BSES Yamuna Power Limited

Volume - I

Tender Notification for

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF POWER QUALITY MONITORING SYSTEM

NIT No.: CMC/BY/21-22/RS/KD/35

Date : 04.01.2022

Due Date for Submission of Bids :24.01.2022

BSES YAMUNA POWER LTD (BYPL)
CONTRACTS & MATERIALS DEPT.,
SHAKTI KIRAN BUILDING, KARKARDOOMA, DELHI-110032
CIN: U40109DL2001PLC111525
WEBSITE: www.bsesdelhi.com
GSTIN: 0711BCC8569N1Z0

BSES Yamuna Power Limited

SECTION - I

REQUEST FOR QUOTATION

2021-22

Tender Notification : CMC/BY/21-22/RS/KD/35

Event : SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF POWER QUALITY MONITORING SYSTEM

Date : 04.01.2022

BSES Yamuna Power Limited

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SECTION – I: REQUEST FOR QUOTATION

1.00 Event Information

1.01 BYPL invites Sealed tenders for Supply, Installation, Testing and Commissioning of Power Quality Monitoring System from reputed manufacturers. The bidder must qualify the technical requirements as specified in clause 2.0 stated below. The sealed envelopes shall be duly super scribed as — **"BID FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF POWER QUALITY MONITORING SYSTEM, TENDER NOTICE CMC/BY/21-22/RS/KD/35. DUE FOR BID SUBMISSION ON DT: 24.01.2022.**

Sl. No.	Item Description	Specification	Requirement Total Qty.	Estimated Cost
BYPL,DELHI				
1	Supply of Fixed Type Power Quality Meters	SECTION V	10 Nos	Rs. 1.18 Crore
2	Supply of Potable Type Power Quality Meters		03 Nos	
3	Installation, Testing, Commissioning of fixed type Power Quality Meters as per Scope of Work and Training		10 Nos	
4	Training sessions on Portable type power Quality meters		03 Nos	
5	Supply and Implementation of Data Acquisition and Management Software System (50 End Points)		01 Lot	
6	Supply and Implementation of Power Quality Data Acquisition and Management Software System (100 End Points) and training		01 Lot	
7	AMC of Power Quality Data Acquisition and Management Software System		01 year	

Note: i) Sl No 5 &6:- Number of end points (either 50 or 100) will be decided during techno commercial evaluation
ii). Quantity may vary to any extent of +/- 30% of above mentioned total quantity.

1.02 The schedule of specifications with detail terms & conditions can be obtained from address given below against demand draft/Pay Order of **Rs. 1180 per set-** drawn in favour of **BSES YAMUNA POWER LIMITED,** payable at Delhi. The sale of tender documents will be issued from 04.01.2022 onwards on all working days upto 24.01.2022. The tender documents can also be downloaded from the website **"www.bsesdelhi.com"**. However, it is advisable to inform BYPL about your interest in tender.

In case tender papers are downloaded from the above website,then the bidder has to enclose a demand draft covering the cost of bid documents as stated above in a separate envelope with suitable superscription — **"**Cost of Bid Documents:Tender **Notice Ref: CMC/BY/21-22/RS/KD/35.**This envelope should accompany the Bid Documents.

1.03 Offers will be received at 15:00 Hrs **on dt.24.01.2022** as indicated earlier will be opened on the next day at the address given below on **25.01.2022 at 15:30 Hrs** in the presence of authorized representatives of the bidders**.** The schedule of specifications with detail terms & conditions are enclosed. It is the sole responsibility of the bidder to ensure that the bid documents reach this office on or before the due date.

HEAD OF THE DEPARTMENT,
3rd FLOOR, 'A' BLOCK,
CONTRACTS & MATERIALS DEPARTMENT,

BSES YAMUNA POWER LTD,
SHAKTI KIRAN BUILDING,
KARKARDOOM, NEW DELHI-110032

1.04 BYPL reserves the right to accept/reject any or all bids without assigning any reason thereof and alter the quantity of materials mentioned in the Tender documents at the time of placing purchase orders. **Bids will be summarily rejected if:**
(i). Earnest Money Deposit (EMD) @ 2% (Two percent) of the Tender value i.e **Rs 2,36,000 /-** is not deposited in the form of Bank Guarantee in favour of BSES YAMUNA POWER LIMITED, payable at Delhi

(ii). The offer does not contain "FOR, NEW DELHI price indicating break-up towards all taxes & duties".
(iii). Complete Technical details are not enclosed.
(iv). Tender is received after due time due to any reason**.**

2.0 **Qualification Criteria:-**

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

TECHNICAL CRITERIA:-

Qualifying Criteria		
SL	**Criteria**	**Documents Required**
Power Quality Meters:		
1	The Bidder must be one of the following: a. An original equipment manufacturer (OEM) of Power Quality Meters. b. An authorized representative of OEM having long term technology partnership with OEM for a period of at least 10 years post the date of bid submission.	a. Details of manufacturing facilities and associated processes. b. Manufacturing unit registration certificate. c. Authorization letter/ Agreement with OEM in case of authorized representative.
2	OEM should have experience of manufacturing and supplying at least 1000 nos PQ meters complying to IEC 61000-4-30 in last five years ending on the date of bid submission.	a. Supply list. b. Purchase orders from clients; c. Supply proof from above mentioned PO's.
3	Bidder should have experience of installation and commissioning of minimum 50 nos PQ meters of the offered make in last five years ending on the date of bid submission.	a. Work completion certificates. b. Installation report. c. Two year satisfactory Performance Certificates for minimum 20 nos PQ meters issued by at least Two reputed organizations along with their contact details.
4	Bidder/ OEM should have following quality certifications for its manufacturing and services function. a. ISO 9001:2015 or latest b. ISO 14001:2015 or latest c. ISO 27001:2013 or latest d. OHSAS 18001:2007 or latest	Valid Certificate copies.
5	a. The bidder should have service centers in India equipped with in-house testing facilities as per BYPL specification. b. Service center shall have repair capability for offered meter and accessories.	Details of support centre and its capabilities.
6	OEM should have complete volume of type test reports as per IEC 61000-4-30 Class 'A'.	Type test reports from **internationally recognized** third party testing lab.

Qualifying Criteria		
SL	**Criteria**	**Documents Required**
Power Quality Data Acquisition and Management Software System:		
1	Bidder should be one of the following: a. An original equipment manufacturer (OEM) of the power quality meters b. A power quality software provider. c. An authorized representative of OEM having long term technology partnership with OEM for a period of at least 10 years post the date of bid submission.	a. Detail of power quality software and its applications. b. Authorization letter/ Agreement with OEM in case of authorized representative.
2	a. Offered software system should be in operation for at-least 1000 Nos meters. b. Single license deployment for at least 100 Nos meters for two clients	a. Purchase orders from clients; b. Deployment proofs. c. Present status of the software system with number of meters it is catering. d. Performance certificates from at least 02 clients in which minimum 100 meters are running on single license.
3	Bidder should have integrated at least 03 different makes of power quality meters with offered software.	Details of make and model of meter integrated with offered software.
4	Bidder/OEM should have obtained following certifications for their software system and development processes: a. ISO 9001:2015	Valid Certificate copies.

COMMERCIAL CRITERIA:-

Qualifying Criteria		
SL	**Criteria**	**Documents Required**
1	The bidder should have average annual turnover of Rs 20 Crore or more in last three financial years (i.e.2018-2019, 2019-2020 & 2020-2021) .	Audited balance sheets / Duly certified CA certificate with UDIN to be submitted
2	If the bidder is an authorized representative of OEM/foreign OEM, they may choose to submit either their own or their OEM's credentials to meet the financial qualification criteria as mentioned above.	Authorization letter/ Agreement with OEM in case of authorized representative.
3	The bidder should be registered under GST Act and shall submit copies of GST Registration Number, PAN and other statutory compliance. The bidder must submit an undertaking that the bidder shall comply all the statutory compliance as per the applicable laws/rules etc	Copies of Relevant Documents / Undertaking
4	Only those firms who have not been blacklisted /debarred by BSES or any other State/Central Govt./ Pvt. Power Utility in India on the date of issuance of NIT shall be entitled to submit the tenders.	The firm shall submit a self-undertaking of non-blacklisting

Note: Bidder can quote for either "Power Quality Meter" or "Power Quality Data Acquisition and Management Software System" or both. Accordingly respective Technical Qualifying Criteria shall be applicable.

The bidder should send the compliance of above mentioned parameters in technical offer and has to give an undertaking about ***No Objection*** to verify his manufacturing facility as a part of tendering process. Further in relevance to above clause (6), vendor should submit details of facilities.

3.00 Bidding and Award Process

Bidders are requested to submit their questions regarding the RFQ or the bidding process after review of this RFQ. BYPL's response to the questions raised by various bidders will be distributed to all participating bidders through website.

a. Time schedule of the bidding process

The bidders on this RFQ package should complete the following within the dates specified as under:

S. N	Steps	Activity description	Due date
1	Technical Queries	▪ All Queries related to RFQ	On or before 24.01.2022
2	Technical Offer	• All document as required in technical specification. • Compliance of Qualification criteria (cl. 2.0) and Documentary evidence in support of qualifying criterion as per format attached in Annexure VII. • Acceptance of delivery, commercial terms and conditions. • Deviation from the General Conditions of the contract/commercial terms and conditions. • Original Tender documents duly stamped and signed on each page as token of acceptance.	24.01.2022, 15:00 Hrs
3	Commercial Offer	• Price for Power Monitoring System. No separate price for additional feature. • Break up regarding basic price and taxes as per format enclosed vide Annexure IV. • Delivery commitment	24.01.2022, 15:00 Hrs
4	Opening of technical bid	● As per RFQ	25.01.2022, 15:30 Hrs

This is a two part bid process. Bidders are to submit the bids in two parts a) Technical Bid b) Price Bid.
Both these parts should be furnished in separate sealed covers super scribing NIT no ,Due date for bid submission with particulars as **Part-I Technical Particulars & Commercial Terms & Conditions** and **Part-II "Financial bid"** and these sealed envelopes should again be placed in another sealed cover which shall be submitted before the due date & time specified.

Bidders are requested to submit the techno-commercial bid in one Original plus one copy in duplicate (Soft copy in Pen drive).

Part – I Technical Bid should not contain any cost information whatsoever.

Part – II Financial: This envelope will be opened after techno commercial evaluation and only of the qualified bidders. The date and time of same shall be intimated in due course to the qualified bidders. Prices shall be in the format enclosed in Annexure IV indicating break up of basic prices, taxes duties, freight etc.

Reverse Auction Clause : Purchaser reserves the right to use the online reverse auction through SAP – SRM as an integral part of the entire tendering process. All the bidders who are techno-commercially qualified on the basis of tender requirements shall participate in reverse auction.

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

4.00 Award Decision

4.01 Purchaser intends to award the business on a lowest bid basis, so suppliers are encouraged to submit the bid competitively. The decision to place purchase order/LOI solely depends on 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 purchaser (and / or its affiliates) and you subsequently DEFAULT on your bid; you will be required to pay purchaser (and / or its affiliates) an amount equal to the difference in your bid and the next lowest bid on the quantity declared in NIT.

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 Contract.

4.05 Quantity Variation: The purchaser reserves the rights to vary the quantity by (+/-) 30% of the tender quantity .

4.06 Quantity Splitting: The purchaser reserves the right to distribute the procurable quantity amongst one or more eligible bidders. If the quantity is to be split, quantity distribution shall be in the manner detailed below:
a) If the quantity is to be split among 2 bidders, it will be done in the ratio of 70:30 on L1 price.
b) It the quantity is to be split among 3 bidders, it will be done in the ratio of 50:30:20 on L1 price.

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

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

6.00 Supplier Confidentiality

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

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

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

7.0 Contact Information

All communication as regards this RFQ shall be made (i) in English, (ii) in writing and (iii) sent by mail, facsimile to

Address	Name/ Designation	E-mail Address
Technical		
CES Dept. 3rd Floor, B-Block, BSES Yamuna Power Ltd Shaktikiran Building, Karkardooma, Delhi 110032	Gaurav Sharma Asst. VP (HOD-CES)	gaurav.a.sharma@relianceada.com
	Puneet Duggal GM (CES)	Puneet.Duggal@relianceada.com
	Ashish Kumar Joshi DGM (CES)	Ashish.K.Joshi@relianceada.com

Commercial		
C&M Dept. 3rd Floor, A-Block, BSES Yamuna Power Ltd Shaktikiran Building, Karkardooma, Delhi 110032	Robin Sebastian HOD-C&M	robin.sebastian@relianceada.com
	Rajesh Srivastava Head-Procurement	rajesh.r.srivastava@relianceada.com
	Khem Dewangan Buyer	Khem.Dewangan@relianceada.com

Note:- Those who are downloading tender notice from website It is advisable to inform BYPL Technical, so as they can be contacted in case of any amendment in tender .

BSES Yamuna Power Limited

SECTION – II

INSTRUCTION TO BIDDERS (ITB)

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF POWER QUALITY MONITORING SYSTEM

NIT No. CMC/BY/21-22/RS/KD/35

Dated : 04.01.2022

A. GENERAL

1.00 BSES YAMUNA POWER LIMITED, hereinafter referred to as the Purchaser "are desirous of implementing the various System Improvement/Repair & Maintenance works at their respective licensed area in Delhi. The Purchaser has now floated this tender for Supply ,Installation ,Testing and Commissioning of Power Quality Monitoring System .

2.00 SCOPE OF WORK

BSES YAMUNA POWER LTD. (BYPL) is an electricity distribution licensee supplying electricity in central and east part of national capitol (India), Delhi. BYPL distributes electricity to 1.7 million consumers spread over an area of 200sqkm. BYPL has overall 53 no's grid substations with 200 no's Power transformers and ~ 4000 No's distribution transformers. No of LT feeders are approximately 18000 No's.

BYPL AT&C loss reduction record is unparallel with over 55% loss reduction i.e. from 63.1% in 2002 to sub 8% in FY21. BYPL has always been on the forefront of adoption of state of the art technologies, providing best-n-class power supply to all its consumers. In line with the same, BYPL has implemented several smart grid technologies to enhance network reliability, improve operational efficiency and ensure high customer satisfaction. Key technologies implemented by BYPL include

- Supervisory control and data acquisition (SCADA) system for Sub-transmission Network
- Intelligent outage management
- Distribution automation
- Intelligent group metering
- Substation health monitoring

Due to continuous deployment and innovations BYPL provides reliable, affordable, quality power across all its customer segments 24x7. With influx of disruption technologies (Roof Top Solar, Battery Energy Systems, Electric Vehicle chargers) & its detrimental effect on the existing 'Power Quality', BYPL desires to implement phase wise 'Power Quality Monitoring System'. The Key highlights of the proposed system are mentioned herewith.

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 own estimation and analysis and should check the accuracy,reliability and completeness of the information in this Document and obtain independent advice from appropriate sources in their own interest.

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

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

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

4.0 **COST OF BIDDING**

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

B. **BIDDING DOCUMENTS**

5.0 **BIDDING DOCUMENTS**

5.01 The Scope of Work, Bidding Procedures and Contract Terms are described in the Bidding Documents. In addition to the covering letter accompanying Bidding Documents, the Bidding Documents include:

Volume -I

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

Volume - II

a) Bid Form - Annexure -I
b) Reverse Auction Event - Annexure –II
c) Format for EMD - Annexure –III
d) Price Format - Annexure –IV
e) Commercial Terms & Conditions - Annexure-V
f) No Deviation Sheet - Annexure- VI
g) Qualification Criterion - Annexure- VII

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 will may result in the rejection of the Bid.

6.0 **AMENDMENT OF BIDDING DOCUMENTS**

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

6.02 The Amendment shall be part of the Bidding Documents, pursuant to Clause 5.01,and will be notified in web site **www.bsesdelhi.com**, and will be binding on the bidders..

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

C. **PREPARATION OF BIDS**

7.0 **LANGUAGE OF BID**

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

8.0 **DOCUMENTS COMPRISING THE BID**

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

(a) Bid Form ,Price & other Schedules (STRICTLY AS PER FORMAT)and Technical Data Sheets completed in accordance with Clause 9.0, 10.0, 11.0 and Technical Specification ;

(b) All the Bids must be accompanied with the required EMD as mentioned in the Section-I against each tender.

(c) Power of Attorney indicating that the person(s) signing the Bid have the authority to sign the Bid and thus that the Bid is binding upon the Bidder during the full period of its validity, in accordance with clause 12.0.

9.0 **BID FORM**

9.01 The Bidder shall submit one ”Original‘ and one ”Copy‘of the Bid Form and the appropriate Price & Other Schedules and Technical Data Sheets.

9.02 **EMD**

Pursuant to Clause 8.0(b) above,the bidder shall furnish,as part of its bid, a EMD amounting to 2% of the total bid value (FOR Destination) i.e **Rs 2,36,000/-** .The EMD is required to protect the Purchaser against the risk of Bidder‘s conduct which would warrant the security‘s forfeiture.

The EMD shall be denominated in the currency of the bid,and shall be in the following form **:**

(a) A bank guarantee issued by any scheduled bank strictly as per the form at enclosed and shall be valid for a period of thirty (30)days beyond the validity of the bid

Unsuccessful bidders‘ EMD will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity.

The successful bidder‘s EMD will be discharged upon furnishing the performance security.

The EMD may be forfeited：

(a) if the Bidder:

i) withdraws its bid during the period of bid validity specified by the Bidder in the Bid Form ; or

(b) in the case of a successful Bidder, if the Bidder fails:

(i) to sign the Contract,or

(ii) to furnish the required performance security.

10.0 **BID PRICES**

10.01 Bidders shall quote for either ‘Power Quality Meter’, ‘ Power Quality Data Acquisition and Management Software’ or both with a break-up of prices for individual items.The total Bid Price shall also cover all the Supplier's obligations mentioned in or reasonably to be inferred from the Bidding Documents in respect of

Design, Supply, Transportation to site, testing and commissioning all in accordance with the requirement of Bidding Documents The Bidder shall complete the appropriate Price Schedules included herein , stating the Unit Price for each item & total Price.

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

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

11.0 **BID CURRENCIES**

Prices shall be quoted **in Indian Rupees Only.**

12.0 **PERIOD OF VALIDITY OF BIDS**

12.01 Bids shall remain valid for 120 days post bid submission date.

12.02 Notwithstanding Clause12.01 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 by post/e-mail.

13.0 **ALERNATIVE BIDS**

Bidders shall submit Bids, which comply with the Bidding Documents. Alternative Bids will not be considered. The attention of Bidders is drawn to the provisions of Clause 22.03 & 22.04 regarding the rejection of Bids, which are not substantially responsive to the requirements of the Bidding Documents.

14.0 **FORMAT AND SIGNING OF BID**

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

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

14.03 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 initialed by the person or persons signing the Bid.

D. SUBMISSION OF BIDS

15.0 **SEALING AND MARKING OF BIDS**

15.01 Bid submission: One original & one Copy (hard copies) of all the Bid Documents shall be sealed and submitted to the Purchaser before the closing time for submission of the bid.

15.02 The Technical Documents and the EMD shall be enclosed in a sealed envelope and the said envelope shall be superscribed with —Technical & EMD". The Financial bid shall be inside another sealed envelope with superscription — Financial Bid ".Both these envelopes shall be sealed inside another big envelope.All the envelopes should bear the Name and Address of the Bidder and marking for the Original and Copy.The envelopes should be superscribed with —**"Tender Notice No, Due date of submission, Tender opening date**.

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

16.0 **DEADLINE FOR SUBMISSION OF BIDS**

16.01 The original Bid,together with the required copies, must be received by the Purchaser at the address specified not **later than 15:00 Hrs on 24.01.2022.**

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

. 17.0 **ONE BID PER BIDDER**

Each Bidder shall submit only one Bid either by itself, or as a partner in a Joint Venture. A Bidder who submits or participates in more than one Bid will cause all those Bids to be rejected.

18.0 **LATE BIDS**

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

19.0 **MODIFICATIONS AND WITHDRAWAL OF BIDS**

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

E. EVALUATION OF BID

20.0 **PROCESS TO BE CONFIDENTIAL**

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

21.0 **CLARIFICATION OF BIDS**

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

22.0 **PRELIMINARY EXAMINATION OF BIDS / RESPONSIVENESS**

22.01 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.

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**

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 would be subjected to a responsiveness check. The Technical Proposals and the Conditional ties of the Bidders would 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) Supply Schedule

(b) Deviations from Bidding Documents

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

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

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

F. AWARD OF CONTRACT

24.0 **CONTACTING THE PURCHASER**

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

24.02 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 A LL BIDS**

The Purchaser reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at any time prior to award of Contract,without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Purchaser‘s action.

26.0 **AWARD OF CONTRACT**

The Purchaser will award the Contract to the successful Bidder whose Bid has been Determined to be the lowest-evaluated responsive Bid, provided further that the Bidder has been determined to be qualified to satisfactorily perform the Contract. Purchaser reserves the right to award order to other bidders in the tender, provided it is required for progress of project & provided he agrees to come to the lowest rate.

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 with in 7 days of issue of the letter of intent /Notification of Award by Purchaser.

29.0 **PERFORMANCE BANK GUARANTEE**

The successful Bidder shall furnish the Performance Bank Guarantee for an amount of 10% (Ten percent) of the total Contract value in accordance with the format provided at the time of order. The Performance Bond shall be valid for a period of Sixty months (60) from the date of the commissioning or Sixty six months (66) from the date of receipt of material (last consignment) at site/stores which ever is earlier plus 3 months towards claim period. Upon submission of the performance security, the EMD shall be released.

30.0 **CORRUPT OR FRADULENT PRACTICES**

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

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

(i) "Corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them ,or induce others to do so,by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution;and

(ii) "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among Bidders(prior to or after Bid submission) designed to establish Bid prices at artificial non -competitive levels and to deprive the Purchaser of the benefits of free and open competition .

(b) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question ;

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

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

BSES Yamuna Power Limited

SECTION – III

(GENERAL CONDITION OF CONTRACT)

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF POWER QUALITY MONITORING SYSTEM

NIT No. CMC/BY/21-22/RS/KD/35

Dated : 04.01.2022

GENERAL TERMS AND CONDITION

1.0 General Instructions

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

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

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

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

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

2.0 Definition of Terms

2.01 "Purchaser" shall mean BSES YAMUNA POWER LIMITED, on whose behalf this bid enquiry is issued by its authorized representative / officers.

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

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

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

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

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

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

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

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

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

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

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

a) The written acceptance of material by the inspector at suppliers works to ship the materials.
b) Acceptance of material at Purchaser site stores after its receipt and due inspection/ testing and release of material acceptance voucher.
c) Where the scope of the contract includes supplying, 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.

3.02 Priority: Should there be any discrepancy between any term hereof and any term of the Offer Sheet, the terms of these RFQ shall prevail.

4.0 Scope of Supply -General

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

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

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

4.04 All relevant drawings, data and instruction manuals.

5.0 Quality Assurance and Inspection

5.01 Immediately on award of contract, the bidder shall prepare detailed quality assurance plan / test procedure identifying the various stages of manufacture, quality checks performed at each stage, raw material inspection and the Customer hold points. The document shall also furnish details of method of checking, inspection and acceptance standards / values and get the approval of Purchaser before proceeding with manufacturing. However, Purchaser shall have right to review the inspection reports, quality checks and results of suppliers in house inspection department which are not Customer hold points and the supplier shall comply with the remarks made by purchaser or his representative on such reviews with regards to further testing, rectification or rejection, etc.

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

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

5.04 On completion of manufacturing the items can be dispatched only after issue of MDCC (Material Dispatch Clearance Certificate) document by the Purchaser.

5.05 All testing and inspection shall be done with out any extra cost.

5.06 Purchaser reserve the right to send any material out of the supply to any recognized laboratory for testing and the cost of testing shall be borne by the Purchaser. In case the material is found not in order with the technical requirement / specification, the charges along with any other penalty which may be levied is to be borne by

the bidder. To avoid any complaint the supplier is advised to send his representative to the stores to see that the material sent for testing is being sealed in the presence of bidders representative.

5.07 Bidder has to sign quality agreement before supply of the material.

6.0 Packing, Packing List & Marking

6.01 **Packing:** Supplier shall pack or shall cause to be packed all Commodities in boxes and containers and otherwise in such a manner as shall be reasonably suitable for shipment by road or rail to BYPL without undue risk of damage in transit.

6.02 **Packing List:** The contents of each package shall be itemized on a detailed list showing the exact weight and the extreme outside dimensions (length, width and eight) of each container or box. One copy of the packing list shall be enclosed in each package delivered. There shall also be enclosed in one package a master packing list identifying each individual package, which is part of the shipment. On any packaging where it is not feasible to place the packing list inside the container, all pertinent information shall be stenciled on the outside and will thus constitute a packing list.

7.01 Prices basis for supply of materials

Bidder to quote their prices on Landed Cost Basis and separate price for each items.

For Supply to BYPL Delhi the price shall be inclusive of packing, forwarding, Freight and Good & Service Tax (GST)**.**
The above supply prices shall also **include unloading** at site stores.
Transit and storage insurance will be arranged by BYPL, however bidder to furnish required details in advance for arranging the same by BYPL.

8.0 Variation in taxes, duties & levies:

8.01 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. However, incase of reduction in taxes, duties and levies, the benefits of the same shall be passed on to BUYER.

8.02 No other Taxes, Duties & Levies other than those specified above will be payable by BUYER except in case of new Levies, Taxes & Duties imposed by the Competent Authorities by way of fresh notification(s) subsequent to the issue of PURCHASE ORDER but within the stipulated delivery period.

8.03 Notwithstanding what is stated above, changes in Taxes, Duties & Levies shall apply only to that portion of PURCHASE ORDER not executed on the date of notification by Competent Authority. Further changes in Taxes, Duties & Levies after due date of Delivery shall not affect PURCHASE ORDER Terms and Value.

8.04 PURCHASE ORDER value shall not be subject to any variation on account of variation in Exchange rate(s).

9.0 Taxes & Duties on raw materials & bought out components:

9.01 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.

9.02 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.

10.0 Terms of payment and billing

10.01 For Supply of Equipment's:

- 100% payment shall be made within 45 days from the date of receipt of material at store/ site against submission of 10 % performance bank guarantee. (Refer 12.01)

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

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

11.0 Price Validity

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

12.0 Performance Guarantee

12.01 Supplier shall establish a performance bond in favor of BSES YAMUNA POWER LIMITED in an amount not less than Ten percent (10%) of the total value of the Contract (the "Performance Bond"). The Performance Bond shall be valid for a period of Sixty months (60) from the date of the commissioning or Sixty six months (66) from the date of receipt of material (last consignment) at site/stores which ever is earlier plus 3 months towards claim period.

(b) Bank guarantee shall be drawn in favour of BSES YAMUNA POWER LIMITED. The performance Bank guarantee shall be in the format as specified by BYPL.

13.0 Forfeiture

13.01 Each Performance Bond established under Clause 12.0 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 together with a simple statement that supplier has failed to comply with any term or condition set forth in the Contract.

13.02 Each Performance Bond 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 set forth in the contract.

14.0 Release

All Performance Bonds will be released without interest within seven (7) days from the last date up to which the Performance Bond has to be kept valid (as defined in Clause 10.0) except for the case set forth in Clause 21.0.

15.0 Defects Liability Period

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

16.0 Return, Replacement or Substitution.

Purchaser shall give Supplier notice of any defective Commodity promptly after becoming aware thereof. Purchaser may in 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 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.

17.0 Effective Date of Commencement of Contract:

17.01 The date of the issue of the Letter of Acceptance shall be treated as the effective date of the commencement of Contract.

18.0 Time – The Essence Of Contract

18.01 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 .

19.0 The Laws and Jurisdiction of Contract:

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

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

20.0 Events of Default

20.01 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.

21.0 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.

22.0 Penalty for Delay

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

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

22.03 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.

23.0 Force Majeure

23.01 General

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

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

(ii) For the avoidance of doubt, if such event or circumstance would not have materially and adversely affected the performance of the affected party had such affected party followed good industry practice, such event or circumstance shall not constitute force Majeure.

(iii) Such event is not the direct or indirect result of the failure of such Party to perform any of its obligations under this Contract.

(iv) Such Party has given the other Party prompt notice describing such events, the effect thereof and the actions being taken in order to comply with above clause.

23.02 Specific Events of Force Majeure subject to the provisions of above clause, Events of Force Majeure shall include only the following to the extent that they or their consequences satisfy the above requirements :

(i) The following events and circumstances :

a) Effect of any natural element or other acts of God, including but not limited to storm, flood, earthquake, lightning, cyclone, landslides or other natural disasters.

b) Explosions or fires

(ii) War declared by the Government of India, provided that the ports at Mumbai are declared as a war zone.

(iii) Dangers of navigation, perils of the sea.

23.03 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.

23.04 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.

23.05 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.

23.06 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.

23.07 Limitation of Force Majeure event. The Supplier shall not be relieved of any obligation under the Contract solely because cost of performance is increased, whether as a consequence of adverse economic consequences or otherwise.

23.08 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.

23.09 Effect of Events of Force Majeure. Except as otherwise provided herein or may further be agreed between the Parties, either Party shall be excused from performance and neither Party shall be construed to be in default in respect of any obligations hereunder, for so long as failure to perform such obligations shall be due to and event of Force Majeure."

24.0 Transfer And Sub-Letting

24.01 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.

25.0 Recoveries

25.01 When ever under this contract any money is recoverable from and payable by the bidder, the purchaser shall be entitled to recover such sum by appropriating in part or in whole by 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.

26.0 Waiver

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

27.0 Indemnification

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

SECTION – IV: QUANTITY AND DELIVERY REQUIREMENT

Sl. No.	Item Description	Specification	Requirement		Location
			Total Qty.	Delivery Schedule	
1	Supply of Fixed Type Power Quality Meters	SECTION V	10 Nos	Communicated at the time of award/as per the requirement (Receipt at the BYPL Delhi Stores)	Stores BYPL Delhi
2	Supply of Potable Type Power Quality Meters		03 Nos		
3	Installation, Testing, Commissioning of fixed type Power Quality Meters as per Scope of Work and Training		10 Nos		
4	Training sessions on Portable type power Quality meters		03 Nos		
5	Supply and Implementation of Data Acquisition and Management Software System (50 End Points)		01 Lot		
6	Supply and Implementation of Power Quality Data Acquisition and Management Software System (100 End Points) and training		01 Lot		
7	AMC of Power Quality Data Acquisition and Management Software System		01 Year		

BSES Yamuna Power Limited

SECTION V

TECHNICAL SPECIFICATION (TS)

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF POWER QUALITY MONITORING SYSTEM

NIT No. CMC/BY/21-22/RS/KD/35

Date of Tender: 04.01.2022

Technical Bid Submission Check List			
S. No.	**Description**	**BYPL Requirement**	**Bidder's Compliance**
1	**Tender No.**	Required	
2	**Technical Specification reference number**	Required	
3	**Communication Details**		
3.1	Name of the Bidder	Required	
3.2	Name of Authorized contact person	Required	
3.3	Contact No. of Authorized contact person	Required	
3.4	E-mail id of Authorized contact person	Required	
4	**Document Submission Format**		
4.1	Documents shall be submitted in Box file/spiral binding. Any other format is not acceptable	Required	
4.2	Index of documents with page numbers for each document	Required	
4.3	Separator with document description shall be provided before each document	Required	
5	**Qualifying Requirement Compliance**		
5.1	Summary of compliance of qualifying criteria in tabular form along with summary of documentary proof provided	Required	
5.2	Detailed Documents supporting compliance of qualifying criteria	Required	
6	**Drawings/ Documents as per Technical Specification.**		
6.1	Signed copy of technical specification	Required	
6.2	Type Test reports of offered model/ type/ rating	Required	
6.3	Guaranteed Technical particulars (GTP)	Required	
6.4	Deviation Sheet	Required	
6.5	Detailed Drawings	Required	
6.6	Manufacturer's quality assurance plan	Required	
6.7	Other drawing/ documents mentioned in technical specification	Required	
7	**Soft copy of complete technical bid through E-mail/PEN Drive**	Required	
Note: Submission of Technical bid check list along with all items mentioned in the check list is mandatory. Order of documents shall be strictly as per the technical bid check list. Bids with incomplete/ wrong information are liable for rejection.			

Introduction, Scope of Supply and Work For Power Quality Monitoring System

Prepared By	Ashish Joshi	28cf4d7d-6c91-4d53-be77-f490e198fb6b	Revision- 0
Reviewed By	Puneet Duggal	404db803-a91f-4234-85f0-0b2b5098ec32	Date
Approved By	Gaurav Sharma	23dc2de2-95de-4472-99a7-dea873f472b6	10/12/2021

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1. Introduction

BSES YAMUNA POWER LTD. (BYPL) is a electricity distribution licensee supplying electricity in central and east part of national capitol (India), Delhi. BYPL distributes electricity to 1.7 million consumers spread over an area of 200sqkm. BYPL has overall 53 no's grid substations with 200 no's Power transformers and ~ 4000 No's distribution transformers. No of LT feeders are approximately 18000 No's.

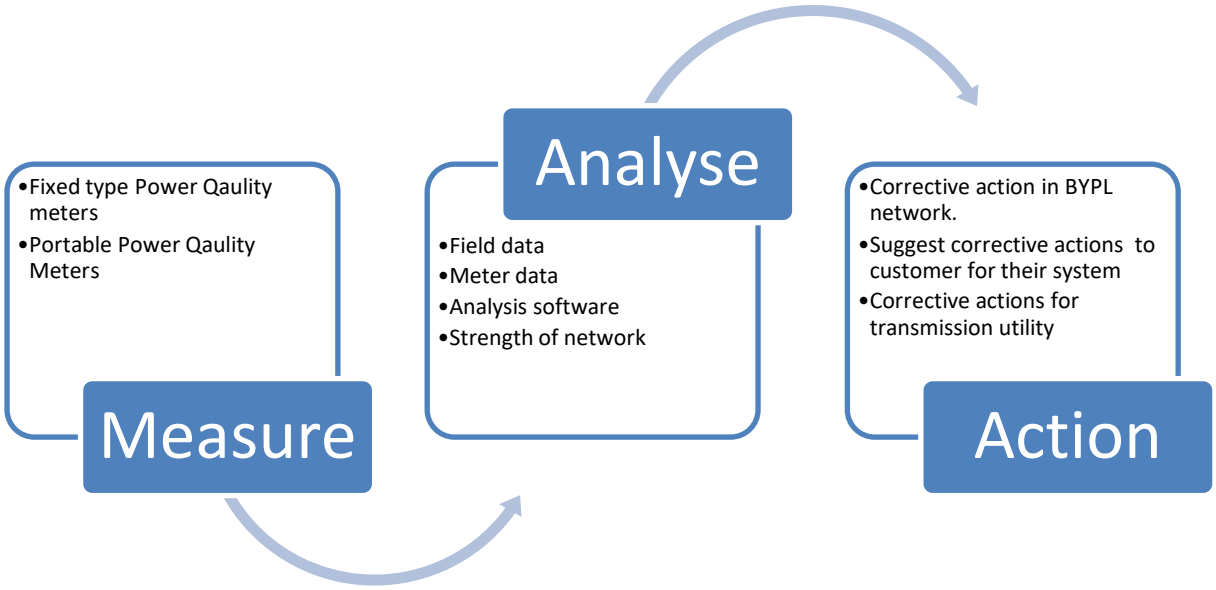
BYPL AT&C loss reduction record is unparallel with over 55% loss reduction i.e. from 63.1% in 2002 to sub 8% in FY21. BYPL has always been on the forefront of adoption of state of the art technologies, providing best-n-class power supply to all its consumers. In line with the same, BYPL has implemented several smart grid technologies to enhance network reliability, improve operational efficiency and ensure high customer satisfaction. Key technologies implemented by BYPL include

- Supervisory control and data acquisition (SCADA) system for Sub-transmission Network
- Intelligent outage management
- Distribution automation
- Intelligent group metering
- Substation health monitoring

Due to continuous deployment and innovations BYPL provides reliable, affordable, quality power across all its customer segments 24x7. With influx of disruption technologies (Roof Top Solar, Battery Energy Systems, Electric Vehicle chargers) & its detrimental effect on the existing 'Power Quality', BYPL desires to implement phase wise 'Power Quality Monitoring System'. The Key highlights of the proposed system are mentioned herewith.

1.1. Power Quality Monitoring System

In order to improve power quality in network and provide customer a high level of satisfaction BYPL shall adopt following philosophy.



1.2. Measure:

Being a distribution utility BYPL receive power from power transmission utility DTL at 66 kV and 33 kV and supply to customers in its licensee area on 66 kV, 33 kV, 11 kV and 415 V.

Fixed Type Power Quality Meters:

Fixed type of meters will be installed to gain real time overview of power quality in its supply network. They will also provide real time information for transients occurring in network due to a fault or switch of a line/ capacitor bank etc. This information will be used to determine possible reasons of the transients and their effects.

1.2.1. Portable Power Quality Meters

Portable meters shall be used to collect power quality information in LT network and customer ends.

1.2.2. Data Acquisition and Management:

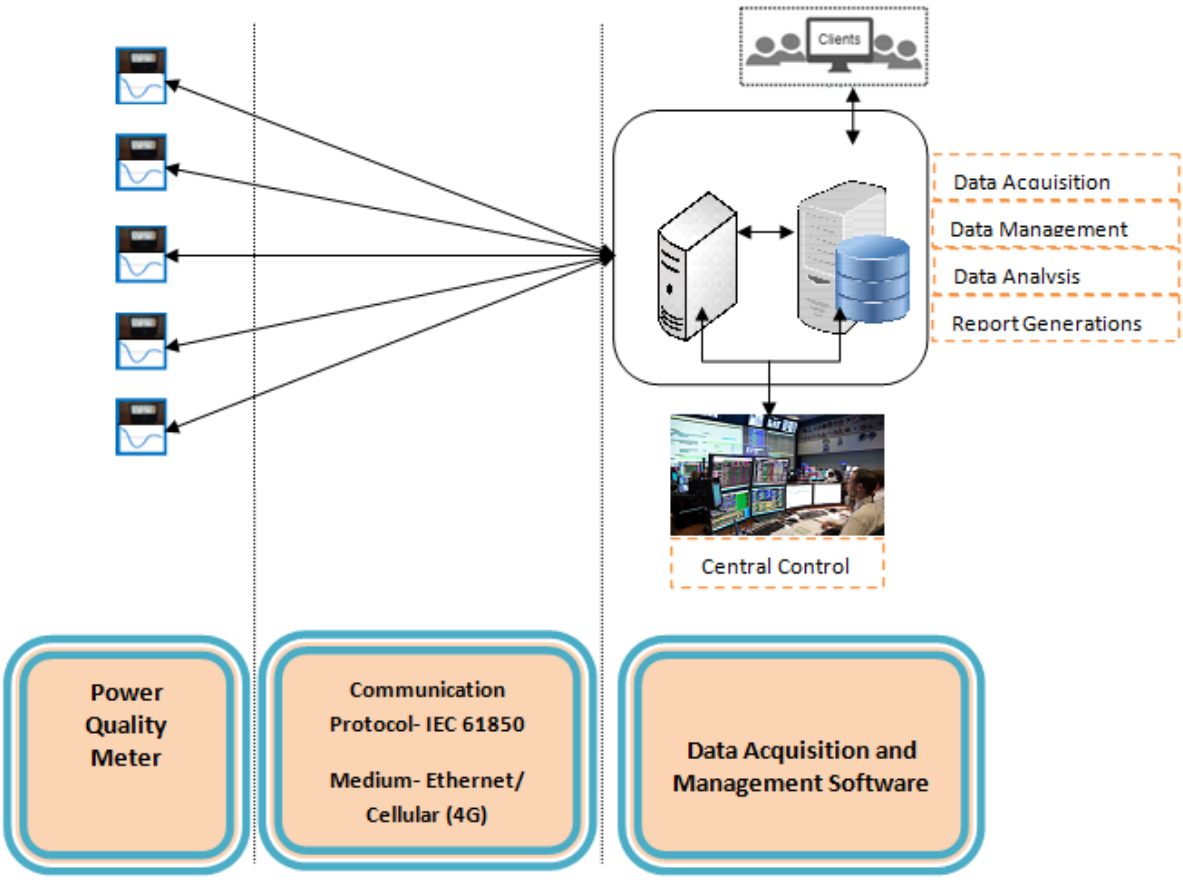
Data collected by power quality meters shall be analyzed along with filed information fault or switching data in order to determine reasons and effect of various events registered by these

meters. Power quality indices shall also be generated to access overall power quality condition in the network.

Power quality data shall be acquired from field devices over remote communication and manual upload to a server which acts as a central acquisition and data repository. Different makes of meter shall be integrated to this system. This system shall also have analytic module to generate various reports over power quality. **This system shall also have facility to generate actionable plan.**

1.3. Proposed Power Quality System Architecture

Proposed architecture is given below. As it is a new system, appropriate changes to optimize system performance may be made in the architecture during the course of technical evaluation.



2. Scope of Supply- Power Quality Meter

2.1. Design, manufacture, testing (at manufacturer's work) before dispatch, packing, delivery and submission of all documentation

2.2. Any accessories / hardware required for installation and operation for the meter.

3. **Scope of Work- Power Quality Meter:**

3.1. Installation & commissioning at location provided by BYPL, along with the complete wiring and necessary hardware

3.2. Any modification in existing panel including cut out, drilling etc for mounting of the meter

3.3. Connectivity of Meter with Communication channel

3.4. Configuration of Parameters and Communication settings

3.5. Integration with BYPL Power Quality Data Acquisition and Management Software System (PQDAMSS)

3.6. User Training- As per Technical Specification

4. **Scope of Supply and Implementation of Power Quality Data Acquisition and Management Software System (PQDAMSS):**

4.1. Supply: - PQDAMSS shall be supplied as per technical specifications enclosed with this tender document.

4.2. Implementation:- PQDAMSS shall be deployed in BYPL data center. Hardware shall be provided by BYPL. Bidder need to specify requirement of hardware and storage including requirement of operating system as per technical specifications.

4.3. Testing:- After successful deployment of the system user acceptance tests shall be carried based on technical specification.

4.4. Training- As per Technical Specification

4.5. Support and AMC

4.5.1. Bidder shall provide 12 month free support period after successful deployment (After successful User acceptance test).

4.5.2. Bidders shall provide annual maintenance contract (AMC) for operation and management of software system post deployment and free support period. Following are the key scope for this AMC

4.5.2.1. Troubleshooting of any reported bugs issues

4.5.2.2. Data archive.

4.5.2.3. Integration of new devices and other systems

4.5.2.4. System Management

4.5.2.5. Support to BYPL official for Analysis of PQ data and events.

4.5.2.6. Software Upgrade

5. Performance Obligation:

Provider of PQDAMSS shall ensure following performance of the software system and its associated services:

Sl No.	Performance Terms	Performance value	Penalty as % of the AMC Cost
1	Acquisition of data from meters in the Software.	>99% success	For <99% - 2% of monthly support charges will be deducted for every 0.5% decrease
2	Software uptime.	>99.5% of the time	For < 99.5% - 5% of quarterly AMC charges will be deducted for every 1% decrease.
3	Software Services uptime	>99.5% of the time	For < 99.5% - 5% of quarterly AMC charges will be deducted for every 1% decrease.
4	Event Notifications	>99% success	For <99% - 2% of monthly support charges will be deducted for every 0.5% decrease
5	Report Dispatch	>99% success	For <99% - 2% of monthly support charges will be deducted for every 0.5% decrease

6. **Bill OF Quantity:**

Sl	Description of Item	UoM	Quantity	Unit Rate	% Tax	Total Cost
1	Supply of Fixed Type Power Quality meters	Nos	10			
2	Supply of Potable Type Power Quality Meters	Nos	03			
3	Installation, Testing, Commissioning and Training of fixed type Power Quality Meters as per Scope of Work	Nos	10			
4	Training of Portable type Power Quality Meters as per Scope of Work	Nos	03			
5	Supply, Implementation and training of Power Quality Data Acquisition and Management Software System (50 End Points)	Lot	01			
6	Supply, Implementation and training of Power Quality Data Acquisition and Management Software System (100 End Points)	Lot	01			
7	AMC of Power Quality Data Acquisition and Management Software System	Annual	01			

7. Scope Demarcation.

Power Quality Meter				
S#	**Head**	**BYPL Scope**	**Bidder Scope**	**Remarks**
1	Supply, installation, Testing and commissioning of PQ Meter	✗	✓	As per Specs & Standards
2	Drawing Submissions	✗	✓	NA
3	Engineering Approvals	✓	✗	NA
4	Routine and acceptance testing at manufacturer's work	✗	✓	NA
6	Request to issue 'Permit to Work' from BYPL authority	✗	✓	Permit should be applied to Engineer In-charge prior to work through proper procedure
7	Permit to work issuance	✓	✗	NA
8	Identification of CT and PT connection points and wiring in existing panel.	✓	✗	BYPL will indicate connection point & facilitate existing wiring diagram required for PQ meter connection in existing panel.
9	Material required for installation of PQ meter e.g. CT and PT wiring, auxiliary supply wiring, LAN cable for communication of meter, lugs, ferrules etc	✗	✓	BYPL shall approve size and type of wiring.
10	Any modification in existing panel including cut out, drilling etc for mounting of the meter.	✗	✓	Approval shall be taken from BYPL regarding any modification.
11	Configuration of PQ meter (Nominal System voltage, rating of CT and PT, type of connections, reference standards, communication parameters etc)	✗	✓	Site specific parameters shall be provided by BYPL.
12	Tools & Tackles related to Job	✗	✓	NA
13	Any other supply item or scope of work missing in given sheet to complete PQ meters commissioning	✗	✓	NA

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Power Quality Meter				
S#	**Head**	**BYPL Scope**	**Bidder Scope**	**Remarks**
14	Integration of PQ meter with BYPL software system.	✗	✓	Bidder has to work with BYPL team or its authorized software system provider
15	Training to BYPL officials	✗	✓	As per Specification
Power Quality Data Acquisition and Management Software System (PQDAMSS)				
1	IT Hardware Sizing as per requirement of Software System	✗	✓	NA
2	To provide IT Hardware	✓	✗	NA
3	Supply and Installation of Software System including all necessary database software, plugins patches, updates etc	✗	✓	NA
4	Integration of PQ meters with Software System.	✗	✓	NA
5	Testing of Software System	✗	✓	NA
6	Documentation related to installation, operation , maintenance, debugging, architecture, database deployment etc	✗	✓	NA
7	Training to BYPL officials	✗	✓	NA

Specification for

Power Quality Meter

Specification no – SP-PQM-187-R0

Prepared By	Ashish Joshi	28cf4d7d-6c91-4d53-be77-f490e198fb6b	Revision- R0
Reviewed By	Puneet Duggal	404db803-a91f-4234-85f0-0b2b5098ec32	Date
Approved By	Gaurav Sharma	3dc2de2-95de-4472-99a7-dea873f472b6	13/12/2021

Index

Record of Revision

Clause No.	Change in Specification	Approved By	Rev

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1.0 Scope of Supply

This specification covers the following for Power Quality Meter.

1.1 Design, manufacture, testing at manufacturer works before dispatch, packing, delivery and submission of all documentation.

1.2 Any accessories / hardware required for installation and operation for the meter.

1.3 Software, Integration and Communication Requirement.

2.0 Codes & standards

Materials, equipment and methods used in the manufacturing of above mentioned equipment shall conform to the latest edition of following

S No.	Standard Number	Title
2.1	Indian Electricity Act	IE Act 2003
2.2	CEA Regulations	With latest amendments
2.3	IEC 61000-4-30 Edition 3.0	Electromagnetic compatibility (EMC) - Part 4-30: Testing and measurement techniques - Power quality measurement methods
2.4	IEC 61000-4-15	Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 15: Flicker meter – Functional and design specifications
2.5	IEC 61000-4-7	Electromagnetic compatibility (EMC) – Part 4-7: Testing and measurement techniques – General guide on harmonics and inter-harmonics measurements and instrumentation, for power supply systems and equipment connected thereto
2.6	IEC 62053-24	Electricity metering equipment - Particular requirements - Part 24: Static meters for fundamental component reactive energy (classes 0,5S, 1S, 1, 2 and 3)
2.7	IEC 62586-1	Power quality measurement in power supply system’s - Part 1: Power quality instruments (PQI)
2.8	IEC 62586-2	Power quality measurement in power supply system’s - Part 2: Functional tests and uncertainty requirements

2.9	IEC 60529	Degrees of protection provided by enclosures (IP Code)
2.10	IEC 61000-6-5	Electromagnetic compatibility (EMC) - Part 6-5: Generic standards - Immunity for equipment used in power station and substation environment
2.11	IEC 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
2.12	IEC 60068-2	Environmental testing - Part 2: Tests - ALL PARTS
2.13	61000-4-4 61000-4-5 61000-4-6 61000-4-3 61000-4-16 61000-4-11	Testing and measurement techniques –Immunity to Electrical fast transient/burst, Surge , conducted disturbances, induced by radio-frequency fields, Electrostatic discharge, Radiated, radio-frequency, electromagnetic field, conducted common mode disturbances in the frequency range 0 Hz to 150 kHz, Voltage dips, short interruptions and voltage variations
2.14	IEEE 519-2014	Recommended Practice and Requirements for Harmonic Control in Electric Power Systems
2.15	IEEE 1159.3	Power Quality Data Interchange Format.
2.16	C37.111	Common Format for Transient Data Exchange
2.17	EN 50160	Voltage Characteristics in Public Distribution Systems
2.18	IS 14697	AC static transformer operated Watt-Hour and VAR-Hour meters, class 0.2 S, 0.5 S and 1.0 S

In the event of direct conflict between various order documents, the precedence of authority of documents shall be as follows-

i. Guaranteed Technical Particulars (GTP)

ii. Specification including applicable codes & standards

iii. Approved Vendor Drawings

iv. Other documents

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3.0 Power System Data

3.1	Supply Voltage	a. Low Voltage: 1 Phase 2 Wire (240 V) b. Low Voltage: 3 Phase 4 Wire (415 V) c. High Voltage: 3 Phase 3 Wire/ 4 Wire (11 kV, 33kV and 66 kV)
3.2	Frequency	50 Hz ± 5%,
3.3	System Neutral	Solidly Earthed

4.0 Type of Power Quality Meter

4.1	Type A	Fixed Type Power Quality Meter
4.2	Type B	Portable Type Power Quality Meter

5.0 Construction Requirement of Type A Meter

5.1	Application	Meter should be suitable to install at site permanently and measure PQ parameters continuously.
5.2	Meter mounting	Surface Mount
5.3	Ingress Protection	IP 5X
5.4	Electrical Safety	a. Insulation Requirement: 300 V Type IV as per IEC 60664 and IEC 61010 b. Pollution Category: 3 as per IEC 60664 and IEC 61010 c. Bidder need to submit type test report for the same.
5.5	Auxiliary Power Supply	a. AC Voltage Range: 40- 440 V @ 50 Hz b. DC Voltage Range: 40-440 V
5.6	Terminal Block	a. Meter shall have Plug-in type screw operated melamine terminal blocks. b. Terminal block shall be suitable for terminating stranded copper cable of size 1.5 Sqm to 6 Sqmm.
5.7	Measurement Requirement	
5.7.1	Connection Type	Configurable to Measure in following connection types: a. 3 Phase 3 Wire b. 3 Phase 4 Wire

		c. 1 Phase 2 Wire
5.7.2	Voltage Channels	a. No of Channels: 4 (3 Phase and Neutral) b. Nominal Voltage Range: 0-460 V c. Maximum Peak Measurement- Bidder need to specify capability of measuring maximum voltage.
5.7.3	Current Channels	a. No of channels: Minimum 4 nos (3 Phase and Neutral) b. Current Range: 0-5 A. c. Maximum Peak Measurement- Bidder need to specify d. Burden- Bidder needs to specify.
5.7.4	Accuracy of Measured Parameters	Bidder need to specify accuracy and uncertainty in measurement of following parameters: a. Voltage and Current magnitude (Fundamental and Harmonics) b. Voltage and Current phase angle (Fundamental and Harmonics) c. Active and Reactive Power and Energies (Fundamental and Harmonics)
5.7.5	Class of the Meter	Class A as per IEC61000-4-30
5.7.6	Sampling Frequency	a. Sampling rate of the meter at all channels should be more than 12.8 kHz.
5.7.7	Transient Measurement	a. Bidder need to specify capability of meter to measure voltage and current transient. b. Bidder may also offer high transient measurement capabilities by using special terminals.
5.7.8	ADC Resolution	Minimum 16 bit
5.8	Data Retention	Meter shall have non volatile internal memory for record power quality data for at- least 01 month continuous recording.
5.9	Display	General LED indicators for Power ON, Data Communication, Status etc.
5.10	Communication	a. 2 Nos Ethernet ports shall (RJ45) for communicating meters

	ports	with SCADA and central server over LAN. b. RJ 11 connector for communicating meter over RS 232 port and RS 485 port. c. Communication ports should have galvanic isolation.
5.11	Environmental Parameters	Meter shall able to work satisfactory in following environmental conditions.
5.11.1	Ambient Temperature	Limit rage for storage: -20 Deg C to +70 Deg C Limit Range of Operation: -20 Deg C to +55 Deg C
5.11.2	Humidity	Relative humidity: 0 to 96 % Rh

6.0 Construction Requirement of Type B Meter

6.1	Application	Meter should be handheld type and Portable.
6.2	Ingress protection	IP 65
6.3	Electrical Safety	a. Insulation Requirement: 300 V Type IV as per IEC 60664 and IEC 61010 b. Pollution Category: 3 as per IEC 60664 and IEC 61010 c. Bidder need to submit type test report for the above mentioned requirements.
6.4	Auxiliary Power Supply	Meter should be able to work with following power supplies: a. AC Voltage Range: 40- 440 V @ 50 Hz b. DC Voltage Range: 40-440 V
6.5	Terminal Block	Following provisions shall be provided to power up meter: a. Using Crocodile clips (02 Nos crocodile clips shall be provided for this purpose) b. Using 3 pin plug. (Shall be provided along with Meter). c. From voltage measurement probes itself. Bidder need to specify power requirement of offered equipment in VA.
6.5.1	Battery Backup	a. Minimum 12 hr battery backup shall be provided in case of supply power failure/ non availability by rechargeable Li-ion battery. b. Battery shall be replaceable in field.
6.6	Measurement	

	Requirement	
6.6.1	Voltage Channels	a. No of Channels: 4 (3 Phase and Neutral) b. Nominal Voltage Range: 0-460 V c. Maximum Peak Measurement- Bidder need to specify capability of measuring maximum voltage.
6.6.2	Voltage Probes	Colour coded 4 no's (3 Phase and Neutral) Crocodile type voltage probes of minimum length of 1000 mm shall be provided along with the meter.
6.6.3	Current Channels	No of channels: Minimum 4 nos (3 Phase and Neutral)
6.6.4	Current Probes	Following current probes shall be provided along with the meter
6.6.4.1	Rogowski Coil	a. 4 Nos (3 Phase and Neutral) b. Coil Diameter: Minimum 100 mm c. Minimum length 1000 mm. d. Frequency Range- 10 Hz to 20 kHz e. Current Range- 5 A to 3000 A
6.6.4.2	Clamp on CT	a. 4 Nos (3 Phase and Neutral) b. Clamp on CT diameter shall be specified by Bidder. c. Minimum lead length 1000 mm. d. Frequency Range- 40 Hz to 20 kHz e. Current Range- 5 mA to 10 A
6.6.5	Accuracy of Measured Parameters	Bidder need to specify accuracy and uncertainty in measurement of following parameters: a. Voltage and Current magnitude (Fundamental and Harmonics) b. Voltage and Current phase angle (Fundamental and Harmonics) c. Active and Reactive Power and Energies (Fundamental and Harmonics)
6.6.6	Class of the Meter	Class A as per IEC61000-4-30
6.6.7	Sampling Frequency	a. Sampling rate of the meter at all channels should be more than 48 kHz. b. Meter shall be able to measure super harmonics spectrum

		(upto 150 kHz) as per IEC 61000-2-2.
6.6.8	Transient Measurement	a. Bidder need to specify capability of meter to measure voltage and current transient. b. Bidder may also offer high transient measurement capabilities by using special terminals.
6.6.9	ADC Resolution	Minimum 24 bit
6.7	Data Retention	Meter shall have non volatile internal memory for record power quality data for at- least 3 month continuous recording.
6.8	Display	a. Colored TFT display b. Display should have appropriate resolution to show real time waveforms. c. Meter shall have facility to display Phasor.
6.9	Fall protection	Meter shall be equipped with shock proof casing to provide protection in case of fall.
6.10	Carry bag	Suitcase type box shall be provided for meter and all accessories. Bidder shall specify its dimensions.
6.11	Limiting Dimensions and Weight	a. Dimensions of the meter are as compact as possible. b. Weight of along along-with its all accessories should suitable to carry by hand. c. Bidder shall specify its dimensions and weight.
6.12	Communication Ports	a. 1 Nos Ethernet ports shall be provided (RJ45) for communicating meter with SCADA and central server over LAN. b. RS 232 port (RJ 11) port for communicating meter by Modem. c. USB port to dump data on a PC. d. Software shall be provided to on a PC to dump data on a computer to upload it on central server.
6.13	Environmental Parameters	Meter shall able to work satisfactory in following environmental conditions.
6.13.1	Ambient Temperature	Limit rage for storage: -20 Deg C to +70 Deg C Limit Range of Operation: -20 Deg C to +55 Deg C
6.13.2	Humidity	Relative humidity: 0 to 96 % Rh

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7.0 Functional Requirement

7.1	Measurement Parameters	a. Meter shall be able to measure and record all the parameters and events mentioned in IEC 61000-4-30 for class A meter. b. Following parameters shall also be measured with a window width of 200 ms: i. Voltage Frequency ii. Phase wise RMS Voltage (Phase to Phase and Phase to Neutral) iii. Phase wise RMS Current. iv. Phase Wise voltage Peak (Signed) v. Phase Wise Current Peak (Signed) vi. Phase wise and cumulative Active Power (Signed) vii. Phase wise and cumulative Reactive Power (Signed) viii. Phase wise and cumulative Apparent Power (Signed) ix. True and displacement PF (Phase Wise and cumulative) x. Voltage Unbalance Factor xi. Current Unbalance Factor xii. Harmonic Voltage xiii. Current Harmonic xiv. Harmonic Power xv. Harmonic Voltage Current Phase and its difference xvi. Inter-Harmonic Voltage xvii. Inter Harmonic Current- xviii. THD Voltage xix. THD and TDD Current xx. THD –Inter harmonic current xxi. K-Factor xxii. Rapid Voltage Change xxiii. Energy Measurement xxiv. TDD current based on user set Peak load current

		xxv. Positive, Negative and zero sequence for voltage xxvi. Positive, Negative and zero sequence for current c. All data measured should have minimum, maximum and average value. d. PQ meter should use standard sign convention for import (+)/export (-) of energy/power and lag (+)/lead (-) Power factor and Reactive Power. e. PQ meters should be able to measure phase to ground voltage and based on it threshold settings events are triggered f. Detail of anti aliasing filter incorporated in meter should be provided along with offer. g. Meter type A- Meter shall store all data points of continuous measurement upto 01 months FIFO basis. h. Meter type B- Meter shall store all data points of continuous measurement upto 03 months FIFO basis. i. This list is indicative. Bidder can specify additional parameters measured by meter. j. Meter should have option to configure aggregation intervals of measured value/ parameters as per requirement of IEC and IEEE standards.
7.2	Flicker Measurement	Meter shall have functionality to measure flickers as per IEC IEC61000-4-15 along with following parameters: a. Short Interval IEC Voltage Flicker measurement---Pst – 10 minute interval b. Long Interval IEC Voltage Flicker measurement – Plt – 2hour interval. c. Each Phase V10 flicker --1 minute d. Instantaneous Flicker as per IEC61000-4-15
7.3	Events	Following is indicative events list: a. Voltage dips, swell and Short/Long interruption with post and pre event waveform and RMS trend record. b. Voltage transients with post and pre waveform record.

		c. Current Transients with post and pre waveform record. d. Rapid Voltage Changes e. Triggering shall be configurable on the basic of event magnitude and persistence time. f. Discrimination shall be provided between upstream and downstream events.
7.4	Programmability	a. Remote configuration of parameters - Web /Window application based configuration b. Locally/ Remote Firmware Upgrade facility shall be provided. c. Data collection interval and parameter list shall be configurable. d. Remote setting facility for threshold levels of parameters to generate events.
7.5	Calibration	Meters shall be calibrated at accredited Labs. Certificate of the calibration shall be submitted by bidder.
7.6	Time synchronization	a. Auto Time Synchronization (NTP) b. Facility shall also be provided to synchronize clock by GPS.

8.0 Data Exchange, Integration, Communication and Trial:

8.1	Communication	a. Meter should support TCP/IP as well as UDP connections. b. Data exchange protocols should be field configurable and should include Modbus TCP, IEC 61850 and IEC 104. c. Meter should support FTP/SFTP to transfer files. d. Meter should support file format of PQDIF and Comtrade. e. Meter should be web configurable over HTTP/ HTTPS. f. All the connections to the meter should be encrypted and password protected. g. Bidder shall describe communication architecture and its integration capabilities with the enterprise software system for portable meter. Preference shall be provided to open protocol system.

8.2	Integration requirement	a. Integration of PQ meter with Enterprise software is sole responsibility of Bidder b. PQ Meter shall provide end-to-end data protections to ensure no data is lost or corrupted during processing, storage, and transportation between meter and interfaces. c. PQ product should comply data requirement for Enterprise Software to generate statistical reports viz. ITC, SEMIF47, SARFI indices, SAG classification Table/ Chart, SAG Timeline Chart/ Table , three dimension histogram (for no of sag, duration and % of depth) and TDD table as per IEEE519 standard for user selected duration. Moreover, generated reports by Enterprise software viz. EN50160, IS 17036 and user configured will be device specific and also collated for all devices. d. Enterprise software will also integrate with GIS for identification of fault distance based on voltage sag observed at point of installation. In view of it, PQ meter should have digital inputs from relay trip contact of breaker tripped for identification of tripped feeder. e. The instantaneous waveform captured by PQ Meter for triggered parameters should be made available in PQDIFF format to enterprise software for graphical representation. f. PQ Meter's should record parameters needed by enterprise software for report generation and event notification. g. PQ meters should provide data in PQDIFF/COMTRADE format to central remote server with enterprise software either directly or using data collection software. h. There will be single data repository for storing PQDIFF/ COMTRADE data for PQ meters of all make.
8.3	Trial	Successful bidder should deploy 01 no meter to integrate with enterprise software. Subsequently, on successful integration and after evaluation of performance for at-least 02 months, further clearance shall be provided.

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8.4	Training	Bidder should provide training to BYPL officials on the following topics at BYPL Delhi Office. Training should include at least 02 day of classroom training and 02 day of field training. a. Installation and Commissioning of meter. b. Configuration of Meter. c. Troubleshooting. d. Operation and Maintenance of Meter e. Analysis of Meter Data.

9.0 Warranty and Marking on Meter

9.1	Warranty	66 Months from the date of Supply
9.2	Marking on Meter	a. Following details shall be printed on name plate of meter: i. Meter Sr. Nos. ii. Name of manufacturer and Country of Origin iii. Month and year of manufacturing iv. Supply voltage ranges and frequency v. Input Voltage Range and Input Current Ranges vi. Accuracy Class and Reference Standards vii. Communication port provided and hardware ID of same. viii. Data Exchange Protocol b. Proper marking for voltage and current terminals and phase identification shall be provided. c. Making for earth terminals and port. d. Marking shall be provided for power supply terminals along-with their voltage ranges.

10.0 Quality Assurance, Inspection and Testing

10.1	Vendor's Quality Plan (QP)	To be submitted for Purchaser's approval.
10.2	Sampling Method	Sampling Method for quality checks shall be as per relevant IS/ IEC/ IEEE and Purchaser's prior approval shall be taken for the same.

10.3	Inspection Hold-Points	To be mutually identified, agreed and approved in Quality Plan.
10.4	Type tests	a. Bidder Shall submit type tests of the offered meter as per IEC 61586 and IEC 61000-4-30. b. Type tests for voltage and current probes shall also be submitted. c. Type tests for IP rating, Environmental testing and safety class shall be submitted as per relevant IS/ IEC.
10.5	Routine tests	a. All the meters and voltage and current probes shall be subjected to routine tests as per IEC 62586, 61000-4-30 and other relevant standards. b. Bidder need to specify all the routine tests in their quality plan. c. Calibration certificates of meters shall be provided. d. Printed Circuit Board used in the meter should be tested as per standard (IPC-A-600).
10.6	Acceptance tests and Inspection	a. Acceptance tests shall be carried out as per IEC IEC 61586 and relevant standards and mutually agreed points. b. Purchaser reserves the right to inspect /witness all tests on the meters at Seller's works at any time, prior to dispatch, to verify compliance with the specification/ standards. c. In-process and / or final inspection call intimation shall be given in advance to purchaser.

11.0 Packing, Marking, Shipping, Handling and Storage

11.1	Packing	Every metes shall be properly sealed / packed in environmental friendly boxes/ cartons for protection against damage, vibration and ingress of dust and moisture.
11.2	Packing for accessories and spares	Robust non returnable packing case with all the above protection & identification Label.

11.3	Marking	On each packing case, following details are required : a. Individual serial number b. Purchaser's name c. PO number (along with SAP item code, if any) & date d. Equipment Tag no. (if any) e. Destination f. Manufacturer / Supplier's name g. Address of Manufacturer / Supplier / it's agent h. Type , rating and other description of equipment i. Country of origin j. Month & year of Manufacturing k. Case measurements l. Gross and net weights in kilograms m. All necessary slinging and stacking instructions
11.4	Test reports & calibration certificates	Routine test report and calibration certificates to be provided with each meter
11.5	Shipping	The seller shall be responsible for all transit damage due to improper packing.
11.6	Handling and Storage	Manufacturer instruction shall be followed. Detail handling & storage instruction sheet /manual to be furnished before commencement of supply.

12.0 Deviations

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

13.0 Document Submission:

Drawing submission shall be as per the matrix given below.

i. All documents/ drawing shall be provided in soft copy only in returnable USB memory drive.
ii. Language of the documents shall be English only.
iii. Incomplete submission shall be liable for rejection.
iv. Document check sheet compliance shall be the first sheet for each submission stage.
v. No submission is acceptable without check list compliance.

Order of document shall be strictly as per the check list.

SL	Detail of Document	Bid	Approval	Pre Dispatch
1	Guaranteed Technical particulars (GTP)	Required	Required	
2	Deviation Sheet, if any	Required	Required	
3	GA / cross sectional drawing of Meter showing all the views / sections	Required	Required	
4	Samples of each type and rating offered.	1 no's	1 no's	
5	Any software and accessories required for installation/ operation of meter	Required	Required	
6	Manufacturer's quality assurance plan and certification for quality standards	Required	Required	
7	Type Test reports of offered model/ type/ rating	Required		
8	BIS certificate	Required		
9	Complete product catalogue and user manual.	Required		
10	Customer Reference List	Required		
11	Recommended list of spare and accessories	Required		
12	Program for production and testing (A)		Required	Required
13	Detailed installation and commissioning instructions		Required	Required
14	As Built Drawing		Required	Required
15	Operation and maintenance Instruction as well as trouble shooting charts/ manuals		Required	Required

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16	Inspection and test reports, carried out in manufacturer's works			Required
17	Routine Test certificates			Required
18	Test certificates of all bought out items			Required

14.0 Delivery

14.1	Delivery	Despatch of Material: Vendor shall despatch the material, only after the Routine Tests/Final Acceptance Tests (FAT) of the material witnessed/waived by the Purchaser, and after receiving written Material Despatch Clearance (MDC) from the Purchaser.

Annexure - A- Guaranteed Technical Particulars (Data By Supplier)

Bidder shall furnish the GTP format with all details against each clause of this specification.

Bidder shall not change the format of GTP or clause description.

Bidder to submit duly filled GTP in hard copy format with company seal.

Clause No.	Clause Description	Manufacturer's Reply
1		
2		
3		
5		

Bidder / Vendor seal / signature ----------

Name of the bidder	
Address of the bidder	
Name of contact person	
Telephone number and email id	

Annexure - B- Recommended Accessories / Spares (Data By Supplier)

SL	Description of spare part	Unit	Quantity
1		No	
2		No	

3			
4			

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Specification for Power Quality Data Acquisition and Management Software System

Specification no – SP-PQSS-188-R0

Prepared By	Ashish Joshi	28cf4d7d-6c91-4d53-be77-f490e198fb6b	Revision- R0
Reviewed by	Puneet Duggal	404db803-a91f-4234-85f0-0b2b5098ec32	Date
	Lalit Kumar	e130c3d0-530a-403e-b5b5-51a110950a42	
Approved by	Gaurav Sharma	23dc2de2-95de-4472-99a7-dea873f472b6	13/12/2021
	Ashwani Aggarwal	5f0ce1de-7a97-4b55-96af-424b60034ade	

Index

Record of Revision

Clause No.	Change in Specification	Approved By	Rev

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1.0 Scope

Scope of this specification is as follow with respect to Power Quality Data Acquisition and management software system (PQDAMSS):

a. Supply
b. Implementation
c. Testing
d. Integration
e. Training

2.0 Codes & standards

The software system and its parts shall conform to the latest edition of following:

S No.	Standard Number	Title
2.1	CEA Regulations	With latest amendments
2.2	IEC 61000-4-30 : 2015	Electromagnetic compatibility (EMC) - Part 4-30: Testing and measurement techniques - Power quality measurement methods
2.3	IS 17036	Distribution System Supply Voltage Quality
2.4	EN 50160	Voltage characteristics of electricity supplied by public distribution systems.
2.5	IEEE 519-2014	**IEEE** Recommended Practices and. Requirements for Harmonic Control in. Electrical Power System s
2.6	IEEE 1159.3	IEEE Recommended Practice for Power Quality Data Interchange Format (PQDIF)
2.7	C37.111	IEEE/IEC International Standard - Measuring relays and protection equipment – Part 24: Common format for transient data exchange (COMTRADE) for power systems
2.8	IEC 61850	Communication networks and systems for power utility automation

In the event of direct conflict between various order documents, the precedence of authority of

documents shall be as follows-

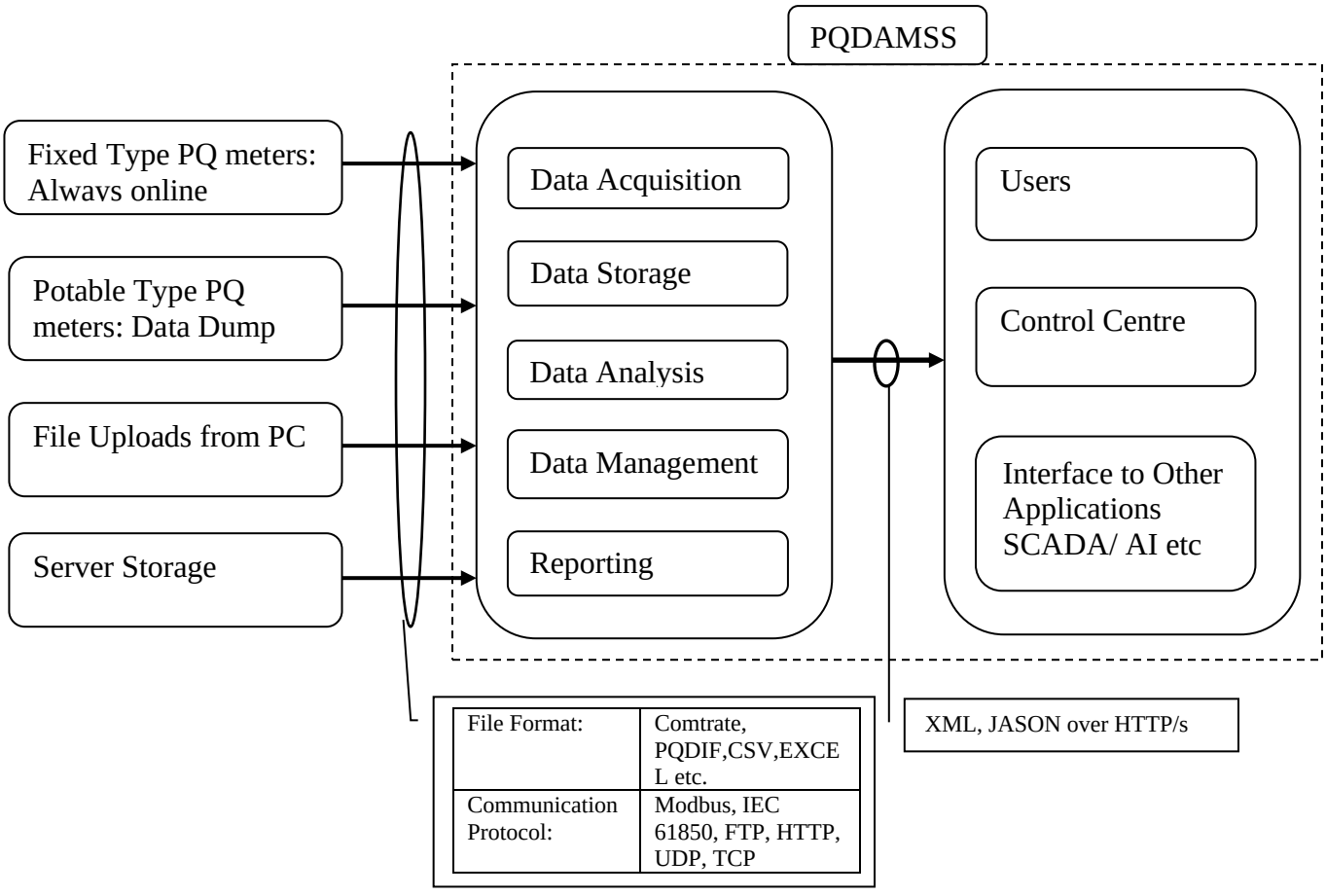
i. Guaranteed Technical Particulars (GTP)

ii. Specification including applicable codes & standards

iii. Approved Vendor Drawings

iv. Other documents

3.0 Architecture



4.0 Functional Requirement:

SL	Parameters	Requirement
4.1	PQDAMSS Location	PQDAMSS shall be deployed at BYPL data center.
4.2	Data Acquisition from Field devices	a. PQDAMSS shall collect data from field devices of different makes.

		b. PQDAMSS shall support various communication protocols as mentioned in this specification.
4.3	Data management	a. Data management application shall store collected data. b. It will provide user interface for control center for administrative works through web services. c. Multiple clients can also be connected through web based services. d. Collected data shall be stored in PQDAMSS and shall be made available for integrated modules and systems.
4.4	Data analysis and reporting	Data analysis and reporting applications shall be provided in PQDAMSS as mentioned this specification.
4.5	Integration with other utility applications	Other utility applications shall be integrated through PQDAMSS over standard adaptors.

5.0 Data Acquisition:

5.1	Protocol	PQDAMSS shall support different protocols communication protocols for data collection from field devices (PQ meters) i.e. IEC 61850, Modbus, FTP etc.
5.2	Communication medium	Ethernet, Cellular modem, RS 484, RS232 etc.
5.3	Data format	System shall support PQDIF and COMTRADE file formats as per latest revision of IEEE 1159.3 and IEEE C37.111 standards respectively for data transfer from meter to PQDAMSS.
5.4	Data collection	Data collection scheduler shall be provided that will collect user configurable set of data from remote field devices in a user configurable frequency by above mentioned communication protocols over mentioned communication mediums. Facility for on demand data collection shall also be

		provided.
5.5	Data Import	Facility shall also be provided for manual importing of data in PQDIF and COMTRADE file format.
5.6	Real time data	PQDAMMSS provided facility to collect real time data to display on dashboard and event alerts purpose.

6.0 Data Management

6.1	User interface	User interfaces shall be provided by web services or windows applications for different roles and assignments.
6.2	Monitoring Dashboards	User configurable dashboard for monitoring and analysis of field devices and data e.g instantaneous voltage, current, harmonic contents (THD, TDD, Individual), frequency, IP address, location etc following views: a. List view: All installed devices shall be listed in tabular form with specified data. b. SLD view: All installed devices shall be shown on a background SLD with specified data. c. GIS view: All installed devices shall be shown background GIS map.
6.3	Data base Supported	a. Bidder may propose. b. Application upgrade shall be supported as per procured database life cycle.
6.4	User management	a. Administrator/ User login control b. Web based GUI to provide role-based access c. System shall not limit the user account for application access.
6.5	Device Management	a. Access Control Management b. Device Configuration c. Firmware Upgrade d. Real Time Devices Status

		e. Report compliance configuration f. Alarm Event configuration g. Threshold configuration for events , reports, triggering DI/DO
6.6	Evaluation and statistics Reporting structure	List is indicative but not limited to a. User defined reports on event , trend, comparison and summary, b. Web and Window based details analysis, reports c. User and Management web report d. Dashboards on Power Quality e. Substation wise summary /status report. f. Monthly/yearly event report. g. Root cause analysis report. h. Event Data and Report accessible on web i. Generated weekly/fortnight power quality report according to EN 50160 or customizable standards j. Downloading of time series and event data for selected duration in excel/PDF or XML format as per Annexure A and Annexure B. k. Graphical user interface for time domain waveform captured for every events as per Annexure C. l. Graphical user interface to show time series data for selected duration with event markers embedded in it. m. Graphical user interface should indicate flagged values. n. It should have numerous chart types option vis (stacked), column/bar, multi-level pie, line, curved lines, scatter plot and curved area. o. The disturbance analyzing tool shall include flexible zooming tools. p. Alarm configuration, Alarm dispatch (Email, SMS) configuration for listed user

		q. Robust Reporting engine for customized user report. r. Accessing time for historical data should be less than 2 seconds. s. Software reporting and analysis shall follow the meter technical specification for data requirement. t. Each Report and analysis shall be generated for both single and multi-site. u. Report templates shall store in HTML/MS Doc etc format, and easily changed to meet user's visual requirements.
6.7	Report scheduling and Dispatch	a. Daily/Weekly/ fortnightly/Monthly configurable reporting & dispatching schedule.
6.8	Dispatch notification	a. Via Email to list of users, measurement points and parameters can be selective for user b. Notification via BYPL SMTP server c. Notification contents shall be configurable d. Email Notification should contain type of event and Time Stamp, other details etc. e. Email Notification of Daily/Weekly/Monthly (configurable) PQ report attached as EN61050 standards or user configurable
6.9	Archival and Backup policy	a. As per provided by the vendor
6.10	Application Integration	a. Web Services / APIs based on open standards for integration with other Utility Applications. i.e GIS (Geographical Information system), CRM(Customer Relationship management) , OMS (Outage Management System), SCADA and Data Analytics Application etc. b. Necessary support in hardware / software for Integration to be provided in details by the bidder. c. Correlate PQ complaints in downstream network with CRM and OMS application.

		d. Correlate Fault Events with SCADA Operation Events.
6.11	Application shall support	a. Pattern recognition, fault prediction, Fault Type Identification and Fault Location by integrating with GIS application. b. Service shall include recent annual software releases of all software in the system. c. Software/firmware upgrade as per latest amendments/guidelines by mentioned standards. d. Scalable license for software and no. of devices.
6.12	Companion Software Applications	a. All associated software support shall be provided along with PQ Data management software. b. PQ data management software and associated software shall be compatible with provided version of companion software. c. Upgrade of companion software or associated software with or without upgrade PQ data management software shall not impact the feature and functioning of project.
6.13	Meters/Portable Meters Integration	a. Data management software shall integrate with existing make of PQ meters if any. b. Support Portable PQ devices data for storage, analysis and reporting purpose.
6.14	Security	a. **Secure Access Controls**: System shall have access control management where different roles and rights shall be created and assigned to the user logins of applications for authorized access. The system shall also include mechanisms for defining and controlling user access to the operating system environment and applications. b. **Authorization Controls**: A least-privilege concept such that users are only allowed to use or access functions for which they have been given

		authorization shall be available c. **Logging**: Logs must be maintained for all attempts to log on (both successful and unsuccessful), any privilege change requests (both successful and unsuccessful), user actions affecting security (such as password changes), attempts to perform actions not authorized by the authorization controls, all configuration changes etc. d. System shall have audit trail functionality for managing all the records of activities performed by users. e. Application shall be designed with adequate Cyber Security and Controls. System shall have at least AES-128 based Data encryption. f. The system shall align to Indian Guidelines for Smart Grid Cyber Security g. Malicious Software Prevention: Implementation of anti-virus software and other malicious software prevention tools shall be supported. h. **Network Security**: The network architecture of the PQM system must be secure with support for firewalls and encryption. i. Software system should confirm to guidelines published by NCIIPC, CERT-in and CEA for cyber security. j. Bidder should provide cyber security features provided in software system.

7.0 Analysis and reporting

7.1	Overview	System availability and health reports Overall (triggered) Event summary tables

7.2	Steady state	a. Steady State Voltage Regulation event summary table b. Steady state (time) trends and histograms c. Real time displays for substation monitored locations. d. SARFI index chart, histogram and table, single index summary by month/year. e. Change in reactive power in each phase and whether it was balanced in all three phases. f. Phasor analysis of and harmonic analysis of steady state snapshot measurement.
7.3	Transient event summary table	a. Identification of reason of transients and indices of transients. b. Classification on downstream and upstream direction of sag/swell/interruptions/harmonics events. c. The magnitude and impact of events on downstream network viz 415 Volt should also be reported. d. In case of upstream events, PQ meters recorded common events shall be consolidated with single event in Data Analysis application to trigger the investigation and avoid duplicity. e. Load growth estimation tool. f. Tabular indication of all events captured with time stamp, location of instrument, magnitude and empty comment Box to enter remarks against events (selection of duration of interest). g. Statistical analysis of sags and swell viz. Timeline, duration verse magnitude etc and ITC, ITIC, UNIPADE, SEMIF47, CBEMA etc. event curve. h. Creates CBEMA Charts, ITIC Charts, and SEMI F47 Charts by Phase, by Phase Count, and by Event ID, Meter No, Charts by Cause, by Source, and by Equipment Name i. SARFI Indices , mentioning SARFI (rms value i.e.

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		90,80,60) with percentile (CP05, CP50, CP95) for the year
7.4	PQ Event Analysis	a. Display sag and swell energy derived from waveform samples b. Displays powers from derived waveform samples c. Displays resistance, reactance and impedance from waveform captured d. Displays Voltage and current phasor chart with voltage, current, impedance and power phasor tables. e. Displays Harmonic spectrum chart from voltage and current waveform samples. f. Estimated fault impedance g. Identifies Type of fault from the waveform. h. Derives positive-sequence, negative-sequence, and zero-sequence components from voltage and current waveform samples i. Graphical representation of vector for voltage and current for captured event waveform j. Displays harmonic spectrum charts derived from voltage and current waveform samples k. Displays derived real, reactive, and apparent power derived from waveform samples or rms values l. Displays derived resistance, reactance, and impedance m. Displays characteristic voltage derived from waveform samples

7.5	RMS voltage variation analysis	a. Analysis of Voltage variation b. Create contour chart showing cumulative event count i.e. sag class rated by voltage sag magnitude and duration c. Create RMS voltage variation magnitude -duration column chart d. Create summary report for voltage variation summary report using word format.
7.6	Other PQ parameters	Build Statics for Harmonic Distortion, Unbalance, Flicker, Rapid Voltage Changes etc.

8.0 Design Requirement

8.1	System architecture	System shall support Service Oriented Architecture and modular based approach in design, operations and implementation.
8.2	Design Attributes	System shall be robust and based on following basic attributes: scalability, availability, reliability, safety, confidentiality, integrity and maintainability.
8.3	Environment	System shall be capable of running in a clustered environment to provide high availability, reliability, scalability (vertically and horizontally). It must perform under periods of high usage and high processing loads based on changing business and technical requirements.
8.4	Life cycle support	System shall support device life cycle management like device registration, installation, provisioning, maintenance, decommissioning etc.
8.5	Latency support	System shall Support multi tenancy architecture.
8.6	Data Processing and integrity	a. System has to ensure the data integrity check on all PQ data received from data collection systems. It shall manage

		source of origin like direct from PQ meter / system / file upload etc. b. System shall have an automatic process for files upload, report generation, event notification. c. Data uniformity as per unit of measurement (UOM) shall be maintained including decimal points. d. Data Compression should be done by software and in Meter also. Bidders should consider meter specification for data storage duration. e. System shall provide end-to-end data protections to ensure no data is lost or corrupted during processing, storage, and transportation between applications and interfaces. f. System shall maintained date time stamp for each data/event and it shall be sync with NTP server. g. System shall support interface to mail system, SMS gateway configuration in alarm dispatch. h. System shall have the ability to recover from a hardware or application failure. It must have built-in redundancy and fail-over architecture to ensure seamless system recovery.
7.7	Data Backups	System shall have backup and archival features for complete system which can be initiated as per schedule or by manual request on tape drive. The system shall support recoverability feature using commonly available and industry standard backup & archival applications and approaches.
7.8	System Monitoring	System shall have provision to monitor and optimize different application processes and services in-terms of CPU usage and memory.
7.9	Hosting Environment	System shall support on-prime and cloud based hosting environment.
7.10	Operating system Support	System shall support multiple operating systems like Windows, Linux and on multiple hypervisors.
7.11	Database Support	System shall support with multiple database platforms like

		Oracle, MS SQL, MY SQL etc.
7.12	System Access	a. System database shall be accessible from application through business processes and managed APIs. b. System shall support both transactions and analytical processing.
7.13	IT Hardware	a. IT hardware (including OS) sizing to be provided by the bidder for 50 no's end points and 100 no's end points. b. Database, extra software, plug-in required running PQ software satisfactory need to be mentioned by bidder.
7.14	Training	Bidder should provide minimum 01 week training to BYPL officials on the following topics at BYPL Delhi Office. a. Operation of software system. b. Troubleshooting in software system. c. Management and control of data and user rights. Data archive. d. Maintenance and all deployment activities required in case of any abnormality or server restart. e. Analysis of Power Quality Data.

9.0 Software License and Support:

9.1	Software License	a. Offered Software along-with associated software's, plug-in etc shall have perpetual license for use i.e. there shall not be any limit on the basis of time, period, no of transactions, no of readouts, no of reports, generations etc. b. All the upgrades, patches etc shall be provided for at-least 15 years from the date of successful user acceptance test. c. Bidder shall provide offer of software licenses for 50 Nos and 100 Nos PQ meters.
9.2	Scalability	a. Deployed software shall be able to cater at least 1000 no end points without any need to any other changes after initial deployment.

10.0 Deviations

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

11.0 Document Submission:

Drawing submission shall be as per the matrix given below.

i. All documents/ drawing shall be provided in soft copy only in returnable USB memory drive.
ii. Language of the documents shall be English only.
iii. Incomplete submission shall be liable for rejection.
iv. Document check sheet compliance shall be the first sheet for each submission stage.
v. No submission is acceptable without check list compliance.
vi. Order of document shall be strictly as per the check list.

SL	Detail of Document	Bid	Approval	Pre Dispatch
1	Guaranteed Technical particulars (GTP)	Required	Required	
2	Deviation Sheet, if any	Required	Required	
3	Evaluation Software	Required	Required	
4	Manufacturer's quality assurance plan and certification for quality standards	Required	Required	
5	Complete product catalogue and user manual.	Required	Required	
6	Customer Reference List	Required		
7	Recommended list of spare and accessories	Required		
8	Program for production and testing (A)		Required	Required
9	Detailed installation and commissioning instructions		Required	Required
10	Operation and maintenance Instruction as well as		Required	Required

	trouble shooting charts/ manuals			
11	Inspection and test reports, carried out in manufacturer's works			Required
12	Routine Test certificates			Required

12.0 Delivery

10.1	Delivery	Despatch of Material: Vendor shall despatch the material, only after the Routine Tests/Final Acceptance Tests (FAT) of the material witnessed/waived by the Purchaser, and after receiving written Material Despatch Clearance (MDC) from the Purchaser.

Annexure - A- Guaranteed Technical Particulars (Data By Supplier)

Bidder shall furnish the GTP format with all details against each clause of this specification.

Bidder shall not change the format of GTP or clause description.

Bidder to submit duly filled GTP in hard copy format with company seal.

Clause No.	Clause Description	Manufacturer's Reply
1		
2		
3		
5		

Bidder / Vendor seal / signature ----------

Name of the bidder	
Address of the bidder	
Name of contact person	
Telephone number and email id	

Annexure - B- Recommended Accessories / Spares (Data By Supplier)

SL	Description of spare part	Unit	Quantity
1		No	
2		No	
3			
4			

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BSES Yamuna Power Limited

Volume - II

FORMATS

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF POWER QUALITY MONITORING SYSTEM

NIT No. CMC/BY/21-22/RS/KD/35

Dated : 04.01.2022

Annexure -I

BID FORM

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF POWER QUALITY MONITORING SYSTEM

To
Head of the Department
Contracts & Materials
BSES Yamuna Power Ltd
BSES Building, Karkardooma
New Delhi– 110032
Sir,

1 We understand that BYPL is desirous of procuring "**Supply, Installation, Testing and Commissioning of Power Quality Monitoring System"** in it's licensed distribution network area in Delhi

2 Having examined the Bidding Documents for the above named works, we the undersigned, offer to deliver the goods in full conformity with the Drawings, Conditions of Contract and specifications for the sum of.....
(figures.....) or such other sums as may be determined in accordance with the terms and conditions of the contract .The above 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 delivery schedule given by you from the date of award of purchase order/letter of intent.

4 If our Bid is accepted, we will furnish a performance bank guarantee for an amount of 5% (Five) percent of the total contract value for due performance of the Contract in accordance with the General Conditions of Contract.

5 We agree to abide by this Bid for a period of 120 days from the date fixed for bid opening under clause 9.0 of GCC, 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 Income Tax Law and other Indian Laws for supply of equipments/materials and the prices have been quoted accordingly.

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

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

9 There is provision for Resolution of Disputes under this Contract, in accordance with the Laws and Jurisdiction of Contract, Clause 19 of GCC .

Dated this..... day of..... 20 .....
Signature..... In the capacity of .....

.....duly authorized to sign for and on behalf of
(IN BLOCK CAPITALS) .....

BSES Yamuna Power Limited

BIDDER DETAIL FORM

Offer No.: …….. Date: ……

To,

Head Contract and Material
BSES YAMUNA POWER LIMITED
3rd Floor "A" Block, Shakti Kiran Building,
Delhi-110032 (INDIA).

Dear Sir,

In response to your Tender No. CMC/BY/21-22/RS/KD/35 dated 04.01.2022 for Supply, Installation, Testing and Commissioning of Power Quality Monitoring System for BSES YAMUNA POWER LTD, Delhi-32. We hereby submit our offer herewith.

1. Bidder Name : ……
2. Website Address : ……
3. Email Address : ……..
4. Address for Communication : ……
   ……..
   ……
5. Telephone Number : ……
6. Fax/Telefax Number : ……
7. Authorized Person - Name :……
   a. Designation:……
   b. Mobile No. : ……..
   c. Email-ID : ……
8. Alternate Person - Name :……
   a. Designation:……
   b. Mobile No. : ……..
   c. Email-ID : ……
9. PAN Number : ……

10. TIN Number : ……

11. GST No. : ……

12. ECC Number : ……

13. Particulars of EMD

    a. Amount : Rs. ……
    b. Mode of Payment (BG) : ……
    c. BG No. : ……
    d. Date : ……
    e. Name of the Bank : ……
    f. Address of the Bank : ……
    g. Validity of BG : ……

14. Particulars of Tender Fee

    a. Amount : Rs. ……
    b. DD No. : ……
    c. Date : ……
    d. Name of the Bank : ……
    e. Address of the Bank : ……

15. Turnover of the Bidder in last 3 years (Please submit copy of Annual Report)

Year	Annual Report attached at Page No.	Turnover in Rs. (Crores)
2018-2019		
2019-2020		
2020-2021		
Average Turnover		

16. Details of similar work / order executed during last 2 years (Please submit copy of completion certificate from the client.

Description of the Work/ Order Executed	Value of Work/Order Executed	Name of the Client	Start Date	Finish Date	Doc. Evidence at Page No.

17. Following Documents are submitted to substantiate other eligibility criteria.

i) ……

ii) ……

iii) ……

DECLARATION

1) We have read and understood the terms & conditions of the above mentioned tender and comply with all Terms & Conditions of your Tender.(In case of any deviation the Bidder must attach a separate sheet clearly mentioning the Clause No. of the Tender and Deviation thereto)

2) We certify that the information mentioned above are true and correct to best of our Knowledge.

3) In case of receipt of order we confirm that payment shall be received through e-Banking / Electronics Transfer.

4) This offer contains ……. No. of pages including all Annexure and Enclosures.

Place:
Date:

Signature of Authorized Signatory

Name:

Designation:

Seal:

Annexure -II

ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed and stamped by the bidder prior to participation in the auction event)

In a bid to make our entire procurement process more fair and transparent, BYPL intends to use the reverse auctions through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as techno 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 supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of BYPL, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. 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 glitch, 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 to submit the bids to ensure fair & transparent competitive bidding. In case of an auction event is restarted, the best bid as 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 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 out rightly rejected by BYPL.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding 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 at BYPL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder. No further communication will be there.
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-data basis against each line item based on the final all inclusive prices offered during conclusion of the auction event for arriving at contract amount.

Signature & seal of the Bidder

Annexure -III

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](herein after called —the Bank"),are bound unto BSES Yamuna Power Ltd., with it's Corporate Office at BSES Shakti Kiran Building Karkardooma, New Delhi -110032 ,(herein after called —the Purchaser")in the sum of Rs. ……(Rupees……only) for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents.

Sealed with the Common Seal of the said Bank this_____ day of_____ 20____.

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

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

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

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that is its demand the purchaser will note that amount claimed by it is due to it, owing to the occurrence of on e 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 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

Beneficiary 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 110032
3. Branch Code: 055
4. Bank Account No: 911020005246567
5. IFSC Code: UTIB0000055

BSES Yamuna Power Limited

Annexure –IV

PRICE FORMAT

Tender No: CMC/BY/21-22/RS/KD/35

S.N.	ITEM DESCRIPTION	QTY	UOM	EX-WORKS PRICE/PC (INR)	GST %	GST Amount (INR)	UNIT LANDED COST/PC(INR)	TOTAL LANDED COST IN (INR)
1	Supply of Fixed Type Power Quality Meters	10	Nos					
2	Supply of Potable Type Power Quality Meters	03	Nos					
3	Installation, Testing, Commissioning of fixed type Power Quality Meters as per Scope of Work and Training	10	Nos					
4	Training sessions on Portable type power Quality meters	03	Nos					
5	Supply and Implementation of Data Acquisition and Management Software System (50 End Points)	01	Lot					
6	Supply and Implementation of Power Quality Data Acquisition and Management Software System (100 End Points) and training	01	Lot					
7	AMC of Power Quality Data Acquisition and Management Software System	01	Year					

Please attach the covering letter head along with the price format.

Note :

a) The delivery shall be as per the requirement and as per the written instructions issued by C&M dept., BYPL.

b) The quantity shown is indicative only for tentative and can vary. PO(s) will be released as per the actual requirement. However, supplier has to deliver the material within the delivery schedule provided.

c) BYPL reserves the right to split the quantity to any extent.

d) Sl No 5 &6:- Number of end points (either 50 or 100) will be decided during techno commercial evaluation

e) Bidder can quote for either “Power Quality Meter” or “Power Quality Data Acquisition and Management Software System” or both. Accordingly respective Technical Qualifying Criteria shall be applicable.

NAME OF BIDDER WITH STAMP

Annexure-V

COMMERCIAL TERMS AND CONDITIONS

Tender No: CMC/BY/21-22/RS/KD/35

S/NO	ITEM DESCRIPTION	AS PER BYPL	CONFIRMATION OF BIDDER/BIDDER terms
1	Validity of prices	120 days from the date of offer	
2	Price basis	a) Firm, FOR Delhi store basis. Prices shall be inclusive of all taxes & duties, freight upto Delhi stores. b) Unloading at stores shall be in vendor's scope c) Transit insurance in BYPL scope	
3	Payment terms	100% payment within 45 days after receipt of material at stores	
4	Delivery schedule	As per our requirement	
5	Defect Liability period	60 months after commissioning or 66 months from the last date of dispatch, whichever is earlier	
6	Penalty for delay	1% per week of delay of undelivered units or part thereof subject to maximum of 10% of total PO (ex-work) value of undelivered units	
7	Performance Bank Guarantee	10% of total PO value valid for 60 months after commissioning or 66 months from the last date of dispatch, whichever is earlier plus 3 months towards claim period	
8	Reverse Auction Event	In a bid to make our entire procurement process more fair and transparent, BYPL intends to use the reverse auctions through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as techno commercial qualified based on the tender requirements shall be eligible to participate in the reverse auction event.	

BSES Yamuna Power Limited

ANNEXURE VI

SCHEDULE OF DEVIATIONS

Tender No: CMC/BY/21-22/RS/KD/35

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:

SL NO	Clause No.	Details of deviation with justifications

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

GENERAL INFORMATION

NAME OF COMPANY
POSTAL ADDRESS

FOR TECHNICAL QUERY:

CONTACT PERSON NAME
DESIGNATION
E-MAIL
MOBILE NO
TELEPHONE NO

FOR COMMERCIAL QUERY:

CONTACT PERSON NAME
DESIGNATION
E-MAIL
MOBILE NO
TELEPHONE NO

BSES Yamuna Power Limited

Annexure - VII

QUALIFICATION CRITERIA

Tender No: CMC/BY/21-22/RS/KD/35

TECHNICAL CRITERIA:-

Qualifying Criteria			
SL	**Criteria**	**Documents Required**	**Documentary Evidence attached page no. detail**
Power Quality Meters:			
1	The Bidder must be one of the following: a. An original equipment manufacturer (OEM) of Power Quality Meters. b. An authorized representative of OEM having long term technology partnership with OEM for a period of at least 10 years post the date of bid submission.	a. Details of manufacturing facilities and associated processes. b. Manufacturing unit registration certificate. c. Authorization letter/ Agreement with OEM in case of authorized representative.	
2	OEM should have experience of manufacturing and supplying at least 1000 nos PQ meters complying to IEC 61000-4-30 in last five years ending on the date of bid submission.	a. Supply list. b. Purchase orders from clients; c. Supply proof from above mentioned PO's.	
3	Bidder should have experience of installation and commissioning of minimum 50 nos PQ meters of the offered make in last five years ending on the date of bid submission.	a. Work completion certificates. b. Installation report. c. Two year satisfactory Performance Certificates for minimum 20 nos PQ meters issued by at least Two reputed organizations along with their contact details.	
4	Bidder/ OEM should have following quality certifications for its manufacturing and services function. a. ISO 9001:2015 or latest b. ISO 14001:2015 or latest c. ISO 27001:2013 or latest d. OHSAS 18001:2007 or latest	Valid Certificate copies.	
5	a. The bidder should have service centers in India equipped with in-house testing facilities as per BYPL specification. b. Service center shall have repair capability for offered meter and accessories.	Details of support centre and its capabilities.	
6	OEM should have complete volume of type test reports as per IEC 61000-4-30 Class 'A'.	Type test reports from **internationally recognized** third party testing lab.	

Qualifying Criteria			
SL	**Criteria**	**Documents Required**	**Documentary Evidence attached page no. detail**
Power Quality Data Acquisition and Management Software System:			
1	Bidder should be one of the following: a. An original equipment manufacturer (OEM) of the power quality meters b. A power quality software provider. c. An authorized representative of OEM having long term technology partnership with OEM for a period of at least 10 years post the date of bid submission.	a. Detail of power quality software and its applications. b. Authorization letter/ Agreement with OEM in case of authorized representative.	
2	a. Offered software system should be in operation for at-least 1000 Nos meters. b. Single license deployment for at least 100 Nos meters for two clients	a. Purchase orders from clients; b. Deployment proofs. c. Present status of the software system with number of meters it is catering. d. Performance certificates from at least 02 clients in which minimum 100 meters are running on single license.	
3	Bidder should have integrated at least 03 different makes of power quality meters with offered software.	Details of make and model of meter integrated with offered software.	
4	Bidder/OEM should have obtained following certifications for their software system and development processes: a. ISO 9001:2015	Valid Certificate copies.	

COMMERCIAL CRITERIA:-

Qualifying Criteria			
SL	**Criteria**	**Documents Required**	**Documentary Evidence attached page no. detail**
1	The bidder should have average annual turnover of Rs 20 Crore or more in last three financial years (i.e.2018-2019, 2019-2020 & 2020-2021) .	Audited balance sheets / Duly certified CA certificate with UDIN to be submitted	
2	If the bidder is an authorized representative of OEM/foreign OEM, they may choose to submit either their own or their OEM's credentials to meet the financial qualification criteria as mentioned above.	Authorization letter/ Agreement with OEM in case of authorized representative.	
3	The bidder should be registered under GST Act and shall submit copies of GST Registration Number, PAN and other statutory compliance. The bidder must	Copies of Relevant Documents / Undertaking	

	submit an undertaking that the bidder shall comply all the statutory compliance as per the applicable laws/rules etc		
4	Only those firms who have not been blacklisted /debarred by BSES or any other State/Central Govt./ Pvt. Power Utility in India on the date of issuance of NIT shall be entitled to submit the tenders.	The firm shall submit a self-undertaking of non-blacklisting	

Note: Bidder can quote for either "Power Quality Meter" or "Power Quality Data Acquisition and Management Software System" or both. Accordingly respective Technical Qualifying Criteria shall be applicable.

The bidder should send the compliance of above mentioned parameters in technical offer and has to give an under about no objection to verify his manufacturing facility as a part of tender process.

BSES Yamuna Power Limited

SELF DECLARATION FORM

Tender No: CMC/BY/21-22/RS/KD/35

To,
The HOD
Contract & Material Dept
BSES Yamuna Power LTD
Karkardooma Delhi-110032

Subject: Declaration for Not blacklisted

Sir,

1. I / We, the undersigned do hereby declare that, I / We have never ever been blacklisted and / or there were no debarring actions against us for any default in supply of material/ Services or in the performance of the contract entrusted to us in any of the State Government, Central Government or any other public sector undertaking or a corporation or Electricity Utilities of India.
2. In the event of any such information pertaining to the aforesaid matter found at any given point of time either during the course of the contract or at the bidding stage, my bid/ contract shall be liable for truncation/ cancellation/ termination without any notice at the sole discretion of the purchaser.

Yours faithfully

Place:
Date:

Signature of the bidder with seal

(This from shall be duly signed by the bidder & submitted along with the original copy of the bid.)

VENDOR CODE OF CONDUCT

Purchaser is committed to conducting its business in an ethical, legal and socially responsible manner. To encourage compliance with all legal requirements and ethical business practices, Purchaser has established this Vendor Code of Conduct (the "Code") for Purchaser's Vendors. For the purposes of this document, "Vendor" means any company, corporation or other entity that sells, or seeks to sell goods or services, to Purchaser, including the Vendor's employees, agents and other representatives.

Fundamental to adopting the Code is the understanding that a business, in all of its activities, must operate in full compliance with the laws, rules and regulations of the countries in which it operates. This Code encourages Vendors to go beyond legal compliance, drawing upon internationally recognized standards, in order to advance social and environmental responsibility.

I. Labour and Human Rights

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

. Fair Treatment - Vendors must be committed to a workplace free of harassment. Vendors shall not threaten workers with or subject them to harsh or inhumane treatment, including sexual harassment, sexual abuse, corporal punishment, mental coercion, physical coercion, verbal abuse or unreasonable restrictions on entering or exiting company provided facilities.

. Antidiscrimination - Vendors shall not discriminate against any worker based on race, colour, age,gender,sexual orientation, ethnicity, disability, religion, political affiliation, union membership, national origin, or marital status in hiring and employment practices such as applications for employment, promotions, rewards, access to training, job assignments, wages, benefits, discipline, and termination. Vendors shall not require a pregnancy test or discriminate against pregnant workers except where required by applicable laws or regulations or prudent for workplace safety. In addition, Vendors shall not require workers or potential workers to undergo medical tests that could be used in a discriminatory way except where required by applicable law or regulation or prudent for workplace safety.

. Freely Chosen Employment - Forced, bonded or indentured labour or involuntary prison labour is not to be used. All work will be voluntary, and workers should be free to leave upon reasonable notice. Workers shall not be required to hand over government-issued identification, passports or work permits as a condition of employment.

. Prevention of Under Age Labor - Child labor is strictly prohibited. Vendors shall not employ children. The minimum age for employment or work shall be 15 years of age, the minimum age for employment in that country, or the age for completing compulsory education in that country, whichever is higher. This Code does not prohibit participation in legitimate workplace apprenticeship programs that are consistent with Article 6 of ILO Minimum Age Convention No. 138 or light work consistent with Article 7 of ILO Minimum Age Convention No. 138.

.Juvenile Labor - Vendors may employ juveniles who are older than the applicable legal minimum age for employment but are younger than 18 years of age, provided they do not perform work likely to jeopardize their health, safety, or morals, consistent with ILO Minimum Age Convention No. 138.

. Minimum Wages - Compensation paid to workers shall comply with all applicable wage laws, including those relating to minimum wages, overtime hours and legally mandated benefits. Any Disciplinary wage deductions are to conform to local law. The basis on which workers are being paid is to be clearly conveyed to them in a timely manner.

. Working Hours - Studies of good manufacturing practices clearly link worker strain to reduced productivity, increased turnover and increased injury and illness. Work weeks are not to exceed maximum set by local law. Further, a work week should not be more than 60 hours per week, including overtime, except in emergency or unusual situations. Workers should be allowed at least one day off per seven-day week.

. Freedom of Association - Open communication and direct engagement between workers and management are the most effective ways to resolve workplace and compensation issues. Vendors are to respect the rights of workers to

associate freely and to communicate openly with management regarding working conditions without fear of reprisal, intimidation or harassment. Workers' rights to join labour unions seek representation and or join worker's councils in accordance with local laws should be acknowledged.

II. Health and Safety

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

The health and safety standards are:

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

III. Environmental

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

The environmental standards are:

. Product Content Restrictions - Vendors are to adhere to applicable laws and regulations regarding prohibition or restriction of specific substances including labeling laws and regulations for recycling and disposal. In addition, Vendors are to adhere to all environmental requirements specified by Purchaser.
. Chemical and Hazardous Materials -Chemical and other materials posing a hazard if released to the environment are to be identified and managed to ensure their safe handling, movement storage, recycling or reuse and disposal.

. Air Emissions - Air emissions of volatile organic chemicals, aerosols, corrosives, particulates, ozone depleting chemicals and combustion by-products generated from operations are to be characterized, monitored, controlled and treated as required prior to discharge.
. Pollution Prevention and Resource Reduction -Waste of all types, including water and energy, are to reduced or eliminated at the source or by practices such as modifying production, maintenance and facility processes, materials substitution, conservation, recycling and re-using materials.
. Wastewater and Solid Waste - Wastewater and solid waste generated from operations industrial processes and sanitation facilities are to be monitored, controlled and treated as required prior to discharge or disposal.
. Environmental Permits and Reporting - All required environmental permits (e.g. discharge monitoring) and registrations are to be obtained, maintained and kept current and their operational and reporting requirements are to be followed.

IV. Ethics

Vendors must be committed to the highest standards of ethical conduct when dealing with workers, Vendors, and customers.
. Corruption, Extortion, or Embezzlement - Corruption, extortion, and embezzlement, in any form, are strictly prohibited. Vendors shall not engage in corruption, extortion or embezzlement in any form and violations of this prohibition may result in immediate termination as an Vendor and in legal action.
. Disclosure of Information - Vendors must disclose information regarding its business activities, structure financial situation, and performance in accordance with applicable laws and regulations and prevailing industry practices.
. No Improper Advantage - Vendors shall not offer or accept bribes or other means of obtaining undue or improper advantage.
. Fair Business, Advertising, and Competition - Vendors must uphold fair business standards in advertising, sales, and competition.
. Business Integrity - The highest standards of integrity are to be expected in all business interactions. Participants shall prohibit any and all forms of corruption, extortion and embezzlement. Monitoring and enforcement procedures shall be implemented to ensure conformance.
. Community Engagement - Vendors are encouraged to engage the community to help foster social and economic development and to contribute to the sustainability of the communities in which they operate.
. Protection of Intellectual Property - Vendors must respect intellectual property rights; safeguard customer information; and transfer of technology and know-how must be done in a manner that protects intellectual property rights.

V. Management System

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

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

performance objectives, and targets an implementation plans including a periodic assessment of Vendor's performance against those objectives.

. Training - Programs for training managers and workers to implement Vendor's policies, procedures and improvement objectives.

. Communication - Process for communicating clear and accurate information about Vendor's performance, practices and expectations to workers, Vendors and customers.

. Worker Feedback and Participation - Ongoing processes to assess employees' understanding of and obtain feedback on practices and conditions covered by this Code and to foster continuous improvement.

. Audits and Assessments - Periodic self-evaluations to ensure conformity to legal and regulatory requirements, the content of the Code and customer contractual requirements related to social and environmental responsibility.

. Corrective Action Process - Process for timely correction of deficiencies identified by internal or external assessments, inspections, investigations and reviews.

. Documentation and Records - Creation of documents and records to ensure regulatory compliance and conformity to company requirements along with appropriate confidentiality to protect privacy.

The Code is modeled on and contains language from the Recognized standards such as International Labour Organization Standards (ILO), Universal Declaration of Human Rights (UDHR), United Nations Convention against Corruption, and the Ethical Trading Initiative (ETI) were used as references in preparing this Code and may be useful sources of additional information

BSES Yamuna Power Limited

VENDOR DATA FORM

1. Name of the company:_____

2. Address of the company:_____

_____

_____

3. During the time the tender enquiry is received and the tender is submitted by us to your office, we authorize following person/ persons whose signatures are attested below to deal with BYPL on our behalf for any clarifications:

S.No	Name & Designation	Contact Telephone & fax	E-mail Address	Specimen Signature
1				
2				
3				

Yours faithfully

Place:
Date:

Signature of the bidder with seal

CHECK LIST

Sno	Item Description	Yes/No
1	INDEX	Yes/no
2	COVERING LETTER	Yes/No
3	Bid FORM (UNORICED) DULY SIGNED	Yes/no
4	Bill of Material (UNPRICED)	Yes/No
5	TECHNICAL BID	Yes/no
6	ACCEPTANCE TO COMMERCIAL TERM AND CONDITIONS	Yes/No
7	FINANCIAL BID (IN SEALD ENVELOPE)	Yes/no
8	EMD IN PRESCRIBED FORMET	Yes/No
9	DEMAND DRAFT OF RS 1180/- DRAWN IN FAVOUR OF BSES YAMUNA POWER LTD	Yes/No
10	POWER OF ATTORNEY/AUTHORISATION LETTER FOR SIGNING THE BID	Yes/No