



उत्तर दक्षिण हरियाणा बिजली वितरण निगम  
UTTAR DAKSHIN HARYANA BIJLI VITRAN NIGAM



## BIDDING DOCUMENTS

## FOR PROCUREMENT OF

**Three Phase 11 KV CT/PT Operated Static Feeder Meters (DLMS compliant) of class 0.5S**

**accuracy & rating -/5 A as per IS-14697 &**

**IS-15959 and Nigam technical specifications**

**Purchaser:** Uttar & Dakshin Haryana Bijli Vitran Nigam Ltd.

### **TENDER ENQUIRY FLOATED BY: -**

#### **DAKSHIN HARYANA BIJLI VITRAN NIGAM**

(A Power Distribution & Retail Supply Utility, Govt. of Haryana)

An ISO 9001:2008 compliant utility, CIN:- U99999HR1999SGC034165

Regd. Office: Vidyut Sada, Vidyut Nagar, Hisar-1250005 (Haryana)

Office of the Chief Engineer/MM, Vidyut Nagar, Hisar-1250005 (Haryana)

PH- 223061(O), 223005 (Fax) [G.M./MM-223332]

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E-mail: [semmdhbvn@gmail.com](mailto:semmdhbvn@gmail.com) , [cemmhisar@gmail.com](mailto:cemmhisar@gmail.com)

**NOTICE INVITING TENDERS**  
(Only through e-procurement)

**NOTICE INVITED TENDER No. 559 /DH/MM/XEN/MM- III**

**DATED: 14.09 .2016**

Offers are invited for procurement of following material on FIRM Price & 'FOR' destination basis anywhere in Haryana, by fixing the annual rate contract as per details given below:-

Tender Enquiry No.	Description of item	Total qty. (In Nos.)	Est. cost
QD-739	11 KV CT/PT Operated Static feeder Meter (DLMS compliant) of class 0.5S accuracy & rating -/5 A as per IS-14697 & IS-15959 and Nigam technical specification no. CSC-45/Rev-III/DH/UH/P&D/2015-16 alongwith corrigendum.	4168	96.95 Lacs
	Date of start	Last date of submission	
	26.09.16 at 10.00 Hours.	18.10.16 Up to 13.00 Hours.	Opening date of part-I 18 .10.16 15.00 Hrs.

Tender documents having detailed terms and conditions can be seen/downloaded from the portal <https://haryanaeprocurement.gov.in> and [www.dhbvn.org.in/web/portal/tenders](http://www.dhbvn.org.in/web/portal/tenders)

Superintending Engineer/MM  
For CE/MM, DHBVN, Hisar

For Publication only



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**DAKSHIN HARYANA BIJLI VITRAN NIGAM**

NOTICE INVITING TENDER  
(Only through e-procurement)

**SCHEDULE OF TENDER (SOT)**

a) NOTICE INVITING TENDER (NIT) NO.	559 /DH/MM/XEN/MM-III DATED: -14.09.2016				
b) e-tender no.					
c. MODE OF TENDER	e-Procurement System (Online Part I - Techno-Commercial Bid and Part II - Price Bid Through <a href="https://haryanaeprocurement.gov.in">https://haryanaeprocurement.gov.in</a> of Nextenders India Pvt. Ltd.)				
d. Tender Enquiry No. under NIT No.	<b>QD-739</b>				
e. Date of NIT available to parties to download	. . .				
f i) Earnest Money Deposit	<b>Rs. 194000/-</b> <b>(2% of estimated cost subject to max. Rs. 2 Lacs)</b> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td><b>For all the bidders except Haryana based MSMEs and KVI units (Rs.)</b></td> <td><b>For the Haryana based MSMEs and KVI units (Rs.)</b></td> </tr> <tr> <td style="text-align: center;">5000/-</td> <td style="text-align: center;">1000/-</td> </tr> </table>	<b>For all the bidders except Haryana based MSMEs and KVI units (Rs.)</b>	<b>For the Haryana based MSMEs and KVI units (Rs.)</b>	5000/-	1000/-
<b>For all the bidders except Haryana based MSMEs and KVI units (Rs.)</b>		<b>For the Haryana based MSMEs and KVI units (Rs.)</b>			
5000/-		1000/-			
ii) Tender Fees (Non-refundable)					
iii) E-Service Fee (Non-refundable)	<b>Rs. 1000/-</b>				

Offer are invited for procurement of following material through fixing the rate contract on 'FIRM' & 'FOR' destination rates basis anywhere in Haryana, as per details given below. The rate contract shall be valid for one year from the date of issue of rate contract and can be extended further for one more year with mutual consent.

**SCHEDULE OF MATERIAL: -**

T.E. no.	Description of material	DHBVN		UHBVN		Total	
		Min	Max	Min	Max	Min	Max
QD- 739	11 KV CT/PT Operated Static feeder Meter (DLMS compliant) of class 0.5S accuracy & rating -/5 A as per IS-14697 & IS-15959 and Nigam technical specification no. CSC-45/Rev-III/DH/UH/P&D/2015-16 alongwith corrigendum.	3668	5502	500	750	4168	6252

- 1) Only those tenders will be considered who fulfill the **Pre Qualification Conditions** mentioned in the tender documents (as elaborated in **Annexure-II**)
- 2) Only those tender shall be considered who deposit the earnest money and tender cost & E-Service Fee by due date.



Information Regarding Online Payment of Tender Document , eService & EMD Fee.

- 1) The Bidders can download the tender documents from the Portal: <https://haryanaeprocurement.gov.in>. The Bidders shall have to pay for the Tender documents, EMD Fees & e-Service Fee online by using the service of secure electronic payment gateway. The secure electronic payments gateway is an online interface between suppliers and online payment authorization networks. The Payment for Tender Document Fee and eService Fee can be made by eligible bidders/ suppliers online directly through Debit Cards & Internet Banking Accounts and the Payment for EMD can be made online directly through RTGS / NEFT.
- 2) If the tenders are cancelled or recalled on any grounds, the tender document fees & e- service fee will not be refunded to the agency.
- 3) The detailed procedure/instructions to bidder on Electronic Tendering System are at **Annexure-I**.
- 4) **For any clarification regarding bid preparation and bid submission, please contact: M/s Nextenders (India) Pvt. Ltd.**  
O/o. DS&D Haryana, SCO – 09, IInd Floor, Sector – 16, Panchkula – 134108  
**E - mail: [Chandigarh@nextenders.com](mailto:Chandigarh@nextenders.com) Help Desk: 1800-180-2097 (Toll Free Number)**
- 5) The Tenderers can submit their tender documents (Online) as per the dates mentioned in the key dates schedule:

**Key Dates schedule:**

Sr. No.	Department Stage/Activity	Tenderer's Stage	Start date and time	Expiry date and time
1.	-	Downloading of Tender Documents & Bid Preparation & submission	26 .09 .16 at 10:00 Hours	18.10 16 at 13:00 Hours
		Pre-bid meeting (If applicable)	. . . at 11:00 Hrs.	
2	Manual submission of technical documents (Within 4 days from the opening of part-I)		-	24.10.2016 at 15.00 Hrs.
3	Technical Opening (Part-I)	-	18.10.16 at 15:00 Hours	---
4	Short-listing of Technical bids & Opening of Financial Bid			Will be intimated to the firms on their E-mail ids

Superintending Engineer/MM  
For CE/MM, DHBVN, Hisar

**For Uploading on website only**



**Annexure-I**

**Instructions to bidder on Electronic Tendering System**

**These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.**

1. **Registration of bidders on eProcurement Portal:-**  
All the bidders intending to participate in the tenders processed online are required to get registered on the centralized e - Procurement Portal i.e. <https://haryanaeprocurement.gov.in>. Please visit the website for more details.
2. **Obtaining a Digital Certificate:**
  - 2.1 The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. These Digital Certificates are issued by an Approved Certifying Authority, by the Controller of Certifying Authorities, Government of India.
  - 2.2 A Digital Certificate is issued upon receipt of mandatory identity (i.e. Applicant's PAN Card) and Address proofs and verification form duly attested by the Bank Manager / Post Master / Gazetted Officer. Only upon the receipt of the required documents, a digital certificate can be issued. For more details please visit the website – <https://haryanaeprocurement.gov.in>.
  - 2.3 The bidders may obtain Class-II or III digital signature certificate from any Certifying Authority or Sub-certifying Authority authorized by the Controller of Certifying Authorities or may obtain information and application format and documents required for the issue of digital certificate from:  
**M/s Nextenders (India) Pvt. Ltd.**  
O/o. DS&D Haryana,  
SCO – 09, IInd Floor,  
Sector – 16,  
Panchkula – 134108  
**E - mail:** [Chandigarh@nextenders.com](mailto:Chandigarh@nextenders.com)  
Help Desk: 1800-180-2097 (**Toll Free Number**)
  - 2.4 Bid for a particular tender must be submitted online using the digital certificate (Encryption & Signing), which is used to encrypt the data and sign the hash during the stage of bid preparation & hash submission. In case, during the process of a particular tender, the user loses his digital certificate (due to virus attack, hardware problem, operating system or any other problem) he will not be able to submit the bid online. Hence, the users are advised **to keep a backup of the certificate** and also keep the copies at safe place under proper security (for its use in case of emergencies).
  - 2.5 In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate/power of attorney



- /lawful authorization to that User. The firm has to authorize a specific individual through an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm in the department tenders as per Information Technology Act 2000. The digital signature of this authorized user will be binding on the firm.
- 2.6 In case of any change in the authorization, it shall be the responsibility of management / partners of the firm to inform the certifying authority about the change and to obtain the digital signatures of the new person / user on behalf of the firm / company. The procedure for application of a digital certificate however will remain the same for the new user.
- 2.7 The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.
- 3 **Opening of an Electronic Payment Account:**  
Tender document can be downloaded online. Bidders are required to pay the tender documents fees online using the electronic payments gateway service. For online payments guidelines, please refer to the Home page of the e-tendering Portal <https://haryanaeprocurement.gov.in>.
- 4 **Pre-requisites for online bidding:**  
In order to bid online on the portal <https://haryanaeprocurement.gov.in> , the user machine must be updated with the latest Java. The link for downloading latest java applet is available on the Home page of the e-tendering Portal.
- 5 **Online Viewing of Detailed Notice Inviting Tenders:**  
The bidders can view the detailed N.I.T and the time schedule (Key Dates) for all the tenders floated through the single portal eProcurement system on the Home Page at <https://haryanaeprocurement.gov.in>.
- 6 **Download of Tender Documents:**  
The tender documents can be downloaded free of cost from the e-Procurement portal <https://haryanaeprocurement.gov.in>.
- 7 **Bid Preparation (Technical & Financial) Online/offline Payment of Tender Document Fee, eService fee, EMD fees and Submission of Bid Seal (Hash) of online Bids:**
- 7.1 The online payment for Tender document fee, eService Fee & EMD can be done using the secure electronic payment gateway. The Payment for Tender Document Fee and eService Fee can be made by eligible bidders/ contractors online directly through Debit Cards & Internet Banking Accounts and the Payment for EMD can be made online directly through RTGS / NEFT .  
The secure electronic payments gateway is an online interface between contractors and Debit card / online payment authorization networks.
- 7.2 The bidders shall **upload** their technical offer containing documents , qualifying criteria, technical specification, schedule of deliveries, and all other terms and conditions except the rates (price bid).  
The bidders shall **quote** the prices in price bid format.



7.3



Submission of bids will be preceded by submission of the digitally signed & sealed bid (Hash) as stated in the time schedule (Key Dates) of the Tender.

**NOTE:-**

- (A) **If bidder fails to complete the Online Bid Submission stage on the stipulated date and time, his/hers bid will be considered as bid not submitted, and hence shall not appear during tender opening stage.**
- (B) **Bidder participating in online tenders shall check the validity of his/her Digital Signature Certificate before participating in the online Tenders at the portal <http://haryanaeprocurement.gov.in>.**
- (C) **For help manual, please refer to the 'Home Page' of the e-Procurement website at <https://haryanaeprocurement.gov.in>, and click on the available link 'Download' to download the file.**

**Guidelines for Online Payments in e-tendering**

Post registration, bidder shall proceed for bidding by using both his digital certificates (one each for encryption and signing). Bidder shall proceed to select the tender he is interested in. On the respective Department's page in the e-tendering portal, the Bidder would have following options to make payment for tender document & EMD:

- a. Debit Card
- b. Net Banking
- c. RTGS/NEFT

**Operative Procedures for Bidder Payments**

- A) Debit Card
- The procedure for paying through Debit Card will be as follows.
- (i) Bidder selects Debit Card option in e-Procurement portal.
  - (ii) The e-Procurement portal displays the amount and the card charges to be paid by bidder. The portal also displays the total amount to be paid by the bidder.
  - (iii) Bidder clicks on "Continue" button
  - (iv) The e-Procurement portal takes the bidder to Debit Card payment gateway screen.
  - (v) Bidder enters card credentials and confirms payment
  - (vi) The gateway verifies the credentials and confirms with "successful" or "failure" message, which is confirmed back to e-Procurement portal.
  - (vii) The page is automatically routed back to e-Procurement portal
  - (viii) The status of the payment is displayed as "successful" in e-Procurement portal. The e-Procurement portal also generates a receipt for all successful transactions. The bidder can take a print out of the same,
  - (ix) The e-Procurement portal allows Bidder to process another payment attempt in case payments are not successful for previous attempt.
- B) Netbanking





- The procedure for paying through Netbanking will be as follows.
- (i) Bidder selects Netbanking option in e-Procurement portal.
  - (ii) The e-Procurement portal displays the amount to be paid by bidder.
  - (iii) Bidder clicks on "Continue" button
  - (iv) The e-Procurement portal takes the bidder to Netbanking payment gateway screen displaying list of Banks
  - (v) Bidder chooses his / her Bank
  - (vi) The Netbanking gateway redirects Bidder to the Netbanking page of the selected Bank
  - (vii) Bidder enters his account credentials and confirms payment
  - (viii) The Bank verifies the credentials and confirms with "successful" or "failure" message to the Netbanking gateway which is confirmed back to e-Procurement portal.
  - (ix) The page is automatically routed back to e-Procurement portal
  - (x) The status of the payment is displayed as "successful" in e-Procurement portal. The e-Procurement portal also generates a receipt for all successful transactions. The bidder can take a print out of the same.
  - (xi) The e-Procurement portal allows Bidder to process another payment attempt in case payments are not successful for previous attempt.
- C) RTGS/ NEFT
- The bidder shall have the option to make the EMD payment via RTGS/ NEFT. Using this module, bidder would be able to pay from their existing Bank account through RTGS/NEFT. This would offer a wide reach for more than 90,000 bank branches and would enable the bidder to make the payment from almost any bank branch across India.
- i. Bidder shall log into the client e-procurement portal using user id and password as per existing process and selects the RTGS/NEFT payment option.
  - ii. Upon doing so, the e-procurement portal shall generate a pre-filled challan. The challan will have all the details that is required by the bidder to make RTGS-NEFT payment.
  - iii. Each challan shall therefore include the following details that will be pre-populated:  
  
Beneficiary account no: (unique alphanumeric code for e-tendering)  
  
Beneficiary IFSC Code:  
Amount:  
Beneficiary bank branch:  
Beneficiary name:
  - iv. The Bidder shall be required to take a print of this challan and make the RTGS/NEFT on the basis of the details printed on the challan.
  - v. The bidder would remit the funds at least one day in advance to the last day and make the payment via RTGS / NEFT to the beneficiary account number as mentioned in the challan.
  - vi. Post making the payment, the bidder would login to the e-



Tendering portal and go to the payment page. On clicking the RTGS / NEFT mode of payment, there would be a link for real time validation. On clicking the same, system would do auto validation of the payment made.

**List of Net banking banks**

1. Allahabad Bank
2. Axis Bank
3. Bank of Bahrain and Kuwait
4. Bank of Baroda
5. Bank of India
6. Bank of Maharashtra
7. Canara Bank
8. City Union Bank
9. Central Bank of India
10. Catholic Syrian Bank
11. Corporation Bank
12. Deutsche Bank
13. Development Credit Bank
14. Dhanlaxmi Bank
15. Federal Bank
16. HDFC Bank
17. ICICI Bank
18. IDBI Bank
19. Indian Bank
20. Indian Overseas Bank
21. Insdusind Bank
22. ING Vysya Bank
23. J and K Bank
24. Karnataka Bank
25. Kotak Mahindra Bank
26. Karur Vysys Bank
27. Punjab National Bank
28. Oriental Bank of Commerce



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29. South Indian Bank
30. Standard Chartered Bank
31. State Bank Of Bikaner and Jaipur
32. State Bank of Hyderabad
33. State Bank of India
34. State Bank of Mysore
35. State Bank of Travencore
36. State Bank Of Patiala
37. Tamilnad Mercantile Bank
38. Union Bank of India
39. United Bank of India
40. Vijaya Bank
41. Yes Bank



**Schedule- B**

**NECESSARY INSTRUCTION/TERMS & CONDITIONS FOR THE BIDDER**

Sr. No.	Necessary instruction/Terms & Conditions for the bidder
1.	Tender must be submitted on prescribed tender form and complete in all respects and submitted through e-procurement mode only. No other mode like email/fax etc. shall be acceptable.
2.	Tender enquiry has been floated for procurement of material as specified in NIT for fixing the rate contract valid for one year from the date of issue of rate contract (which can be extended further for one year with the mutual consent of purchaser and supplier at the same rates, terms & conditions).
3.	Tenderer must carefully study the technical specifications and general terms and conditions before preparation of tender. All terms and conditions of NIT and Corrigendum shall be applicable.
4.	The tenders not meeting the requirement of pre-qualification conditions, necessary terms and conditions of the NIT and Nigam technical specifications shall be rejected.
5.	The bidders shall have to pay for the tender documents, EMD Fees & e-Service Fee online by using the service of secure electronic payment gateway. The secure electronic payments gateway is an online interface between contractors/suppliers and online payments authorization networks. The payment for Tender Document Fee and eService Fee can be made by eligible bidders/suppliers online directly through Debit Cards & Internet banking Accounts and the Payment for EMD can be made online directly through RTGS/NEFT. The Bank charges, if any, will be to the account of the tenderer. No claims against the Nigam either in respect of interest if any due on the Security deposit/Earnest money or its depreciation in value shall be admitted
6.	Detailed procedure for depositing earnest money, order preference to Haryana firms, delivery schedule and other terms and conditions are contained in SOT & schedule D of tender documents. Each tender document is required to be signed by his authorized representative alongwith stamp and is to be uploaded thereafter.
7.	The following tenders shall be exempted from the deposit of earnest money. (i) Wholly Govt. of India owned undertakings. (i) Wholly State owned undertakings of Haryana.
8.	The tenders should remain valid for 180 days from the date of opening of tender (Part-I in case of two part tender) otherwise the same will not be accepted and rejected outrightly.
9.	The offers/tenders will be opened on the date and time prescribed in the Notice Inviting Tenders. In case the date of opening falls on a holiday including Sunday or a holiday is subsequently declared on that date, the tenders will be opened on next working day following the holiday.
10.	All tenders/offers will be regarded as constituting an offer or offers open to acceptance in whole or in part until the last date of validity as prescribed in the notice inviting tenders or as indicated by the tenderer in his tender/offer, whichever be later.
11.	The price must be quoted in Indian Rupees and any mistake in calculating the rupee price will not justify the claim for increase in prices.
12.	Authenticated documents to prove authority of signatory (legal power of attorney in favour of signatory) <b>must be uploaded</b> . Memorandum of article and Memorandum of association of the firm, if applicable, shall also be <b>uploaded with the tender</b> . The firm shall submit the detail information in the performa of particular of bidder. <b>(Annexure-III)</b>



13.	The tenderer shall give details of immovable property i.e. land, building, machinery, exact location of their property and copy of constitution/balance sheet alongwith the tender. <b>The document shall be uploaded by the supplier/s.</b>
14.	Tender not adhering to Nigam's delivery schedule will not be considered.
15.	If more than one bid is submitted by any/one bidder, (having same registered office), the same shall be rejected.
16.	The deviations in Technical & Commercial terms and Conditions, if any, must be brought out clearly on the performa enclosed ( <b>Annexure-V</b> ), failing which it will be presumed that the same are acceptable in to-to.
17.	Tenderer/s shall submit their offer in an ambiguous free wording failing which DHBVN/UHBVN interpretation will be final.
18.	The tenders shall be submitted in two parts. Part-I shall consist technical details and commercial terms and part-II shall consist price bid only. Part-II i.e. price bids shall be opened on a date to be intimated separately for the purpose.
19.	<b>Purchase Preference:</b> The provision for purchase preference shall be as per policy/guidelines issued by the State Govt. vide G.O. No. 2/2/2010-4 I B II dated 19.12.2011 and/or latest instruction issued by the State Govt.  All other Policy decisions/ guidelines on procurement of Stores through the Directorate of Supplies and Disposals as applicable for the state of Haryana are also applicable in this case (Unless stated /decided otherwise). The instructions/guidelines issued by Govt. of Haryana vide G.O. No. 2/2/2010-4 I B II dated 28.05.2010, G.O. No. 2/2/2010-4 I B II dated 19.12.11, G.O. No. 2/2/2010-4 I B II dated 18.06.13, G.O. No. 2/2/2010-4 I B II dated 16.6.2014, G.O. No. 2/2/2010-4 I B II dated 9.02.15 & G.O. No. 2/2/2010-4 I B II dated 24.03.15 are available on website <a href="http://www.dsndharyana.gov.in">www.dsndharyana.gov.in</a> . the bidders are requested to download the same from website and read carefully before submitting the tender. It shall be.0 presumed that the bidder has read these instructions/guidelines and agreed the same, while evaluating for tender submitted by the firm/supplier/tenderer.
20.	The revision of price bid after opening of Part-I i.e. technical and commercial part of the tender is not allowed. In case of withdrawing the same within the validity period, EMD shall be forfeited.
21.	If any of the firm fails to supply the material within stipulated delivery period, then the leftover quantity of said firm shall be considered for allocation to the firm (s) supplying material under the same NIT and performing better. This clause shall be applicable after issuance of purchase order of the minimum quantity of Rate Contract and with mutual consent of Nigam and the remaining suppliers under the same NIT. The defaulting firm shall have to fulfill its contractual obligations against the minimum quantity of the rate contract, else shall have to bear penal action as per the provisions in the NIT.
22.	<b>Arithmetical Errors:</b> - in case of any inconsistency in the prices furnished, the purchaser shall be entitled to consider the lowest prices for the purpose of evaluation and award of contract. All arithmetical errors will be rectified on the basis of the unit price or total price (in figures and in words) whichever is more beneficial to the purchaser.
23.	In the event of a firm not favoring the delivery commitments of the previous contracts, this fact will weigh against the firm tendering against a subsequent enquiry and be treated as disability. Before issue of the letter of intent or of placing the order, the previous order should be fully discharged or a reliable under taking should be given that it would be done within a reasonable period and within scope of the previous contract, if the firm declines to give this undertaking, it would be considered ineligible for competing against any subsequent tender/order and the current order would automatically pass on the next lower firm.



24.	The tender shall be issued by UHBVN/DHBVN for fixing the rate contract on behalf of both the power utilities i.e. DHBVN & UHBVN. However, all the purchase orders will be issued by CE/MM of respective utilities in a phased manner depending on the requirement of stores. The PQRs and other liabilities of the bidder shall be as per minimum quantity offered.
25.	Material offered should be strictly according to the technical specification attached with the tender documents as laid down in Annexure-A of Schedule D (Part-I) to the Terms and conditions of the contract. Unless a deviation in the specifications given in Annexure 'A' is pointed out by the tenderer specifically, it will be presumed that Offer/tender conforms to the specifications as laid down in Annexure 'A'. However, in case of any ambiguity in the Nigam's technical Specification, the provision of relevant IS with latest amendment will prevail. The concerned Director /Projects, shall be the deciding authority in such cases.
26.	EMD is liable to be forfeited in case of evidence of cartel formation by the bidder(s). The provision for penal action in case of cartel formation by the bidders shall be as per clause No. 9 of policy (guidelines) issued by the State Govt. vide G.O No. 2/2/2010-41 BII dated 28.5.2010.
27.	The purchaser reserves the right to reject any or all the tenders received without assigning any reason.
28.	The firm failing to accept the LOI/RC after having made commitments before SPC/HPPC (Nigam)/HPPC (Govt.) shall be blacklisted/ debarred from doing business with Nigam and earnest money of the firm shall be forfeited.
29.	The bidder shall submit alongwith his tender documents, the details of his production capacity, orders in hand/pending with quantity, value and delivery schedule of the material /equipments in question. <b>The document shall be uploaded by the supplier.</b>
30.	The bidder shall submit all the requisite documents pertaining to the plant from where the material will be supplied. <b>The document shall be uploaded by the supplier.</b>
31.	List of customers to whom the material in question has been supplied/orders executed financial year wise and their performance certificates shall be enclosed by the Tenderer. <b>The document shall be uploaded by the supplier.</b>
32.	No change in GTPs/technical parameters/drawings submitted alongwith bid shall be allowed in case the offered material is as per technical specification of Nigam.
33.	The tenderer must submit a hard copy of all the documents related to part-I ( i.e. techno-commercial terms and conditions, where the tender is invited in two parts) uploaded on the site for the said tender duly certifying that these documents are same as uploaded on designated website, within 4 days of opening of part-I. (All affidavit & undertakings should be submitted in original with hard copy).



34.	<p><b>Submission of Quality Assurance Procedure</b></p> <p>The Vendor / Contractor at the time of submission of the drawings for approval from DHBVN/UHBVN is also required to submit a Quality Assurance Procedure (QAP) of the materials to be supplied for review and approval. In this QAP, the vendor / contractor shall clearly indicate the quality measures being taken by the manufacturer to maintain the quality of the finished product. The drawings/QAP once approved shall not be required to be submitted for approval again.</p> <p><b>QAP will indicate the following details:-</b></p> <ul style="list-style-type: none"><li>i) Tests being performed on the raw material purchased by manufacturer for manufacturing of the finished product.</li><li>ii) Tests being conducted during manufacturing of the product (In process testing).</li><li>iii) Tests which shall be done on the finished product at the time of pre-dispatch inspection.</li><li>iv) Test results assured by the vendor.</li><li>v) Tests procedure followed for the inspection with full details of test setup etc.</li></ul> <p>The Inspection shall be carried out on the basis of the approved QAP. All the details provided by the vendor / contractor shall be verified by Nigam / Third Party during the inspection and if any deviation is found from the approved documents, it will be noted in the inspection report.</p>
35.	<p>The firms will enter into an agreement with the Nigam to ensure that there is no fall in the prices of the item under rate contract and in case of any such price fall, the rates of the material will be revised as per any decrease in price.</p>
36.	<p>The max. Quoted qty. shall be considered as 1.5 times of the min. qty. quoted by the bidder/s against the NIT.</p>
37.	<p>MODVAT benefits, if any, be included in quoted prices and confirmed in bid submission.</p>
38.	<p>All the other terms and conditions will be as per latest guidelines of Govt. of Haryana and schedule D (general and particular terms &amp; conditions of contract) and technical specification of Nigam. However, any statutory variation shall be borne by the Nigam, during contractual delivery schedule only i.e. increase in statutory variation beyond the overall delivery period shall be borne by the firm. Further, in case of award of contract / PO to the firm/s having exemption in statutory levy like E.D., VAT / CST etc. at the time of quoting the bid, the rate of such statutory levies as applicable on the date of tender opening / finalization shall be deemed to be included in the rates finalized.</p>
39.	<p>The post tender offers or communications received from the supplier/contractors etc. which effect the quoted and equivalent rates there by changing the merit position of the tender shall not be entertained</p>
40.	<p>On the day the purchaser conveys acceptance to the supplier's offer either through e-mail/fax or by a letter, the date of e-mail/fax or letter will be the date of agreement and the contractual obligations of the supplier will commence from that very date. The supplier will have no right to revoke his offer after the acceptance of purchaser.</p>
41.	<p>The benefits applicable vide Govt. of Haryana office order no- 2/2/2010-4-IB-II dated 24.03.2015 to Haryana based Micro and Small Enterprises (Including KVI units) will be admissible only if the concerned Enterprises participate directly in the tender not through their intermediaries i.e. their dealers/agents and distributors etc. <b>To avail the benefits of Haryana based Micro and Small Enterprises (Including KVI units), the bidders will upload the requisite documents along with the tender documents.</b></p>
42.	<p><b>Pre-qualification conditions:</b> The firm quoting against the NIT shall meet with the Pre-qualification requirement as elaborated in <b>Annexure-II</b> without which the firm shall not be considered for placement of order. <b>The PQRs and other liabilities of the bidders shall be as per min. quantity offered by the firm.</b></p>



### Pre-qualification conditions

Sr. no.	<b>Pre-qualification conditions:</b> The firm quoting against the NIT shall meet with the following qualification requirement without which the firm shall not be considered for opening of price bid. <b>The PQRs and other liabilities of the bidders shall be as per min. quantity offered by the firm:-</b>
i.	The bidder must possess valid ISO 9001:2008 certification for meter manufacturing, ISO 27001:2005 for information security management system & ISO 14001:2004 for environmental management system and should be a manufacturer/authorized agent of manufacturer if Manufacturer being outside India. (His agent shall have the necessary testing facilities in India)
ii.	The bidder should have a turnover of minimum Rs. 100 crores in any one of last three financial years related to metering business only. The above said document shall be duly authenticated by registered CA. <b>The balance sheet of that particular year may also be attached. (Estimated cost of material of NIT (taking min. qty. of the tender) is Rs. 96.95 Lacs.</b>  <b>Manufacturing Small Enterprises (Including Khadi &amp; Village industries) that have filed Entrepreneurs Memoranda in Haryana will be entitled to a concession of 50% on the turnover and shall be considered qualifying accordingly.</b> <b>Manufacturing Micro Enterprises that have filed Entrepreneurs Memoranda in Haryana will be entitled to a concession of 75% on the turnover and shall be considered qualifying accordingly.</b>
iii.	Minimum quantity to be quoted shall be <b>atleast 50% of min. qty. of the NIT. Any offer below 50% of the min. qty. of NIT shall be rejected</b> and its price bid shall not be opened.
iv.	The firm bidding 50% or more of NIT quantity must have manufactured and supplied minimum quantity of 5 Lacs of any type & rating of fully static energy meters with LCD display & communication port during the last three financial years <b>to any power distribution utilities of India. (Govt./Pvt.).</b> <b>The list of supplies for that particular year duly attested by CA must be uploaded &amp; attached.</b>  <b>(format for affidavit for past supplies is enclosed as Annexure VII &amp; Certificate of CA is attached as Annexure-VIII)</b>
v.	Only those firms who have not been blacklisted /debarred by DHBVN/UHBVN or any other State/Central Govt. Power Utility in India on the date of issuance of NIT shall be entitled to submit the tenders. The firm shall submit an affidavit of non-blacklisting on the non-judicial stamp paper of the appropriate value attested by Notary public. (format for an affidavit of non-blacklisting is enclosed as <b>Annexure X</b> )
vi.	The Bidder must possess a valid Bureau of Indian Standard Certification (ISI mark) for meters being manufactured in India.
vii.	The bidder shall submit a copy of valid certificate of Capability Maturity Model Integration (CMMI) level 3 version 1.3 or above issued by recognized body like SEI etc. alongwith his bid.
iii.	Manufactures should possess fully computerized meter test benches for carrying out routine and acceptance tests.
ix.	<b>The bidder should have completed the supplies up to the date of opening of Part-I tenders against all the previous purchase orders of similar item irrespective of size/rating placed by UHBVN/DHBVN whose delivery period has already expired with max. penalty, failing which the bid shall be treated as non responsive</b>





**SCHEDULE 'C'**  
**UTTAR/DAKSHIN HARYANA BIJLI VITRAN NIGAM LIMITED**  
**TENDER FORM**

From \_\_\_\_\_

To \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Offer No. \_\_\_\_\_

Dated \_\_\_\_\_

Subject : Submission of e-tender against Notice Inviting Tender No. \_\_\_\_\_

dated \_\_\_\_\_ (Tender enquiry no. \_\_\_\_\_ & tender ID No. \_\_\_\_\_) of  
Uttar/Dakshin Haryana Bijli Vitran Nigam Ltd.

Dear Sir,

With reference to your above mentioned notice inviting tender & tender ID, I/We hereby offer to supply/provide genuine goods/services (as per details given in the tender documents) and shall execute the supply contract truly and faithfully within the time specified and set forth in the attached terms and conditions. The goods/services to be supplied/provided will be of the quality and answerable in every aspect with this tender. I/We shall be responsible for all complaints as regards the quality of goods/services and in case of dispute the decision of the Nigam will be final and binding on me/us.

1. Rs. \_\_\_\_\_ Rupees \_\_\_\_\_) have been deposited online through designated e-procurement website, as earnest money as desired. I fully understand that in the event of my/our tender being accepted this earnest money shall be retained by you till the submission of performance guarantee by me as per clause 6, Schedule-D.

2. I/We shall have no claim to the refund of the earnest money prescribed against this tender in the event of my/our non-compliance of the purchase order provided such order is placed within the period of validity of my/our tender as indicated in paragraph 4 below.

I further understand that my earnest money will stand forfeited even if I withdraw my tender at any stage during the currency of the period of validity.

3. My/our tender shall remain valid for a period of \_\_\_\_\_ days from the last date prescribed for submission of the tenders against the NIT No. \_\_\_\_\_ dt. \_\_\_\_\_ (tender ID No. : \_\_\_\_\_).

4. My/our tender alongwith the terms and conditions with the relevant columns and annexures duly filled in, including the enclosed terms and conditions, (in the capacity of sole owner/ general or special attorney, in proof of which power of attorney is attached) is submitted for your favourable consideration.

5. I/We have read the enclosed terms and conditions carefully and accept the same in toto. My/our tender constitutes a firm offer under the Indian Contract Act 1872 and is open to an acceptance in whole or in parts. My/ our offer, if accepted on the attached terms and conditions will constitute a legally binding contract and shall operate as a contract as defined in the Indian Contract Act 1872 and the Indian sale of goods Act 1930.

6. Detail of documents submitted, duly paginated, by me is attached herewith for ready reference.

Thanking you.

DA/Details of documents

Place  
Dated

Yours faithfully,  
Name & Full Address of Tenderers



NIT No. \_\_\_\_\_

Enquiry No. \_\_\_\_\_

**SCHEDULE 'D'**

**(Part-I. General Conditions of Contract)**

**UTTAR/ DAKSHIN HARYANA BIJLI VITRAN NIGAM LIMITED**

**GENERAL TERMS AND CONDITIONS FOR PROCUREMENT OF EQUIPMENT STORES AND OTHER MATERIAL UNDER THE RATE CONTRACT**

In construction of the terms and conditions of the contract, the following words shall have the meaning herein assigned to them, unless the subject or context otherwise requires:

- (a) The "PURCHASER" shall mean the Haryana DISCOMs (DHBVNL /UHBVNL) or their authorized agent and shall include their Successors in office, and assigns.
- (b) The "SUPPLIER" shall mean M/s \_\_\_\_\_ and shall include the supplier's legal representatives, successors, and assigns.
- (c) "MANUFACTURERS: shall mean M/s \_\_\_\_\_ and shall include their legal representatives, successors, and assigns.
- (d) "MATERIAL" all the materials to be supplied by the supplier under the contract as per clause of material specifications, prices etc.
- (e) 'SPECIFICATION' shall mean and include the specifications as detailed in the attached herewith and Drawings attached thereto as well as samples and patterns, (if any).
- (f) The 'SITE' shall mean and include the lands and buildings over/under/upon and in which the materials are to be installed and used in accordance with the terms and conditions.
- (g) 'PLACE OF DELIVERY' shall mean the place of delivery at which the supplier is responsible to deliver the material at the contract price as specified in the clause "Material-Specification: Price etc.
- (h) 'COMMERCIAL USE' shall mean the use to which the material can commercially be put.
- (i) 'MONTH' shall mean a calendar month.
- (j) 'THE TERMS' F.A.S., F.O.R., F.O.B., C.I.F. and other shipping/ despatch terms as used herein, shall have meaning in accordance with their uses in India.
- (k) 'WORK' shall mean and include supply of all the materials, plants and equipment and rendering of other services by the supplier under this contract.
- (l) 'ACT' shall mean the Companies Act 1956 and shall include any statutory amendments, Modifications or re-enactment thereof for the time being in force.
- (m) 'Haryana DISCOMs' shall mean the UTTAR HARYANA BIJLI VITRAN NIGAM LIMITED /DAKSHIN HARYANA BIJLI VITRAN NIGAM LIMITED as incorporated under Companies Act



1956 and shall include their successors and assigns.

- (n) 'MANAGING DIRECTOR' shall mean the Managing Director of the NIGAM (DHBVN/UHBVN) duly appointed by the Govt.
- (o) 'CONSIGNEE' shall mean the officer to whom the materials is required to be dispatched or the person specified in the purchase order.
- (p) 'CONTRACT' shall mean the Notice Inviting Tender, Instructions for tenderers, Tender Forms, terms and conditions of contract with their annexures and purchase order/ acceptance of offer/Tender/Rate Contract.
- (q) 'DRAWING' shall mean the drawing/drawings annexed to the specification (if any) or as approved by the purchaser.
- (r) 'PURCHASE AUTHORITY' shall mean the officer signing the acceptance of tender and shall include any officer who has authority to execute the relevant contract on behalf of the purchaser.
- (s) 'PURCHASE ORDER' shall mean an order of supply of material including the acceptance of the tender.
- (t) 'ANNEXURE' shall mean the Annexure to the terms and conditions.
- (u) 'ACCEPTANCE OF TENDER' shall mean the letter or memorandum communicating to the supplier the acceptance of his offer (Tender) and shall include advance acceptance of his offer i.e. Letter of Intent or Rate Contract.
- (v) 'TEST' shall mean such test as is prescribed by the Indian Standards Institution or by the Haryana DISCOMs and/or considered necessary by the authorized agents of the purchaser, whether conducted/performed or made by them or any other agency acting under their directions.
- (w) 'DELIVERY' shall be deemed to take place on delivery of the material in accordance with the terms and conditions of the Contract after test and inspection by the purchaser or his authorized agent, to the consignee.
- (x) D.G.S & D shall mean the Director General of Supplies and Disposals, Government of India.
- (y) DS&D shall mean the Director Supplies & Disposal, Haryana.

## 2. PARTIES.

The parties to the contract are the supplier and the purchaser, Legal address of the parties to the Contract is under:

Supplier M/s \_\_\_\_\_  
\_\_\_\_\_

Purchaser: Dakshin Haryana Bijli Vitran Nigam (Hisar)/UTTAR Haryana Bijli Vitran Nigam (Panchkula)



For all purposes of the contract including the arbitration there under, the address of the supplier mentioned above, shall be the address to which all communications addressed to the supplier shall be sent, unless the supplier has notified a change by a separate letter containing no other communication and sent by a Speed Post (Acknowledgement Due) to the purchaser. The supplier shall be solely responsible for the consequences of an omission to notify the change of address in the manner aforesaid.

**3. AUTHORITY OF THE PERSON SIGNING THE CONTRACT ON BEHALF OF THE SUPPLIER.**

The person who has signed these Tender papers (including the terms and conditions) has got authority to sign on behalf of the supplier. It is discovered at any time that the person so signing had no authority to do so, the purchaser without prejudice to any other right or remedy available to him may, cancel the contract and hold such person liable to the purchaser for all costs and damages arising from the cancellation of the contract including any loss which the purchaser may sustain on account of such purchase.

**4. RESPONSIBILITY OF THE SUPPLIER FOR EXECUTING THE CONTRACT.**

**(i) RISK IN MATERIAL**

The supplier shall execute the contract in all respects in accordance with these terms and conditions. The material and every constitute part thereof, whether in possession or control of the supplier, his agents or servants or a Carrier or in the joint possession of the supplier, his agents, servants and the purchaser, shall remain in every respect at the risk of supplier until its actual delivery to the consignee at the stipulated place or destination. The supplier shall be responsible for all loss, destruction, damage or deterioration of or to the material from any cause whatsoever while the material after test and inspection is awaiting dispatch or delivery in course of transit from the supplier to the consignee. The supplier shall alone be entitled and responsible to make claims against the carrier in respect of non delivery, mis-delivery, short delivery, loss, destruction, damage or of the deteriorated material entrusted to such carrier by the supplier for transmission to the consignee.

**(ii) CONSIGNEE'S RIGHT OF REJECTION**

Notwithstanding any approval which the purchaser may have given in respect of the material, it shall be lawful for the consignee to reject the material or any part thereof on behalf of the purchaser within a reasonable time after actual delivery thereof to him at the place or destination specified in Annexure 'B' if the material or any part or portion thereof is not in all respects in conformity with the terms and conditions of the contract whether on account of any loss, deterioration or damage before dispatch or delivery or during transit or otherwise howsoever.

The provision contained in clause 14 (vi) below relating to the removal of material rejected by the purchaser or his authorised agent shall, mutatis mutandis, apply to material rejected by the consignee as herein provided.

**(iii) SUBLETTING AND ASSIGNMENT:**

The supplier shall not save with the previous consent in writing of the purchaser sublet, transfer or assign the contract or any part thereof or interest therein or behalf or advantage thereof in any manner whatsoever.



## 5. ASSISTANCE TO SUPPLIER

The supplier shall be solely responsible to procure any raw material, license or permit required for the fulfillment of the contract. Any assistance for the procurement or attempt to tender assistance in the matter aforesaid, shall not be construed or constitute any promise, undertaking or assurance on the part of the purchaser regarding the procurement of the same to effect any variation in the rights and liabilities of the parties under the contract.

## 6. SECURITY DEPOSIT

- i) The earnest money furnished by the successful tenderers to whom the purchase order/ contract is allotted shall be refunded within 7 days from the verification received from the concerned Bank of performance guarantee as per contract (performa enclosed as **Annexure-VI**) by the accounts wing/DDO. The earnest money of lowest (L-2) shall be released after submission of performance Bank Guarantee by the successful bidder i.e. L-1. For remaining participating firms, EMD shall be refunded after finalization of the procurement case.
- ii) BG shall be retained by the purchaser for the period valid for 90 days after the expiry of warranty period as per clause of 'WARRANTY'.
- iii) No claim of the supplier shall lie against the purchaser either in respect of interest or any depreciation in the value of security deposit.
- iv) If, the supplier fails or neglects to observe or perform any of his obligations under this contract, it shall be lawful for the purchaser to forfeit at his absolute discretion, the Available EMD shall be forfeited and BG shall be encashed besides invoking clauses no. 21 & 28 i.e "Termination of Contract for default" & "Blacklisting of Firm" respectively.

The ibid forfeiture of EMD and encashment of BG shall be without prejudice to the right of the purchaser to recover any further amount of any liquidated and/or other damages, undue payment or overpayment made to the supplier under this contract and / or any other contract.

## 7. MATERIAL, SPECIFICATIONS, PRICES, ETC.

- i- The supplier shall supply the quantities of different items of material within the NIT of the best quality, workmanship and strictly in accordance with the prescribed specifications (**Annexure A**) and rates shown against each, unless any deviation in specification has been expressly pointed out in the purchase order.

The rates offered by the supplier and subsequently finalized shall remain Variable / FIRM as specified in Particular Conditions of Schedule-D (Part-II) of NIT documents.

- ii- **Periodical Assessment of Rate and Undertaking for Price Fall.**
  - a) **Periodical Assessment of Rate:**

Since the Rate Contract is for one year thus the rates as finalized will be assessed/verified by the Nodal Agency periodically. In case a downward trend in their market rates are observed. The Nigam shall have the right to review the rates time to time.



b) **Price Fall Clause:**

- i) The prices charged for the material supplied under the rate contract by the firm shall in no way exceed the lowest price at which the firm sales the material to any person/organization Including the purchaser or any other department of the central Govt. or any Deptt. of the State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be during the delivery period till performance of all supply orders placed during the currency of the rate contracts is completed.
- ii) If at any time during the said period, the firm reduces the rates of the material as contained/ described in the contract or offer to sell such material to any person / Organization including the purchaser or any Deptt. of Central Govt. or any Deptt. of the State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be, at price lower than the price chargeable under the rate contract, shall forthwith notify such reduction / sale or offer to sale to the Nigam and the price payable under the rate contract for the material supplied after the date of coming into force of such reduction or sale offer to sale, shall stand correspondingly reduced.
- iii) The firm shall furnish the following certificate to the concerned Consignee's along with each bill against the rate contract:-

"I / we certify that there has been no reduction in sale price of the material of description identical to the material supplied to Nigam under the rate contract herein and such material has not been offered and sold by me / us to any person / organization including the purchase of any Deptts. of the Central Govt., any Deptts. of the State Govt., any statutory undertaking of the Central or State Govt. as the case may be upto the date of bill/ date of completion of supplies against all supply orders placed during the currency of the rate contract at prices lower than the prices charged to Nigam under the rate contract".

8. **SAMPLE** :- This clause shall be applicable as specified in Particular conditions of Schedule-D (Part-II)

9. (i) **DELIVERY**

The supplier shall deliver the material in accordance with the terms and conditions of the contract at the time/times and at the place/places and in the manner specified in the Annexure 'B' attached thereto. In case the due date of delivery in terms of delivery schedule falls on a holiday including Sunday or holiday is subsequently declared on that date, the firm shall be required to complete the supply by the first working day falling next to the due date.

(ii) **TIME FOR AND DATE OF DELIVERY; THE ESSENCE OF THE CONTRACT.**

The time for and the date of delivery of the material stipulated in the Annexure 'B' purchase order shall be the essence of the contract and delivery must be completed not later than the date (s) as specified in Annexure 'B'/purchase order.

(iii) **NOTIFICATION OF DELIVERY:**



Notification of delivery of dispatch in regard to each and every consignment shall be made to the purchaser and respective consignees. The supplier shall supply to consignee a packing account and full details of the contents of the package and quantity of material in order to enable the consignee to check the material on arrival at destination.

(iv) **Early Supplies:-** This clause shall be applicable as specified in Particular Conditions of Schedule- D (Part-II).

(v) **DAMAGES FOR DELAY IN DELIVERY:**

The delivery of material as per the Annexure "B" attached to the Terms and Conditions of Contract (Schedule 'D') shall be the essence of the contract between the supplier and the Nigam and the delivery of such consignment must accordingly be insisted upon the date it is due in terms thereof.

No supplies/consignments received after the due date, on which they were actually due according to the terms of the purchase order, shall be accepted by the consignee except, with the approval of the purchasing authority.

In case the purchasing authority decides to accept a delayed supply, the supplier shall be liable to pay penalty @ one half of one percent per week or part thereof of the value of goods so delayed subject to a maximum of 5% of the total value of the delayed supplies. In case the delivery schedule provides lot wise delivery of material, lot wise penalty shall be imposed.

(vi) **PASSING OF A PROPERTY:**

Property in the material shall not pass to the purchaser unless and until the material has been delivered to the consignee, in accordance with the terms and conditions.

(vii) **TAKING OVER CERTIFICATES:**

The consignee (s) shall issue a taking over certificate after the material has been received at site (s), taken into possession, inspected, counted, measured and the supplier has supplied the copies of tests and inspection-certificate, if any, vide clause-14 "Test and Inspection".

**10. FORCE MAJEURE:**

The supplier shall not be liable for any loss or damage due to delay in manufacture or delivery of the material for reason arising out of compliance with regulations, orders or instructions of Central/ State Govt.. Acts of God, acts of Civil and Military authorities, fires, floods, strikes, Lockouts, freight embargoes, war-risk, riots and civil commotion.

Whenever the supplier is not in a position to supply the material within the delivery period and he wants extension in the due date (s) of delivery under this clause, he will request for such extension of the delivery period alongwith all necessary evidence, before the expiry of the scheduled date(s) of delivery. In no case, the delivery period shall be extended under this clause, in case the request is received after the due date of delivery has expired. Extension in the delivery period may be granted only for the period for which the completion of the work is proved by the supplier to have been delayed for circumstances mentioned in this clause.

In all such cases, the Nigam shall have the option to accept any portion of the balance



material and cancel the order for the rest, provided, however, if any material had been manufactured exclusively for the purchaser under this contract prior to the commencement of the force majeure circumstances, it shall be accepted by the purchaser and secondly, the cancellation will be without any liability for damages on the part of the supplier.

The decision of the purchaser in all matters under this clause shall be final and binding on the supplier.

Non-availability of raw material or any other similar cause shall not be considered as a force majeure circumstance.

11. **WARRANTY:** - This clause shall be applicable as specified in Particular Conditions of Schedule- D (Part-II).
12. **DRAWINGS :-** This clause shall be applicable as specified in Particular Conditions of Schedule- D (Part-II).
13. **MISTAKES IN DRAWINGS:** This clause shall be applicable as specified in Particular Conditions of Schedule- D (Part-II).
14. **TESTS AND INSPECTION:**

The material shall be inspected and tested by the purchaser or his authorised agent before dispatch unless dispensed with in writing by the purchaser. The Supplier shall give to the purchaser at least 10 days advance notice from the date of readiness of material for such inspection and test.

The Inspection call will be generated in a pre-specified format as per **Annexure – IV**.

The vendor /supplier shall also provide a copy of approved QAP, drawings along with the inspection call. Vendor / supplier should give it in writing that he is ready for the inspection. On receipt of the advance notice from the supplier offering the material for inspection the purchasing authority will get the material inspected and issue the dispatch authorization within 20 days. In case the Inspecting Officer finds on arrival at the supplier's premises that the material was not ready for inspection and that the notice given by the supplier was unfruitful, the firm shall be liable to bear actual expenditure incurred by the Nigam on this account plus a fixed penalty of Rs. 20, 000/- for each such call made by the supplier. In addition to above a fixed amount of Rs. 10,000 per officer per-day would also be payable by the bidder in case inspecting officer deputed by Nigam and in case of 3<sup>rd</sup> party inspector, the amount of bills submitted by them. In case of joint inspection, the bidder shall be liable to pay Rs. 10,000 per man-day for the Nigam's inspector and amount of actual bills submitted by the 3<sup>rd</sup> party agency.

**In case the material offered for inspection fails in 1st inspection, the Nigam will have the right to levy a penalty at 0.25 % of the value of offered material. In case the material offered for inspection fail during the 2<sup>nd</sup> inspection, the Nigam will have the right to increase the penalty to 0.5% of the value of offered material. In case, the material offered fails during the 3<sup>rd</sup> and final inspection also, the firm will be liable for penal action viz. encashment of BG, debarring/ blacklisting in future and no further opportunity for inspection would be provided to the supplier firm.**





i) **FACILITIES FOR TESTS AND INSPECTION:**

The Supplier shall, at his own expense, afford to the Purchaser or his authorised agent, all reasonable facilities and such accommodation as may be necessary for such tests and inspection. The Purchaser or his authorised agent shall have full and free access at any time, during the execution of the contract to the supplier's work for the purpose aforesaid, and he may require the Supplier to make arrangement for inspection of the material or any part thereof at his premises or at any other place specified by the Purchaser or his authorised agent.

- ii) The Supplier shall provide, without any extra charges, all materials, tools labour and assistance of every kind which the Purchaser or his authorised agent may demand of him for any test and inspection. The purchaser or the authorised agent, shall in his sole judgment, be entitled to remove for tests and inspection any of the material to any premises other than his (Supplier's) premises.

iii) **LIABILITY FOR COSTS OF LABORATORY TEST:**

In the event of rejection of material or any part thereof by the purchaser or his authorized agent which is removed to the Laboratory or other place of test, the Supplier, on demand, shall pay to the Purchaser all costs incurred in such removal.

iv) **METHOD OF TESTING:**

The Purchaser or his authorized agent shall have the right to put all the material or part thereof to such tests as he may think fit and proper. The supplier shall not be entitled to object on any ground whatsoever to the method of testing by the purchaser or his authorized agent.

- v) The Supplier shall mark or permit the purchaser or his authorized agent to mark all the approved material with a recognized Purchaser's mark. The material which cannot be so marked, shall, if so, required by the Purchaser or his authorized agent, be packed in suitable packages or cases which shall be sealed and marked with such mark.

vi) **REMOVAL OF REJECTED MATERIAL:**

If any material is rejected by the Purchaser or his authorized agent after tests and inspection or by the consignee, the material so rejected shall be removed from the premises of rejection by the supplier at his own cost. Such rejected material shall under all circumstances lie at the risk of the Supplier from the moment of such rejection; and if such material is not removed by the Supplier within a period of 45 days, from the date of notice given by the consignee/Purchasing Department for lifting of such material, Purchaser or his authorized Agent or consignee may dispose of such material in any way at the Supplier's risk and cost and retain such portion of the proceeds as may be necessary to cover any expense incurred in connection with such disposal and shall also be entitled to recover handling and storage charges for the period during which the rejected material is not removed.

vii) **CERTIFICATE OF TEST & INSPECTION**

When the test and inspection have been satisfactory carried out by the purchaser or his representative, the purchaser or his authorized representative shall issue a communication to that effect, the material will then be dispatched by the Supplier according to dispatch



instructions of the Purchaser or his authorized representative vide Clause-19 Dispatch Instructions.

viii) **POST RECEIPT INSPECTION:**

The material after receipt in the stores of the Nigam shall be subjected to inspection for its conformity to the specification by a representative of the Nigam in the presence of representative of the contractor/supplier after issuance of e-mail notice/telephonic communication to the supplier/ contractor. In case the firm fails to depute a representative on the specified date, the Nigam would be free to get the material checked in the absence of firms representative for which the firm would have no reason to protest at any stage and would be fully responsible of the outcome.

ix) **TYPE TEST CONDITIONS:** This clause shall be applicable as specified in Particular Conditions of schedule-D (Part-II)

x) **Non – conformance of material with provisions of technical specification:** - The material offered/received after the inspection by the authorized inspecting officer may again be subjected to the test for losses or any other parameter from any Testing House/in-house technique of the Nigam & the results if found deviating, un-acceptable or not complying to approved GTP, the lot shall be rejected and bidder shall arrange to supply the replacement within forty-five (45) days of such detection at his cost including to and fro transportation. In addition to this, a penalty @ 5% of cost of the rejected lot of material shall be imposed. The rejected material shall be lifted back by firm only after replacement with fresh material or by submission of additional BG of equivalent to the cost of material. This BG shall be released when the replacement of material with fresh material received in the Nigam Stores and material is accepted by the Nigam.

**15. VAT/ CENTRAL SALE TAX**

The Purchaser shall pay Central Sale Tax /Value Added Tax at the prescribed rates (if applicable) on the production of the following Certificates by the supplier in triplicate:

- i) Certified that the transaction in which the sales tax /Value Added Tax has been claimed has been/will be included in the return submitted/to be submitted to the Taxation authorities for the assessment of Central Sales Tax and amount claimed from the Haryana DISCOMs has been/shall be paid to the Sales Tax authorities.
- ii) Certified that the goods on which the Sales Tax /Value Added Tax has been charged in Bill No. \_\_\_\_\_ dt. \_\_\_\_\_ for Rs. \_\_\_\_\_ have not been exempted under the Central Sales Tax Act 1956/ Haryana VAT Act 2003 or the rules made thereunder and the charges on account of Sales Tax on these goods are correct under the provision of the relevant Act or the Rules made thereunder.
- iii) Certified that we shall always indemnify the Haryana DISCOMs in case it is found at a later stage, that wrong or incorrect payment had been recovered on account of Sales Tax paid/to be paid by us.
- iv) Certified that we are registered as a dealer under the Central / State Sales Tax/ VAT and our registration No. is \_\_\_\_\_.

Provided that in respect of the item at Sr. \_\_\_\_\_ and of clause – 7 which are required by the Nigam for use on the generation and distribution of electrical energy to the Public, no Haryana Sales Tax/VAT shall be payable as they are exempted under Section-27, Sub-section (I)(a)(III) of Haryana General Sales Tax Act 1973.



**16. DOCUMENTATION :**

- i) All bills and/or invoices whether in respect of an advance payment or full payment, shall contain complete details of Code No., name of the item, description of material supplied, quantity supplied, rates, details of extra claims, etc. as well as the name of the consignee who received the material, shall be submitted in triplicate, duly accompanied by the receipted good challan, inspection note/test certificate in original, prescribed sales tax/ excise duty certificates and then from contractor to the Nigam and excise duty gate pass, where required.
- ii) All freight charges whether paid or to pay, and whether chargeable to the Nigam or included in the quoted price, shall be shown in the invoice separately.
- iii) All bills and/ or invoices shall be sent by the supplier to:

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for payment.

**17. TERMS OF PAYMENT :** This clause shall be applicable as specified in Particular Conditions of Schedule-D (Part-II)

**18. NEGLIGENCE:**

If the supplier shall neglect to execute the supply contract with due diligence and expedition or shall refuse or neglect to comply with any reasonable orders given in writing by the purchaser or his authorized agent in connection with this contract or shall contravene this provision of the contract, the purchaser may give 15 days notice in writing to the supplier to make good the failure, neglect or contravention complained of and should the Supplier fail to comply with the notice within the above said time from the date of service thereof (in case of failure, neglect or contravention capable of being made good, within that time or otherwise within such time as may be reasonably necessary for making it good), then in such case, the purchaser shall be at liberty to take the work wholly or in part out of Supplier's hand and re-contract at a reasonable price with any other person (s). in such event, it shall be lawful for the purchaser to retain any balance which may otherwise be due by him to the Supplier on any account, and apply the same towards the execution of the whole of balance of the supply contract so re-contracted, as aforesaid, if no such balance is due by him to the supplier or if due, is not sufficient to cover the amount thus recoverable from the supplier, it shall be lawful for the purchase to recover the whole or the balance of the amount from the supplier by action at law or otherwise. The remedy under this clause will be in addition to and without prejudice to right available to the purchaser under other clause of these terms and conditions.

**19. DESPATCH OF MATERIAL AND DESPATCH INSTRUCTIONS:**

The supplier shall be responsible to obtain complete Dispatch instructions from the purchaser before the dispatch of each consignment.



The supplier shall sufficiently pack at his own cost the material for transit so as to ensure this being free from loss or damage on arrival without opening the packages while in transit at their destination. All containers in which the material is supplied shall be non returnable.

## 20. REPLACEMENT AND REJECTION:

Material found sub-standard or defective or not conforming to the prescribed specification in any manner, at consignee's end shall not be accepted and intimation to this effect shall be given to the supplier, the purchasing authority and the Controller of Stores by the consignee. The purchasing authority shall promptly take up the matter with the supplier and ask him to rectify or replace the defective/sub-standard material forthwith and in any case within a period of 45 days from the date of intimation about such defective material by the stores wing, failing which, the Nigam shall reserve the right to get the defect rectified at the supplier's cost or to withhold the amount equal to cost of defective material. The supplier shall also be intimated that all expenses involved in the replacement by way of handling, transportation, storage, etc. shall be to their account. The payments so withheld shall be released after the receipt of repaired/replacement material. In case, the supplier still does not respond for lifting the defective material, despite continuous follow-up, the procedure as prescribed in as per clause no. 21 read with sub-clause 28.1 (a & b) shall be invoked for termination of contract, encashment of BG, imposing LD charges @ 5% of the value of defective/ rejected/ undelivered material and initiation of action for blacklisting etc. Even after expiry of 90 days, if there is no response from the firm, Nigam can deduct the cost of the defective equipments/material from the pending liabilities of the firm, including encashment of the BG of the firm, available with Nigam against the same P.O. or in other cases.

If there is sufficient financial cover against the same or other P.O.s available then the principal supplier can lift the material against the financial cover of same P.O.s. If the financial cover falls short of cost of material to be lifted for repair/replacement than either he would have to deposit the BG of the balance cost of the equipments through DD or cost thereof in cash.

In respect of the defective/sub-standard supplies, the date on which such a supply is replaced shall be reckoned as the effective date of delivery there against and the delay shall be worked out accordingly with reference to the date on which the supply was due as per the terms of contract, for the purpose of determining penalties/liquidated damages recoverable under Clause 9 (v).

## 21. TERMINATION OF CONTRACT FOR DEFAULT

21.1 The purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, terminate the contract in whole or in part:

- a) If the supplier fails to deliver any or all of the stores within the time period(s) specified in the contract, or any extension thereof granted by the Purchaser; or
- b) If the supplier fails to perform any other obligation under the contract within the period specified in the contract or any extension thereof granted by the purchaser.
- c) If the supplier, in the judgment of the purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the contract (The definition of corrupt or fraudulent practices defined under clause-25).

21.2 In the event the purchaser terminate the contract in whole or in part. Available EMD submitted by the firm/supplier shall be forfeited and available BG shall be got encashed towards recovery of LD Charges and any other dues from the firm.



**22. SET-OFF:**

Any sum of money due and payable to the supplier under the contract (including Security deposit returnable to the supplier) may be appropriated by the purchaser and set-off against any claim of the purchaser for the payment of a sum of money arising out of or under this contract or any other contract entered into by the supplier with the purchaser.

**23. SUPPLIER'S DEFAULT LIABILITY :**

In the event of breach of any these terms and conditions by the supplier, the purchaser can terminate the contract without Notice to the supplier at any stage and the supplier shall have no claim whatsoever on the purchaser on this account. But the supplier shall be liable to pay to the purchaser a sum equivalent to 5% of the value of the undelivered material as liquidated damages and not as a penalty.

**24. LAWS GOVERNING THE CONTRACT**

- (i) This contract shall be governed by the Laws of India for the time being in force.
- (ii) Irrespective of the place of delivery place of performance or place of payment under the contract, the contract shall be deemed to have been made at the place from which the acceptance of tender has been issued.
- (iii) Jurisdiction of courts: The courts of the place from where the acceptance of tender has been issued shall alone have exclusive jurisdiction to decide any dispute arising out of or in respect of the contract.

**25. Corrupt or Fraudulent Practices**

The Nigam requires that Tenderers/ Suppliers/ Contractors observe the highest standard of ethics during the procurement and execution of Nigam contracts. In pursuance of this policy, the Nigam:-

- (a) Defines, for the purposes of this provision, the terms set forth as follows:
  - (i) "corrupt practice" means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public 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 Nigam, and includes collusive practice among Tenderers (prior to or after tender submission) designed to establish tender prices at artificial, non-competitive levels and to deprive the Nigam of the benefits of free and open competition;
- (b) will reject a proposal for award if it determines that the Tenderer 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 Nigam contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Nigam contract.

**26. PATENT RIGHTS**



The supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

In the event of any claim asserted by a third party of infringement of copyright, patent, trademark or industrial design rights arising from the use of the Goods or any part thereof in the Purchaser's country, the supplier shall act expeditiously to extinguish such claim. If the supplier fails to comply and the Purchaser is required to pay compensation to a third party resulting from such infringement, the supplier shall be responsible for the compensation including all expenses, court costs and lawyer fees. The Purchaser will give notice to the supplier of such claim, if it is made, without delay.

## 27. SETTLEMENT OF DISPUTES

If any dispute or difference of any kind whatsoever arises between the Purchaser and the Supplier in connection with or arising out of the Contract, the parties will make every effort to resolve amicably such dispute or difference by mutual consultation.

If, after thirty (30) days the parties failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of the matter may be commenced unless such notice is given.

## 28. Blacklisting of the Firms:

As the purchase order becomes a valid contract between the purchaser and supplier on the date of its issue, no further changes in the terms and conditions thereof are permissible and any request received in this regard from the supplier should be summarily rejected, making it clear to supply the goods strictly in accordance with the terms and conditions of the contract. It should be noted that such a liability can be enforced on the supplier only if the purchase order does not contain any term or condition contrary to what had been quoted in the supplier's tender. Once this is ensured, any attempt by the supplier to back out of his commitment should be taken seriously and his earnest money deposited be forfeited forthwith, without prejudice to any further legal remedies open to the Nigam under the relevant laws. Where necessary, the case of supplier illegally backing out of the commitment, should also be put up to the Board of Directors for consideration and to decide for black-listing of the firm and damages, if any, to be recovered

### 28.1. Procedure for Blacklisting of firm

*In case the supplier intends to illegally back out of the commitment, the steps for blacklisting of the firm, besides enforcement of damages recoverable under the law will be taken as per procedure given below:-*

- a) *A notice shall be served by the purchasing department on the supplier by registered post/speed post bringing his defaults to his notice and asking him to complete all pending supplies / or to settle dispute within a period of 15 days from the date of issue of Notice.*
- b) *In case the firm fails to comply with the notice(s), a show Cause notice of 21 days shall be issued why the firm/supplier/contractor should not be blacklisted. In the Show Cause Notice complete details of the case, default committed by the firm/supplier/contractor and details of notices issued by the Nigam shall be incorporated.*
- c) *In case the supplier/firm/contractor fails to comply with the notice issued for blacklisting or does not respond to show cause notice or the reply as submitted is not found*



*justified/convincing. The contract with the firm/supplier shall be terminated inter-alia taking other action as per regulation no. 20 & further the firm may be blacklisted with the approval of BODs.*

- d) *The period of blacklisting of the defaulting firm/ supplier/contractor will be approved upto 3 years by BOD's and shall be notified to all Power Utilities in the country and the names of such blacklisted supplier/contractor would also be put on the website of the Nigam*

**29. ARBITRATION**

All the matters, questions, disputes, differences and / or claims arising out of and /or concerning and /or in connection and /or relating to this contract whether or not obligations of either or both parties under this contract be subsisting at the time of such dispute and whether or not this contract has been terminated or purported to be terminated or completed, shall be referred to the Sole Arbitrator to be nominated by Managing Director/DHBVNL or UHBVNL (as the case may be). The Award of the Arbitrator shall be final and binding on the Parties to this contract. Provisions of the Arbitration & conciliation Act, 1996 and the Rules made there under, the statutory modifications thereof for the time being in force, shall be deemed to apply to the Arbitration proceedings under this clause.

Place :

Date :

Signature of the Supplier.

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**SCHEDULE 'D'**

**(Part-II, Particular Conditions of Contract)**

**UTTAR/ DAKSHIN HARYANA BIJLI VITRAN NIGAM LIMITED**

**PARTICULAR TERMS AND CONDITIONS FOR PROCUREMENT OF EQUIPMENT STORES AND OTHER MATERIAL UNDER THE RATE CONTRACT**

The below mentioned terms & conditions shall be applicable in addition to the terms & conditions mentioned in Part-I of Schedule D

**1) PRICE :-**

The prices quoted shall be 'FIRM' and 'FOR' destination basis anywhere in Haryana. The breakup of prices quoted viz. Ex-works prices, excise duty, cess, sales tax, freight and insurance etc. should be clearly given in schedule of prices as per details in the enclosed Performa, which is a must.

**2) SAMPLE**

Not Required

**3) Delivery:**

**i) Acceptance Early Supplies**

(a) In case the material is required early by the Nigam and the purchasing authority requests for the same, then the payment would be regulated as per PO provisions i.e. actual delivery (physical) date shall be considered as due date of delivery.

(b) in case any firm supplied the material earlier than the actual due date of supply, then the payment procedure/terms shall remain the same as per terms and conditions and lots due date mentioned in the relevant PO/work order.

**ii) Acceptance of delay supply :-**

In case of lot wise delayed supply or else, the same may be considered and accepted by the purchaser with levy of penalty as per provision of PO.

**4) Warranty:-**

The supplier shall be made responsible to replace free of cost, with no transportation or insurance-cost to the Nigam, up to the destination, the whole or any part of the material which in normal and proper use proves defective in quality or workmanship, subject to the condition that the defect is noticed within 66 months from the date the material is received by the consignee or 60 months from the date of installation which ever period may expire earlier. The consignee or any other officer of the Nigam actually using the material will give





prompt notice of each such defect to the supplier as well as the Purchasing authority and the Controller of Stores. The replacement shall be effected by the supplier within a reasonable time, but not, in any case, exceeding 45 days. The supplier shall also arrange to remove the defective supply within a reasonable period but not exceeding 45 days from the date of issue of the notice in respect thereof, but only after replacement of defective material. Upon the firm failing to do so, the damages/defects may be got rectified by the Nigam and the cost adjusted from the firm's pending dues and/or security deposit against this or any other contract in force and the balance left be got deposited by the supplier. The Nigam may also withhold the amount equal to cost of defective material.

The warranty for 66/60 months shall be one time. In addition to above, warranty should be extended by the supplier for the period for which the service was not rendered by the material/equipment supplied by the supplier which would be allowable for one occasion only. In case of recurrence, the material/ equipment shall have to be replaced afresh or cost of the material shall be recoverable from the pending liabilities of the supplier/contractor towards Nigam.

After completion of overall warranty period, if it is found that any material defective/ damaged within warranty period is still lying in the store/field/with the firm then equivalent amount of cost of material as BG shall be accepted. After receipt of fresh BG, the old BG should be released.

**In case of breach of contractual obligations with reference to non responding for repairing /replacement of defective material, notices of 15 days & 21 days shall be issued to the firm and in case of still persistence of default, the Nigam shall reserve the right to terminate the contract, encashment of BG towards recovery of damages and further initiation of action for blacklisting**

5) **DRAWINGS:-**

Not Applicable

6) **MISTAKES IN DRAWINGS:**

Not Applicable

7) **POST RECEIPT INSPECTION AND SAMPLE TESTING AFTER RECEIPT OF MATERIAL IN NIGAM STORES:-**

Nigam intends to purchase only High Quality material. For this purpose stringent testing of the material shall be done as per Nigam's Quality Assurance Plan (QAP) .

- a) A team of 2 XENs to be nominated by Chief Engineer/MM will carry out random checking to ensure quality and quantity of material received in Nigam's stores.
- b) The team will draw sample from each lot received in anyone of the stores to carry out checking as under:-
  - Genuineness of seals provided during inspection
  - Workmanship of material received in store
  - Quantity of material inspected viz-a-viz received quantity.
  - Quality of material received in the store.



- c) The above said inspection / checking would be carried out to check all physical parameters as per approved technical specifications of the Nigam / Engineering Design / Drawings.

The above said team may draw samples randomly for any material for its testing from any NABL accredited testing lab as approved by the Nigam. **Normally, one sample from any of the lots, (to be decided by purchasing authority) shall be sent to NABL accredited lab (Govt. /Semi Govt. / Private Lab) to carry out the acceptance tests, at Nigam's cost.** If sample fails the entire lot shall be rejected and cost of testing shall be charged from the firm. However, testing of 2nd sample of the same lot may be considered on justified request of the firm & with the approval of Director/Projects **to be decided on merits of each case. In case, 2nd sample is rejected, the entire lot shall be rejected.**

In case of failure of sample from the lot then:-

- Supplier shall have to replace the full quantity of the respective inspected lot supplied to various stores and lying unused at stores as per provision contained under clause no.14(x) of Schedule-D (Part-I).
- For the quantity already utilized against the aforementioned lot in field then a deduction @ 15% (Fifteen Percent) of FOR destination prices of the material utilized shall be made..

#### 8) TYPE TEST CONDITIONS:

The firm/s shall be required to submit the type test certificates as per Nigam's Technical Specifications and relevant ISS along with the tender documents, which should not be more than five years old on the date of opening of tender. Alternatively, the firm/s shall submit an undertaking that the requisite type test certificates shall be submitted within 45 days from the date of issuance of LOI/RC. The purchaser departments shall approve the drawing and type tests within 10 days from the date of receipt all the requisite type test certificates.

In case any difference between ISS & Nigam technical specifications, the type test certificates (incorporating the remaining tests, if applicable) issued by NABL accredited testing houses/Govt. approved lab besides international testing house/labs like KEMA, KERI etc. will be supplied by the bidder within 45 days from the date of issue of LOI/Rate Contract.

The type test certificates should be as per IS with latest amendment which will be supplied by the firm for approval of drawing and GTPs, unless stated otherwise specifically.

**In case of delay in submission of detailed type test certificates beyond 45 days from the date of issue of LOI/RC, penalty @ 0.05% per day subject to maximum 2% of the contract value shall be imposed.**

**Note: Delay in submission of type test by firm shall not form the basis for relaxation/extension in delivery schedule in any case.**

#### 9) TERMS OF PAYMENT:-

Subject to any deductions which the purchaser may be authorized to make under this contract, the payment for the material shall be made as under:-

- a) 70 % payment shall be made on 30th day from the date of receipt of material by the



उत्तर दक्षिण हरियाणा बिजली वितरण निगम

UTTAR DAKSHIN HARYANA BILI VITRAN NIGAM



consignee or date of submission of complete documents etc., whichever is later and balance 30% shall be released on 45<sup>th</sup> day from the date of receipt of material by the consignee or date of submission of documents i.e. bills/invoices in triplicate, receipted challans, inspection report, prescribed sale tax/excise duty certificates and excise duty gate pass wherever required etc., whichever is later

- (b) The Bank Guarantee of the value of 10% [ 5% in case of Haryana based micro and small enterprises (including khadi and village industries units)] of the contract price of PO for complete requisite period (alongwith e-mail id of issuing bank) shall be furnished within 15 days from the date of issue of PO which should remain valid for 90 days after the expiry of warranty period (the BG shall be issued by any Nationalized /Private Bank in India, failing which:
- Penalty @ 0.05% per day of the value of BG with a ceiling of 2% of value of BG would be charged from due date of submission, till the BG or DD in lieu of BG is submitted by the firm.
  - In case the performance bank guarantee or DD in lieu of performance security is not submitted within 45 days from the date of issue of PO or the date if any stipulated by the purchasing authority, the Nigam reserve the right to cancel the PO/RC and initiate the action for allotment to L-2 firm.
  - In the event of receipt of material without the receipt of BG, amount equivalent to BG alongwith penalty shall be deducted from the payments due to the supplier. However, on receipt of requisite BG from the firm, the amount deducted in lieu of the BG only, shall be refunded without accrual of any interest thereon and amount of penalty so deducted shall not be refunded.

Further a rebate of 0.05 percent per day shall be availed of by the Nigam if payment is made earlier than the period specified. The rebate will be calculated on the payable amount.

The delay in payment to the suppliers beyond the stipulated credit period indicated in the supply order, unless supported by cogent reasons and approved by a higher authority ,would attract penal interest on the defaulting amount @ Rs. 25/- per one lac per day of delay beyond the credit stipulated period. Payment of such interests would be brought to the notice of Administrative Secretary of the department and call for fixation of responsibility. In case of delayed supply duly accepted by the purchasing authority, no penal interest on the same shall be applicable.

In case the due date of payment in terms of payment schedule falls on a holiday including Sunday or holiday is subsequently declared on that date, the payment shall be released on the first working day falling next to the due date.

Place :

Date :

Signature of the Supplier.



**PARTICULARS OF THE BIDDER**

1.	Name of the firm	
2.	Postal address.	
3.	Telephone No.	
4.	Fax No.	
5.	Email.	
6.	Type of organization:	
7.	Date of commencement of business.	
8.	Name of proprietor / Partners / Directors and their detail Bio-data.	Page _____to _____page
9.	Details of offices other than H.O./Controlling office and other infrastructure available.	Page _____to _____page
10.	Detailed organizational structure with background of key personnel.	Page _____to _____page
11.	Type of service being offered.	Page _____to _____page
12.	List of clients' alongwith their addresses and contact telephone. Fax Nos. and type of services offered and/or being offered to them. a) Electricity Companies/ Board. b) Others.	Page _____to _____page Page _____to _____page



13.	Details of Empanelment accreditation Electricity Board/Companies/other Client alongwith empanelment/ accreditation letter.	Page _____ to _____page
14.	Balance sheet and P&L Accounts of past 3 financial years.	Page _____ to _____page
15.	Letters/certificates for successful completion of work from Electricity Companies/ Board/other.	Page _____ to _____page
16.	Details of any collaboration/ tie up with Indian/Overseas Agency/Organization.	Page _____ to _____page
17.	Any other additional information/certificate.	Page _____ to _____page
18.	Details of work force with the agency.	



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UTTAR DAKSHIN HARYANA BILII VITRAN NIGAM



ANNEXURE 'A' TO SCHEDULE 'D'  
(Part-I)

**SPECIFICATIONS**

Signature of the Supplier.



उत्तर दक्षिण हरियाणा बिजली वितरण निगम  
UTTAR DAKSHIN HARYANA BILI VITRAN NIGAM



**Specification No. CSC-45/Rev-III /DH/UH/P&D/2015-2016**

**TECHNICAL SPECIFICATION  
FOR**

**3PHASE 4 WIRE LT CT & HT CT/PT OPERATED STATIC**

**AMR COMPATIBLE TRI-VECTOR ENERGY METERS  
(DLMS Compliant)**

**FOR**

**HT/ LT CONSUMERS/FEEDER/ DT METERS**

Issue Month: March, 2016

Common Specifications Committee

(CSC approval date 22.03.2016)

UHBVN & DHBVN



उत्तर दक्षिण हरियाणा बिजली वितरण निगम  
UTTAR DAKSHIN HARYANA BIJI VITRAN NIGAM



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### 1.0 SCOPE

Design, manufacturing, testing, supply and delivery of AC, 3 Phase, 4 Wire, CT/PT operated fully Static and AMR compatible Tri-Vector Energy Meters for measurement of different electrical parameters listed elsewhere in the document including Active Energy (kWh), Reactive Energy (kVArh), Apparent Energy (kVAh) etc. The detail scope is given below. The meters shall be DLMS compliant as per IS: 15959:2011.

### 2.0 APPLICATION

- In Substation on incoming/Outgoing HT feeders
- On Distribution Transformers
- LT and HT Consumers

### 3.0 STANDARDS TO WHICH METERS SHALL COMPLY

IS15959:2011 Specification for Data Exchange for Electricity Meter Reading, Tariff and Load Control – Companion Specification.

IS: 14697 /1999 (reaffirmed 2004) Specification for AC Static Transformer operated Watt Hour & VAR-Hour meters (0.5S);

IS-15707 Specification for Testing, evaluation, installation & maintenance of AC Electricity Meters-Code of Practice

The equipment meeting with the requirements of other authoritative standards, which ensure equal or better quality than the standard mentioned above, also shall be considered; in case of conflict related with communication protocol, IS15959:2011 shall be considered. For conflict related with other parts of the specification, the order of priority shall be – i) This technical specification ii) IS: 14697 /1999 (reaffirmed 2004).

### 4.0 CLIMATIC CONDITIONS

The Static Energy Meter shall be suitable for satisfactorily working under the following climatic conditions:

- |   |                       |
|---|-----------------------|
| 1. Max. ambient air temperature                     | 70 degree             |
| 2. Min. ambient air temperature                     | (-)5 degree C         |
| 3. Average Daily Max. ambient temperature           | 40 degree C           |
| 4. Max. yearly weighted average ambient temperature | 32 degree C           |
| 5. Max. altitude above mean sea level               | 1000 m                |
| 6. Minimum Relative Humidity (%age)                 | 26                    |
| 7. Max. Relative Humidity (%age)                    | 95                    |
| 8. Avg. No. of Rainy days/year                      | 120                   |
| 9. Avg. annual rainfall                             | 900 mm                |
| 10. Maximum wind pressure                           | 195 kg/m <sup>2</sup> |

### 5.0 WORKING ENVIRONMENT

As per IS 14697-1999 (reaffirmed 2004). Meter to perform satisfactorily under Non-Air Conditioned environment (within stipulations of IS)

Meter body will conform to IP51 degree of protection. For outdoor use meter shall be installed in sealed enclosure conforming to IP 55.

The meter shall be suitable designed for satisfactory operation under the hot and hazardous tropical climate conditions and shall be dust and vermin proof. All the parts and surface, which are subject to corrosion, shall either be made of such material or shall be provided with such protective finish, which provided suitable protection to them from any injurious effect of excessive humidity.

### 6.0 GENERAL TECHNICAL REQUIREMENTS



1	Type	AMR Compatible Static, 3 Ph, 4 Wire Tri-Vector Energy Meter
2	Frequency	50 Hz $\pm$ 5%
3	Accuracy Class	0.5S ( For Both Active and Reactive energies)
4	Secondary Voltage	i. For CT/PT operated HT meters-Suitable for operation from 110V Ph-Ph or 63.5V Ph-N ii. For distribution transformer and other LT CT operated Meters-suitable for operation from 415V Ph-Ph or 240 VPh-N
5	Basic current(Ib)	-/5 Amps.
6	Maximum Continuous Current	200 %of Ib; Starting and Short time current shall be as per IS-14697
7	Power Consumption	i. The active and apparent power consumption, in each voltage circuit, at reference voltage, reference temperature and reference frequency shall not exceed 1.5 W and 8 VA. ii. The apparent power taken by each current circuit, at basic current, reference frequency and reference temperature shall not exceed 1.0 VA
8	Power factor	0.0 Lag -Unity- 0.0 Lead Note:- The meter shall record at UPF in case of leading PF.
9	Design	Meter shall be designed with application specific integrated circuit (ASIC) or micro controller; shall have no moving part; electronic components shall be assembled on printed circuit board using surface mounting technology; factory calibration using high accuracy (0.05 class) software based test bench.
10	Starting Current	The meter shall start and continue to register the current 0.1 % of Ib.
11	Running with no load	When the 115% of rated voltage is applied with no current flowing in the current circuit, the meters shall not register any energy and test output of the meter shall not be more than one pulse/count on "no load".
12	Power Supply Variation	The extreme power supply variation (which an operating meter should withstand without damage and without degradation of its meteorological characteristics when it is subsequently operated under its operating conditions) is as follows.  Voltage : 60% to 120 % of Vref Frequency : 45 Hz to 55 Hz  The manufacturer can also offer meters, which can withstand higher variations.

## 7.0 CONSTRUCTIONAL REQUIREMENT/METER COVER & SEALING ARRANGEMENT

**7.1 METER CASE:** The meter case & cover will be ultrasonically welded (Continues ultrasonic welding all around the meter) with two no. polycarbonate seals as per Nigam's latest technical specification, one each on either side and two number polycarbonate seals of firms with latest IS specification, one each on both sides so that meter's internal parts are only accessible after breaking seals, ultrasonic welding or case cover of the meter and it should become unserviceable. The material for base (non-transparent) and cover (transparent / translucent) of the meter shall be of Polycarbonate. The meter shall be factory calibrated and shall have unidirectional screws with holes for sealing, fully embedded so that these cannot be unscrewed by means of pliers etc.. The meter case shall have at least three mounting holes. 2 holes at terminal block for mounting



purpose; sealed beneath the terminal cover and one for hanging screw on the top which shall be constructed in such a way that it may be concealed beneath meter case after hanging the meter at the time of its commissioning.

**7.2 WINDOWS:** The meter cover shall be of Toughened Glass or Reinforced Polycarbonate material with one window. The window shall be of transparent material. The meter base should be ultrasonically welded with meter cover so that it cannot be removed undamaged; without breaking the meter cover.

**7.3 TERMINALS AND TERMINAL BLOCK:** The terminals may be grouped in a terminal block, having adequate insulating properties and mechanical strength. The terminal block shall be made from best quality non - hygroscopic, flame retardant material (capable of passing the flammability tests, as per IS -11731) with nickel-plated brass or aluminium alloy for connecting terminals. The clamping screw should be provided inside the terminal cover and should have metallic sleeve molded within the block to avoid damage during tightening of the screws. The terminals in the terminal block shall be of adequate length in order to have proper grip of conductor with the help of two screws through application of a plate so as to make cage type arrangement. The manner of fixing the conductors to the terminals shall ensure adequate and durable contact such that there is no risk of loosening or undue heating. Screw connections, shall ensure adequate securing in meter nuts which facilitate and should not remain vulnerable to get loosened and tightened several times during the life of the meter. All parts of each terminal shall be such that the risk of corrosion, resulting from contact with any other meter part, is minimized. Two screws shall be provided in each current terminal for effectively clamping the external leads or thimbles. Each clamping screw shall engage at least 3 threads in the terminal. The ends of screws shall be such as not to pierce the conductor. Electrical connections shall be so designed that the contact pressure is not transmitted through insulating material. For current circuits, the voltage is considered to be the same as for the related voltage circuit. The internal diameter of terminal holes shall be 5.5mm (min.). The clearances and creepage distances shall conform to clause 6.60 of IS: 14697 /1999. The terminal block should be grouped with the main body of the meter in such a way that if the terminal block once removed the meter should become un-serviceable.

*It shall conform to IS 11731 (FH-1category) besides meeting the test requirement of heat deflection test as per ISO 75, glow wire test as per the IS:11000 (part 2/SEC-1) 1984 OR IEC PUB,60695-2-12, Ball pressure test as per IEC--60695-10-2 and Flammability Test As per UL 94.*

**7.4 TERMINAL COVER:** - The terminal cover shall be extended type and not detachable from the meter body, which can be sealed independently of the meter cover. The terminal cover shall enclose the actual terminals; the conductor fixing screws, the external conductors and their insulation i.e. no part of meter or cable / accessories shall be visible from the front of the meter. When the meter is mounted, no access to the terminal shall be possible without breaking the seal (s) of the meter terminal cover. The terminal cover shall have at least two sealing screws. The fixing screws used on the terminal cover for fixing and sealing shall be kept captive in the terminal cover.

The connection diagram of the meter shall be clearly shown for 3 phase 4 wire system, on inside portion of the terminal cover. The meter terminals shall also be having proper marking and this marking should appear in the said diagram.

**7.5 SEALING:** - 2 no unidirectional sealing screw shall be provided for proper fixing of meter cover with 2 no good quality polycarbonate seals, one each on either side, so that the meter internal parts are only accessible after breaking the seals, ultrasonic welding or case cover of the meter. Separate sealing arrangements shall be provided for MDI reset and communication port. In addition, the firm / supplier shall affix 2 no good quality, numbered holograms or paper seals covering both cover and base, on base and cover; one on each side and its record should be forwarded to the Nigam.

Provision for additional sealing by purchaser at two no. additional points other than mentioned above, one each on either side of the meter should also be made by the manufacturer.



### 8.0 MANUFACTURING PROCESS, ASSEMBLY AND TESTING

Meters shall be manufactured using latest and 'state of the art' technology and methods prevalent in electronics industry. The meter shall be made from high accuracy and reliable surface mount technology (SMT) components. All inward flow of major components and sub assembly parts (CT, PT, RTCs/Crystal, LCDs, LEDs, power circuit electronic components etc.) shall have batch and source identification. Multilayer 'PCB' assembly with 'PTH' (Plated through Hole) using surface mounted component shall have adequate track clearance for power circuits. SMT component shall be assembled using automatic 'pick-and-place' machines, Reflow Soldering oven, for stabilized setting of the components on 'PCB'. For soldered PCBs, cleaning and washing of cards, after wave soldering process is to be carried out as a standard practice. Assembly line of the manufacturing system shall have provision for testing of sub-assembled cards. Manual placing of components and soldering should be minimized to items, which cannot be handled by automatic machine. Handling of 'PCB' with ICs/C-MOS components should be restricted to bare minimum and precautions to prevent 'ESD' failure should be provided. Complete assembled and soldered PCB should undergo functional testing using computerized Automatic Test Equipment.

Fully assembled and finished meter shall undergo 'burn-in' test process for 72hrs at 55 degree Celsius (Max. temperature not to exceed 60 degree Celsius) under base current (Ib) load condition.

Test points should be provided to check the performance of each block/stage of the meter circuitry. RTC shall be synchronized with NPL time at the time of manufacture. Meters testing at intermediate and final stage shall be carried out with testing instruments, duly calibrated with reference standard (calibrated from NABL Accredited Laboratory), with traceability of source and date.

### 9.0 ELECTRONIC COMPONENT

The meter shall be manufactured from high accuracy and reliable Surface Mount Technology (SMT) components. The supplier should submit the details of source/agencies from whom purchase of various components of meters used by them, has been done, to the authorized representative/ team deputed by Nigam for its verification. The make of components used in the meter should be used as per list noted below.

Sr. No.	Component Function	Requirement	Makes and Origin
1.	Measurement or computing chips	The measurement or computing chips in the meter should be surface mount type along with ASICs.	<u>USA</u> : Analog Devices, Cyrus, ST, Teridian, Motorola, RenesasLogic,Atmel,Phillips, Texas Instruments. <u>South Africa</u> : SAMES <u>Japan</u> : Hitachi or Oki Free scale semiconductors, MMI, Maxim, Siemens
2.	Memory Chip	The memory chips should not be affected by the external parameters like high voltage spikes or electrostatic discharges.	<u>USA</u> Atmel,NationalSemiconductors,TexasInstruments,Phillips,ST, Renesas <u>Japan</u> : Hitachi or Oki Microchip, Ramtron/ Numonyx, Siemens



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3.	Display modules	a) The display modules should be well protected from the external UV radiations. b) The display visibility should be sufficient to read the Meter mounted at height at 0.5 meter as well as at the height of 0.2 meters. c) The construction of the modules should be such that the displayed quantity should not be disturbed with the life of display (PIN Type) d) It should be trans reflective HTN or STN type industrial grade with extended temperature range.	Any Reputed Manufacturer bearing IS certification.
4.	Communication modules	Communication modules should be compatible for the RS 232 ports/RS 485 and RJ11.	USA: National Semiconductors, HP, Ontonica, ST  Holland/Korea: Philips  Japan: Hitachi  Taiwan: Ligitek  Germany: Siemens, Everlight
5.	Optical Port	Optical Port should be used to transfer the meter data to meter reading instrument. The mechanical construction of the port should be such to facilitate the data transfer easily.	USA: National Semiconductors, HP,  Holland/Korea: Philips  Japan: Hitachi  Taiwan: Ligitek Osram, Everlight, EG & G VATEC
6.	Power Supply	The power supply should be with the capabilities as per the relevant standards. The power supply unit of the meter should not be affected, in case the maximum voltage of the system appears at the terminals due to faults or due to wrong connections.	SMPS / Capacitor type
7.	Electronic Components	The active & passive components should be of surface mount type & are to be handled & soldered by the state of art assembly processes.	USA: National Semiconductors, Atmel, Philips, Texas Instruments, ST, Onsemi Japan: Hitachi, Oki, AVX or Ricoh Korea: Samsung
8.	Mechanical Parts	a) The internal electrical component should be of electrolytic copper & should be protected from corrosion, rust etc. The other mechanical components should be protected from rust, corrosion etc. by suitable plating /painting methods.	Any Reputed Manufacturer bearing IS certification.
9.	Battery	Lithium with guaranteed life of 10 years.	Verta, Tedirun, Sanyo or National Renota, Panasonic, ST, Epson, Maxell, Intersil, tekcell
10.	RTC & Micro controller	The accuracy of RTC shall be as per relevant IEC/IS standards	USA: Philips, Dallas, Atmel, Motorola, Microchip Japan: NEC or Oki Texas instruments, ST, Epson, Intersil, Renasas
11.	P.C.B	Glass Epoxy, fire resistant grade FR4, with minimum thickness 1.6mm	(Bare board test (BBT) is must)

However, manufacturing plants located at other sites/countries of aforementioned manufacturer (with same trade mark) shall be acceptable. However, in case of any deviation and discrepancy, the decision of



Director/Projects of the utility shall be final.

#### 10.0 DISPLAYS

The meter shall have 7 digits (with  $\pm$  indication), parameter identifier, backlit Liquid Crystal Display (LCD) of minimum 10 mm height, and wide viewing angle of 120 degree. Auto display cycling is required with persistence time of 10 Seconds. LCD shall be suitable for temperature withstand of 70 deg. C; Sequence of display of various instantaneous electrical parameters shall be as desired by Purchaser at the time of order.

The data stored in the meters shall not be lost in the event of power failure. The meter shall have Non Volatile Memory (NVM), which does not need any battery backup. The NVM shall have a minimum retention period of 10 years.

Meter shall have scroll lock facility to display any one desired parameter continuously from display parameters. Scroll lock facility shall come into operation with press of the push button for 5 seconds continuously which would restore back automatically to its usual scroll display mode after 2 minutes from the succeeding display parameter. However, the scroll lock facility once operational can be unlocked by another sequential push button operation of 5 seconds continuously.

There should also be a provision through the push button mode to access a high resolution display of the principle unit of measurement for testing purpose. This high resolution display should be provided for displaying the measured units up to 4 decimal points without any rounding off the digits.

#### 11.0 PERFORMANCE UNDER INFLUENCE QUANTITIES

The meters performance under influence quantities shall be governed by IS 14697-1999 (reaffirmed 2004). The accuracy of meter shall not exceed the permissible limits of accuracy as per standard IS: 14697 (latest version).

#### 12.0 OUTPUT DEVICE

Energy Meter shall have test output, accessible from the front, and be capable of being monitored with suitable testing equipment while in operation at site. The operation indicator must be visible from the front and test output device shall be provided in the form of LED. Resolution of the test output device shall be sufficient to enable the starting current test in less than 10 minutes.

**Test output device shall be provided in the form of preferably different LEDs for kWh, kVArh and having proper marking beneath them. The test output device should have constant pulse rate in terms of pulse/unit energy.**

#### 13.0 REAL TIME INTERNAL CLOCK (RTC)

RTC shall be pre-programmed for 30 Years Day/date without any necessity for correction. The maximum drift shall not exceed +/- 120 Seconds per year.

The clock day/date setting and synchronization shall only be possible through password/Key code command from one of the following:

- a) CMRI or Meter testing work bench and this shall need password enabling for meter;
- b) From remote server through suitable communication network or Sub-station data logger 'PC'.

#### 14.0 QUANTITIES TO BE MEASURED & DISPLAYED

The meter shall be capable of measuring and displaying the following electrical quantities within specified accuracy limits for poly-phase balanced or unbalanced loads:

1. Display check
2. Sr. No. of the meter
3. Date
4. Time



5.
  - 5a KWh import
  - 5b KWh export
6. Kvarh Lag
7. Kvarh Lead
8. Absolute kVAH
9. MDI in kVA&kW with date & time
10. Cum. MDI in kVA&kW
11. No. of reset counts
12. TOD readings in kWH&kVAH
  1. 2200 Hrs to 0530 Hrs.
  2. 0530 Hrs to 0800 Hrs
  3. 0800 Hrs to 1730 Hrs
  4. 1730 Hrs to 1800 Hrs
  5. 1800 Hrs to 1830 Hrs
  6. 1830 Hrs to 1900 Hrs
  7. 1900 Hrs to 2100 Hrs
  8. 2100 Hrs to 2200 Hrs
13. Inst. Parameters---V1, V2, V3
14. L1, L2, L3
15. pf1, pf2, pf3, Average Pf
16. Inst. Load in kW & Kva
17. Last month reading-absolute kWH
18. Last month reading-absolute kVAH
19. Last month MDI in kVA&kW with date & time
20. Last month cum. Demand in kVA&kW
21. Inst. PT tamper
22. Inst. CT tamper
23. Inst. Other tamper
24. Cover open tamper with date & time
25. Tamper history with date & time
  - 1st Tamper
  - last tamper occurrence
  - last tamper reset
26. Total no. of tamper counts
27. Phase sequence
28. Self diagnosis

Note: Un-required parameters, depending upon type of meter, may be ignored.

4. Instantaneous Parameters such as phase and line voltages, currents, power factor, overall kVA, kW, kVAh, cumulative maximum demand (kW and kVA), reset count and frequency etc. as per details given in the table below and enclosed annexure.

The meter should display maximum demand (in KW & KVA) of the previous billing cycle at any instant of time.

b) Block Load Profile Parameters such as kVAh/kWh//Maximum Demand (MD) in kW/kVA/power factor/phase, and line voltages/currents etc. (minimum 5 parameters) as per details given in the table below and enclosed annexure but mandatory to be got confirmed from DHBVN/UHBVN before starting manufacturing of the meters.

c) Daily Load Profile: Parameters such as cumulative energy kWh (import/export)/cumulative kVAh (while kW- import/export)/cumulative energy kVAh (quadrant-1/2/3/4)/reactive energy high (V>103%)/low (V<97%), etc. as per details given in the table below and enclosed annexure.



In addition to above the meter shall also record the Name plate details, programmable parameters (readable as profile), occurrence and restoration of tamper events along with the parameters (Table 30, 31 and 32 to 38 respectively of enclosed guideline document).

Detail of category wise parameters requirement suitable for specific location such as feeder/DT metering, interface points/boundary points is given in following tables of guidelines document enclosed as annexure:

Category	Parameter group	Annexure Table No.
Substation Feeder / Distribution Transformer meter	Instantaneous parameters	22
	Block Load Profile Parameters	23
Boundary/Ring fencing /Interface Meters	Instantaneous parameters	24
	Block Load Profile Parameters	25
	Daily Load Profile Parameters	26
HT Consumer Meters	Instantaneous parameters	27
	Block Load Profile Parameters	28
	Billing Profile parameters	29
Substation Feeder/ DistributionTransformer /Boundary/Ring fencing /Interface/HT Consumer Meters	Name Plate details	30
	Programmable Parameters	31
	Event Conditions	32 to 38
Logging parameters for each the event condition – shall be Selected	Capture parameters for event as applicable (Event Log Profile)	39

#### TOD METERING

Depending upon the requirement, minimum eight different registers for storing TOD consumption and maximum demand should be available. Number and timing of these TOD Zones shall be user programmable with proper security system.

#### DISPLAY OF TAMPER EVENT

Meter should have a provision to show tamper occurrence flag indication related to below mentioned tamper events at appropriate place across the meter display unit, which shall remain resettable after removal of cause of tamper occurrence. However, a flag counter shall be provided which shall continue to register tamper events by corresponding increments and details there-against shall be logged in memory register.

Tamper Conditions	Tamper flag in meter	Tamper Display in meter
Meter Cover and Base Open	METER OPEN	TAMPER followed by TC OPEN
ESD > 50 KV	HV ESD	TAMPER followed by HV ESD
Magnet >0.5T Magnetic Influence (CBIP Limits)	MAGNET	TAMPER followed by MAGNET
DC Injection>330 V	DC INJECTION	TAMPER followed by DC
Neutral Disturbance	NEUTRAL DISTURBANCE	TAMPER followed by ND





CT Open	CT OPEN	TAMPER followed by CT OPEN
CT REVERSE	CT REV	TAMPER followed by R/Y/B CT REV
CT Bypassed	CT BYPASS	TAMPER followed by R/Y/B CT BYPASS
Current Unbalance	Current Unbalance	TAMPER followed by CT UNB
Potential Missing	PT MISS	TAMPER followed by R/Y/B PT MISS
Voltage Unbalance	Voltage Unbalance	TAMPER followed by PT UNB
Wrong Phase Association	PH- ASSO- Wrong	TAMPER followed by PH-ASSO-WRONG
LOW Power Factor	LOW PF	TAMPER followed by LOW PF
Top Cover Open	TC Open	TAMPER followed by TC Open

### 15.0 DEMAND INTEGRATION PERIOD

The maximum demand integration period should be set for/ 15minute by manufacturer.

### 16.0 MD RESET

It should be possible to reset MD by the following options:

- Local push button
- Auto reset at 24:00 hrs at the end of last day of every month.

### 17.0 MARKING OF METERS

The marking of meters shall be in accordance with IS: 14697 /1999 (reaffirmed 2004). The meters shall bear marking "Property of DHBVN/UHBVN".

The meter shall also store name plate details as given in the table30 of annexure F. These shall be readable as a profile as and when required.

Every meter shall have nameplate beneath the meter cover such that the nameplate cannot be accessed without opening the meter cover and without breaking the seals of the meter cover and the nameplate shall be marked distinctly and indelibly.

### 18.0 COMMUNICATION CAPABILITY

The meter shall be provided with two ports for communication of the measured/collected data as per guideline document enclosed in the annexure, i.e. a hardware port compatible with RS 232 or RS 485 specifications which shall be used for remote access through suitable modem (GPRS/RF) or any other latest available technology and an Optical port complying with hardware specifications detailed in IEC-62056-21. This shall be used for local data downloading through a DLMS compliant CMRI. One meter long cable, of suitable size, having facility at one end, for connecting to the optical port, other end shall be provided with 9 Pin D connector, should be provided with the meter as spare cable, so that the optical port can be brought out of the meter box. The meter shall have necessary facilities to transfer the data via the communication port, CMRI and also to download this on a PC to get complete details in numeric form. The necessary software for this purpose shall be provided by the supplier, without any condition, free of cost. Provision of one meter long cable, of suitable size, having facility at one end, for connecting to the RJ11 port, other end shall be provided with 9 Pin D connector, as spare cable should be provided with the meter, so that RJ 11 port can be brought out of the meter box. All spare cables shall be provided free of cost.

The RS 485 port shall be used at substations suitable for multi-drop connections of the meter for exporting data to sub-station data logger/DCU/Computer and the remote end server. The RS 232 port shall be used at boundary point meters, consumer meters and Distribution Transformer meters, capable to transfer and export data to the remote end server through suitable communication mediums (GPRS/RF) or any other latest available technology. Both ports shall support the default and minimum baud rate of 9600 bps and all the meter data shall be transfer in max. 5 min..



Application	Communication ports required at meter
Feeder Meter	Optical and RS 485
DT Meter	Optical and RJ 11
HT/LT CT consumer Meter	Optical and RJ 11

#### METER READING SOFTWARE

##### i) GENERAL

a) Licensed copies of the relevant software shall be made available for installation on each Common Meter Reading Instrument (CMRI) and Base computer software (BCS) for installation on the server and other terminals by the supplier and also install software in CMRI as well as base computer in all M&T Lab, all M&P Divisions and 'OP' circle in UHBVN/ DHBVN and the software support for ten years with all up gradations. Common Meter Reading Instrument (CMRI) would be loaded with user-friendly software (windows based) for reading, downloading meter data and relevant programming transaction in the meter with proper security system.

b) Windows based user interactive Base Computer Software (BCS) shall have to be supplied for efficient and speedy recovery of data from CMRI/Meter (by remote communication) and downloading instructions from base computer software to CMRI/Meter (by remote communication). This BCS should have, interalia, features and facilities to communicate, download and display meter data as per standard IS 15959:2011 for DLMS/COSEM meters. The BCS should also have facility to convert meter reading data into user definable Database format (such as Microsoft Access) and spreadsheet format for integrating with the purc'aser's billing system. Here again an "Export wizard" or similar utility shall be available whereby user can select file format, the variable data to export, the field width selection of each variable so that it may be possible for the user to integrate the same with the user's billing data and process the selected data in desired manner. The BCS shall also allow for viewing and easy analysis of the meter data acquired and for exporting that data in ASCII (American Standard Code for Information Interchange) or CSV (Common Specification format) format.

The software shall have the flexibility to generate at least the following sets of reports interalia:

- Energy accounting reports
- Billing reports
- Load survey reports
- Tamper information reports
  - Mid Night data snap shot

Billing reports to include customer ID, Name & Address, connected Load, meter status, billing cycle, historical meter reading, date and time, current meter reading, date and time, Maximum Demand (kW and kVA), Cumulative Maximum Demand (kW and kVA), date and time of Maximum Demand occurrence.

Load survey report for a pre-determined time to include the following:

Customer ID, meter number, Consumer Connectivity references i.e. identity & location of pole / Distribution transformer reference, feeder reference, sub-division reference, division reference, circle reference, time, date, maximum demand (kW), kVA, kWh, power factor, kVAh, MD reset count, power on hours, outage duration, number of outages, Voltages max R, Y, B date, time and duration, Voltages minimum R, Y, B date, time and duration, load factor as (energy consumed / (maximum demand x power on hours)), average load as (energy consumed / power on hours), TOD max DEMAND and duration, Average current phase wise.



The load survey data should be available in the form of bar charts as well as in spreadsheets. The BCS shall have the facility to give complete load survey data both in numeric and graphical form.

Tamper reports shall include month wise data on tamper count, tamper duration and tamper history with occurrence and restoration time stamp.

Vendor will provide soft copy of all the currant and updated software in CD form as and when required. Vendor to install & demonstrate working of software program on the CMRIs of the Nigam.

c) Base computer station software should be capable of accepting data from CMRI for processing, generating reports, downloading instructions and uploading instructions from the BCS to CMRI for communication with meters.

d) Dial-up software for accepting data from the meter by means of remote communication.

e) Software shall be password protected & data to be secured with encryption facility.

f) The supplier will also provide zigs in all M&T Labs to read the meter memory.

#### 19.0 TAMPER & FRAUD MONITORING FEATURES

The meter shall work satisfactorily (as per defined logics) under presence of various influencing conditions like Radio Frequency Interference, harmonic distortion, Voltage /Frequency Fluctuations, and electromagnetic High Frequency Fields etc.. The meter shall be immune to abnormal voltage/frequency generating devices.

Tamper details shall be stored in internal memory for retrieval by authorized personnel through either of the follow:

4. i) CMRI
- ii) Remote access through suitable communication network.

Minimum 311 numbers of events (occurrences & restoration with date & time) should be available in the meter memory and retention thereof shall be on FIFO basis except in "Meter cover open" tamper. The meter shall work satisfactorily (as per specified logics) under following abnormal conditions:

1. Phase sequence reversal	The meter shall keep working accurately irrespective of the phase sequence of the suppl
4. 2. Missing Neutral	The meter shall continue to record accurately according to electrical connections even if the Neutral of potential supply is accidentally or incidentally disconnecte



4. 3. Current reversal / CT polarity reversal	The meter shall log energy in forward direction even if the current is flowing in reverse direction in one or more phases. The meter shall also be capable of detecting and recording occurrence and restoration with date and time if the current is flowing in reverse direction in one or more phases.
4. External magnetic influence	a) The metering system shall be provided with adequate magnetic shielding so under effect of any magnetic field (AC Electro Magnet or DC Magnet) as per the values specified in CBIP Technical Report No.88 (with latest amendments) applied on the metering system shall not affect the proper functioning and recording of energy as per error limits prescribed by CBIP and it should record at I <sub>max</sub> as value prescribed in CBIP Technical Report No. 88. In case of permanent magnet, meter should be immune upto 0.5 T and greater than 0.5 T the meter shall also start recording energy at maximum current I <sub>MAX</sub> under such influence of abnormal magnetic field irrespective of actual load and log the tamper occurrence and restoration with date and time. The meter shall record as per actual load once the external abnormal magnetic field is removed.
Potential Missing	The meter should record energy at V <sub>ref</sub> . In case of missing potential but running load/current.

Note:-There should also be a provision of 4<sup>th</sup> CT (Neutral CT) in the LT&HT CT Operated consumer & DT meters for recording unbalance/neutral current/ current bypass.

Persistence time for occurrence and restoration for the events along with their threshold values shall be as per given below:

Sr. No.	Temper Type	Phase wise	Occurrence threshold	Restoration Threshold	Occurrence Time	Restoration Time
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1.	Missing Potential	Yes	Vx<50% of Vref Ix>5% of Ib <u>x=r/y/b</u>	Vx>60% Vref Current ignored <u>x=r/y/b</u>	5	5
2.	Low Voltage	No	Vx < 75% of Vref and No voltage missing in any phase	Vx >75% of Vref and No voltage missing in any phase	5	5
3	Voltage Unbalance	No	V max-Vmin>20% Vmax Current ignored All Voltages is >50% Vref	V max-Vmin<20% Vmax Current ignored All Voltages is >50% Vref	5	5
4	CT Polarity Reverse	Yes	Ix>10% I basic Vx>40%Vref PFph > 0.2 Current flow is reversed <u>x=r/y/b</u> PFph=phase power factor	Ix> 10% I basic Vx>40% Vref PFph > 0.2 Current flow is forward <u>x=r/y/b</u> PFph=phase power factor	5	5
5	CT Open	Yes	Ix<= 2% Ib Any other phases Current>10%Ib Vx >40% Vref <u>x=r/y/b</u>	Ix>= 5% Ib Any other phases Current>10% Ib Vx >40% Vref <u>x=r/y/b</u>	5	5
6	Current Unbalance	No	( I max- I min) > 30% of Ib, and (I all>10% of Ib) I all current <120 of Ib and Ix is >2%Ib ➤ I all- All current Values <u>x=r/y/b</u>	( I max- I min) <20% of Ib, and (I all>10% of Ib) I all current <120 of Ib and Ix is >2%Ib I all- All current Values <u>x=r/y/b</u>	5	5
7	Power failure	No	When there is no supply in all the three phases to the meter.	Power ON shall log when power supply resume	5	2
8	Magnet	No	Whenever the meter sense any magnetic influences <0.27 Tesla meter shall be immune and >0.27 Tesla it shall record energy at I max. In both cases meter shall be log temper of magnet.	When Meter Not Under Magnetic Influence	2	1



9	Neutral Disturbance	No	<ol style="list-style-type: none"> <li>Any abnormal signal through neutral meter should be immune. The beyond immune abnormal signal meter shall log temper and record energy in deficiency mode.</li> <li><math>V_x &gt; 130\% V_{ref}</math> <math>V_x</math> is voltage in any phase.</li> </ol>	<ol style="list-style-type: none"> <li>On removal/absence of such signal with date and time stamp. and/or</li> <li><math>V_x &lt; 130\%</math> of <math>V_{ref}</math> <math>V_x</math> is voltage in any phase.</li> </ol>	2	5
10	Low power factor	No	Net PF $< 0.3$ $V_x > 40\% V_{ref}$ $I_x > 1\% I_b$ $x=r/y/b$	Net PF $> 0.3$ $V_x > 40\% V_{ref}$ $I_x > 1\% I_b$ $x=r/y/b$	5	5
11	Cover open	NO	Tamper log immediately after top cover opening	Not restored	Immediately	Not restored
12	CT Bypass	NO	Vector sum ( $I_r + I_y + I_b$ ) is $> 20\%$ of $I_b$ and $I_{all} > 2\% I_b$ ➤ $I_{all}$ - All current Values	Vector sum ( $I_r + I_y + I_b$ ) is $< 20\%$ of $I_b$ and $I_{all}$ is $> 2\% I_b$ ➤ $I_{all}$ - All current Values	5	5
15	Abnormal Temperature	No	If temperature $< -5$ degree C & $> 70$ degree C	If temperature $> -5$ degree C & $< 70$ degree C	Immediate	1 min

The meter shall record the total duration of above abnormalities, time and date of their occurrences & restorations with a snap shot of electrical conditions viz. Voltage, current, kwh & Kvh energy, load in KW & KVA, PF etc through the meter's optical port/RJ11 with the help of CMRI or remote communication and download the same to the BCS where it shall be available for viewing. All this information shall be made available in simple and easily understandable format.

#### TAMPER LOGIC

Properly designed meter event logic should be provided. There shall be separate compartments for logging of potential related event, current related event and power on/off event. The bidder should explain the events details in each compartment under their offer.

The logging of various events in each compartment should be as under:

Once one or more compartments have become full, the last event pertaining to the same compartment will be entered and the earliest (first one)-event should disappear. Thus, in this manner each succeeding event will replace the earliest recorded event, compartment wise. Events of one compartment/category should overwrite the events of their own compartment/category only.

There shall be separate compartments for logging of different types of tampers/events as follows:

Compartment No. 1: Memory space for logging 150 Nos. of voltage related tamper events (occurrence and restoration with date and time) shall be allocated. Power On/Off should be in separate compartment.

Compartment No. 2: Memory space for logging 150 Nos. of current related tamper events (occurrence



and restoration with date and time) shall be allocated.

Compartment No. 3: Memory space for logging 1 No. of Top Cover open event (occurrence with date and time) shall be allocated with non-rollover facility.

Compartment No. 4: Memory space for logging 10 Nos. of other events like Magnet, High Frequency, and Injection of DC in neutral etc. (occurrence and restoration with date and time) shall be allocated.

#### **SELF DIAGNOSTIC FEATURE**

The meter shall be capable of performing complete self-diagnostic check to monitor the circuits for any malfunctioning to ensure integrity of data memory location at all time. The meter shall have indication for unsatisfactory/non-functioning/malfunctioning of the following:

- a) Time and date on meter display
- b) All display segments on meter display
- c) Real Time Clock (RTC) status in meter reading prints out at BCS end
- d) While installing the meter, it should be possible to check the correctness of Current Transformer, Voltage connections to the meter and their polarity from the functioning of the meter for different voltage injections with the help of vector/phasor diagrams. It should also be possible to check the current and voltage sequence parity. For this purpose suitable software for field diagnosis of meter connections with the help of CMRI should be supplied.

#### **21.0 ACCEPTANCE & ROUTINE TESTS**

Criteria for selection for such tests and performance requirements shall be as per IS 14697-1999 (reaffirmed 2004). Additional acceptance shall test for error measurement under all abnormal conditions and test to check communication capability of meter through various modes to be done.

##### **Communication Test**

The bidder shall demonstrate the communication capability of the meter through various communication modes. Also bidder need to ensure that provided API (Application Program Interface) is MIOS compliant and backward compliant to previous versions of meter of same make.

#### **22.0 TESTING AND MANUFACTURING FACILITIES**

The bidder shall have all acceptance test facility & at least the following testing facilities to ensure accurate calibration:

- i. Insulation resistance measurement.
- ii. Running at no load.
- iii. Starting current test.
- iv. Limits of error.
- v. Power loss in voltage and current coil.
- vi. Repeatability of error.

The manufacturer should have valid calibration certificate of testing instruments/equipments from accredited NABL laboratory.



GUARANTEED TECHNICAL PARTICULARS FOR CT / PT OPERATED TRIVECTOR  
METERS /LT CT METER

1)	Maker's Name	
2)	Meter Make & Type	
3)	Fixing Arrangement	
4)	Basic current (Amperes)	
5)	Rated Maximum Continuous Current (Amperes)	
6)	Standard Reference Voltage & Frequency	
7)	Class of accuracy	
8)	Power Loss in each	
i)	Voltage circuit	
ii	Current circuit	
9)	Minimum Starting Current	
10)	Type of display	
11)	No. of Digits	
12)	Type of output Device	
13)	Clearances and creepage distance in the	
I.	Terminal Block	
II.	Terminal cover	
III.	Internal parts of the meter	
14)	Material of	
I.	Terminal Block	
II.	Terminal cover	
15)	Material of Terminals	
16)	Material of Meter Frame/Cover	
17)	Window arrangement & material	
18)	Number of seals provided	
I.	Main Meter Cover	
II	Meter Terminal Cover	
19)	Total weight of the Meter	





ANNEX A  
(Foreword)

INTRODUCTION TO STANDARDIZED METER PARAMETERS LIST

**A-1 CLASSIFICATION OF PARAMETERS**

The Metering Parameters have been identified and classified as follows:

- a) Instantaneous Parameters
- b) Block Profile / Load Survey Parameters.
- c) Daily Profile Parameters.
- d) Parameters for accounting / billing.
- e) General Purpose quantities
  - i. Name Plate Details.
  - ii. Programmable parameters
- f) Event Conditions.

The measurement and computation of each of these parameters and events shall be based on standard methods or based on utilities prudent practices or as directed by respective Regulatory Commission.

For each of the identified parameter, the OBIS code, Interface Class and the Attributes are given in the various tables in corresponding Annexure. The OBIS codes listed are applicable for LN referencing and is mandatory to adhere to by the SERVERS and CLIENTS.

**A-2 INSTANTANEOUS PARAMETERS**

The Instantaneous parameters shall be continuously updated by the meter hardware / software as per internal sampling and computation time. The energy values in the table shall be cumulative readings from the date of manufacturing or installation of meter as the case may be. These shall be continuously updated and last updated value shall be available for downloading as and when required. Each of the parameters shall be readable at any instant by the HOST from remote or by HHU at site. The snap shot of all the instantaneous values of all parameters shall be readable by the HOST computer.

**A-3 PROFILE GENERIC OR LOAD SURVEY PARAMETERS (CAPTURE TIME BLOCK 15 OR 30 MINUTES)**

This is an array of parameters identified for capturing and storing at specified time intervals or capture times. The capture times shall be either 15 or 30 minutes. The capture times shall be programmable by the utilities. The tables lists the parameters whose profile (survey) is to be captured and stored in the meter as per set capture time period. The profiles shall be readable at any time by the HOST from remote or by HHU (MRI) at site for any specified range and time.

In the case of Category B meters the capture time shall be of 15 minutes duration.

The data stored in the array shall be the average value for the captured time block and stored at the end of that block, except for energy values. The energy entries are the consumption during respective capture time block and posted at the end of that block. The array of data shall be retained inside the meter memory for the last 22 days for a capture period of 15 minutes or for the last 45 days for a capture period of 30 minutes. It is assumed that the number of load survey parameters is 5 which can be selected from the respective tables by the utilities. The storage days can be expanded by choosing less number of parameters.

The block load profiles shall not store or return values (typically zero values) for conditions where the meter is powered down for a full day, where a full day is defined as the 24 hour period from midnight 00 Hrs to the next midnight 00 Hrs. Under such conditions the block load profile for the entire 24 Hour period shall not be stored nor padded with zero entries. However if the meter is powered up even for a small amount of time (sufficient for it to boot up and record the Power up event) during the 24 Hour period, it shall store and return the Block load profile for the entire 24 hour duration.



#### **A-4 PARAMETERS FOR ACCOUNTING / BILLING PURPOSE**

These are parameters identified for accounting / billing purposes. These shall be generated by the meter for each billing cycle and stored in the memory. The set of data for last 6 (six) cycles shall be stored in the memory. At the end of each cycle corresponding set of data shall be readable by the HOST from remote or by HHU at site.

#### **A-5 GENERAL PURPOSE QUANTITIES**

##### **A-5.1 Name Plate Details**

These parameters are electrical and non-electrical quantities and are static in nature, grouped as “Name Plate Details”, containing pertinent information about the supplied meter. The parameters identified and grouped as “Name Plate Details” under this classification are applicable for all categories of meters( see Annex F).

##### **A-5.2 Programmable Parameters**

These parameters are non-electrical quantities. The parameters identified and grouped as “Programmable Parameters” shall be programmable by the Utility engineers. For the purpose of setting / altering the values of these parameters, the security and access rights in line with the methodology described in protocol, shall be mutually agreed between utility and manufacturer. The parameters shall be programmable by HOST from remote and HHU at site. These are applicable for all categories of meters( see Annex F).

#### **A-6 EVENT CONDITIONS**

**A-6.1** Any abnormal or a tamper condition is defined as an Event. The meters shall identify and log both occurrence and restoration of such events. The meters shall also capture some of the parameters at the instance of above said log. This specification has identified the events to be logged and the parameters to be captured for each of those events( see Annex G).

**A-6.2** This Companion Specification has further classified those events in sub groups for easy handling. The sub groups are

- a. Voltage related events
- b. Current related events
- c. Power Failure related events
- d. Transactional events
- e. Other events
- f. Non rollover events
- g. Control events

**A-6.3** The number of events stored in each compartment shall be decided by agreement between the Utility and Manufacturers. However the total number of events shall be 200.

**A-6.4** The event conditions identified are listed in Table 37 to Table 43 of Annex.G covering all the subgroups. For each type of event condition the parameters to be captured are listed in Table 44 of Annex G. The required capture parameters for selected event condition shall be chosen by the utility as per its practices and directives.

**A-6.5** The types of events to be recorded may be selected by the Utility out of the list provided in tables Table 37 to Table 43 of Annex.G as per Utility need and practice. The parameters for which Snapshot is to be recorded at time of tamper / event can also be selected out of list of parameters provided in “Capture Parameters” in Table 44 of Annex G.

**A-6.6** The servers shall be capable of providing the entire list of parameters listed in the respective Annexure. However the utility as per its practices and directives may choose required parameters from the full list. Sequence of parameters in buffer shall be derived from capture object. The OBIS code for such selected parameters however shall remain as assigned.



ANNEX B  
(Clause 1.3)

INTRODUCTION TO METERING PARAMETERS WITH DATA IDENTIFIERS

**B-1** Three categories of electricity meters have been selected for compiling comprehensive lists of metering parameters with their data identifiers as required for data networks in India for COSEM procedures and services. The relevant reference documents are listed in 2.

**B-2** The meters complying with this specification shall be considered as servers in a data network. The data collecting devices at the head end or HHU shall function as client and seek required services from these servers. Table 21 lists the server categories with metering nomenclatures and Annex references.

**Table 21 Categories of Meters**  
(Clause B-2)

SI No	Server Category	Metering Nomenclature / Purpose	Annex
(1)	(2)	(3)	(4)
i)	A	Energy Accounting and Audit Metering	C, F,G
ii)	B	Boundary / Bank / Ring / ABT Metering	D, F,G
iii)	C	HV (PT / CT) and LV (CT) consumer Metering	E, F,G

**B-1.1 Category A Meter**

This meter is identified for use at sub-station feeders and Distribution Transformer Centers. The parameters listed for this category is for “Energy Accounting and Audit” purposes (see also Annex C).

**B-1.2 Category B Meter**

This meter is identified for use at Meter Banks and Network boundaries. The parameters listed for this category is for import / export of energy. This meter is also suitable for Availability Based Tariff (ABT) regime (see also Annex D).

**B-1.3 Category C Meter**

This meter is identified for use at HV (PT and CT operated) and LV (CT operated) consumers. The parameters listed for this category is for consumers who draw energy from the grid. For consumers who also supply energy to grid, the category B Meter is recommended (see also Annex E).



ANNEX C

(Clause B-1.1, Table 21)

PARAMETER LIST FOR 'CATEGORY A' METERS

**C-1** The parameters listed here are for Energy Accounting & Audit purposes. These meters are identified for Feeder metering and DTC metering where the power flow is unidirectional. In circumstances where bidirectional power flow is to be measured then Category B Meters shall be deployed.

**C-2** The parameters identified are grouped under Instantaneous (Table 22) and Block load profile (Table 23). The tables include the name of the parameter, the OBIS code and Interface class.

**C-3** Association Access Rights are as follows:

- Public Client - Read Only for Clock and no access for other objects.
- Meter Reader – Read Only for all objects.
- Utility Setting – Read & Write for Clock and Read Only for others.

**C-4 INSTANTANEOUS PARAMETERS**

Each of the parameters is a separate entity. The OBIS code for each parameter is identified as per DLMS /COSEM protocol.

**C-4.1 Snap Shot Of Instantaneous Parameters**

The parameters of Table 22 shall be captured as a profile generic using the country specific OBIS code 1.0.94.91.0.255; the attribute 2 of each of the capture objects shall be copied into the profile at the instant of a request from the Host.

Table 22 Instantaneous Parameters for Class A Meters  
(Clause C-2 & C-4.1)

SI No	Parameter	OBIS Code	Interface Class No
(1)	(2)	A.B.C.D.E.F (3)	(4)
i)	Real Time Clock – Date and Time	0.0.1.0.0.255	8
ii)	Current - IR	1.0.31.7.0.255	3
iii)	Current – IY	1.0.51.7.0.255	3
iv)	Current – IB	1.0.71.7.0.255	3
v)	Voltage – VRN	1.0.32.7.0.255	3
vi)	Voltage – VYN	1.0.52.7.0.255	3
vii)	Voltage – VBN	1.0.72.7.0.255	3
viii)	Voltage – VRV	1.0.32.7.0.255	3
ix)	Voltage – VBY	1.0.52.7.0.255	3
x)	Signed Power Factor –R phase	1.0.33.7.0.255	3
xi)	Signed Power Factor - Y phase	1.0.53.7.0.255	3
xii)	Signed Power Factor - B phase	1.0.73.7.0.255	3
xiii)	Three Phase Power Factor – PF	1.0.13.7.0.255	3
xiv)	Frequency	1.0.14.7.0.255	3
xv)	Apparent Power – KVA	1.0.9.7.0.255	3
xvi)	Signed Active Power – kW (+ Forward; - Reverse)	1.0.1.7.0.255	3
xvii)	Signed Reactive Power – kvar (+ Lag; - Lead)	1.0.3.7.0.255	3
xviii)	Cumulative Energy – kWh	1.0.1.8.0.255	3
xix)	Cumulative Energy – kvarh – Lag	1.0.5.8.0.255	3
xx)	Cumulative Energy – kvarh – Lead	1.0.8.8.0.255	3
xxi)	Cumulative Energy – kVAh	1.0.9.8.0.255	3



xxii)	Number of Power-Failures.	0.0.96.7.0.255	1
xxiii)	Cumulative Power-Failure Duration	0.0.94.91.8.255	3
xxiv)	Cumulative Tamper Count	0.0.94.91.0.255	1
xxv)	Cumulative Billing Count	0.0.0.1.0.255	1
xxvi)	Cumulative Programming Count	0.0.96.2.0.255	1
xxvii)	Billing Date	0.0.0.1.2.255	3
xxviii)	Maximum Demand – kW	1.0.1.6.0.255	4
xxix)	Maximum Demand – kVA	1.0.9.6.0.255	4

NOTES

- 1) The items at SI No v), vi), and vii) are for 3 $\Phi$  / 4W system of measurement with NEUTRAL as reference point.
- 2) The items at SI No viii) and ix) are for 3  $\Phi$  / 3W system of measurement with Y-PHASE as reference point.
- 3) Signed Power factor: (+) indicates lag and (-) indicates lead.
- 4) The parameters at SI No xviii) to xxvi) hold cumulative values at that instant from the date of manufacturing or installation of meter as the case may be.
- 5) The above list is identified for the purpose of communication to HOST or HHU.
- 6) The utilities may choose, based on needs, additional parameters for display purpose ONLY.
- 7) Item number at SI No xxv) refers to the Billing Period Counter.

**C-4.2 Scaler Profile**

This profile is meant for capturing the Scaler-unit of each of the parameter listed in Table 22. This is modeled as profile generic (IC=7) and is assigned the country specific OBIS code 1.0.94.91.3.255. The capture objects for this profile shall include the scaler-unit attributes of the Instantaneous parameters listed above. Instantaneous parameters that do not have a scaler-unit (like IC 1) shall not be included in the capture objects list. The profile buffer shall have only one entry. This profile is not required to be updated periodically

**C-5 BLOCK LOAD PROFILE PARAMETERS**

This is an array of load survey data captured as a profile generic. The OBIS code is 1.0.99.1.0.255, with Interface class as 7. The capture objects of this block load profile are as per Table 23 and the captured attribute shall be attribute 2 of each interface class. The capture object values will be copied into buffer of this array automatically as per capture period which shall be set through OBIS code 1.0.0.8.4.255 of recording interval 1.

Association Access Rights are as follows:

- a) Public Client - No access for all objects.
- b) Meter Reader – Read only for all objects.
- c) Utility Setting – Read only for all objects.

**Table 23 Block Load Survey Parameters for Class A Meters**

(Clause C-2 & C-5)

SI No	Parameter	OBIS Code	Interface Class No / Attribute
(1)	(2)	(3)	(4)
i)	Real Time Clock – Date and Time	0.0.1.0.0.255	8 / 2
ii)	Current - IR	1.0.31.27.0.255	3 / 2
iii)	Current – IY	1.0.51.27.0.255	3 / 2



iv)	Current – IB	1.0.71.27.0.255	3 / 2
v)	Voltage – VRN	1.0.32.27.0.255	3 / 2
vi)	Voltage – VYN	1.0.52.27.0.255	3 / 2
vii)	Voltage – VBN	1.0.72.27.0.255	3 / 2
viii)	Voltage – VRY	1.0.32.27.0.255	3 / 2
ix)	Voltage – VBY	1.0.52.27.0.255	3 / 2
x)	Block Energy – kWh	1.0.1.29.0.255	3 / 2
xi)	Block Energy – kvarh – lag	1.0.5.29.0.255	3 / 2
xii)	Block Energy – kvarh – lead	1.0.8.29.0.255	3 / 2
xiii)	Block Energy – kVAh	1.0.9.29.0.255	3 / 2

NOTES

- 1) The items at SI No v), vi), and vii) are for 3 $\Phi$  / 4W system of measurement with NEUTRAL as reference point.
- 2) The items at SI No viii) and ix) are for 3  $\Phi$  / 3W system of measurement with Y-PHASE as reference point.
- 3) The parameters at SI No ii) to ix) are the average values during the block period time and stored at the end of that time block.
- 4) The parameters at SI No x) to xiii) are the actual energy consumption during that time block.
- 5) Capture objects for 3  $\Phi$  / 4W are items SI No i) to vii) and x) to xiii)
- 6) Capture objects for 3  $\Phi$  / 3W are items SI No i) to iv) and viii) to xiii)
- 7) Support for Selective access shall be as defined in 11.3

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**C-6 PARAMETERS FOR ACCOUNTING / BILLING**

The list of parameters in Table 22 and Table 23 shall be used for computing the daily accounting data at the HOST.

**C-6.1 Scaler Profile**

This profile is meant for capturing the Scaler-unit of each of the parameter listed in Table 23. This is modeled as profile generic (IC=7) and is assigned the country specific OBIS code 1.0.94.91.4.255. The capture objects for this profile shall include the scaler-unit attributes of the parameters listed above. The profile buffer shall have only one entry. This profile is not required to be updated periodically



ANNEX D

(Clause B-1.2, Table 21)

PARAMETER LIST FOR 'CATEGORY B' METERS

**D-1** The parameters listed here are for Boundary / Bank / Ring Fencing / ABT Metering. The meter records parameters under import and or export conditions.

**D-2** The parameters identified for this are grouped under Instantaneous (Table 24), Block load profile (Table 25) and Daily Load profile (Table 26). The tables include the name of the parameter, the OBIS code and Interface class.

**D-3 INSTANTANEOUS PARAMETERS**

Each of the parameters is a separate entity. The OBIS code for each parameter is identified as per DLMS /COSEM protocol.

Association Access Rights are as follows:

- Public Client - Read Only for Clock and no access for other objects.
- Meter Reader – Read only for all objects.
- Utility Setting – Read & Write for Clock and Read Only for others.

**D-3.1 Snap Shot of Instantaneous Parameters**

The parameters of Table 24 shall be captured as a profile generic using the country specific OBIS code 1.0.94.91.0.255. The attribute 2 of each of the capture objects shall be copied into the profile at the instant of a request from the Host.

**Table 24 Instantaneous Parameters for Class B Meters**

(Clause D-2 & D-3.1)

SI No	Parameter	OBIS Code A.B.C.D.E.F	Interface Class No
(1)	(2)	(3)	(4)
i)	Real Time Clock – Date and Time	0.0.1.0.0.255	8
ii)	Current - IR	1.0.31.7.0.255	3
iii)	Current – IY	1.0.51.7.0.255	3
iv)	Current – IB	1.0.71.7.0.255	3
v)	Voltage – VRN	1.0.32.7.0.255	3
vi)	Voltage – VYN	1.0.52.7.0.255	3
vii)	Voltage – VBN	1.0.72.7.0.255	3
viii)	Voltage – VRY	1.0.32.7.0.255	3
ix)	Voltage – VBY	1.0.52.7.0.255	3
x)	Signed Power Factor - R phase	1.0.33.7.0.255	3
xi)	Signed Power Factor - Y phase	1.0.53.7.0.255	3
xii)	Signed Power Factor - B phase	1.0.73.7.0.255	3
xiii)	Three Phase Power Factor – PF	1.0.13.7.0.255	3
xiv)	Frequency	1.0.14.7.0.255	3
xv)	Apparent Power – KVA	1.0.9.7.0.255	3
xvi)	Signed Active Power – kW (+ import: - export)	1.0.1.7.0.255	3
xvii)	Signed Reactive Power – kvar (+ Lag; - Lead)	1.0.3.7.0.255	3
xviii)	Cumulative Energy – kWh (Import)	1.0.1.8.0.255	3
xix)	Cumulative Energy – kWh (Export)	1.0.2.8.0.255	3
xx)	Cumulative Energy – kVAh(Import)	1.0.9.8.0.255	3
xxi)	Cumulative Energy – kVAh(Export)	1.0.10.8.0.255	3
xxii)	Number of Power-Failures.	0.0.96.7.0.255	1
xxiii)	Cumulative Power-Failure Duration	0.0.94.91.8.255	3
xxiv)	Cumulative Tamper Count	0.0.94.91.0.255	1



xxv)	Cumulative Billing Count	0.0.0.1.0.255	1
xxvi)	Cumulative programming Count	0.0.96.2.0.255	1
xxvii)	Billing Date	0.0.0.1.2.255	3

NOTES

- 1) The items at SI No v), vi) and vii) are for 3 $\Phi$  / 4W system of measurement with NEUTRAL as reference point.
- 2) The items at SI No viii), ix) are for 3  $\Phi$  / 3W system of measurement with Y-PHASE as reference point.
- 3) Signed Power factor: (+) indicates lag and (-) indicates lead.
- 4) The parameters at SI No xviii) to xxvi) hold cumulative values at that instant from the date of manufacturing or installation of meter as the case may be.
- 5) The above list is identified for the purpose of communication to HOST or HHU.
- 6) The utilities may choose, based on needs, additional parameters for display purpose ONLY.
- 7) Item number at SI No xxv) refers to the Billing Period Counter

### D-3.2 Scaler Profile

This profile is meant for capturing the Scaler-unit of each of the parameter listed in Table 24. This is modeled as profile generic (IC=7) and is assigned the country specific OBIS code 1.0.94.91.3.255. The capture objects for this profile shall include the scaler-unit attributes of the Instantaneous parameters listed above. Instantaneous parameters that do not have a scaler-unit (like IC 1) shall not be included in the capture objects list. The profile buffer shall have only one entry. This profile is not required to be updated periodically.

### D-4 BLOCK LOAD PROFILE PARAMETERS

This is an array of load survey data captured as a profile generic. The OBIS code is 1.0.99.1.0.255, with Interface class as 7. The capture objects of this block load profile are as per Table 25 and the captured object shall be attribute 2 of each interface class. The capture object values will be copied into a buffer of this array automatically as per capture period which shall be set through OBIS code 1.0.0.8.4.255 of recording interval 1.

Association Access Rights are as follows:

- a) Public Client – No access for all objects
- b) Meter Reader – Read only for all objects.
- c) Utility Setting – Read only for all objects.





Table 25 Block Load Survey Parameters for Class B Meters  
(Clause D-2 & D-4)

SI No	Parameter	OBIS Code	Interface Class No / Attribute
(1)	(2)	A.B.C.D.E.F (3)	(4)
i)	Real Time Clock – Date and Time	0.0.1.0.0.255	8 / 2
ii)	Frequency	1.0.14.27.0.255	3 / 2
iii)	Voltage – VRN	1.0.32.27.0.255	3 / 2
iv)	Voltage – VYN	1.0.52.27.0.255	3 / 2
v)	Voltage – VBN	1.0.72.27.0.255	3 / 2
vi)	Energy – Active Import	1.0.1.29.0.255	3 / 2
vii)	Energy – Net Active Energy	1.0.16.29.0.255	3 / 2
viii)	Energy – Active Export	1.0.2.29.0.255	3 / 2
ix)	Energy – kvarh – Quadrant I	1.0.5.29.0.255	3 / 2
x)	Energy – kvarh – Quadrant II	1.0.6.29.0.255	3 / 2
xi)	Energy – kvarh – Quadrant III	1.0.7.29.0.255	3 / 2
xii)	Energy – kvarh – Quadrant IV	1.0.8.29.0.255	3 / 2

#### NOTES

- 1) The parameters listed in this table are for load survey purpose and are logged as per the block period time.
- 2) The Block period time for Interface meters is fixed at 15 min for which the data storage will be for 22 days.
- 3) The parameters at SI No iii) to vi) are the average values of 15 min block and stored at the end of that time block.
- 4) The parameters at SI No vii) to xii) are the actual energy consumption during the 15 min time block.
- 5) Item at SI No ii) is an ABT parameter for absolute average value.
- 6) Item at SI No vii) is an ABT parameter for Net energy in the current 15 min block.
- 7) Support for Selective access shall be as defined in Section 11.3.

#### D-4.1 Scaler Profile

This profile is meant for capturing the Scaler-unit of each of the parameter listed in Table 25. This is modeled as profile generic (IC=7) and is assigned the country specific OBIS code 1.0.94.91.4.255. The capture objects for this profile shall include the scaler-unit attributes of the parameters listed above. The profile buffer shall have only one entry. This profile is not required to be updated periodically.

#### D-5 DAILY LOAD PROFILE PARAMETERS

This is an array of load survey data captured as a profile generic at the end of 24 hours. The OBIS code is 1.0.99.2.0.255, with Interface class as 7. The capture objects of this daily load profile are as per Table 26 and the captured attribute shall be attributing 2 of each interface class. The capture object values will be copied into a buffer of this array automatically as per capture period which shall be set through OBIS code 1.0.0.8.5.255 of recording interval 2. The capture period attribute shall be statically fixed as 24 hours.

Association Access Rights are as follows:

- a) Public Client – No access for all objects
- b) Meter Reader – Read only for all objects.
- c) Utility Setting – Read only for all objects.



Table 26 Daily Load Profile Parameters for Class B Meters  
(Clause D-2 & D-5)

SI No	Parameter	OBIS Code A.B.C.D.E.F (3)	Interface Class No / Attribute (4)
i)	Real Time Clock – Date and Time	0.0.1.0.0.255	8 / 2
ii)	Cumulative Energy – kWh – Import	1.0.1.8.0.255	3 / 2
iii)	Cumulative Energy – kWh – Export	1.0.2.8.0.255	3 / 2
iv)	Cumulative Energy – kVAh while kW Import	1.0.9.8.0.255	3 / 2
v)	Cumulative Energy – kVAh while kW Export	1.0.10.8.0.255	3 / 2
vi)	Reactive Energy High (V > 103%)	1.0.94.91.1.255	3 / 2
vii)	Reactive Energy Low (V < 97%)	1.0.94.91.2.255	3 / 2
viii)	Cumulative Energy – kvarh – Quadrant 1	1.0.5.8.0.255	3 / 2
ix)	Cumulative Energy – kvarh – Quadrant 2	1.0.6.8.0.255	3 / 2
x)	Cumulative Energy – kvarh – Quadrant 3	1.0.7.8.0.255	3 / 2
xi)	Cumulative Energy – kvarh – Quadrant 4	1.0.8.8.0.255	3 / 2

NOTES

- 1) The parameters listed in this table are meant for billing purpose and shall be logged at midnight (00 Hrs).
- 2) The storage time for these parameters is 22 days.
- 3) The parameters at SI No ii) to xi) are cumulative values at that instant from the date of manufacturing or installation of meter as the case may be.
- 4) Item at SI No vi) is an ABT parameter.
- 5) Item at SI No vii) is an ABT parameter.
- 6) Support for Selective access shall be as defined in Section 11.3

**D-5.1 Scaler Profile**

This profile is meant for capturing the Scaler-unit of each of the parameter listed in Table 26. This is modeled as profile generic (IC=7) and is assigned the country specific OBIS code 1.0.94.91.5.255. The capture objects for this profile shall include the scaler-unit attributes of the parameters listed above. The profile buffer shall have only one entry. This profile is not required to be updated periodically.



ANNEX E

(Clause B-1.3, Table 21)

PARAMETER LIST FOR 'CATEGORY C' METERS

**E-1** The parameters listed here are for HT (PT / CT) and LT (CT) consumer metering. This meter records energy in import mode. These meters shall be capable of recording Import of energy. For customers who import energy and also export energy, use of category B meters is recommended.

**E-2** The parameters identified for this are grouped under Instantaneous (Table 27), Block load profile (Table 28), and Billing (Table 29). The tables include the name of the parameter, the OBIS code and Interface class.

**E-3 INSTANTANEOUS PARAMETERS**

Each of the parameters is a separate entity. The OBIS code for each parameter is identified as per DLMS /COSEM protocol.

Association Access Rights are as follows:

- Public Client - Read only for Clock and no access for other objects.
- Meter Reader – Read only for all objects.
- Utility Setting – Read & Write for Clock and Read Only for others.

**E-3.1 Snap Shot of Instantaneous Parameters**

The parameters of Table 27 shall be captured as a profile generic using the country specific OBIS code 1.0.94.91.0.255. The attribute 2 of each of the capture objects shall be copied into the profile at the instant of a request from the Host.

**Table 27 Instantaneous Parameters for Class C Meters**

(Clause E-2 & E-3.1)

SI No	Parameter	OBIS Code A.B.C.D.E.F	Interface Class No
(1)	(2)	(3)	(4)
i)	Real Time Clock – Date and Time	0.0.1.0.0.255	8
ii)	Current - IR	1.0.31.7.0.255	3
iii)	Current – IY	1.0.51.7.0.255	3
iv)	Current – IB	1.0.71.7.0.255	3
v)	Voltage – VRN	1.0.32.7.0.255	3
vi)	Voltage – VYN	1.0.52.7.0.255	3
vii)	Voltage – VBN	1.0.72.7.0.255	3
viii)	Voltage – VRV	1.0.32.7.0.255	3
ix)	Voltage – VBY	1.0.52.7.0.255	3
x)	Signed Power Factor –R phase	1.0.33.7.0.255	3
xi)	Signed Power Factor - Y phase	1.0.53.7.0.255	3
xii)	Signed Power Factor - B phase	1.0.73.7.0.255	3
xiii)	Three Phase Power Factor – PF	1.0.13.7.0.255	3
xiv)	Frequency	1.0.14.7.0.255	3
xv)	Apparent Power – KVA	1.0.9.7.0.255	3
xvi)	Signed Active Power – kW (+ Forward; - Reverse)	1.0.1.7.0.255	3
xvii)	Signed Reactive Power – kvar (+ Lag; - Lead)	1.0.3.7.0.255	3
xviii)	Number of Power-Failures	0.0.96.7.0.255	1
xix)	Cumulative Power-Failure Duration	0.0.94.91.8.255	3
xx)	Cumulative Tamper Count	0.0.94.91.0.255	1



xxi)	Cumulative Billing Count	0.0.0.1.0.255	1
xxii)	Cumulative Programming Count	0.0.96.2.0.255	1
xxiii)	Billing Date	0.0.0.1.2.255	3
xxiv)	Cumulative Energy kWh	1.0.1.8.0.255	3 / 2
xxv)	Cumulative Energy kvarh Lag	1.0.5.8.0.255	3 / 2
xxvi)	Cumulative Energy kvarh Lead	1.0.8.8.0.255	3 / 2
xxvii)	Cumulative Energy kVAh	1.0.9.8.0.255	3 / 2

NOTES

- 1) The items at SI No v), vi) and vii) are for 3 $\Phi$  / 4W system of measurement with NEUTRAL as reference point.
- 2) The items at SI No viii) and ix) are for 3  $\Phi$  / 3W system of measurement with Y-PHASE as reference point.
- 3) Signed Power factor – (+ indicates lag) and (- indicates lead).
- 4) The parameters at SI No xviii) to xxii) hold cumulative values at that instant from the date of manufacturing or installation of meter as the case may be.
- 5) The above list is identified for the purpose of communication to HOST or HHU.
- 6) The utilities may choose, based on needs, additional parameters for display purpose ONLY.
- 7) Item at SI No xxi) refers to the Billing Period Counter
- 8) Item at SI No xxiii) - Data type to be same as for attribute 2 of IC 8, Clock.

**E-3.2 Scaler Profile**

This profile is meant for capturing the Scaler-unit of each of the parameter listed in Table 27. This is modeled as profile generic (IC=7) and is assigned the country specific OBIS code 1.0.94.91.3.255. The capture objects for this profile shall include the scaler-unit attributes of the Instantaneous parameters listed above. Instantaneous parameters that do not have a scaler-unit (like IC 1) shall not be included in the capture objects list. The profile buffer shall have only one entry. This profile is not required to be updated periodically.

**E-4 BLOCK LOAD PROFILE PARAMETERS**

This is an array of load survey data captured as a profile generic. The OBIS code is 1.0.99.1.0.255, with Interface class as 7. The capture objects of this block load profile are as per Table 28 and the captured attribute shall be 2 of each interface class. The capture object values will be copied into a buffer of this array automatically as per capture period which shall be set through OBIS code 1.0.0.8.4.255 of recording interval 1.

Association Access Rights are as follows:

- a) Public Client – No access for all objects.
- b) Meter Reader – Read only for all objects.
- c) Utility Setting – Read only for all objects.



Table 28 Block Load Survey Parameters for Class C Meters  
(Clause E-2 & E-4)

SI No	Parameter	OBIS Code	Interface Class No / Attribute
(1)	(2)	A.B.C.D.E.F (3)	(4)
i)	Real Time Clock – Date and Time	0.0.1.0.0.255	8 / 2
ii)	Current - IR	1.0.31.27.0.255	3 / 2
iii)	Current – IY	1.0.51.27.0.255	3 / 2
iv)	Current – IB	1.0.71.27.0.255	3 / 2
v)	Voltage – VRN	1.0.32.27.0.255	3 / 2
vi)	Voltage – VYN	1.0.52.27.0.255	3 / 2
vii)	Voltage – VBN	1.0.72.27.0.255	3 / 2
viii)	Voltage – VRY	1.0.32.27.0.255	3 / 2
ix)	Voltage – VBY	1.0.52.27.0.255	3 / 2
x)	Block Energy – kWh	1.0.1.29.0.255	3 / 2
xi)	Block Energy – kvarh – lag	1.0.5.29.0.255	3 / 2
xii)	Block Energy – kvarh – lead	1.0.8.29.0.255	3 / 2
xiii)	Block Energy – kVAh	1.0.9.29.0.255	3 / 2

**NOTES**

- 1) The parameters listed in this table are for load survey purpose and are logged as per the block period time.
- 2) The parameters at SI No ii) to ix) are the average values during the block period time and stored at the end of that time block.
- 3) The parameters at SI No x) to xiii) are the actual energy consumption during that time block.
- 4) Capture objects for 3  $\Phi$  / 4W are items at SI No i) to vii) and x) to xiii)
- 5) Capture objects for 3  $\Phi$  / 3W are items at SI No i) to iv) and viii) to xiii)
- 6) Support for Selective access shall be as defined in Section 11.3

**E-4.1 Scaler Profile**

This profile is meant for capturing the Scaler-unit of each of the parameter listed in Table 28. This is modeled as profile generic (IC=7) and is assigned the country specific OBIS code 1.0.94.91.4.255. The capture objects for this profile shall include the scaler-unit attributes of the parameters listed above. The profile buffer shall have only one entry. This profile is not required to be updated periodically.

**E-5 BILLING PROFILE PARAMETERS**

The contents of this table are for billing purpose.

Association Access Rights are as follows:

- a) Public Client – No access for all objects.
- b) Meter Reader – Read only for all objects.
- c) Utility Setting – Read only for all objects.



Table 29 Billing Profile Parameters for Class C Meters

S.No	Parameter	OBIS Code A.B.C.D.E.F	Interface Class No / Attribute
(1)	(2)	(3)	(4)
i)	Billing Date	0.0.0.1.2.255	3 / 2
ii)	System Power Factor for Billing Period	1.0.13.0.0.255	3 / 2
iii)	Cumulative Energy – kWh	1.0.1.8.0.255	3 / 2
iv)	Cumulative Energy – kWh – TZ1	1.0.1.8.1.255	3 / 2
v)	Cumulative Energy – kWh – TZ2	1.0.1.8.2.255	3 / 2
vi)	Cumulative Energy – kWh – TZ3	1.0.1.8.3.255	3 / 2
vii)	Cumulative Energy – kWh – TZ4	1.0.1.8.4.255	3 / 2
viii)	Cumulative Energy – kWh – TZ5	1.0.1.8.5.255	3 / 2
ix)	Cumulative Energy – kWh – TZ6	1.0.1.8.6.255	3 / 2
x)	Cumulative Energy – kWh – TZ7	1.0.1.8.7.255	3 / 2
xi)	Cumulative Energy – kWh – TZ8	1.0.1.8.8.255	3 / 2
xii)	Cumulative Energy – kvarh – Lag	1.0.5.8.0.255	3 / 2
xiii)	Cumulative Energy – kvarh – Lead	1.0.8.8.0.255	3 / 2
xiv)	Cumulative Energy – kVAh	1.0.9.8.0.255	3 / 2
xv)	Cumulative Energy – kVAh – TZ1	1.0.9.8.1.255	3 / 2
xvi)	Cumulative Energy – kVAh – TZ2	1.0.9.8.2.255	3 / 2
xvii)	Cumulative Energy – kVAh – TZ3	1.0.9.8.3.255	3 / 2
xviii)	Cumulative Energy – kVAh – TZ4	1.0.9.8.4.255	3 / 2
xix)	Cumulative Energy – kVAh – TZ5	1.0.9.8.5.255	3 / 2
xx)	Cumulative Energy – kVAh – TZ6	1.0.9.8.6.255	3 / 2
xxi)	Cumulative Energy – kVAh – TZ7	1.0.9.8.7.255	3 / 2
xxii)	Cumulative Energy – kVAh – TZ8	1.0.9.8.8.255	3 / 2
xxiii)	MD – kW	1.0.1.6.0.255	4 / 2,5
xxiv)	MD – kW – TZ1	1.0.1.6.1.255	4 / 2,5
xxv)	MD – kW – TZ2	1.0.1.6.2.255	4 / 2,5
xxvi)	MD – kW – TZ3	1.0.1.6.3.255	4 / 2,5
xxvii)	MD – kW – TZ4	1.0.1.6.4.255	4 / 2,5
xxviii)	MD – kW – TZ5	1.0.1.6.5.255	4 / 2,5
xxix)	MD – kW – TZ6	1.0.1.6.6.255	4 / 2,5
xxx)	MD – kW – TZ7	1.0.1.6.7.255	4 / 2,5
xxxi)	MD – kW – TZ8	1.0.1.6.8.255	4 / 2,5
xxxii)	MD – kVA	1.0.9.6.0.255	4 / 2,5
xxxiii)	MD – kVA – TZ1	1.0.9.6.1.255	4 / 2,5
xxxiv)	MD – kVA – TZ2	1.0.9.6.2.255	4 / 2,5
xxxv)	MD – kVA – TZ3	1.0.9.6.3.255	4 / 2,5
xxxvi)	MD – kVA – TZ4	1.0.9.6.4.255	4 / 2,5
xxxvii)	MD – kVA – TZ5	1.0.9.6.5.255	4 / 2,5
xxxviii)	MD – kVA – TZ6	1.0.9.6.6.255	4 / 2,5
xxxix)	MD – kVA – TZ7	1.0.9.6.7.255	4 / 2,5
xl)	MD – kVA – TZ8	1.0.9.6.8.255	4 / 2,5



Xli CMD KW  
Xlii CMD Kva

1.0.1.6.9.255  
1.0.9.6.9.255

4/2,5  
4/2,5

#### NOTES

- 1) The data are stored up to 6 billing cycles. The Billing profile is modeled as Profile generic (IC: = 7) object with OBIS Code 1.0.98.1.0.255. The capture objects of this load profile are as per Table-29. The capture object values will be copied into buffer of this object either automatically or asynchronously. The capture period is set to zero, billing action is controlled by billing dates as provided in 10 and table 31.
- 2) Support for Selective access shall be as defined in Section 11.3
- 3) The current cycle billing parameters shall be readable as the values of the latest billing period, on demand. This shall be in addition to the last 6 billing period data which shall be available in the Profile buffer as the last 6 entries in the buffer.
- 4) The captured attributes in case of Interface Class 4 (Extended register) used for MD values will be attributes 2 and 5 (Value and Timestamp)

#### E-5.1 Scaler Profile

This profile is meant for capturing the Scaler-unit of each of the parameter listed in Table 29. This is modeled as profile generic (IC=7) and is assigned the country specific OBIS code 1.0.94.91.6.255. The capture objects for this profile shall include the scaler-unit attributes of the parameters listed above. The profile buffer shall have only one entry. This profile is not required to be updated periodically.



ANNEX F  
(Clause A-5)

GENERAL PURPOSE PARAMETERS

F-1 NAME PLATE DETAILS

The contents of Table 30 are common to all meters. The data are meter specific information.

Association Access Rights for Name Plate Details are as follows:

- Public Client – No access for all objects except Meter Serial number.
- Meter Reader – Read only for all objects.
- Utility Setting – Read only for all objects.

:

Table 30 Name Plate Details Parameters  
(Clause F-1)

SI No	Parameter	OBIS Code	Interface Class
(1)	(2)	A.B.C.D.E.F (3)	(4)
i)	Meter Serial Number	0.0.96.1.0.255	1 (Data)
ii)	Manufacturer name	0.0.96.1.1.255	1
iii)	Firmware Version for meter	1.0.0.2.0.255	1
iv)	Meter type (3P-3W / 3P-4W)	0.0.94.91.9.255	1
v)	Internal CT ratio	1.0.0.4.2.255	1
vi)	Internal PT ratio	1.0.0.4.3.255	1
vii)	Meter year of manufacture	0.0.96.1.4.255	1

**NOTE**For item SI No iv), a value of “0” indicates 3P-3W; a value of “1” indicates 3P-4W





**F-2 Programmable Parameters.**

Association Access Rights for programmable parameters as given in Table 31 are as follows:

- a) Public Client – No Access for all objects except Real Time Clock.
- b) Meter Reader – Read only for all objects.
- c) Utility Setting – Read, Write for all objects.

**Table 31 Programmable Parameters**  
(Clause F-2)

Sl No	Parameter	OBIS Code	Interface Class
(1)	(2)	A.B.C.D.E.F	(4)
i)	Real Time Clock – Date and Time	0.0.1.0.0.255	8 (Clock)
ii)	Demand Integration Period	1.0.0.8.0.255	1 (Data)
iii)	Profile Capture Period	1.0.0.8.4.255	1
iv)	Single-action Schedule for Billing Dates	0.0.15.0.0.255	22
v)	Activity Calendar for Time Zones etc.	0.0.13.0.0.255	20

**NOTES**

- 1) The parameters are programmable by the utility engineers with required access rights.
- 2) Unit for Demand Integration Period and profile capture period is in “seconds”.
- 3) Programming of any of the parameters shall increment the “Cumulative programming count” value.



ANNEX G  
(Clause A-6)

EVENT REFERENCE TABLE

G-1 EVENTS

Any exceptional / fraud / tamper condition is considered as an Event and stored in an Event code object (OBIS: = 0.0.96.11.e.255 IC: = 1, values of E range from 0 to 6). The value attribute (attr-2) of this object stores identifier corresponding to most recent event occurred in the meter. Unique identifier is assigned to occurrence and restoration of all possible events (identified so far) in the event reference tables (Table 32 to 38). Thus event code object will tell only about the most recent event and to get a picture of all events and associated information (at the time of event) an Event log object is used. An event log object is modeled as Profile generic (OBIS: = 0.0.99.98.e.255 IC: = 7, values of E range from 0 to 6). The buffer attribute (attr-2) of this profile object will store (asynchronously) a new entry for every event (occurrence and restoration are considered as separate events). The capture objects for the event log object is define below in Table-39.

G-1.1 Indian Event Reference Tables

The contents of Table 32 to 38 are common to all categories of meter for which the parameters are selected as per the category of meter.

Table 32 Indian Event Reference Table – Voltage Related

(Clause G-1 & G-1.1)

SI No	Event ID	Descriptions
(1)	(2)	(3)
i)	1	R-Phase – PT link Missing (Missing Potential) – Occurrence
ii)	2	R-Phase – PT link Missing (Missing Potential) – Restoration
iii)	3	Y-Phase – PT link Missing (Missing Potential) – Occurrence
iv)	4	Y-Phase – PT link Missing (Missing Potential) – Restoration
v)	5	B-Phase – PT link Missing (Missing Potential) – Occurrence
vi)	6	B-Phase – PT link Missing (Missing Potential) – Restoration
vii)	7	Over Voltage in any Phase - Occurrence
viii)	8	Over Voltage in any Phase - Restoration
ix)	9	Low Voltage in any Phase - Occurrence
x)	10	Low Voltage in any Phase - Restoration
xi)	11	Voltage Unbalance - Occurrence
xii)	12	Voltage Unbalance - Restoration

Table 33 Indian Event Reference Table – Current Related

(Clause G-1 & G-1.1)

SI No	Event ID	Descriptions
(1)	(2)	(3)
i)	51	Phase – R CT reverse – Occurrence
ii)	52	Phase – R CT reverse – Restoration
iii)	53	Phase – Y CT reverse – Occurrence
iv)	54	Phase – Y CT reverse – Restoration
v)	55	Phase – B CT reverse – Occurrence
vi)	56	Phase – B CT reverse – Restoration
vii)	57	Phase – R CT Open - Occurrence
viii)	58	Phase – R CT Open - Restoration
ix)	59	Phase – Y CT Open - Occurrence
x)	60	Phase – Y CT Open - Restoration
xi)	61	Phase – B CT Open - Occurrence



xii)	62	Phase – B CT Open - Restoration
xiii)	63	Current Unbalance - Occurrence
xiv)	64	Current Unbalance - Restoration
xv)	65	CT Bypass – Occurrence
xvi)	66	CT Bypass – Restoration
xvii)	67	Over Current in any Phase – Occurrence
xviii)	68	Over Current in any Phase – Restoration

**Table 34 Indian Event Reference Table – Power Related**

(Clause G-1 & G-1.1)

SI No	Event ID	Descriptions
(1)	(2)	(3)
i)	101	Power failure (3 phase) – Occurrence
ii)	102	Power failure (3 phase) – Restoration

**Table 35 Indian Event Reference Table – Transaction Related**

(Clause G-1 & G-1.1)

SI No	Event ID	Descriptions
(1)	(2)	(3)
i)	151	Real Time Clock – Date and Time
ii)	152	Demand Integration Period
iii)	153	Profile Capture Period
iv)	154	Single-action Schedule for Billing Dates
v)	155	Activity Calendar for Time Zones etc.

**Table 36 Indian Event Reference Table – Others**

(Clause G-1 & G-1.1)

SI No	Event ID	Descriptions
(1)	(2)	(3)
i)	201	Influence of Permanent Magnet or AC/ DC Electromagnet – Occurrence
ii)	202	Influence of Permanent Magnet or AC/ DC Electromagnet - Restoration
iii)	203	Neutral Disturbance - HF & DC - Occurrence
iv)	204	Neutral Disturbance - HF & DC - Restoration
v)	205	Very Low PF - Occurrence
vi)	206	Very Low PF - Restoration



**Table 37 Indian Event Reference Table – Non Roll Over Events**  
(Clause G-1 & G-1.1)

Sl.No.	Event ID	Descriptions
(1)	(2)	(3)
i)	251	Meter Cover Opening – Occurrence

**Table 38 Indian Event Reference Table – Control Events**  
(Clause G-1.1)

Sl No	Event ID	Descriptions
(1)	(2)	(3)
i)	301	Meter disconnected
ii)	302	Meter connected

**G-1.2 Capture Parameters For Event As Applicable (Event Log Profile)**

Association Access Rights are as follows:

- Public Client - No access
- Meter Reading - Read only
- Utility Settings - Read only

**Table 39 Capture Parameters for Events**  
(Clause G-1)

Sl No	Parameter	A	B	C	D	E	F	IC
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
i)	Date and Time of event	0	0	1	0	0	255	8 (Clock)
ii)	Event Code	0	0	96	11	0	255	1 (Data)
iii)	Current - IR	1	0	31	7	0	255	3 (Register)
iv)	Current - IY	1	0	51	7	0	255	3 (Register)
v)	Current – IB	1	0	71	7	0	255	3 (Register)
vi)	Voltage - VRN (3 Φ / 4W)	1	0	32	7	0	255	3 (Register)
vii)	Voltage – VYN (3 Φ / 4W)	1	0	52	7	0	255	3 (Register)
viii)	Voltage – VBN (3 Φ / 4W)	1	0	72	7	0	255	3 (Register)
ix)	Voltage - VRY (3 Φ / 3W)	1	0	32	7	0	255	3 (Register)
x)	Voltage – VYB (3 Φ / 3W)	1	0	52	7	0	255	3 (Register)
xi)	Power Factor – R phase	1	0	33	7	0	255	3 (Register)
xii)	Power Factor – Y phase	1	0	53	7	0	255	3 (Register)
xiii)	Power Factor – B phase	1	0	73	7	0	255	3 (Register)
xiv)	Cumulative Energy – kWh	1	0	1	8	0	255	3 (Register)

**G-1.3 Note For Tables (32,33,34,35,36,37,38 and 39)**

- These are the event conditions generally recorded in consumer meters, utilities may select any the above event conditions based on their practice. The need and applicability of these events for other type of meters shall be considered by Utility.
- Either Occurrence or Restoration is considered an event.
- For each of the events a certain list of parameters will be captured.
- The list capture parameters are given in Table 39. The utility shall select the required parameters from the Table 39 as per their practice.



- 5) For each of the event captured “Cumulative tamper count” value will be incremented except for events from Tables 34, 35, 37 and 38.
- 6) Capture parameters mentioned in Table 39 are captured when event occurrence and restoration is logged.
- 7) For events in Table 34, 38 no parameters shall be captured along with the event.
- 8) The attributes of each of the IC (Interface Class) is to be identified while finalizing the Companion Standard.
- 9) For 3  $\Phi$  / 4W the reference point is NEUTRAL
- 10) For 3  $\Phi$  / 3W the reference point is Y-Phase
- 11) Support for Selective access shall be as defined in Section 11.3

## G-2 Scaler Profile

This profile is meant for capturing the Scaler-unit of each of the parameter listed in Table 39. This is modeled as profile generic (IC=7) and is assigned the country specific OBIS code 1.0.94.91.7.255. The capture objects for this profile shall include the scaler-unit attributes of the parameters listed above. Parameters listed above that do not have a scaler-unit attribute shall not be included in the capture objects of this profile. The profile buffer shall have only one entry. This profile is not required to be updated periodically.

(Clause 3.1.23)

## CONFORMANCE TESTING

**H-1** Meters claiming conformance to this Companion Specification will be required to

- a) Conform to the DLMS/COSEM base standards (IEC 62056.) as certified by the conformance test tool (CTT)
- b) Conform to the specific requirements and constraints of this companion specification as certified by CPRI or any other laboratory having facilities for the purpose.

**H-2** This certification shall ensure

- a) All mandatory parameters applicable to the category of the meter under test are implemented
- b) All data types where specified are conforming to this document
- c) All Application Associations are implemented as specified in this document with all specified services supported
- d) Association object lists conform to this document with access rights and OBIS codes as specified here
- e) Event related DLMS objects are implemented with Event identifiers as specified in the Event reference tables in this document

**H-2.1** The test report from an accredited laboratory and having membership with DLMS UA shall be considered as a proof of conformance of protocol implementation.

**H-2.2** Systems once created in accordance with this companion specification and contemporary standards, shall be deemed acceptable, provided such systems are tested and certified through standard evaluation process.



ANNEXURE 'B' TO SCHEDULE 'D'(Part-I)

**SCHEDULE OF DELIVERIES**

Sr. No.	Name of item Specification	Name of consignee	Delivery Schedule
1.	11 KV CT/PT Operated Static feeder Meter (DLMS compliant) of class 0.5S accuracy & rating -/5 A as per IS-14697 & IS-15959 and Nigam technical specification no. CSC-45/Rev-III/DH/UH/P&D/2015-16 alongwith corrigendum.	Any Where in Haryana	<p>50% of the ordered quantity shall be supplied within 45 days from the date of receipt of purchase order to be placed by CE/MM DHBVN/ UHBVN and balance 50% quantity shall be supplied within one month thereafter. Thus total ordered quantity shall be supplied within two &amp; half months from the date of receipt of purchase order. Time is essence of the contract.</p> <p>The material should be supplied to the consignees within 15 days of issue of dispatch authorization or within contractual delivery period whichever expires earlier. After this period, the firm will supply the material at its own risk and responsibility. The acceptances of such material with or without re-inspection upto the scheduled delivery period shall be at the sole discretion of Chief Engineer/MM, UHBVN/ DHBVN. Thereafter, Nigam will have a right to refuse or accept such delayed material on the applicable rates,</p>

Note:-

1. The delivery schedule as mentioned above shall be read in conjunction with the clauses of type test and drawing mentioned in schedule – D ( Part- II) , wherever applicable.
2. The material should be supplied to the consignees within 15 days of issue of dispatch authorization or within contractual delivery period whichever expires earlier. After this period, the firm will supply the material at its own risk and responsibility. The acceptances of such material with or without re-inspection upto the scheduled delivery period shall be at the sole discretion of Chief Engineer/MM, UHBVN/ DHBVN. Thereafter, Nigam will have a right to refuse or accept such delayed material on the applicable rates, terms & conditions.

Name & Full Address of Tenderer

Place:

Date:



**ANNEXURE – IV**

**Format for raising Inspection Call by the Vendor / Supplier**

From,  
Name of the Firm with Complete Address

To,  
Concerned Department (CE/MM)  
Address

**Subject:-** Inspection Call for \_\_\_\_\_ No [Items] as per Work Order / Purchase Order No -  
\_\_\_\_\_ dt. \_\_\_\_\_

Sir,  
This is with reference to subject cited Work Order / Purchase Order. We would like to inform that below mentioned material is ready for inspection:

Sr No	Item Description	Quantity as per WO/PO	Quantity already Inspected & supplied	Quantity offered for Inspection	Balance Quantity	Contract Delivery Period

It is requested to kindly depute an officer for inspection of the materials. The name and contact details of the person responsible for getting the inspection conducted is:-

\_\_\_\_\_ [Contact Details of Person]  
\_\_\_\_\_ [Date and Place for Inspection]

Signature  
Name  
Designation  
Company Seal

**Note:-**



(TO BE FILLED IN AND SIGNED BY THE TENDERER)  
**SCHEDULE OF DEVIATIONS**

We/I have carefully gone through the Technical Specification and the general conditions of contract and we/I have satisfied ourselves/myself and hereby confirm that our/my offer strictly conforms to the requirements of the Technical Specifications and general conditions of contract except for the deviations which are given below:-

Sr. No.	Description	Stipulation in specification	Deviations offered	Remarks.
A.	<b><u>Commercial Terms:</u></b>			
	Clause No.			
B.	<b><u>Technical Specifications:</u></b>			
	Clause No.			

(Please use more Sheets, if required).

Dated:

Place:

Designation

Name

Status

Whether Authorized Signatory of the  
Tendering Company

Name of the Tendering Company





**BANK GUARANTEE PROFORMA**

This agreement is made this \_\_\_\_\_ day of \_\_\_\_\_ (a) \_\_\_\_\_ between \_\_\_\_\_ (b) a company registered under banking Companies Act/or any other Act to be specified, having its registered office at \_\_\_\_\_ (c) called the guarantor which expression shall unless repugnant to the context or meaning thereof, include its successors and assigns of the first part M/s \_\_\_\_\_ (d) a Company/firm registered under the companies Act 1956/ partnership firm/proprietorship firm having its registered office at \_\_\_\_\_ (e) (hereinafter called the suppliers which expressions shall unless repugnant to the context or meaning thereof, include its successors and assigns) of the second part at the DHBVNL, a body corporate under company Act 1956 (hereinafter called the purchaser, which expressions shall unless repugnant to the context or meaning thereof, include its successors and assigns) of the third part.

Whereas the supplier has interalia agreed with the purchaser to supply the purchaser \_\_\_\_\_ (f) on the terms and conditions contained in the contract No. \_\_\_\_\_ dated \_\_\_-- (g) placed by the purchaser on the suppliers and accepted by the suppliers.

And whereas under clause \_\_\_\_\_ (h) of the said contract, the supplier is required to furnish a bank guarantee for a sum of Rs. \_\_\_\_\_ (i) being the \_\_\_\_\_ (j) value of all the consignments of the above material on account of retention money, which but for this guarantee value be withheld by the purchaser till such time that the material is received in good condition and in accordance with the specification of the same to guarantee the payment of the retention money on bills submitted against supply of material/repair of equipment on order from time to time upto a maximum amount of the sum Rs. \_\_\_\_\_ (k).

And whereas at the request of the supplier the purchaser has agreed not to retain \_\_\_\_\_ (l) of the contract price of all the consignments and in lieu thereof to accept Bank Guarantee from the Guarantor for the due performance of the said contract by the said supplier on the terms and conditions herein contained. Now this deed, therefore, witnessst and it is hereby agreed by and between the parties hereto as follows:-

The Guarantor hereby guarantees to the purchaser the quality, workmanship and design of all the consignments of \_\_\_\_\_ (m) in accordance with the prescribed specifications and the terms of the said contract and agrees to indemnify and keep indemnified the said purchaser to the extent of Rs. \_\_\_\_\_ (n) in the aggregate against all losses, damages, costs, charges and expenses which maybe suffered or incurred by the purchaser on account of any defect in the material supplied or on account of any breach on the part of said supplier or any of the terms and conditions of the said contract in the supply/repair of the consignments. The guarantor further agrees the said purchaser shall be the sole judge whether the supply/repairs have been made according to the prescribed specifications, design and workmanship as laid down in the said contract and the supplier had committed breach or breaches of any of the terms and conditions of the said contract and the extent of loss/damage, cost, charges, l or expenses suffered or incurred by the purchaser on account thereof and the guarantor shall immediately on receipt of any claim or claims from the said purchaser pay to the extent of the amount specified above "without demur or objection".

The guarantor further agrees that this guarantee shall remain in full force and effect for \_\_\_\_\_ (o) months from the date of dispatch of material by the said supplier under the said contract i.e. upto \_\_\_\_\_ (p)

The guarantor also agrees and undertakes not to revoke this guarantee before the same is discharged as aforesaid except with the previous consent of the said purchaser in writing.

The guarantor here by further agrees that the said purchaser shall have the full liberty



without effecting in any manner the obligation of the guarantor hereunder with or without the consent of the guarantor to vary any of the terms of the said contract or to extend time for performance of the said contract by the supplier from time to time or to postpone for any time or from time to time any of the power exercisable by the purchaser against the said supplier and either to forbear or enforce any of the terms or conditions relating to the said contract and the guarantor shall not be relieved from his liability by reasons of any variation or any extension being granted to the said supplier or for any forbearance, act or omission on the part of the said supplier or any indulgence by the said purchaser to the said supplier or any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving the guarantor. Nor shall it be necessary for the said purchaser to sue the said supplier before suing the said guarantor for the amount/damages due under the deed of guarantee.

In witness whereof the parties hereto put their respective hands on the day and the year first above mentioned.

1. Witness
  2. Witness
  1. Witness
  2. Witness
  1. Witness
  2. Witness
- Signature of the Guarantor
- Signature of the Supplier
- Signature of the CE/MM

For & on behalf of the DHBVN

**Note:--**

1. Date of execution of Bank Guarantee.
2. Name of Bank
3. Complete address of the Bank.
4. Name of the supplier
5. Permanent address of the firm
6. Quantity and description of material
7. PO No. and date
8. Payment clause
9. Amount of Bank Guarantee
10. %age of the contract price
11. Amount of Bank Guarantee should be both in figure and words
12. Name of the material
13. Bank guarantee amount
14. Number of months
15. Date of validity



**Format of Affidavit for past supplies**

I, \_\_\_\_\_ Director of M/s \_\_\_\_\_ with Headquarter at hereby solemnly affirm and declare that our firm has executed following purchase orders of any type & rating of fully static energy meters with LCD display & communication port placed by **any power distribution utilities of India. (Govt./Pvt.)** during the last three financial years.

Sr. no.	Name of power utility/	Name of item	PO no. & date	Qty ordered	Qty. supplied till date	Remarks

I understand that if upon acceptance of our offer dated \_\_\_\_\_ against UHBVN/DHBVN tender enquiry no. QD-\_\_\_ for supply of \_\_\_\_\_ any PO is placed upon us, the same is liable to be cancelled if this declaration is found wrong at any subsequent time and further I understand to compensate the UHBVN/DHBVN, for the consequences arising out of wrong declaration.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attested by Notary Public

(The above information should be supported by documentary evidence)



**Annexure – VIII**

**TO BE SUBMITTED ON FIRMS LETTER HEAD  
DULY ATTESTED BY CHARTERED ACCOUNTANT**

The firm M/s \_\_\_\_\_ has supplied following quantity of any type & rating of fully static energy meters with LCD display & communication port during the last three financial years **to any power distribution utilities of India. (Govt./Pvt.)**.

Sr. no.	Financial year	Name of the item	Quantity billed	Total bill value of items	Remarks
1.					
2.					
3.					



From

To

The Chief Engineer/MM,  
DHBVN, Hisar

**Subject;- Undertaking in respect of Tender Enquiry no. QD- \_\_\_\_\_ for the procurement of**

We hereby confirm our unconditional acceptance of all the terms and conditions mentioned in the tender documents against your tender enquiry no. QD- \_\_\_\_\_ for the procurement of \_\_\_\_\_. The material shall be supplied strictly as per technical specification of the Nigam/relevant ISS without any deviation.

\_\_\_\_\_  
(Authorized Signatory of the firm)



**AFFIDAVIT FOR NON BLACKLISTING**

(On NJSP)

I, \_\_\_\_\_ Director of M/S  
\_\_\_\_\_ with  
Headquarter at \_\_\_\_\_ being their  
authorized signatory, do hereby solemnly affirm and declare that M/S \_\_\_\_  
\_\_\_\_\_ is not blacklisted by any State/Central Govt. or  
any of its agencies. I understand that if upon acceptance of our offer dated \_\_\_\_\_  
against DHBVN/UHBVN tender enquiry No. \_\_\_\_\_ for supply of  
\_\_\_\_\_ any P.O. is placed upon us, the same is liable to be  
cancelled if this declaration is found wrong at any subsequent time and further I understand to  
compensate the DHBVN/UHBVN, for the consequences arising out of wrong declaration.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attested by Notary Public



**Price Schedule as provided in the Electronic tender at website**

Sr. No.	Description of Item	NIT quantity	Place of Billing (Haryana/Out of Haryana)	Quantity Offered	Ex-work Price (Rs./Unit)	Excise Duty (%)	VAT/CST (%)	Freight and Insurance Charges (Rs/Unit)	Any Other duties or taxes (Rs./Unit)	Discount (Rs./Unit)	Landed Cost Formula