conductor Screen** (inner semi-con) A Material & type As per Cl. 2.1.2 B | Thickness (min) 0.50 mm C Diameter over conductor mm screen D Make and grade of semiconducting compound Insulation 10.0 A Insulation Material As per Cl. 2.1.3 В Nominal thickness 33 kV, 3c 8.8 mm C | Minimum thickness b) 33 kV, 3c 7.82 mm D Diameter over Insulation mm (Approx.) E Make and grade of Insulation compound F Eccentricity As per IEC standards % G Water-tree retardant property Required 11A. Insulation Screen (outer semi-con) a. i) Thickness of freely mm 0.50 strippable Semi conducting screen ii) Make and grade of semiconducting compound As per Cl. No. 2.1.4 iii) Printing (Yes / No) iv) Ovality of the core As per IEC Standards





Technical Specification for 33 kV 3Cx400 sq mm cable Diameter over Insulation Screen (apprx.) 11B. Water-Swellable Tape (if required by Purchaser) a) Thickness a) 0.3 mm b) Weight b) 118 gm / sq. m c) Swell height c)  $\geq$  12 mm in 1 min. d) Yes / No d) Compatible to strippable / non-strippable semi-con, over which it is applied. e) Make & Grade e) Pl. state f) Pre-slitted packed tapes f) Yes / No from sub-vendors approved by BSES 11C. **Cable Core identification** a) By coloured strips over cores applied helically / longitudinally b) Manufacturer's name shall be permanently printed on the strips, at close intervals. 11D. **Copper Tape** i) Dimensions Mm Thickness: 0.1 +/- 5 % b) Width: 50 mm C) Overlap: 20% d) No Negative tolerance on thickness of copper tape ... kA ii) Fault current-carrying Manufacturer's for ... capacity of copper tape Standard sec. (Calculation sheet shall be attached) Diameter over laid up core mm (apprx.) 12.0 Filler As per Cl. 2.1.9 (Specify no. & size of (Material and type) filler at center & core interstices)





Technical Specification for 33 kV 3Cx400 sq mm cable a) 33 kV, 3c x 400 sq. mm. 12A.0 **Binder Tape** over laid-up cores **Inner Sheath** 13.0 A | Material and type As per Cl. 2.1.11 B | Minimum thickness a) 33 kV, 3c x 400 sq. mm. 0.7 mm C Approx. dia. over inner mm sheath 14.0 Armour A Material 33 kV, 3Cx400 G. I. Round wire No. Armour – GI round wire a) Minimum Dia of wire mm 4.00 a) (zero negative tolerance) b) Number of wire (min.) b) As per nos. manufacturer calulation C Approx. Equivalent Area sq. mm. % D Area covered by armour Min. 90 % Calculation shall be attached. E Dia. over armour - apprx. Mm Fault current carrying Calculation sheet ... kA for ... capacity of armour shall be attached. sec. 15.0 **Outer Sheath** Material and type As per Cl. 2.1.14 \*\* As per Table-5 of B Thickness (min.) IS 7098 Part-2 a) 33 kV, 3c x 400 sq. mm. mm C Color Blue D Embossing Yes / No (details as per Cl. 2.1.14) E FRLS Properties As per customer's requirement 16.0 Approx. overall diameter mm 17.0 Standard drum length with tolerance a) 33 kV, 3c x 400 300 +/- 5% meters sq. mm. 17A Overall order tolerance - 2 % for the total





Technical Specification for 33 kV 3Cx400 sq mm cable cable length for the entire order. 18.0 **Cable Drum** Type of drum Steel a. (Specify the relevant IS / IEC followed for drum design) On both faces Markings on the drum (as per Cl. 7.0.0) 18A.0 **Cross-Sectional Drawing** Is drawing submitted, showing every (ref. Cl. 5.0.0) feature of constructions? (Yes / No) 19.0 Yes/No a. Sealing-end Cap (provided at both ends) Is manufacturer's / Sub-Vendor's drawing submitted? (Yes / No) b. Cable pulling eye at one Yes/No end and Sealing end cap at Is manufacturer's / other end Sub-Vendor's drawing submitted? (Yes / No) 20.0 Weights a) Net weight of cable kg / km (apprx.) b) Weight of empty drum 300 mtr Kg 300 mtr c) Weight of Cable with drum kg 300 mtr mm d)Drum size e)Drawing of Drum Required 21.0 Continuous current rating for standard I. S. condition laid Direct Amp a) In ground 30° C b) In duct 30° C Amp Amp c) In air 40° C 22.0 (not used) 23.0 Electrical Parameters at Maximum Operating temperature: AC Resistance ohm / km Α B Reactance at 50 c/s ohm / km ohm / km С Impedance D Zero sequence impedance ohm / km E Positive sequence ohm / km



Technical Specification for 33 kV 3Cx400 sq mm cable impedance Negative sequence ohm / km impedance Capacitance micro-G farad / km Conductance Amperes per volts mho I Inductive susceptance J | Capacitive susceptance ohms 24.0 Recommended minimum 15 x O. D. mm bending radius 25.0 De-rating factor for following Ground / Air Ambient Temperatures: a) At 30° C b) At 35° C c) At 40° C d) At 45° C e) At 50° C 26.0 Group factor for following Touching Trefoil numbers of cables laid: a) 3 Nos. b) 4 Nos. c) 5 Nos. d) 6 Nos. 27.0 Recommended pressure for 30 N / mm2 N/sq. mm. laying cable using power winch 28.0 Process of Cross-linking of Polyethylene a) 33 kV, 3c x400 Dry Cure and Dry Cooling process only Is copy of latest valid 29.0 Type test (TTR - Type Test Report) TTR for respective sizes enclosed? (Yes / No) 30.0 Is QAP Format **Quality Assurance Plan** (Annexure-F), duly (QAP) filled in and enclosed? (Yes / No)



	Technical Specification for 33 kV 3Cx400 sq mm cable										
31.0	List of Sub-Vendors	Is this list enclosed									
	for construction items	for BSES approval?									
	(Annexure-C)	(Yes / No)									



Technical Specification for 33 kV 3Cx400 sq mm cable

#### Annexure - C

#### **List of Sub-Vendors**

#### for critical items

Vendor to state sub-vendors' names for other items, wherever approved names are not mentioned, for purchaser's approval during pre-order / post-order stages.

Raw Materials		Name of the Suppliers
	1	Dow Chemicals , U.S.A.
XLPE Compound	2	Borealis , Sweden
	3	Hanwha , South Korea
	1	Dow Chemicals, U.S.A.
Semi-Conducting Compound	2	Borealis , Sweden
	3	Hanwha , South Korea
	1	Lantor
	2	Geca
Conductor Water-Blocking	3	Miracle
tapes / yarn / powder	4	Scapa
	5	Sneham International
	1	Lantor
	2	Geca
Water-Swellable Tapes	3	Miracle
(Pre-slitted)	4	Scapa
	5	Sneham International
	1	Bharat Aluminium Co. Ltd. (BALCO)
	2	Hindustan Aluminium Co. Ltd. (HINDALCO)
Aluminium Rod	3	National Aluminium Co. Ltd. (NALCO)
	4	Vedanta (Sesa Sterlite)
	XLPE Compound  Semi-Conducting Compound  Conductor Water-Blocking tapes / yarn / powder  Water-Swellable Tapes (Pre-slitted)	XLPE Compound



Technical Specification for 33 kV 3Cx400 sq mm cable Aggarwal Metal 2 Indian Smelting Copper Tape 6. 3 Luvata Swedan 4 Outokumpu Copper Strip AB, Swedan Tata 1 2 Balaji 7 Galvanized Steel Wires / 3 Systematic Strips Mica Wires Pvt Ltd. 4 5 **Bansal Industries** Kalpana 2 Universal SCJ Plastic 8 **PVC Compound** 3 4 Sriram Polytech Shri Ram Vinyl, Kota 5 Vijoy Polymers 1 Yash Polymers 9 P. P. Fillers 2 3 **AVSL Industries** 1 **AVSL Industries** Core Identification Tape 2 Yash Polymer 10 3 Vijoy Polymers Borealis 11 PE Compound 2 Shakun 3 Kalpana



#### Technical Specification for 33 kV 3Cx400 sq mm cable

#### Annexure - D

#### **Service Conditions**

(Atmospheric / Soil conditions at Site)

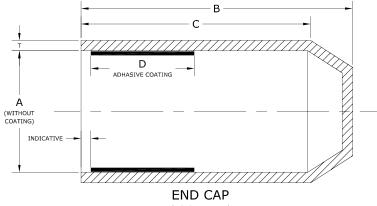
A.	Delhi	
a)	Average grade atmospheric	Heavily polluted, dry
	condition	
b)	Average grade soil condition	
c)	Maximum altitude above sea	1000 M
	level	
d)	Air temperature Ambient	i) Highest : 50 deg C
		ii) Average : 40 deg C
		iii) Minimum : 0 deg C
e)	Relative Humidity	100 % max
f)	Thermal Resistivity of Soil	150 deg. C . cm / W max.
g)	Seismic Zone	4
h)	Rainfall	750 mm concentrated in four months

### **ANNEXURE E**

#### **DIMENSIONS**

SIZE	Α	Α	В	С	D	LC %	Т
SIZE	EXP.(Min.)	REC (Max)	EXP.(Min.)	EXP (Min.)	EXP (Min.)		(WALL REC. ± 20 % )
EC 120/150	75	34	120	105	50	± 10	4.2
EC 240/300	100	62	130	110	70	± 10	3.5
EC 400	145	75	155	120	70	± 10	4.6

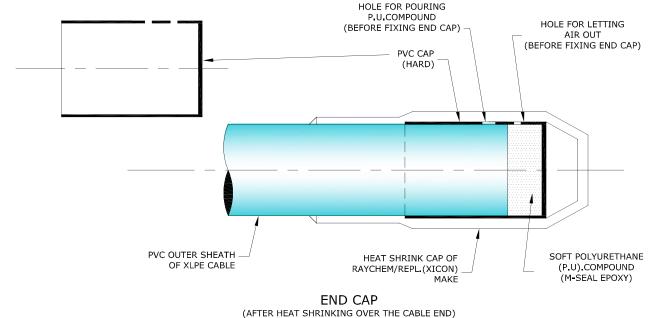
EXP - Expanded (as supplied), REC - Recovered freely, LC - Longitudinal Change, T - Wall Thickness, EC - End Cap



#### **MATERIAL SPECIFICATIONS**

	Characteristics	Test Class	Value	Test Method
Α	Physical Properties			
1	Specific Gravity	Туре	1.05 ± 0.2	ASTM D-1505
2	Water Absorption	Type	1 % (max)	ASTM D-570 / ISO 62
3	Tensile Strength	Routine	10 N /sqmm (min)	ASTM D-412 / ISO 37
4	Ultimate Elongation	Routine	300% (min)	ASTM D-412 / ISO 37
5	Hardness	Type	45 shore D ± 3	ASTM D-2240
6	Thermal Test			
В	Thermal Ageing (120°C for 500 hrs)			
1	Tensile Strength	Type	8 N/sqmm (min)	ASTM D-412 / ISO 37
2	Ultimate Elongation	Type	200% (min)	ASTM D-412 / ISO 37
С	Electrical Properties	•	40	
1	Volume Resistivity	Туре	10 <sup>12</sup> ohm-cm. (min)	ASTM D-257 / IEC 93
2	Dielectrical Strength	Type	10 kV/mm. (min)	ASTM D149 / IEC 243
3	Dielectric Constant	Туре	5 (max)	ASTM D 150 / IEC 250

(AS SUPPLIED) SECTIONAL VIEW



Note: 1) All dimension in mm

- 2) Colour Black
- 3) Size as mentioned in the table shall be stencilled on respective item



DRAWING No. MISC/E/4-1131/1698

SCALE :NOT TO SCALE DATE: 09-05-2011

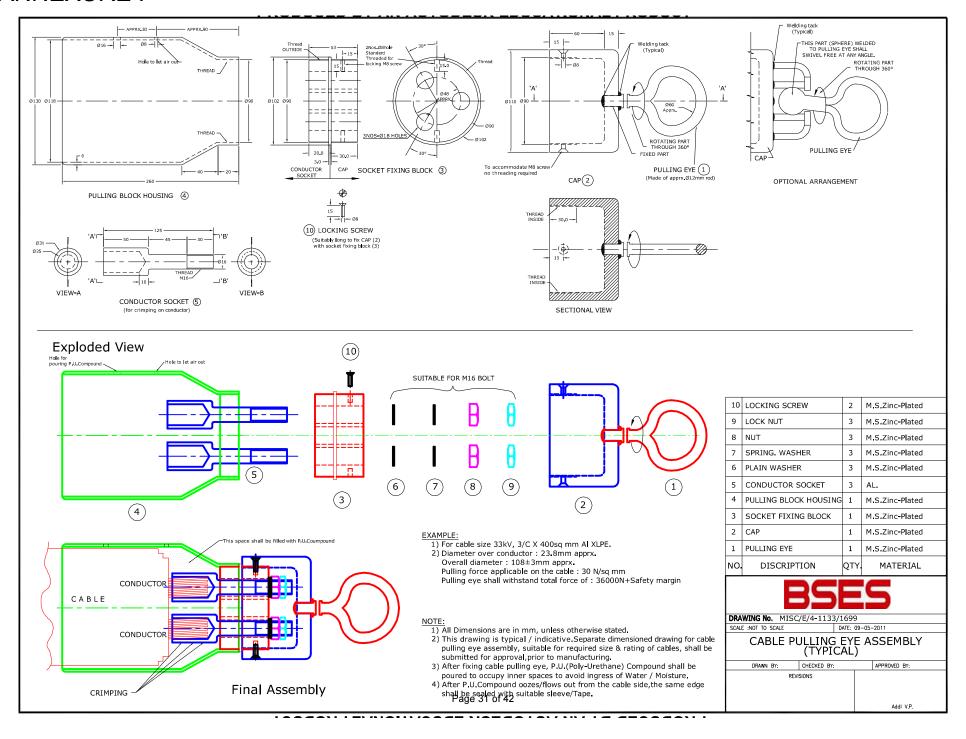
END SEALING CAP (FOR XLPE CABLE)

DRAWN BY: CHECKED BY: APPROVED BY:

REVISIONS

Addl V.P.

#### ANNEXURE F



#### ANNEXURE G: QUALITY ASSURANCE PLAN (QAP)

S.	COMPONENT &	CHARACTERISTICS	CLASS	TYPE OF	QUANTUM OF CHECK	REFERENCE	ACCEPTANCE	FORMAT OF		AGENC	1	Remark
NO.	OPERATION			CHECK		DOCUMENT	NORMS	RECORD	sv	MFR	BSES	
1	2	3	4	5	6	7	8	9	10	11	12	13
		endor of Cable Manufacturer, MFR	: Cable Manufacturer,	MPS : Material	Purchase Specification,							
	· · · · · · · · · · · · · · · · · · ·	tness, V : Verification										
	W MATERIAL											
1	Aluminium/Copper	a) Tensile strength	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
	Rod	b) Resistivity	Major	Electrical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		c) Diameter	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		d) Chemical composition	Major	Chemical	Sample	MPS	MPS	Test certificate		V	V	
		e) Surface finish	Major	Visual	Sample			-	Р	Р	_	
2	PVC Compound	a) Tensile Strength	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		b) Elongation at break	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		c) Thermal stability	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
3	TR-XLPE	a) Packing	Minor	Visual	100%	MPS	MPS	-	Р	V	-	
	Compound	b) Tensile Strength	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
	(Borealis/Dow	c) Elongation at break	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
	chemical/ Hanwa)	d) Hot set test	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		e) Volume Resistivity	Major	Electrical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		f) Cure Curve (Max. Torque)	Major	Physical	Sample	MPS	MPS	Reg./Sheet	-	Р	V	
		g) Density	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
4	Semi-conducting	a) Packing	Minor	Visual	100%	MPS	MPS	-	Р	V	-	
	Compound	b) Volume Resistivity	Major	Electrical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
	(Borealis/Dow	c) Tensile Strength	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
	chemical/ Hanwa)	d) Elongation at break	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		e) Cure Curve (Max. Torque)	Major	Physical	Sample	MPS	MPS	Reg./Sheet	-	Р	V	
		f) Density	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
5	Copper tape	a) Thickness & width	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		b) Tensile Strength	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		c) Elongation at break	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		d) Resistivity	Major	Electrical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
6.	Armour wires/strips	a) Dimensions	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
	(Galvanised steel)	b) Surface condition/finish	Major	Visual	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		c) Tensile Strength	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		d) Elongation at break	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		e) Torsion test for round wire	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		f) Wrapping test	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		g) Mass of zinc coating	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		h) Uniformity of zinc coating	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		i) Adhesion test	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		j) Resistivity test	Major	Electrical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
7	Water Swellable	a) Dimensions	Minor	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	

## BSES\_

#### ANNEXURE G: QUALITY ASSURANCE PLAN (QAP)

S	COMPONENT &	CHARACTERISTICS	QUANTUM OF CHECK		ACCEPTANCE	FORMAT OF	I	AGENC	Υ	Remark		
NO.	OPERATION	or market Endotries	CLASS	TYPE OF CHECK	QUALITY OF STEER	DOCUMENT	NORMS	RECORD	sv	MFR	BSES	I Noman
1	2	3	4	5	6	7	8	9	10	11	12	13
Ė	_	/endor of Cable Manufacturer, MFR : Cable				<u> </u>	1	†	Ť	<u> </u>	† ·	
		tness, V : Verification										
	tape	b) Swelling height	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		c) Resistivity	Major	Electrical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
		d) Weight	Major	Physical	Sample	MPS	MPS	Reg./Sheet	Р	P/V	V	
8	Steel Drum	a) Dimension	Major	Meas.	1 sample per size	IS 10418 / I	Purchase order	-	Р	Р	-	
		b) Finish & workman ship	Minor	Visual	1 sample per size	Compliance to star norms & free from		-	Р	Р	-	
9	Binder tape	a) Dimensions & material	Minor	Physical	Sample	MPS	MPS	-	Р	Р	-	
10	Polypropylene filler	a) Size	Minor	Physical	Sample	Purchase order	Purchase order	-	Р	Р	-	
11	Heat shrinkable end	a) Bore diameter	Major	Physical	1 sample per size			-	-	Р	-	
	cap	b) Length of end cap	Minor	Physical	1 sample per size			-	-	Р	-	
B PR	OCESS INSPECTION											
1	Wire Drawing	a) Diameter	Major	Physical	Sample			Reg./Sheet	-	Р	V	
		b) Surface finish	Major	Visual	100 %	Smooth & free			-	Р	-	
		c) Tensile test (for AI)	Major	Physical	Sample	IS: 8130/84	IS: 8130/84	Reg./Sheet	-	Р	V	
		d) Elongation test (for Cu)	Major	Physical	Sample	IS: 8130/84	IS: 8130/84	Reg./Sheet	-	-	V	
		e) Wrapping test (for AI)	Major	Physical	Sample	IS: 8130/84	IS: 8130/84	Reg./Sheet	-	Р	V	
2	Stranding	a) No. of wires/strands	Major	Physical	At the time of m/c setting			Reg./Sheet	-	Р	V	
		b) Lay length & Lay direction	Major	Physical	-do-			-	-	Р	V	
		c) Dia of conductor	Major	Physical	During setting & once in each shift			Reg./Sheet	-	Р	V	
		d) Surface finish	Major	Visual	100 %	No surface defects edges, scratches,	and free from sharp grease, oil etc.	-	-	Р	-	
3	Core extrusion	a) Compound Make/Grade	Major	Visual	During m/c setting			-	-	Р	-	Insulation screen
	(Conductor screen, Insulation & insulation screen)	b) Thickness of insulation & extruded S.C. layers	Major	Physical	During m/c setting after stabilisation	Tech. Data Sheet / IS 7098/II/2011	Tech. Data Sheet / IS 7098/II/2011	Reg./Sheet	-	Р	V	shall be freely strippable, without application of heat.
		c) Surface finish	Minor	Visual	100 %	Smooth & free	from defects	-	-	Р	-	
		d) Printing on outer semi- conducting layer	Major	Visual	100 %	"DO NOT HEAT, FRI	EELY STRIPPABLE"	-	-	Р	-	
		e) Tensile Strength	Major	Physical	Sample	IS 7098/II/2011	IS 7098/II/2011	Reg./Sheet	T -	Р	V	
		f) Elongation at break	Major	Physical	Sample	IS 7098/II/2011	IS 7098/II/2011	Reg./Sheet	-	Р	V	
		g) Hot set test	Major	Physical	Sample	IS 7098/II/2011	IS 7098/II/2011	Reg./Sheet	-	Р	V	
		g1) Ovality of core	Minor	Physical	Sample	Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	Р	V	

#### ANNEXURE G: QUALITY ASSURANCE PLAN (QAP)

S.	COMPONENT &	CHARACTERISTICS	CLASS	TYPE OF	QUANTUM OF CHECK	REFERENCE	ACCEPTANCE	FORMAT OF	AGENCY		Y	Remark
NO.	OPERATION			CHECK		DOCUMENT	NORMS	RECORD	sv	MFR	BSES	1
1	2	3	4	5	6	7	8	9	10	11	12	13
		Vendor of Cable Manufacturer, MFR : Cabl	e Manufacturer,	MPS : Material	Purchase Specification,							
	P : Perform, W : W	itness, V : Verification										
		h) Eccentricity of insulation	Minor	Physical	Sample	Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	Р	V	
		i) Core diameter	Minor	Physical	Sample	Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	Р	V	
		<ul><li>j) Void &amp; contamination test for insulation (Silicon Oil test)</li></ul>	Major	Physical	Sample			-	-	Р	V	
		k) Wafer boil test for extruded semi- conducting layers	Major	Physical	1 sample/lot	BIS draft Specn	BIS draft Specn	Reg./Sheet	-	Р	V	
4	Taping - water	a) Dimensions	Minor	Physical	Sample	Tech. Data Sheet	Tech. Data Sheet	-	-	Р	-	
	Swellable semi- conducting	b) Tape Application (Overlap)	Minor	Visual	During m/c setting	Suitable overlap	Suitable overlap	-	-	Р	-	
5	Taping - Copper	a) Width & Thickness of tape	Major	Physical	During m/c setting	Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	Р	V	
	tape	b) Number of tapes	Major	Visual	During m/c setting	Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	Р	V	
		c) Tape application (Overlap)	Minor	Visual	During m/c setting	Tech. Data Sheet	Tech. Data Sheet	-	-	Р	-	
6	Laying up	a) Identification of cores	Major	Visual	During m/c setting	Tech. Data Sheet	Tech. Data Sheet	-	-	Р	-	Cores shall be
		b) Direction of lay, core Sequence & Lay length	Major	Visual	During m/c setting	IS 7098/II/2011, PIL- W-02	IS 7098/II/2011, PIL- W-02	-	-	Р	-	laidup with PP fillers & suitable tape
		c) Application of binder tape	Minor	Visual	During m/c setting	Tech. Data SI	neet	-	-	Р	-	binder shall be provided over laid
		d) Shape of laid up assembly	Minor	Visual	100%	Reasonably circular	Reasonably circular	-	-	Р	-	up assembly
7	Inner sheath	a) Material & type	Major	Visual	During m/c setting	Tech. Data Sheet	Tech. Data Sheet	-	-	Р	-	
		b) Thickness	Major	Physical	During m/c setting & drum change	Tech. Data Sheet & IS 7098/II/2011	ech. Data Sheet & IS 7098/II/2011	Reg./Sheet	-	Р	V	
		c) Surface finish	Minor	Visual	100 %	Surface shall be sr defects	nooth & free from	-	-	Р	-	
		d) Colour of inner sheath	Major	Visual	100 %	Tech. Data Sheet	Tech. Data Sheet	-	-	Р	-	
8	Armouring	a) Dimension of armour wires/strips	Major	Physical	During m/c setting	Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	Р	V	No negative tol. on strip thickness/wire diameter
		b) No. of armour strip/wire	Major	Counting	During m/c setting	Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	Р	V	
		c) Armour coverage	Minor	Visual	During m/c setting	IS 7098/II/2011	IS 7098/II/2011	<u> </u>	-	P	-	
		d) Direction of lay	Major	Visual	During m/c setting	IS 7098/II/2011	IS 7098/II/2011	-	-	P	-	
		e) Lay length/Gear setting	Minor	Visual	During m/c setting			_	-	P	-	
		f) Surface finish	Major	Visual	100 %	No cross over/over	riding of wire/strip	-	-	Р		
9	Outer	a) Material & type	Major	Visual	During m/c setting	Tech. Data Sheet	Tech. Data Sheet	<del>                                     </del>	+ -	P	-	
J	sheath/Rewinding	b) Anti rodent & termite additives	Major	Visual	Each loading	. Join Bala Shoot	. Son. Bata Shoot	Reg./Sheet	<del>   </del>	P	V	
l	Janeau // New Inding	D) Anti rodent & termite additives	Iviajor	Visuai	Each loading			Reg./Sneet	· -	<u> </u>	V	<u> </u>

#### ANNEXURE G: QUALITY ASSURANCE PLAN (QAP)

S.	COMPONENT &	CHARACTERISTICS	CLASS	TYPE OF	QUANTUM OF CHECK		ACCEPTANCE	FORMAT OF			Remark	
NO.	OPERATION			CHECK		DOCUMENT	NORMS	RECORD	sv	MFR	BSES	
1	2	3	4	5	6	7	8	9	10	11	12	13
		Vendor of Cable Manufacturer, MFR : Cable	Manufacturer	, MPS : Material	Purchase Specification,							
	P : Perform, W : W	itness, V : Verification		<u> </u>		T   D   O	T . D . O	D (0)				
		b) Thickness	Major	Physical	Each length	Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	P	V	
		c) Overall diameter	Major	Physical	Each length	Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	P	V	
		d) Surface finish & colour of sheath	Major	Visual	100 %	Surface smooth & f Colour as per Tech		-	-		-	
		e) Cable length verification	Major	Visual	Each length	Manufacturing Plan	Manufacturing Plan	-	-	Р	-	
		f) Marking	Major	Visual	Each length	As per approved GTP drawing	P/cross sectiona	Reg./Sheet	-	Р	V	
C FI	NAL INSPECTION											
1	Routine tests	a) High Voltage	Critical	Electrical	100 %	IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	V	
		b) Conductor Resistance	Critical	Electrical	100 %	IS 8130/84	IS 8130/84	Test Report	-	Р	V	
		c) Partial Discharge	Critical	Electrical	100 %	IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	V	
		d) Impulse	Critical	Electrical	One sample per lot			Test Report		Р	V	
		e) Armour Coverage	Critical	Physical	One sample per lot			Test Report		Р	V	
		f) Physiacal Dimensions	Critical	Physical	One sample per lot			Test Report		Р	V	
		g) Freely Strippable insulation screen (Strippability Test)	Major	Physical	One sample per lot	Factory Standard	Factory Standard	Test Report	-	Р	V	
2	Stage Inspection	Wire Drawing	Major	Visual	100 %	Tech. Data Sheet	IS/IEC	Test Report	-	Р	W	
		Extrusion process	Major	Visual	100 %	Tech. Data Sheet	IS/IEC	Test Report	-	Р	W	Stage Inspection
		Raw maerial inspection at factory	Major	Physical	100 %	Tech. Data Sheet	IS/IEC	Test Report	-	Р	W	shall be conducted subject to BSES
		Wrapping of Aluminium	Major	Physical	100 %	Tech. Data Sheet	IS/IEC	Test Report	-	Р	W	requirement
		Tensile test for Aluminium	Major	Physical	100 %	Tech. Data Sheet	IS/IEC	Test Report	-	Р	W	†
		a) Annealing test for copper	Major	Physical	Appendix A to IS	IS 8130/84	IS 8130/84	-	-	Р	V	Verification of
		b) Tensile test for aluminium	Major	Physical	7098/II/2011, each lot sample basis	IS 8130/84	IS 8130/84	-	-	Р	V	process records.
		c) Wrapping test for aluminium	Major	Physical		IS 8130/84	IS 8130/84	-	-	Р	V	Tests N/A on finished conductor.
		d) Conductor resistance test	Major	Electrical	Appendix A to IS 7098/II/2011, each lot sample basis	IS 8130/84	IS 8130/84	Test Report	-	Р	W	
		e) Test for thickness of insulation & sheath	Major	Physical	- Sample basis	IS 7098/II/2011 & Tech. Data sheet	IS 7098/II/2011 & Tech. Data sheet	Test Report	-	Р	W	
		f) Hot set test for insulation	Major	Physical	7	IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	

#### ANNEXURE G: QUALITY ASSURANCE PLAN (QAP)

S.	COMPONENT &	CHARACTERISTICS	CLASS	TYPE OF	QUANTUM OF CHECK	REFERENCE	ACCEPTANCE	FORMAT OF		AGENC'	Y	Remark
NO.	OPERATION			CHECK		DOCUMENT	NORMS	RECORD	sv	MFR	BSES	
1	2	3	4	5	6	7	8	9	10	11	12	13
		endor of Cable Manufacturer, MFR: Cable	Manufacturer,	MPS : Material I	Purchase Specification,							
	P : Perform, W : Wi	tness, V : Verification										
		g) Tensile strength & Elongation at break of insulation & outer sheath	Major	Physical		IS 7098/II/2011 & IS 5831/84	IS 7098/II/2011 & IS 5831/84	Test Report	-	Р	W	
		h) Partial discharge test	Critical	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		i) High voltage test	Critical	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		j) Insulation resistance (Volume resistivity) test	Major	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		k) Tests for dimension of armour wires/strips	Major	Physical		· '	0810 Pt. 36 & ata sheet	Test Report	-	Р	W	
		I) Test for anti termite & anti rodent property of outer sheath	Major	Physical		Tech. Data Sheet	Tech. Data Sheet	Reg./Sheet	-	Р	W	
		m) Rewinding of cable on drum	Major	Visual		appearance, cable	appearance, drum e winding, packing, //sequential marking	Reg./Sheet	-	P	W	
		n) Void & contamination test for insulation (Silicon Oil test)	Major	Physical				Reg./Sheet	-	Р	W	
		o) Wafer boil test for extruded semi- conducting layers	Major	Physical				Reg./Sheet	-	Р	W	
3	Acceptance tests	p) Freely Strippable insulation screen	Major	Physical		Factory Standard	Factory Standard	Test Report	-	Р	W	
		q) Water Penetration test (WPT) on core (i.e.Logitudinal Water Blocking Test)	Major	Physical	Fach Lat Cassala Basia	IEC:60502	IEC:60502	Test Report	-	Р	W	Test shall be conducted for leakage of water through
					Each Lot Sample Basis							conductor.
		r) Armour coverage	Major	Physical		As per data sheet & FS	FS	Test Report	-	Р	W	
		s) Ovality	Major	Physical			As per data sheet	Test Report	-	Р	W	
		t) Eccentricity	Major	Physical			As per data sheet	Test Report	-	Р	W	
		u ) Mass & uniformity & zinc coating on armour	Major	Physical		As per data sheet & FS	FS	Test Report	-	Р	W	
		v ) Resistivity of Strip armour	Major	Electrical		As per data sheet & FS	As per data sheet & FS	Test Report	-	Р	W	
		w ) Swelling height of water swellable tape	Major	Physical		As per data sheet & FS	As per data sheet & FS	Test Report	-	Р	W	
		x) Flammability test	Major	Physical	]	As per IS- 78098/II/2011	As per IS- 78098/II/2011	Test Report	-	Р	W	
		y)Impulse withstand test	Critical	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	

#### ANNEXURE G: QUALITY ASSURANCE PLAN (QAP)

3.	COMPONENT &	CHARACTERISTICS	CLASS	TYPE OF	QUANTUM OF CHECK		ACCEPTANCE	FORMAT OF		AGENC		Remark
0.	OPERATION			CHECK		DOCUMENT	NORMS	RECORD	sv	MFR	BSES	
1	2	3	4	5	6	7	8	9	10	11	12	13
		Vendor of Cable Manufacturer, MFR: Cable	Manufacturer	, MPS : Material	Purchase Specification,							
	P : Perform, W : W	itness, V : Verification										
		z) Ageing & Water absorption test(Gravimetric) on Insulation & Outer sheath	Major	Physical		IS 5831/84	IS 5831/84	Test Report	-	Р	W	
		z1) Heating Cycle with Potential	Critical	Electrical	sample basis, once per PO			Test Report	-	Р	W	
		z2) Raw Material Verification in all aspects	Major	Physical	Each Lot					Р	W	
		Z3) OFC Continuty Test and verification of outer sheath marking with continuous 15mm red strip for OFC embedded identification	Major	Physical	Each Lot					P	W	
1	Type tests at	a) Tests on conductor										
	vendor's works	i) Annealing test for copper	Major	Physical		IS 8130/84	IS 8130/84	-	-	Р	V	Verification
		ii) Tensile test for aluminium	Major	Physical		IS 8130/84	IS 8130/84	-	-	Р	V	process recor
		iii) Wrapping test for aluminium	Major	Physical		IS 8130/84	IS 8130/84	-	-	Р	V	Tests N/A on finish conductor.
		iv) Conductor resistance test	Major	Electrical	1	IS 8130/84	IS 8130/84	Test Report	-	Р	V	
		b) Tests for armouring wires/strips										
		i) Dimensions of wire/strip	Major	Physical	]		0810 Pt. 36 & ata sheet	Test Report	-	Р	W	
		ii) Tensile strength & Elongation at break	Major	Physical	]	IS 3975	IS 3975	Test Report	-	Р	W	Only for Ste wires/strips
		iii) Torsion test for wire	Major	Physical		IS 3975	IS 3975	Test Report	-	Р	W	† ·
		iv) Winding test for strip	Major	Physical		IS 3975	IS 3975	Test Report	-	Р	W	†
		v) Uniformity of zinc coating	Major	Chemical		IS 3975	IS 3975	Test Report	-	Р	W	
		vi) Mass of zinc coating	Major	Chemical		IS 3975	IS 3975	Test Report	-	Р	W	1
		vii) Resistivity of wire/strip	Major	Electrical		IS 3975	IS 3975	Test Report	-	Р	W	†
		c) Test for thickness of insulation & sheath	Major	Physical	-	IS 7098/II/2011 & Tech. Data sheet	IS 7098/II/2011 & Tech. Data sheet	Test Report	-	Р	W	
		d) Physical tests for insulation			1		+	+			W	
		i) Tensile strength & Elongation test	Major	Physical	1	IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
	1	, , ,		,								
		ii) Ageing in air oven	Major	Physical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		iii) Hot set test	Major	Physical		IS 7098/II/2011	IS 7098/II/2011	Test Report		Р	W	
	1	iv) Shrinkage test	Major	Physical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		v) Water absorption (gravimetric)	Major	Physical	One sample per Tender	IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		e) Physical tests for outer sheath			1						W	

#### ANNEXURE G: QUALITY ASSURANCE PLAN (QAP)

S.	COMPONENT &	CHARACTERISTICS	CLASS	TYPE OF	QUANTUM OF CHECK	REFERENCE	ACCEPTANCE	FORMAT OF		AGENC'	Y	Remark
NO.	OPERATION			CHECK		DOCUMENT	NORMS	RECORD	sv	MFR	BSES	
1	2	3	4	5	6	7	8	9	10	11	12	13
		endor of Cable Manufacturer, MFR : Cable	Manufacturer,	MPS : Material	Purchase Specification,							
	,	tness, V : Verification										
		i) Tensile strength & Elongation test at break	Major	Physical		IS 5831/84	IS 5831/84	Test Report	-	Р	W	
		ii) Ageing in air oven	Major	Physical		IS 5831/84	IS 5831/84	Test Report	-	Р	W	
		iii) Shrinkage test	Major	Physical	1	IS 5831/84	IS 5831/84	Test Report	-	Р	W	
		iv) Hot deformation test	Major	Physical	1	IS 5831/84	IS 5831/84	Test Report	-	Р	W	
		v) Loss of mass in air oven	Major	Physical	1	IS 5831/84	IS 5831/84	Test Report	-	Р	W	
		v) Heat shock test	Major	Physical	1	IS 5831/84	IS 5831/84	Test Report	-	Р	W	
		vi) Thermal stability test	Major	Physical	1	IS 5831/84	IS 5831/84	Test Report	-	Р	W	
		f) Electrical tests in sequence			1						W	
		i) Partial discharge test	Critical	Electrical	1	IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		ii) Bending test	Major	Physical	1	IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		iii) Partial discharge test	Critical	Electrical	1	IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		iv) Dielectric power factor as a function of voltage	Major	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		v) Dielectric power factor as a function of temperature	Major	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		vi) Heating cycle test	Major	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		vii) Dielectric power factor as a function of voltage	Major	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		viii) Partial discharge test	Critical	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		ix) Impulse withstand test	Critical	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		x) High voltage test	Critical	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		g) Insulation resistance (Volume resistivity test)	Major	Electrical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
		h) Flammability test	Major	Physical		IS 7098/II/2011	IS 7098/II/2011	Test Report	-	Р	W	
D PA	CKING & MARKING											
1	Packing & Marking	a) Cable end sealing	Major	Visual	100 %	IS 7098/II/2011/ Agreement	IS 7098/II/2011/ Agreement	-	-	Р	W/V	BSES representative may
		b) Pulling eye at leading end- removed from vendor scope, end cap shall be provided at both the end of cable	Major	Visual	100 %	As per agreement	As per agreement	-	-	Р	W/V	verify these characteristics on randomly selected drums.
		b) Stencilling/Marking on drum	Minor	Visual	100 %	IS 7098(Part 2):2011/ Agreement	IS 7098(Part 2):2011/ Agreement	-	-	Р	V	juluiiis.

Ē			ANN	EXURE G: 0	QUALITY ASSURAN	ICE PLAN (QA	AP)					
				FOR:	33 & 66 kV EHV CAI	BLES						
S.	COMPONENT &	CHARACTERISTICS	CLASS	TYPE OF	QUANTUM OF CHECK	REFERENCE	ACCEPTANCE	FORMAT OF		AGENCY	<b>′</b>	Remark
NO.	OPERATION			CHECK		DOCUMENT	NORMS	RECORD	sv	MFR	BSES	
1	2	3	4	5	6	7	8	9	10	11	12	13
	Legend : SV : Sub-	Vendor of Cable Manufacturer, MFR: Ca	ole Manufacturer	, MPS : Material	Purchase Specification,							
	P : Perform, W : W	itness, V : Verification										
	<u>Note</u>	Checks specified above for Raw Mate     Number of samples shall be selected     Plant standards shall be followed in c     BSES may witness Raw material an     BSES's Inspector may randomly sele     For each of the offered lot for inspective.     All factory Type Tests shall be Witness.	as per Factory Sta ase Technical Dat d in process inspe ct a cable drum fo on, BSES may rar	ndard/Agreemen a Sheet does not ction in addition t r type testing at v	nt wherever 'sample' is indica t include requirements for cha to Routine/Acceptance tests rendor's works.	ted for extent of chec aracteristics to be ch at any time/stage of	ck. ecked. manufacturing.	ion of sealing ca	p to cabl	le outer sl	heath	



Technical Specification for 33 kV 3Cx400 sq mm cable

#### Annexure- H

#### Testing and manufacturing process requirements w. r. t. TR- XLPE insulation

All cables made with TR-XLPE Insulation should be tested and/or certified to meet the following performance parameters as per ANSI /ICEA S-94-649 after one year AWTT.

Property	Units	Requirements Values
Min. Avg. Electrical	Kv/mm	<u>≥</u> 25
Breakdown Strength(qual. test)		
Impulse Strength	Kv/mm	≥ 83
Water Tree Length	Mm	0.25
Max. Bowtie Tree Density	(Number per	Maximum 15
_	16.4 cu. cm)	(0.12-0.25 mm range)

Manufacturing processes to produce high-quality cables with the following characteristics:

- Cure consistency with hot set/creep less than 100%
- No voids larger than 75 microns per 16.4 cubic cm
- No ambers larger than 250 microns per 16.4 cubic cm
- No contaminants larger than 125 microns and less than 5 between 50-125 microns per cubic 16.4 cubic cm tested.
- · Neutral indent on cable is less than 375 microns
- Cable insulation concentricity greater than 90% tested
- No protrusions greater than 75 microns at the conductor shield and 125 microns at the insulation shield

#### **Annexure-I: Deviation Format**

SI. No.	Document Name	Clause No.	Deviation	Reason	Merit to BSES

BSES-TS-158-RMHC-R0

APPROVED LIST FOR DIFFERENT TYPES OF CABLE RAW MATERIALS & VENDOR NAMES

# **BSES**

### APPROVED LIST

FOR

### DIFFERENT TYPES OF CABLE RAW MATERIALS &

**VENDOR NAMES** 

Specification No.- BSES-TS-158-RMHC-R0

Rev:	R0	Page:	03
Date:	16.05.2024		0
Prepared by	RK Jana/ Pronab Bairagi	2.4.500 2h	D.
r repared by	Abhishek Vashistha	Meso	·}-
Davioused by	Amit Tomar	117	lindel
Reviewed by	Puneet Duggal	YK	
Approved by	Gaurav Sharma	Ue	aulu
Approved by	Gopal Nariya	11	X/n



#### BSES-TS-158-RMHC-R0

APPROVED LIST FOR DIFFERENT TYPES OF CABLE RAW MATERIALS & VENDOR NAMES

### Raw materials Manufacturer details:

SL.NO.	RAW MATERIALS	SL.NO.	NAME OF MAKE
		А	Bharat Aluminium Co.Ltd. (BALCO)
01	Aluminium Rod (For	В	Hindustan Aluminium Co.Ltd. (HINDALCO
	conductor & armour)	С	National Aluminium Co.Ltd.(NALCO)
		D	Vedanta (Sesa Sterlite)
		Α	Lantor
		В	GECA TAPES
02	Water-Swellable Tapes	С	Scapa
	(Pre-slitted)	D	Sneham International
	1 1 1 1	Е	Indore Tapes
-3		Δ	Day Chaminal II C A
00	Carrel Carrello at language	A	Dow Chemical, U.S.A.
03	Semi-Conducting Compound	В	Borealis, Sweden
		С	Hanwha, South Korea
		Α	Dow Chemical, U.S.A.
04	XLPE Compound	В	Borealis, Sweden
		С	Hanwha, South Korea
		A	Lantor
		В	Geca Tapes
05	Water-Blocking Tapes /		Scapa
00	Yarn Yarn	D	Sneham International
		E	Indore Tapes
			- Indoic Tapes
		А	Aggarwal Metal
06	Copper Tape	В	Neosym Industry
		С	Luvata , Swedan
		A	AVSL Industries



#### BSES-TS-158-RMHC-R0

#### APPROVED LIST FOR DIFFERENT TYPES OF CABLE RAW MATERIALS & VENDOR NAMES

	Tape	С	Vijay Polymers
		Α	AVSL Industries
80	P. P. Fillers	В	Yash Polymer
		С	Vijay Polymers
		Α	Ddev Plastiks Industries Ltd.
		В	Universal
		С	SCJ Plastic
		D	Sriram Polytech
09	PVC Compound	E	Shri Ram Vinyl, Kota
		F	Bansal Polyplast Pvt.Ltd.
		G	KEI Industries Ltd.
		Н	KEC International Ltd.
		Α	TATA
		В	Balaji
10	Galvanized Steel	С	Systematic
	Wires / Strips	D	Mica Wires Pvt.Ltd
4		Ε	Bansal Industries
		E	
		Α	Borealis
11	PE Compound	В	Shakun
		С	Ddev Plastiks Industries Ltd.

#### Note:

- A. Listed make in this documents shall be followed by manufacturer strictly.B. Deviation shall not be given for raw material make at any stage of manufacturing.