Annexure-I

OIL INDIA LIMITED
(A Government of India Enterprise)
P.O. Duliajan - 786602, Assam, India
FAX: 91-0374-2800533; E-mail : material@oilindia.in

A) OIL INDIA LIMITED invites Indigenous Competitive Bid (e-tenders) through its e-Procurement portal - *https://etender.srm.oilindia.in/irj/portal* for following e-tender :

E-Tender No.	B.C Date	Material Description & Quantity
SDI6388P15 DT:24.02.2015 (SINGLE STAGE TWO BID SYSTEM)	**30.04.2015**	**STATIC ENERGY METER- 4945 NOS**
SDI6495P15 DT:05.03.2015 (SINGLE STAGE COMPOSITE BID SYSTEM)	**30.04.2015**	**EXPLOSIVE VAN – 04 NOS**

Application showing full address/email address with Tender Fee (Non-refundable) of Rs. 1,000.00 in favour of M/s Oil India Limited and payable at Duliajan is to be sent to Head-Materials, Oil India Limited, P.O. Duliajan, Assam-786602. Application shall be accepted one week prior to Bid Closing date. The envelope containing the application for participation should clearly indicate "REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO …" for easy identification and timely issue of user ID and password. On receipt of requisite tender fee, USER_ID and initial PASSWORD will be communicated to the bidder (through e-mail) and will be allowed to participate in the tender through OIL's e-`` Procurement portal. No physical tender documents will be provided. Details of NIT can be viewed using "Guest Login" provided in the e-Procurement portal. The link to e-Procurement portal has been also provided through OIL's web site www.oil-india.com.

NOTE:

(Tender Fee may also be paid online upto one week prior to the bid closing date (or as amended in e-portal).

OIL INDIA LIMITED
(A Government of India Enterprises)
PO : Duliajan – 786602
Assam (India)

TELEPHONE NO. (91-374) 2808719
FAX NO: (91-374) 2800533
Email: ranjanbarman@oilindia.in ; erp_mm@oilindia.in

FORWARDING LETTER

Tender No. : **SDI6388P15 DT: 24.02.2015**

Tender Fee : **Rs 1,000.00**

Bid Security Amount : **Rs 4,83,000.00**

Bidding Type : **SINGLE STAGE TWO BID SYSTEM**

Bid Closing on : **As mentioned in the e-portal**

Bid Opening on : **-do-**

Performance Security : **Applicable**

Integrity Pact : **Applicable**

Date of pre-bid conference : **20.04.2015**

Venue of pre-bid conference: Will be held in Duliajan

OIL invites Bids for **SUPPLY, INSTALLATION & COMMISSIONING AND OPERATION OF MAINTAINANCE OF 4945 NOS STATIC ENERGY METER WITH PRE-PAYMENT FACILITY** through its e-Procurement site under **SINGLE STAGE TWO BID SYSTEM**. The bidding documents and other terms and conditions are available at Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents

The general details of tender can be viewed by opening the RFx [Tender] under RFx and Auctions.. The details of items tendered can be found in the Item Data and details uploaded under Technical RFX.

NOTES:

(1) A Pre-Bid Conference with the Parties will be held in Duliajan on 20.04.2015 at Electrical Department , OIL Duliajan to discuss on the technical specifications and other terms and conditions of the tender. All the Parties who purchase the Tender Document within the Last date of Tender Fee Payment i.e. 23.04.2015 (or amended otherwise) will be eligible to attend the Pre-Bid Conference. The exact venue and time of the Pre-Bid conference will be intimated to the Parties at a later date.

(2) Clarification on the technical specifications and other terms & conditions of the tender shall be provided to the parties during the Pre-bid Conference. Parties should come fully prepared to the Pre-bid Conference and submit their queries to OIL in the Pre-bid Conference for clarification. The set of queries may also be sent to OIL at least 7 (seven) days before the Pre-bid Conference for study by OIL. At the most 2 (Two) representatives

from each party shall be allowed to participate in the pre-bid conference. All costs for attending the pre-bid conference shall be to the bidder's account.

(3) Any changes in the technical specifications and other terms & conditions of the tender arising out of discussion in the Pre-bid Conference shall also form part of the tender document.

(4) Parties, immediately after the purchase of the Tender documents, shall inform OIL at the following address about their participation in the Pre-Bid Conference with details of the persons to enable OIL to make arrangement for the Pre-Bid Conference.

HEAD – MATERIALS
OIL INDIA LIMITED
P.O DULIAJAN, PIN – 786 602
DIST. DIBRUGARH (ASSAM) INDIA
FAX NO. : +91 - 374 – 2800533
E-Mail : ranjanbarman@oilindia.in

The tender will be governed by:

a) "General Terms & Conditions" for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.

b) Technical specifications and Quantity as per **Annexure – 1A**.

c) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.

d) In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.

e) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited).

f) Bidder are advised to fill up the Technical bid check list (**Annexure EEE**) and Response sheet (**Annexure FFF**) given in MS excel format in Technical RFx -> External Area - > Tender Documents. The above filled up document to be uploaded in the Technical RFX Response.

Special Note:

1.0 General Qualification Criteria:
In addition to the general BRC/BEC, following criteria on Bidders' Experience and their financial capabilities shall be considered **(documentary evidence to be provided along with the bid in Technical RFx -> External Area - > Tender Documents)** as on the Bid Closing Date:

Criteria	Complied / Not Complied. Documentary evidence submitted / not submitted
a) Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than **Rs 482.77 Lakhs.**	

2.0 Application showing full address/email address with Tender Fee (Non-refundable) of Rs. 1,000.00 in favour of M/s Oil India Limited and payable at Duliajan is to be sent to Head-Materials, Oil India Limited, P.O. Duliajan, Assam-786602. Application shall be accepted only upto one week prior to the bid closing date (or as amended in e-portal). The envelope containing the application for participation should clearly indicate "REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO …" for easy identification and timely issue of user ID and password. On receipt of requisite tender fee, USER_ID and initial PASSWORD will be communicated to the bidder (through e-mail) and will be allowed to participate in the tender through OIL's e- Procurement portal. No physical tender documents will be provided. Details of NIT can be viewed using "Guest Login" provided in the e-Procurement portal. The link to e-Procurement portal has been also provided through OIL's web site www.oil-india.com.

NOTE:

a) Tender Fee may also be paid online upto one week prior to the bid closing date (or as amended in e-portal).

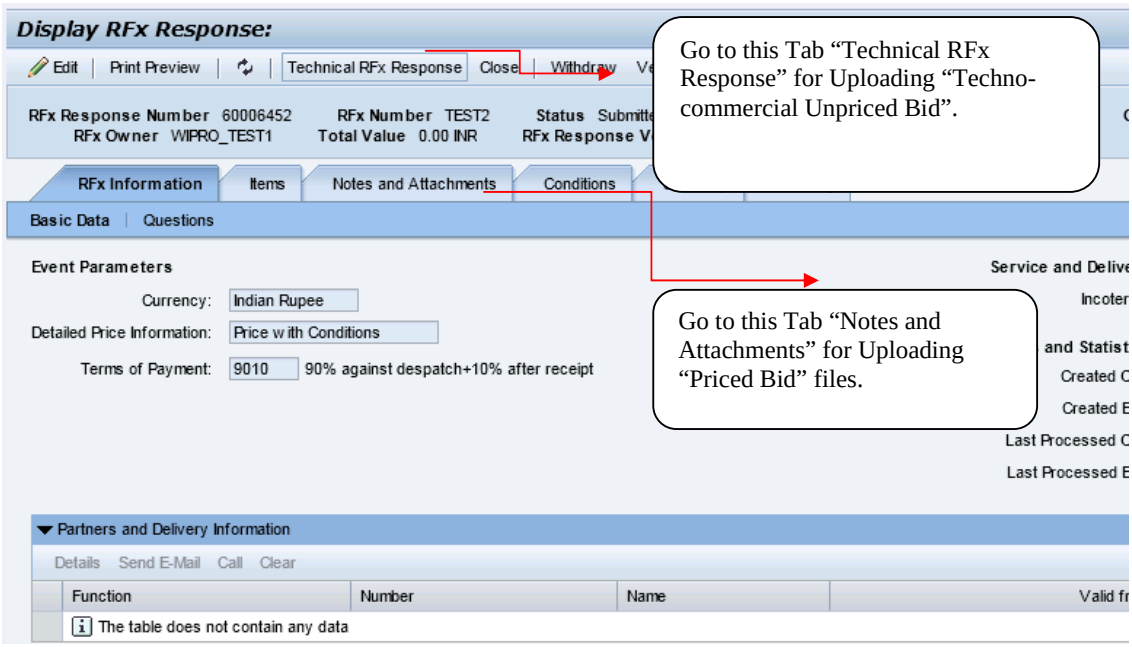
b) PSUs and SSI units are provided tender documents Free of Cost (as per govt guidelines), however they have to apply to OIL's designated office to issue the tender documents before the last date of sale of tender document mentioned in the tender.

3.0 The tender is invited under SINGLE STAGE-TWO BID SYSTEM. The bidders are required to submit both the "TECHNO-COMMERCIAL UNPRICED BID" and "PRICED BID" through electronic format in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender.

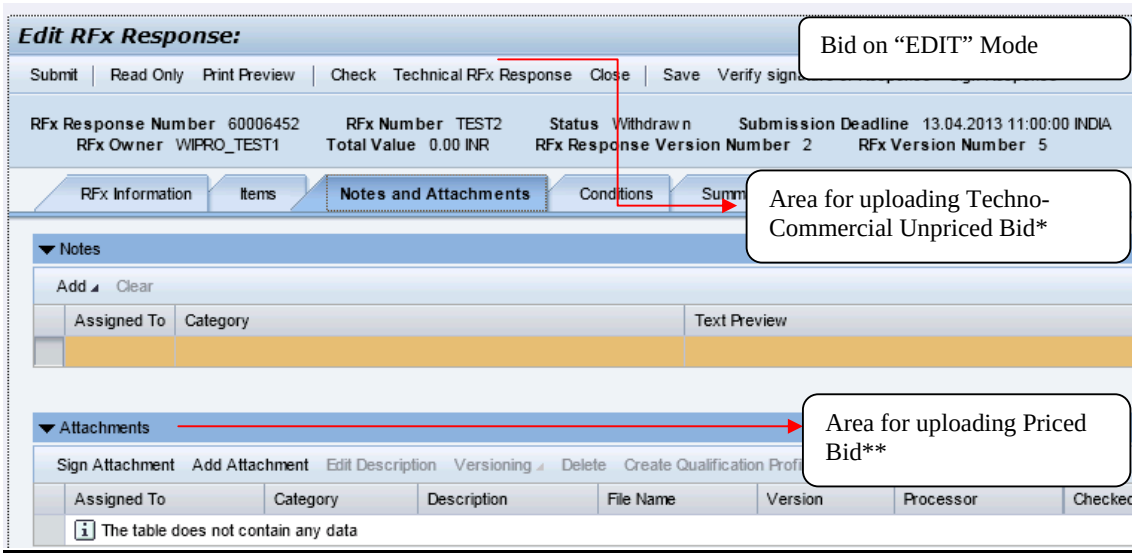
3.1 Please ensure that Technical Bid / all technical related documents related to the tender are uploaded in the Technical RFx Response-> User - > Technical Bid only**.** The "**TECHNO-COMMERCIAL UNPRICED BID**" shall contain all techno-commercial details **except the prices**. **Please note that no price details should be uploaded in** Technical RFx Response**.**

3.2 The "**PRICE BID**" must contain the price schedule and the bidder's commercial terms and conditions.**The prices of the items should be quoted in "Conditions Tab". Details of prices as per Bid format / Commercial bid can be uploaded as Attachment under the attachment option under "Notes & Attachments".**

3.3 A screen shot in this regard is given below. Offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in Annexure-CCC.



On "EDIT" Mode- The following screen will appear. Bidders are advised to Upload "Techno-Commercial Unpriced Bid" and "Priced Bid" in the places as indicated above:



Note :

* The "Techno-Commercial Unpriced Bid" shall contain all techno-commercial details **except the prices**.

** The "Price bid" must contain the price schedule and the bidder's commercial terms and conditions. For uploading Price Bid, first click on Sign Attachment, a browser window will open, select the file from the PC and click on Sign to sign the Sign. On Signing a new file with extension .SSIG will be created. Close that window. Next click on Add Atachment, a browser window will open, select the .SSIG signed file from the PC and name the file under Description, Assigned to General Data and clock on OK to save the File.

4.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with **Tender no.** and **Due date** to **Head**

Materials, Materials Department, Oil India Limited, Duliajan - 786602, Assam on or before the Bid Closing Date and Time mentioned in the Tender.

a) **Original Bid Security**
b) **Detailed Catalogue (if any)**
c) **Any other document required to be submitted in original as per tender requirement**

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate.

5.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.

6.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time failing which the offer shall be rejected.

7.0 Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.

8.0 **SINGLE STAGE TWO BID SYSTEM** shall be followed for this tender and only the PRICED-BIDS of the bidders whose offers are commercially and technically acceptable shall be opened for further evaluation.

9.0 **a) The Integrity Pact is applicable against this tender. Therefore, please submit the Integrity Pact document duly signed along with your quotation as per BRC. OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure DDD of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be submitted by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid. If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway".**

b) The name of the OIL's Independent External Monitors at present are as under:

SRI RAGHAW SHARAN PANDEY
Former Secretary, MOP & NG,
e-Mail ID : rspandey_99@hotmail.com;

10.0 The tender shall be governed by the Bid Rejection & Bid Evaluation Criteria given in enclosed **Annexure-CCC**. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (as per **Annexure-CCC**) contradict the Clauses of the tender and / or "General Terms & Conditions" as per Booklet No. MM/LOCAL/E-01/2005 for E-procurement (LCB Tenders) elsewhere, those in the BEC / BRC shall prevail.

11.0 To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications

fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

12.0 Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.

NOTE:

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the NIT terms and conditions of NIT.

Yours Faithfully

Sd-
(R BARMAN)
SR. MANAGER MATERIALS (IP)
FOR : HEAD-MATERIALS

Annexure - CCC

Tender No & Date: SDI6388P15 DT; 24.02.2015

BID REJECTION CRITERIA (BRC) / BID EVALUATION CRITERIA (BEC)

The following BRC/BEC will govern the evaluation of the bids received against this tender. Bids that do not comply with stipulated BRC/BEC in full will be treated as non responsive and such bids shall prima-facie be rejected. Bid evaluation will be done only for those bids that pass through the "Bid Rejection Criteria" as stipulated in this document.

Other terms and conditions of the enquiry shall be as per General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BRC / BEC) contradict the Clauses of the tender or MM/LOCAL/E-01/2005 elsewhere, those in the BRC / BEC shall prevail.

Criteria	**Complied / Not Complied. (Remarks if any)**
1.0 BID REJECTION CRITERIA (BRC): The bid shall conform generally to the terms and conditions given in this document. Notwithstanding the general conformity of the bids to the stipulated specifications, the following requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and rejected. **A) TECHNICAL:** 1. The bidder must quote for (i) Supply (ii) Installation and Commissioning of meters and (iii) Operation and Maintenance Services for 5 (Five) Years. 2. The bidder shall be manufacturer of Static Energy Meter with prepayment facility or authorized dealer of Static Energy Meter with prepayment facility. In case of authorized dealer, valid dealership/authorization certificate from the meter manufacturer shall be submitted along with the offer. 3. The bidder shall have experience of supply, installation and commissioning of Static Energy Meters with prepayment facility in any Central Govt. /State Govt./PSU/Public Limited Company during last 5 years as on bid closing date. The quantity in single order completed, shall not be less than 1500(One thousand five hundred only) numbers. 4. The offered Static Energy Meter with prepayment facility as per 3 above must have been in service and operating satisfactorily for at least a period of one year as on bid closing date. 5. The Bidder shall submit following documentary evidence in support of their offer, i) Purchase order /Work order with detailed scope of work & completion certificate for 3 of above.	

ii) Performance certificate for 4 of above.

6. The offered single phase and three phase Static Energy Meter with prepayment facility shall be type tested, as per IS- 15884 from any NABL accredited testing laboratory. Documentary evidence for type test shall be submitted along with the offer.

B) COMMERCIAL:

i). Validity of the bid shall be minimum 120 days from the Bid Closing Date.

ii). Bid security:
The bid must be accompanied by Bid Security of **Rs 4,83,000.00** in OIL's prescribed format as Bank Guarantee or a Bank Draft/Cashier cheque in favour of OIL. The Bid Security may be submitted manually in sealed envelope superscribed with Tender no. and Bid Closing date to Head Materials, Materials Department, Oil India Limited, Duliajan- 786602, Assam on or before the Bid Closing Date and Time mentioned in the Tender. **The Bank Guarantee towards Bid Security shall be valid for 10 months from Bid closing date. (i.e. upto 01.03.2016).**

Bid Security may also be paid online on or before the Bid Closing Date and Time mentioned in the Tender.

If bid security in ORIGINAL of above mentioned Amount and Validity is not received or paid online within bid closing date and time, the bid submitted through electronic form will be rejected without any further consideration.

For exemption for submission of Bid Security, please refer Clause No. 8.8 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.

The format of Bank Guarantee towards Bid Security (Annexure – VII) has been amended to Annexure – VII (Revised) and bidders should submit Bank Guarantee towards Bid Security as per Annexure – VII (Revised) only.

In case of extension of Bid Closing date against the tender where a bidder has already submitted his bid with requisite bid security validity within the original B.C. Date, such bidders will extend validity of bid security covering the extended period of the bid closing date.

iii). Bids are invited under "Single Stage Two Bid System". Bidders have to submit both the "Techno-commercial Unpriced Bids" and "Priced Bids" through electronic form in the OIL's e-Tender portal within the bid Closing date and time stipulated in the e-tender. The Techno-commercial Unpriced bid is to be submitted as per scope of works and Technical specification of the tender and the priced bid as per the online

	Commercial bid format. For details of submission procedure, please refer relevant para of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. Any offer not complying with the above shall be rejected straightway.	
v).	Performance Security: a) The successful Bidder will have to provide 1st Performance Security @ 10% of total cost of Equipment + Installation & Commissioning + Training. The Performance Security must be valid for one year from the date of successful commissioning of the equipment or 18 months from the date of despatch whichever is earlier. b) The successful Bidder will have to provide 2nd Performance Security @ 10% of total cost of OMS for 5 years prior to expiry of the 1st Performance Security. The Performance Security must be valid for 5 years. **The validity requirement of Performance Security is assuming despatch within stipulated delivery period and confirmation to all terms and conditions of order. In case of any delay in despatch or non-confirmation to all terms and conditions of order, validity of the Performance Security is to be extended suitably as advised by OIL.** For exemption for submission of Performance Security, please refer Clause No. 9.12 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.	
iv).	*The Bank Guarantee should be allowed to be encashed at all branches within India*.	
v).	The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.	
vi).	Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.	
vii).	All the Bids must be Digitally Signed using "Class 3" digital certificate with Organisation's name *(e-commerce application)* as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than "Class 3 with Organisation's Name" digital certificate, will be rejected.	
viii).	Technical RFx Response folder is meant for Technical bid only. Therefore, No price should be given in Technical RFx Response folder, otherwise the offer will be rejected.	
ix).	Price should be maintained in the "online price schedule" only. The price	

submitted other than the "online price schedule" shall not be considered.

xi). Integrity Pact :

OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure DDD of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be submitted by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid. If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway".

xii). A bid shall be rejected straightway if it does not conform to any one of the following clauses:
(a) Validity of bid shorter than the validity indicated in the Tender.
(b) Original Bid Security not received within the stipulated date & time mentioned in the Tender.
(c) Bid Security with (i) Validity shorter than the validity indicated in Tender and/or (ii) Bid Security amount lesser than the amount indicated in the Tender.
(d) In case the Party refuses to sign Integrity Pact.
(e) Average Annual Turnover of a bidder lower than the average Annual turnover mentioned in the Tender.

2.0 BID EVALUATION CRITERIA (BEC)

The bids conforming to the terms and conditions stipulated in the tender and considered to be responsive after subjecting to the Bid Rejection Criteria as well as verification of original of any or all documents/ documentary evidences pertaining to BRC, will be considered for further evaluation as per the Bid Evaluation Criteria given below.

A) TECHNICAL:

1. To ascertain the inter-se-ranking, the comparison of the responsive bids will be made on the basis of total amount quoted for supply, installation, commissioning and Operation and Maintenance Service for 5 (Five) years. The purchase order shall be placed to the lowest(L1) bidder provided they meet the other qualifying criteria listed in the tender.
2. In case of identical lowest offered rate by more than 1(One) bidder, the selection will be made by draw of lot among the bidders offering the identical lowest rates.
3. All the items will be procured from the same source and evaluation will be done accordingly.

B) COMMERCIAL: i). To evaluate the inter-se-ranking of the offers, Assam Entry Tax on purchase value will be loaded as per prevailing Govt. of Assam guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their offer. ii) Priced bids of only those bidders will be opened whose offers are found technically acceptable. The technically acceptable bidders will be informed before opening of the "priced bid". iii). To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.	

NOTE:

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the NIT terms and conditions of NIT.

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TECHNICAL SPECIFICATIONS WITH QUANTITY

Tender No & Date: SDI6388P15 DT: 24.02.2015

	Complied / Not Complied. (Remarks if any)
ITEM NO. 10 **Supply of A.C. Direct Connected Single Phase Static Energy Meter with prepayment facility – QTY = 4620 NOS** Detail Specification of A.C. Direct Connected Single Phase Static Energy Meter with prepayment facility, Accuracy Class1.0 for 230 Volt System with Pilfer Proof Meter Box. 1. Scope i) The scope of this specification covers design, manufacture, testing and supply of Single phase Static energy meter with prepayment facility, Accuracy Class1.0 for 230 Volt System with Pilfer Proof Meter Box. The meter should be capable of recording and displaying energy in KWh and demand in KW for power factor range of Zero Lag-Unity-Zero Lead. Meter should have facility/capability for adjustable KW, recording tamper information and disconnecting output supply if KW/current exceeded the pre-set value in the meter. It should also have the facilities to reconnect the load with reduced kw/current after resetting the meter. ii) The meter shall conform to high standards of engineering, design and workmanship and shall be capable of performing continuous operation in a manner acceptable to Oil India Ltd. The offered meter shall be complete with all components, accessories necessary for their effective and trouble free operation of the system for the purpose mentioned above. 2. STANDARDS APPLICABLE: The performance & testing of meters with accuracy class-1.0 are required for measurement of Active Energy and shall conform to the latest edition of following standards: Sl. No. Standard No. Title 1 IS: 15884 Alternating Current Direct Connected Static Prepayment Meters for Active Energy (Class 1 and 2)- Specification 2 CBIP - 88 publication No.304 read with latest amendments Manual on Standardization of AC Static Electrical Energy Meters 3 IS 12346 (1988) Specification for testing equipment for A.C. Static Electrical Energy Meter (latest amendment). 4 IS 14434 (1998) Polycarbonate Moulding & Extrusion Materials. 3. ENVIRONMENTAL CONDITIONS: The meter required to operate satisfactorily and continuously with specified accuracy under hot, dusty and tropical conditions and other climatic condition specified as herein after:- i) Specified operating range : -10 C to + 55 C ii) Limit range of operation : -25 C to + 55 C iii) Limit range of storage and Transport : -25 C to + 70 C iv) RELATIVE HUMIDITY: (a) Annual Mean : <75 percent (b) For 30 days (spread over one year) : <95 percent (c) Occasionally on other days : <85 percent v) Maximum altitude above Mean Sea Level : 1000 Meter vi) Annual rain fall : 100 to 1500 mm.	

4. GENERAL & CONSTRUCTIONAL REQUIREMENTS

4.1. General Requirements- Technical:

4.1.1. General Features:

a) The meter should be designed and constructed in such a way so as to avoid causing any danger during use and under normal condition. However, the following should be ensured:

" Personal safety against electric shock

" Personal safety against effects of excessive temperature

" Protection against spread of fire.

" Protection against penetration of solid objects, dust and water

b) The meter should be able to disconnect the load in case of exceeding the load limit (KW/Current). It should also have the facilities to reconnect the load with reduced kw/current after resetting the meter.

c) All the material used in the manufacture of meters shall be of highest quality. The entire design and construction shall be capable of withstanding stresses likely to occur in actual service and rough handling during transportation.

d) All insulating material used in the construction of meter shall be non-hygroscopic non ageing and of tested quality and shall conform to tests as specified in relevant Standards.

e) The meter shall be designed on application specific integrated circuit and shall be manufactured using SMT (Surface Mount Technology) components.

f) The terminal block, the terminal cover and the meter case shall ensure reasonable safety against the spread of fire. They should not be ignited by thermic overload of live parts in contact with them.

g) The meter shall conform to the degree of protection IP 51.

h) All parts which are subject to corrosion under normal working conditions shall be protected effectively. Any protective coating shall not be liable to change by ordinary handling due to exposure to air under normal working conditions.

i) The meters shall be designed such that their working remains unaffected by electromagnetic interference, electrostatic discharges and high voltage transients as specified in standard.

4.2. CONSTRUCTIONAL REQUIREMENTS:

4.2.1. METER CASE:

a) The meter shall have completely insulated body and be of wall mounted projected type. The meter shall have a case made of unbreakable high grade fire resistant, reinforced polycarbonate or equivalent high grade engineering plastic which can be sealed in such a way that the internal parts of the meter are accessible only after breaking the meter cover seals. The meter cover shall have at least two sealing screws, each screw having the sealing holes.

b) The meter case shall have at least three mounting holes. Two holes for mounting screws on the terminal block sealed beneath the terminal cover and one for hanging screw on the top.

4.2.2. WINDOW:

The meter cover shall be of high grade, fire resistant, reinforced polycarbonate or equivalent high grade engineering plastic with one window made of UV stabilized, silicon coated polycarbonate or equivalent high grade engineering plastic for reading the register. The window shall be integral part of the meter cover such that it can not be removed undamaged without breaking the meter cover.

4.2.3. TERMINALS AND TERMINALS BLOCK:

a) The terminal block shall be made from best quality non-hygroscopic, fire retardant, reinforced polycarbonate (not bakelite) or equivalent high grade engineering plastic which should form an extension of the meter case. It shall have terminal minimum internal diameter 5.5mm

b) The meter shall be provided with cage clamp, to connect the cables. Each clamping screw shall engage at least 3 threads in the terminals. The screws shall not have pointed edge at

the end of thread. The clearance and creep age distance of terminal block and tips between the terminal and the surrounding parts of metal enclosure shall be as per relevant IS standard.

c) All parts of each terminal shall be such that the risk of corrosion resulting from contact with any other metal part is minimized.

d) Electrical connections shall be so designed that contact pressure is not transmitted through insulating material.

4.2.4. TERMINAL COVER:

a) The meter terminal Block shall be provided with an extended terminal cover with independent sealing arrangement in such a way that it shall cover the 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.

b) When the meter is mounted, no access to the terminals shall be possible without breaking the seal of the meter terminal cover.

4.2.5. TERMINAL ARRANGEMENT:

A diagram of connections should be provided inside the cover of the terminal block. The terminal cover shall be extended such that when it is placed in position it is not possible to approach the connections or connecting wires.

5.0. DISPLAY:

a) The measured value(s) should be displayed on a Liquid Crystal display (LCD) register. The height X width of the digit should be minimum 8.0 X 5 mm. The KWh energy registration should take place with minimum 5 nos of complete digits. The display should have backlit capability for easy reading. When the LCD is placed at a constant temperature of 65 deg C for a period of 30 minutes in operating condition and 80 deg C for 30 mins. Under de-energized / storage condition, it should not get deformed. The LCD should be of TN (Twisted Pneumatic) type with display size area of at least 40 X 15 mm. There should not be any multiplying factor for KHW reading.

b) The data should be stored in non-volatile memory (NVM). The non-volatile memory should retain data for a minimum period of 10 years under un-powered condition. The Real Time internal Clock (RTC): The real time quartz clock shall be used in the meter for maintaining time (IST) and calendar. The RTC shall be non- rechargeable and shall be pre-programmed for 30 years Day/date without any necessity for correction. RTC shall have long life (10 years) with non rechargeable battery.

Meter memory shall have the following details :

" Transaction history data with date and time
" All the events with time based and category based information
" All the limiting parameters
" Tariff details
" Monthly history consumption data of energy consumed in last 6 months.
" Authenticated Billing Code (ABC)
" All account related information .

c) The energy corresponding to rated maximum current at reference voltage and 0.8 PF/1.0PF.

d) In addition to provide serial number of the meter on the display plate, the meter serial number should also be programmed into meter memory for identification through communication port for Laptop / meter reading print out.

e) It should be possible to read the meter during power -off condition. It should also be possible to read the meter with Laptop in this condition. If battery is used for the same, it should be a separate battery and not the one used for RTC. The battery should be of high quality

Lithium / Lithium - ion battery. (It is a preferable feature.)

The meter should display the required parameters in two different modes as per the sequence given below

A) Auto Display Mode :

The following parameters hereinafter referred to as "Billing Parameters" (B.P) should be displayed in an auto-cycle mode, in the following sequence :

1. LCD Test
2. Real Time
3. Date
4. Cumulative Active energy (forwarded) reading (kWh)
5. Last Bill Maximum demand (kW)
6. Billing period counts

Each parameter should be on meter display for 10 seconds and the time gap between two auto-cycles should be 120 seconds

B) Push Button Mode :

In addition to the auto display mode parameters, the following parameters should be displayed on pressing the push button (All displays of auto mode and the following) :

1. Last Bill Active Forward energy
2. Instantaneous Load (KW)
3. Instantaneous voltage, current
4. Maximum demand in KW for Current month
5. Supply Frequency
6. TOD Energy
7. Pre- set value of KW limit
8. Instantaneous Power Factor
9. Tamper Count
10. Meter Sl. No

6.0 MAXIMUM DEMAND REGISTRATION & RESET

Meter should continuously monitor & calculate the average maximum demand for each demand interval time of 30 minutes and maximum of these in a calendar month should be stored along with date and time when it occurred. The maximum demand should automatically reset at 24:00 hrs. of the last date of each calendar month and the corresponding value along with date/time stamp shall be transferred to Billing(History) registers.

The integration period should be set as 30 minutes, on real-time basis.

The billing purpose parameters (active forwarded energy, maximum demand in kW) should be recorded and should be available in Bill (History)for a minimum 6 months .

7.0 SELF- DIAGNOSTIC FEATURE

The meter should be capable of performing complete self diagnostic check to monitor integrity of data memory location at all time. The meter should have indication for unsatisfactory / nonfunctioning / 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) Non-volatile Memory (NVM) status in meter reading prints out at BCS end

8.0 COMMUNICATION CAPABILITY:

The meter shall have data downloading facility with prepaid meter events like transaction, monthly consumption, temper records, overload, tripping data etc. Through a hardware port

suitable for communicating with hand held device/ computers etc.
Likewise, to display the parameters on Customer Interface Unit, additional hardware port shall be provided. Adequate sealing provision should be provided. Necessary chord for of minimum length of one meter shall be provided.

9.0 HARDWARE AND SOFTWARE REQUIREMENTS

The meter shall be loaded with user-friendly software (higher version of Windows compatible) for reading / downloading meter data. Windows based Base Computer Software (BCS) should be provided for receiving/tranfering data from/to Laptop and downloading instructions from base computer software to Laptop at free of cost. The bidder has to supply the Meter Reading protocol (API) free of cost. Software and hardware required for transferring data from Laptop to Meter and Meter to Laptop shall be provided free of cost to OIL.
It should not be possible to alter date in the meter by-passing commands from the Laptop. For alteration of RTC time, change of TOD timing, Billing parameters, etc it should be possible to perform this functions through but only through authenticated commands sets by BCS after scheduling for particular meter Sl.nos. No alternation, change should be possible through authenticated commands sets by BCS without scheduling of meters.

10.0 DISPLAY POWER UP IN ABSENCE OF MAINS SUPPLY

The meter should have the provision of providing the display of billing parameters in absence of main supply. Press of push button should activate the display to facilitate hands free meter reading with auto-off provision.

11.0 MARKING OF THE METER

The marking on the meter should be in accordance with relevant clauses of IS 13779.
The basic marking on the meter nameplate should be as follows (all other markings as per IS should also be there) :

a) Manufacturer's name & trade mark
b) Type Designation
c) No. of phases & wires
d) Serial number (Size not less than 5mm)
e) Month & Year of manufacture
f) Reference Voltage
g) Rated Current
h) Operating Frequency
i) Principal unit(s) of measurement
j) Meter Constant (imp/kwh)
k) Class index of meter
l) Guarantee (Guaranteed for a period of 5 Yrs. from the date of commissioning)
m) BIS marking
n) Place of manufacture
o) BIS marking
q) Bar coded Sl no. of the meter along with manufacturing date.
r) Purchase Order No
s) Name of Purchaser i.e OIL

12.0 TECHNICAL SPECIFICATION FOR PILFER PROOF METER BOX (SINGLE DOOR TYPE & WITHOUT CUT OUT) SUITABLE FOR SINGLE PHASE PREPAID STATIC ENERGY METER

13.1 SCOPE:

This specification covers manufacture and supply of Pilfer Proof Meter Box (PPMB) suitable to house Energy Meters. The Meter Box shall be wall/pole mounted type, ability so as to offer protection of electrical equipment against harsh weather. The box shall be anti-corrosive, dust proof, shock, vermin & waterproof, pilfer proof, fire proof and UV stabilized. The enclosures shall not deform or melt when exposed to fire.

14.2 TECHNICAL REQUIREMENT :

a) The Meter Box i.e base and cover shall be made of hot press moulded, unbreakable, high grade fire retardant Engineering Plastic / Polycarbonate, with minimum thickness 2.0 mm having good di-electric and mechanical strength. The material must be such that the Meter Box should not change in colour, shape, size & dimensions when subjected to Ageing Test. The Meter Box should have top tapered surface and round corners to prevent any water logging on the top of meter cover. The overall dimensions of the enclosure shall be suitable for housing single phase meter as offered by the bidder and there should be a clearance of 30mm + 2 mm from top & both sides of the meter. Bottom side clearance should be 75mm + 5 mm from the lower edge of terminal block of the meter. Clearance from front side and back side of the meter should be 15mm + 2 mm and 10 + 2 mm respectively. Meter Box with higher dimensions may be considered if found suitable.

Push Button facility must be available on the surface of the Meter Box.

b) The Meter Box should be capable of withstanding the mechanical, electrical and thermal stresses well as the effects of humidity which are likely to be encountered in service. At the same time the box should ensure desired degree of safety. The material used should be adequately stabilized against detrimental effect of light and weather. The surface appearance of the moulded parts must be smooth, non-porous and homogeneous, free of ripples, defects and marks. No fillers of fibers should be visible at any place.

c) The box should comply in all respect with the requirement of latest amendments of IS Applicable degree of protection shall be Min IP 42

d) All accessories like nuts, bolts, washers etc. shall be galvanized.

14.3 CONSTRUCTION:

a) The enclosure shall be single piece moulded with hot process compression moulding.

b) Dimension : To be specified by the bidder.

c) Hinges :

A minimum of 2 nos. brass/stainless steel hinges in left side of the door and 1 no. brass/stainless steel hinge with locking arrangement in right side of the door shall be provided inside the enclosure. The hinges of the door shall be concealed and they shall be fixed to the flanges provided on the body and cover of the enclosure in such a manner that the door opens by a minimum of 120 degree.

d) Suitable groove with locking arrangement shall be provided for opening of the enclosure door.

e) Earthing Bolt :

8mm dia. G.I. bolt with 2 nos. washers for earthing all metal parts shall be provided.

f) Fixing arrangement :

The meter box shall have 4 nos. of mounting brackets made out of same material as meter box with provision for 6 mm dia hole for mounting the box on the poll with suitable screws. The meter box shall have provision to fix it on the wall with the meter in assembled

condition. Four (4) nos. self threaded screws of minimum size of 4 mm dia and 25 mm long shall be provided with each meter box. Any other suitable arrangement for fixing the box may be accepted after verification.

g) Sealing arrangement:

The Box should have provision for padlocking and also for sealing arrangement of the base with cover providing holes for 1 no. seal to make it fully tamper proof.

h) Incoming and outgoing cable arrangement:

Suitable 2 (two) Nos. of holes at bottom shall be provided in the box for cable / wire entry. High grade double compression MS / Aluminum alloy cable glands fixed on both sides by check nuts to be provided.

i) Base and Cover details:

Thickness of the meter box shall not be less than 2.0 mm on all sides including door. The meter box shall have 4 mm thickness of the tongue and groove area. The meter box cover shall be made overlapping type having collars on all four (4) sides and shall be provided with Neoprene rubber gasket of minimum 2.5 mm dia to completely fit in the grooves of the base. The base of the meter box must have a groove to hold the gasket and the overlap of the top cover with base should be sufficient. The tongue of the base shall ensure proper sealing arrangement against ingress of rainwater and dust inside the box.

j) The Enclosures shall generally comply with the provision of IS 14772. The enclosure shall be with good workmanship.

k) Soft neoprene/nitride rubber gaskets shall be provided all round wherever required for protection against entry of dust and water. The gasket shall confirm to Type-III as per IS-11149. The enclosure shall comply with IP-42 or better degree of protection.

l) The Enclosures shall be off white/admiral gray / ivory or as specified by the owner.

m) Marking/Embossing:

The following information shall be clearly & indelibly embossed/laser printed on the cover and base of the Meter Box.

i) Property of OIL
ii) Name / Brand name of Manufacturer
iii) Meter Box Sl. No. (Embossed on both the base and covers of Meter Box)
iv) Sign of Danger

15.0 TECHNICAL SPECIFICATION FOR SINGLE PHASE METER:

15.1 CURRENT AND VOLTAGE RATING:

Rated Voltage (Vref) : 230 V (Phase to Neutral)
Rated Current : Basic Current 10 Amps (Ib)
: Maximum current 60 Amps (Imax)
Meter shall be direct connected without Current Transformer.

15.2 VARIATION IN POWER SUPPLY:

The meters shall be suitable for working satisfactorily with the following power supply system variations:-

15.2.1 VOLTAGE RANGE:

(i) Specified Operating Range : 0.7 to 1.3 V ref.(-30% to +30%)
(ii) Operating voltage range for accuracy requirement : 0.85 to 1.15 V ref i.e. -15% to + 15%

15.2.2 FREQUENCY VARIATION:

The standard reference frequency for performance shall be 50Hz with tolerance + 5%.

15.3 POWER CONSUMPTION:

i) VOLTAGE CIRCUIT:

The active, apparent Power consumption in voltage circuit including the power supply of the meter at reference voltage, reference temperature and reference frequency shall be within limits as specify in relevant BIS standard.

ii) CURRENT CIRCUIT:

The apparent Power taken by each current circuit at basic current, reference frequency and reference temperature shall be within limits as specify in relevant BIS standard.

15.4 STARTING CURRENT:

The meter should start registering the energy at 0.2% of Basic Current (Ib)

15.5 ACCURACY:

Accuracy class of meter shall be 1.0 and shall confirm to accuracy requirement as per specific BIS standard.

The display features which shall be available on various keys shall be as follows:

" Days left (based on consumption of last seven days)
" Value of recent consumption
" The currently active rates, the prices charged for consumption at each rate, and the number of units consumed at each rate and the daily charges.
" Last 5 Codes
" Monthly consumption in KWH.
" Maximum Demand with occurrence of time and instantaneous load.
" Cumulative kWH unit
" Date/Time, Serial no., voltage, current etc.
" Key code mode
" Scroll back button

15.6. TAMPER AND FRAUD PROTECTION:

The meter shall operate normally under the following conditions:

a) Phase current reversal: The meter shall record forwarded energy.
b) Neutral current reversal: The meter shall record forwarded energy.
c) Phase and neutral interchange: The meter shall record forwarded energy.
d) The meter shall operate normally in case the phase and neutral are swapped with neutral connected to earth.

1.In case the neutral is opened and load is connected to the earth, partial phase by pass or full phase bypass the energy shall be recorded on the wire which has higher current recording. Such tampers shall be logged in the memory of the meter.

2.Two latch relays should be provided one for phase and one for neutral to prevent tempering using phase neutral interchange , like load reversal and drawing of load through local earth and single wire operation .

e) The metering system shall be provided with adequate magnetic shielding so that any external magnetic field (AC Electro Magnet or DC Magnet) applied on the metering system shall not affect the proper functioning and recording of energy.

f) The meter shall conform to requirements of CBIP-304 and its amendments for tampering using external magnets. The meter should be immune to 0.2T of AC magnetic fields and 0.5T DC magnetic fields, beyond which it should record as tamper if not immune.

15.7. Meter Reading:

1. It shall be possible to read the prepayment meters and minimum following information

shall be available in meter reading data.
" The transaction history data with date and time.
" All the events history with time based and category based information.
" Tariff details including the TOD tables, slab tables and information about the current active rate price.
" Monthly history and consumption data of the energy consumed for last twelve months.
" Record of maximum demand in KW in each months.
" All the account related information like meter credit, emergency credit details, minimum charge and fixed charges value.
" All the limiting parameters shall also be available in meter reading.
2 There should have provision for recharging of energy meter through Customer Interface Unit (CIU)
3. Connection and disconnection facility should be in built in energy meter.

ITEM NO. 20

Installation & Commissioning of A.C. Direct Connected Single Phase Static Prepaid Energy Meter, Accuracy Class1.0 for 230 Volt System with Pilfer Proof Meter Box.
QTY = 01 AU

Installation & Commissioning of A.C. Direct Connected Single Phase Static Energy Meter with prepayment facility, Accuracy Class1.0 for 230 Volt System with Pilfer Proof Meter Box.

1. The meter with the pilfer proof box shall be installed and commissioned at site by the supplier.
2. The bidder has to quote installation cost per meter. Payment shall be made based on actual.
3. The supplier shall submit following documents within one month from the date of placement of order for approval.
i) The work plan for supply , installation and commissioning of meters
ii) The valid Electrical Contractor License of the supplier or the firm with whom they shall have tie up for installation , commissioning and operation and maintenance service for Five years, issued or recognised by Electrical Licensing Board, Govt of Assam.
iii) Copy of valid certificate of competency issued or recognised by Electrical Licensing Board, Govt of Assam ,of the supervisor who will supervise the installation and commissioning jobs.
iv) Copy of valid workman permit issued or recognised by Electrical Licensing Board, Govt of Assam, of the personnel who will carry out the installation and commissioning job.
v) Copy of wiring diagram of the meters.
vi) Installation and commissioning procedure , safe operating procedure
4. The supplier can start the installation job only after getting approval for the above documents mentioned in point no. 3.i) to 3.vi)
5. All the materials required for mounting the meter with the box shall be provided by the supplier .
6. All the materials required for connecting meters with the electrical circuit like proper size of cable , lugs , glands etc are to provided by the supplier. The supplier shall get the materials used for connecting meters with the electrical circuit approved from OIL's engineer - in charge before using.
7. All tools and tackles required for installation and commissioning of meters shall be provided by the supplier.

8. The supervisor engaged by the supplier shall obtain clearance from OIL's Engineer - in charge before connecting meters to the OIL's Power supply.
9. The supplier shall ensure that people engaged for installation and commissioning of meter use Personal Protective Equipment(PPE) and follow safe operating procedure to avoid accident. Any accident happens during installation and commissioning job, the supplier shall be held responsible. All PPE shall be provided by the supplier.
10. The meters shall be tested for its features at site. If the meters found to be defective ,it is to be replaced immediately.
11. The installation and commissioning work shall be carried out normally during day time .
12. The commissioning report of the meter in the standard format shall be submitted by the supplier to OIL.

ITEM NO. 30

Supply of A.C. Direct Connected Three Phase four wire Static Energy Meter with prepayment facility, Accuracy Class1.0 for 415 Volt System with Pilfer Proof Meter Box.

Detail Specification of A.C. Direct Connected Three Phase four wire Static Energy Meter with prepayment facility, Accuracy Class1.0 for 415 Volt System with Pilfer Proof Meter Box.

1. Scope

i) The scope of this specification covers design, manufacture, testing and supply of Three phase four wire energy meter with prepayment facility, Accuracy Class1.0 for 415 Volt System with Pilfer Proof Meter Box. The meter should be capable of recording and displaying energy in KWh and demand in KW for power factor range of Zero Lag-Unity-Zero Lead. Meter should have facility/capability for adjustable KW, recording tamper information and disconnecting output supply if Kw/current exceeded the pre-set value in the meter. It should also have the facility to reconnect the load with reduced kw/current after resetting the meter.

ii) The meter shall conform to high standards of engineering, design and workmanship and shall be capable of performing continuous operation in a manner acceptable to Oil India Ltd. The offered meter shall be complete with all components, accessories necessary for their effective and trouble free operation of the system for the purpose mentioned above.

2. STANDARDS APPLICABLE:

The performance & testing of meters with accuracy class-1.0 are required for measurement of Active Energy and shall conform to the latest edition of following standards:

Sl. No.	Standard No.	Title
1	IS: 15884	Alternating Current Direct Connected Static Prepayment Meters for Active Energy (Class 1 and 2)- Specification
2	CBIP - 88 publication No.304 read with latest amendments	Manual on Standardization of AC Static Electrical Energy Meters
3	IS 12346 (1988)	Specification for testing equipment for A.C. Static Electrical Energy Meter (latest amendment).
4	IS 14434 (1998)	Polycarbonate Moulding & Extrusion Materials.

3. ENVIRONMENTAL CONDITIONS:

The meter required to operate satisfactorily and continuously with specified accuracy under hot, dusty and tropical conditions and other climatic condition specified as herein after:-

i) Specified operating range : -10 C to + 55 C

ii) Limit range of operation : -25 C to + 55 C
iii) Limit range of storage and Transport : -25 C to + 70 C
iv) RELATIVE HUMIDITY:
(a) Annual Mean : <75 percent
(b) For 30 days (spread over one year) : <95 percent
(c) Occasionally on other days : <85 percent
v) Maximum altitude above Mean Sea Level : 1000 Meter
vi) Annual rain fall : 100 to 1500 mm.

4. GENERAL & CONSTRUCTIONAL REQUIREMENTS

4.1. General Requirements- Technical:

4.1.1. General Features:

a) The meter should be designed and constructed in such a way so as to avoid causing any danger during use and under normal condition. However, the following should be ensured:

" Personal safety against electric shock
" Personal safety against effects of excessive temperature
" Protection against spread of fire.
" Protection against penetration of solid objects, dust and water

b) The meter should be able to disconnect the load in case of exceeding the load limit (KW/Current). It should also have the facility to reconnect the load with reduced kw/current after resetting the meter.

c) All the material used in the manufacture of meters shall be of highest quality. The entire design and construction shall be capable of withstanding stresses likely to occur in actual service and rough handling during transportation.

d) All insulating material used in the construction of meter shall be non-hygroscopic non ageing and of tested quality and shall conform to tests as specified in relevant Standards.

e) The meter shall be designed on application specific integrated circuit and shall be manufactured using SMT (Surface Mount Technology) components.

f) The terminal block, the terminal cover and the meter case shall ensure reasonable safety against the spread of fire. They should not be ignited by thermic overload of live parts in contact with them.

g) The meter shall conform to the degree of protection IP 51.

h) All parts which are subject to corrosion under normal working conditions shall be protected effectively. Any protective coating shall not be liable to change by ordinary handling due to exposure to air under normal working conditions.

i) The meters shall be designed such that their working remain unaffected by electromagnetic interference, electrostatic discharges and high voltage transients as specified in standard.

4.2. CONSTRUCTIONAL REQUIREMENTS:

4.2.1. METER CASE:

a) The meter shall have completely insulated body and be of wall mounted projected type. The meter shall have a case made of unbreakable high grade fire resistant, reinforced polycarbonate or equivalent high grade engineering plastic which can be sealed in such a way that the internal parts of the meter are accessible only after breaking the meter cover seals. The meter cover shall have at least two sealing screws, each screw having the sealing holes.

b) The meter case shall have at least three mounting holes. Two holes for mounting screws on the terminal block sealed beneath the terminal cover and one for hanging screw on the top.

4.2.2. WINDOW:

The meter cover shall be of high grade, fire resistant, reinforced polycarbonate or equivalent

high grade engineering plastic with one window made of UV stabilized, silicon coated polycarbonate or equivalent high grade engineering plastic for reading the register. The window shall be integral part of the meter cover such that it can not be removed undamaged without breaking the meter cover.

4.2.3. TERMINALS AND TERMINALS BLOCK:

a) The terminal block shall be made from best quality non-hygroscopic, fire retardant, reinforced polycarbonate (not bakelite) or equivalent high grade engineering plastic which should form an extension of the meter case. It shall have terminal minimum internal diameter 5.5mm

b) The meter shall be provided with cage clamp, to connect the cables. Each clamping screw shall engage at least 3 threads in the terminals. The screws shall not have pointed edge at the end of thread. The clearance and creep age distance of terminal block and tips between the terminal and the surrounding parts of metal enclosure shall be as per relevant IS standard.

c) All parts of each terminal shall be such that the risk of corrosion resulting from contact with any other metal part is minimized.

d) Electrical connections shall be so designed that contact pressure is not transmitted through insulating material.

4.2.4. TERMINAL COVER:

a) The meter terminal Block shall be provided with an extended terminal cover with independent sealing arrangement in such a way that it shall cover the 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.

b) When the meter is mounted, no access to the terminals shall be possible without breaking the seal of the meter terminal cover.

4.2.5. TERMINAL ARRANGEMENT:

A diagram of connections should be provided inside the cover of the terminal block. The terminal cover shall be extended such that when it is placed in position it is not possible to approach the connections or connecting wires.

5.0. DISPLAY:

a) The measured value(s) should be displayed on a Liquid Crystal display (LCD) register. The height X width of the digit should be minimum 8.0 X 5 mm. The KWh energy registration should take place with minimum 5 nos of complete digits. The display should have backlit capability for easy reading. When the LCD is placed at a constant temperature of 65 deg C for a period of 30 minutes in operating condition and 80 deg C for 30 mins. Under de-energized / storage condition, it should not get deformed. The LCD should be of TN (Twisted Pneumatic) type with display size area of at least 40 X 15 mm. There should not be any multiplying factor for KHW reading.

b) The data should be stored in non-volatile memory (NVM). The non-volatile memory should retain data for a period of not less than 5 years under un-powered condition.

The Real Time internal Clock (RTC): The real time quartz clock shall be used in the meter for maintaining time (IST) and calendar. The RTC shall be non- rechargeable and shall be pre-programmed for 30 years Day/date without any necessity for correction. RTC shall have long life (10 years) with non rechargeable battery.

Meter memory shall have the following details :

" Transaction history data with date and time

" All the events with time based and category based information

" All the limiting parameters][
" Tarrif details
" Monthly history consumption data of energy consumed in last 6 months.
" Authenticated Billing Code(ABC)
" All account related information.

c) The energy corresponding to rated maximum current at reference voltage and 0.8PF/1.0PF.
d) In addition to provide serial number of the meter on the display plate, the meter serial number should also be programmed into meter memory for identification through communication port for Laptop / meter reading print out.
e) It should be possible to read the meter during power -off condition. It should also be possible to read the meter with Laptop in this condition. If battery is used for the same, it should be a separate battery and not the one used for RTC. The battery should be of high quality Lithium / Lithium - ion battery.(It is a preferable feature.)
The meter should display the required parameters in two different modes as per the sequence given below

A) Auto Display Mode :
The following parameters hereinafter referred to as "Billing Parameters" (B.P) should be displayed in an auto-cycle mode, in the following sequence :
1. LCD Test
2. Real Time
3. Date
4. Cumulative Active energy (forwarded) reading (kWh)
5. Last Bill Maximum demand (kW)
6. Billing period counts
Each parameter should be on meter display for 10 seconds and the time gap between two auto-cycles should be 120 seconds

B) Push Button Mode :
In addition to the auto display mode parameters, the following parameters should be displayed on pressing the push button (All displays of auto mode and the following) :
1. Last Bill Active Forward energy
2. Instantaneous Load (KW)
3. Instantaneous voltage, current
4. Maximum demand kW for Current month
5. Supply Frequency
6. TOD Energy
7. Pre- set value of KW limit
8. Instantaneous Power Factor
9. Tamper Count
10. Meter Sl. No

6.0 MAXIMUM DEMAND REGISTRATION & RESET
Meter should continuously monitor & calculate the average maximum demand for each demand interval time of 30 minutes and maximum of these in a calendar month should be stored along with date and time when it occurred. The maximum demand should automatically reset at 24:00 hrs. of the last date of each calendar month and the corresponding value along with date/time stamp shall be transferred to Billing(History) registers.
The integration period should be set as 30 minutes, on real-time basis.

The billing purpose parameters (active forwarded energy, maximum demand in kW) should be recorded and should be available in Bill(History)for a minimum 75days.

7.0 SELF- DIAGNOSTIC FEATURE

The meter should be capable of performing complete self diagnostic check to monitor integrity of data memory location at all time. The meter should have indication for unsatisfactory / nonfunctioning / 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) Non-volatile Memory (NVM) status in meter reading prints out at BCS end

8.0 COMMUNICATION CAPABILITY:

The meter shall have data downloading facility with prepaid meter events like transaction, monthly consumption, temper records, overload, tripping data etc. Through a hardware port suitable for communicating with hand held device/ computers etc.

Likewise, to display the parameters on Customer Interface Unit, additional hardware port shall be provided. Adequate sealing provision should be provided. Necessary chord for of minimum length of one meter shall be provided.

9.0 HARDWARE AND SOFTWARE REQUIREMENTS

The meter shall be loaded with user-friendly software (higher version of Windows compatible) for reading / downloading meter data. Windows based Base Computer Software (BCS) should be provided for receiving/tranfering data from/to Laptop and downloading instructions from base computer software to Laptop at free of cost. The bidder has to supply the Meter Reading protocol (API) free of cost. Software and hardware required for transferring data from Laptop to Meter and Meter to Laptop shall be provided free of cost to OIL.

It should not be possible to alter date in the meter by-passing commands from the Laptop. For alteration of RTC time, change of TOD timing, Billing parameters, etc it should be possible to perform this functions through but only through authenticated commands sets by BCS after scheduling for particular meter Sl.nos. No alternation, change should be possible through authenticated commands sets by BCS without scheduling of meters.

10.0 DISPLAY POWER UP IN ABSENCE OF MAINS SUPPLY

The meter should have the provision of providing the display of billing parameters in absence of main supply. Press of push button should activate the display to facilitate hands free meter reading with auto-off provision.

11. MARKING OF THE METER

The marking on the meter should be in accordance with relevant clauses of IS 13779.

The basic marking on the meter nameplate should be as follows (all other markings as per IS should also be there) :

a) Manufacturer's name & trade mark
b) Type Designation
c) No. of phases & wires
d) Serial number (Size not less than 5mm)
e) Month & Year of manufacture
f) Reference Voltage
g) Rated Current
h) Operating Frequency

i) Principal unit(s) of measurement
j) Meter Constant (imp/kwh)
k) Class index of meter
l) Guarantee **(Guaranteed for a period of 5 Yrs. from the date of commissioning)**
m) BIS marking
n) Place of manufacture
o) BIS marking
q) Bar coded Sl no. of the meter along with manufacturing date.
r) Purchase Order No
s) Name of Purchaser i.e OIL

13.0 TECHNICAL SPECIFICATION FOR PILFER PROOF METER BOX (SINGLE DOOR TYPE & WITHOUT CUT OUT) SUITABLE FOR THREE PHASE FOUR WIRE STATIC ENERGY METER

14.1 SCOPE:
This specification covers manufacture and supply of Pilfer Proof Meter Box (PPMB) suitable to house Energy Meters. The Meter Box shall be wall/pole mounted type, ability so as to offer protection of electrical equipment against harsh weather. The box shall be anti-corrosive, dust proof, shock, vermin & waterproof, pilfer proof, fire proof and UV stabilized. The enclosures shall not deform or melt when exposed to fire.

14.2 TECHNICAL REQUIREMENT :
a) The Meter Box i.e base and cover shall be made of hot press moulded, unbreakable, high grade fire retardant Engineering Plastic (Acrylonitrile Butadiene Styrene) / Polycarbonate, with minimum thickness 2.0 mm having good di-electric and mechanical strength. The material must be such that the Meter Box should not change in colour, shape, size & dimensions when subjected to Ageing Test. The Meter Box should have top tapered surface and round corners to prevent any water logging on the top of meter cover. The overall dimensions of the enclosure shall be suitable for housing three phase meter as offered by the bidder and there should be a clearance of 30mm + 2 mm from top & both sides of the meter. Bottom side clearance should be 75mm + 5 mm from the lower edge of terminal block of the meter. Clearance from front side and back side of the meter should be 15mm + 2 mm and 10 + 2 mm respectively. Meter Box with higher dimensions may be considered if found suitable.
Push Button facility must be available in top of the Meter Box.

b) The Meter Box should be capable of withstanding the mechanical, electrical and thermal stresses well as the effects of humidity which are likely to be encountered in service. At the same time the box should ensure desired degree of safety. The material used should be adequately stabilized against detrimental effect of light and weather. The surface appearance of the moulded parts must be smooth, non-porous and homogeneous, free of ripples, defects and marks. No fillers of fibers should be visible at any place.

c) The box should comply in all respect with the requirement of latest amendments of IS Applicable degree of protection shall be Min IP 42
d) All accessories like nuts, bolts, washers etc. shall be galvanized.

14.3 CONSTRUCTION :

a) The enclosure shall be single piece moulded with hot process compression moulding.
b) Dimension : To be specified by the bidder.

c) Hinges :

A minimum of 2 nos. brass/stainless steel hinges in left side of the door and 1 no. brass/stainless steel hinge with locking arrangement in right side of the door shall be provided inside the enclosure. The hinges of the door shall be concealed and they shall be fixed to the flanges provided on the body and cover of the enclosure in such a manner that the door opens by a minimum of 120 degree.

d) Suitable groove with locking arrangement shall be provided for opening of the enclosure door.

e) Earthing Bolt :

8mm dia. G.I. bolt with 2 nos. washers for earthing all metal parts shall be provided.

f) Fixing arrangement :

The meter box shall have 4 nos. of mounting brackets made out of same material as meter box with provision for 6 mm dia hole for mounting the box on the poll with suitable screws. The meter box shall have provision to fix it on the wall or wooden board with the meter in assembled condition. Four (4) nos. self threaded screws of minimum size of 4 mm dia and 25 mm long shall be provided with each meter box. Any other suitable arrangement for fixing the box may be accepted after verification.

g) Sealing arrangement :

The Box should have provision for padlocking and also for sealing arrangement of the base with cover providing holes for 1 no. seal to make it fully tamper proof.

h) Incoming and outgoing cable arrangement:

Suitable 2 (two) Nos. of holes at bottom shall be provided in the box for cable / wire entry. High grade double compression MS / Aluminum alloy cable glands fixed on both sides by check nuts to be provided.

i) Base and Cover details :

Thickness of the meter box shall not be less than 2.0 mm on all sides including door. The meter box shall have 4 mm thickness of the tongue and groove area. The meter box cover shall be made overlapping type having collars on all four (4) sides and shall be provided with Neoprene rubber gasket of minimum 2.5 mm dia to completely fit in the grooves of the base. The base of the meter box must have a groove to hold the gasket and the overlap of the top cover with base should be sufficient. The tongue of the base shall ensure proper sealing arrangement against ingress of rainwater and dust inside the box.

j) The Enclosures shall generally comply with the provision of IS 14772. The enclosure shall be with good workmanship.

k) Soft neoprene/nitride rubber gaskets shall be provided all round wherever required for protection against entry of dust and water. The gasket shall confirm to Type-III as per IS-11149. The enclosure shall comply with IP-42 or better degree of protection.

l) The Enclosures shall be off white/admiral gray / ivory or as specified by the owner.

m) Marking/Embossing:

The following information shall be clearly & indelibly embossed/laser printed on the cover and base of the Meter Box.

i) Property of OIL

ii) Name / Brand name of Manufacturer

iii) Meter Box Sl. No. (Embossed on both the base and covers of Meter Box)

iii) Sign of Danger

15. Technical Specification of Three Phase Four Wire Energy Meter

15.1. CURRENT AND VOLTAGE RATING:

Rated Voltage (Vref) : 415V (Phase to Phase) and 230 V (Phase to neutral)

Meter shall be suitable for 3 (three) phase 4 (four) wire system

Rated Current : Current 10A to 60 A

Meter shall be direct connected without Current Transformer

15. 2 VARIATION IN POWER SUPPLY:

The meters shall be suitable for working satisfactorily with the following power supply system variations:-

15.2.1 VOLTAGE RANGE:

(i) Specified Operating Range : 0.7 To 1.3 Vref. (-30% to +30%)

(ii) Operating voltage range for accuracy requirement : 0.85 to 1.15 Vref i.e. -15% to + 15%

15.2.2 FREQUENCY VARIATION:

The standard reference frequency for performance shall be 50Hz with tolerance + 5%.

15.3 POWER CONSUMPTION:

i) VOLTAGE CIRCUIT:

The active, apparent Power consumption in voltage circuit including the power supply of the meter at reference voltage, reference temperature and reference frequency shall be within limits as specify in relevant BIS standard.

ii) CURRENT CIRCUIT:

The apparent Power taken by each current circuit at basic current, reference frequency and reference temperature shall be within limits as specify in relevant BIS standard.

15.4 STARTING CURRENT:

The meter should start registering the energy at 0.2/0.4 % of Basic Current(Ib)

15.5 ACCURACY:

Accuracy class of meter shall be 1.0 and shall confirm to accuracy requirement as per specific BIS standard.

The display features which shall be available on various keys shall be as follows:

" Days Left (based on consumption of last seven days)

" Value of recent consumption

" The currently active rates, the prices charged for consumption at each rate, and the number of units consumed at each rate and the daily charges

" Last 5 Codes

" Monthly consumption in KWH.

" Maximum Demand with occurrence of time and instantaneous load.

" Cumulative KWH unit

" Key code mode

" Scroll back button

15.6. TAMPER AND FRAUD PROTECTION:

15.6.1 Phase Sequence Reversal: The meter should work accurately irrespective of phase sequence of the supply.

15.6.2 Missing Potential: The meter shall be capable of detecting and recording occurrences and restorations of missing potential (1 phase or 2 phases) which can happen due to intentional/ accidental disconnection of potential leads with date and time along with total no. of such occurrences for all phases during the above period. This tamper recording shall not be done when meter is without any load i.e. current in all phases is zero.

15.6.3 External Magnetic Influence: The metering system shall be provided with adequate magnetic shielding so that any external magnetic field (AC Electro Magnet or DC Magnet) as per the values specified in standard applied on the metering system shall not affect the proper functioning and recording of energy as per error limits prescribed in standard.

15.6.4: Adequate numbers of latching relays shall be provided for temper and fraud protection.

15.7. Meter Reading:

1. It shall be possible to read the prepayment meters and minimum following information

shall be available in meter reading data. " The transaction history data with date and time. " All the events history with time based and category based information. " Tariff details including the TOD tables, slab tables and information about the current active rate price. " Monthly history and consumption data of the energy consumed for last twelve months. " Record of maximum demand in KW in each months " All the account related information like meter credit, emergency credit details, minimum charge and fixed charges value. " All the limiting parameters shall also be available in meter reading. 2. There should have provision for recharging of energy meter through Customer Interface Unit (CIU) 3. Connection and disconnection facility should be in built in energy meter.	
ITEM NO. 40 **Installation and Commissioning of AC Direct Connected Three Phase four wire Energy Meter with prepayment facility, Accuracy Class1.0 for 415 Volt System with Pilfer Proof Meter Box. QTY – 01 AU** Installation and Commissioning of AC Direct Connected Three Phase four wire Energy Meter with prepayment facility, Accuracy Class1.0 for 415 Volt System with Pilfer Proof Meter Box 1. The meter with the pilfer proof box shall be installed and commissioned at site by the supplier. 2. The bidder has to quote installation cost per meter. Payment shall be made based on actual. 3. The supplier shall submit following documents within one month from the date of placement of order for approval by OIL. i) The work plan for supply , installation and commissioning of meters. ii) The valid Electrical Contractor License of the supplier or the firm with whom they shall have tie up for installation, commissioning , operation and maintenance service for Five years, issued or recognised by Electrical Licensing Board, Govt of Assam. iii) Copy of valid certificate of competency issued or recognised by Electrical Licensing Board, Govt of Assam, of the supervisor who will supervise the installation and commissioning jobs. iv) Copy of valid workman permit issued or recognised by Electrical Licensing Board, Govt of Assam, of the personnel who will carry out the installation and commissioning job. v) Copy of wiring diagram of the meters. vi) Installation and commissioning procedure , safe operating procedure 4. The supplier can start the installation job only after getting approval for the above documents mentioned in point no. 3.i) to 3.vi) 5. All the materials required for mounting the meter with the box shall be provided by the supplier. 6. All the materials required for connecting meters with the electrical circuit like proper size of cable, lugs, glands etc are to provided by the supplier. The supplier shall get the materials used for connecting meters with the electrical circuit approved from OIL's engineer - in charge before using. 7. All tools and tackles required for installation and commissioning of meters shall be provided by the supplier. 8. The supervisor engaged by the supplier shall obtain clearance from OIL's Engineer - in charge before connecting meters to the OIL's Power supply.	

9. The supplier shall ensure that people engaged for installation and commissioning of meter use Personal Protective Equipment (PPE) and follow safe operating procedure to avoid accident. Any accident happens during installation and commissioning job, the supplier shall be held responsible. All PPE shall be provided by the supplier. 10. The meters shall be tested for its features at site. If the meters found to be defective, it is to be replaced immediately. 11. The installation and commissioning work shall be carried out normally during day time. 12. The commissioning report of the meter in the standard format shall be submitted by the supplier to OIL.	
ITEM NO. 50 **Operation and Maintenance Services for A.C. Direct connected Single and Three Phase four wire Static Energy Meters with prepayment facility (FOR FIVE YEARS). QTY- 01 AU** Operation and Maintenance Services for A.C. Direct connected Single and Three Phase four wire Static Energy Meters with prepayment facility. A. Scope of work of Operation and Maintenance Services 1. The contractor shall ensure trouble free operation of the meters. The tripping and resetting of the meter shall be done by the contractor. The meters shall be checked for loose connection/ heating and rectify the same. 2. The defective meters shall be replaced by the contractor at free of charge during guarantee period. Beyond guarantee period, meters will be provided by OIL . However all the materials required for replacing the meters shall be supplied by the contractor. 3. If wiring of b'low, quarter or any installations where meters were fixed needs to be changed for rewiring or construction, connections to the meters shall be done by the contractor. In that case, materials required for connections shall be provided by OIL. 4. Lowering or increasing KW/CURRENT and KWH setting shall be done by the contractor as advised by OIL as and when required by OIL. 5. Setting and re-setting of meters shall be done by the contractors. Any transactions with the meter shall be done by contractor. 6. The meters shall be tested monthly for its operation and if any malfunction is detected, it is to be rectified immediately. 7. If new meters are to be installed, OIL will provide the meter, but the installation shall be done by the contractor.The material required for installation shall be supplied by the contractor. The installation and commissioning charges shall be same per Purchase Order. new meters. 8. If terminal block got burnt due to loose connection or due to any defects in the meter , then these are to replaced by the contractor. 9. The contractor shall check meters for any damage and ingress of water. 10. Following reports shall be submitted by the contractor in soft copy , if required in hard copy i) Monthly reading in KWH and maximum KW in the month of each meter. ii) Frequency of resetting of meter in a month iii) Reports attended in a month for malfunction of meters. iv) Monthly reports of tempering if any. v) Quarterly and annual report on following a) Pattern of KWH consumption and pattern of KW drawn of each meter. b) Pattern of resetting of meter . c) Malfunction of meters. d) Quarterly reports of tempering if any.	

e) Power consumption

11. At the end of the contractual period, the meters shall be handed over to OIL in good working condition. If any meter found to be defective due to improper maintenance, it is to be replaced by the contractor.
12. Addition, deletion of consumer and modification of consumer database is to be done by the contractor .
13. The starting date for operation and maintenance service shall be the date on which last meter is installed and commissioned.
14. Any points specifically not mentioned in the supply, installation and commissioning and operation and maintenance services, but required for successful operation shall be in the scope of the contractor.

B. STATUTORY REQUIREMENT FOR WORK

1. The contractor shall execute the jobs as per specifications in the Operation and Maintenance Services contract.
2. The contractor shall employ work persons with valid workman wireman permits issued or recognised by Electrical Licensing Board, Govt. of Assam to carry out all electrical jobs. Such permits/licenses shall be submitted to OIL for scrutiny after issue of LOA.
4. Contractor shall employ one electrical supervisor to supervise the jobs performed by the teams to the satisfaction of the company. The supervisor shall possess valid supervisor's certificate of competency issued or recognized by Electrical Licensing Board ,Govt. of Assam for supervision of electrical jobs. Such license shall be submitted to OIL for scrutiny after issue of LOA.
5. Contractor shall issue his/her work persons with all the safety gadgets.
6.Quality of jobs carried out by the Contractor shall be of high standard and should be as per the norms of Central Electricity Authority Regulations, 2010, NEC or other electrical standards recognized by the company.

C. MANPOWER:

a) All personnel deputed by the contractor shall be competent for the job.
b) All workers shall be medically fit and able to carry out the various jobs assigned to them.
c) Contractor shall obtain OIL's approval for technical personnel.
d) Bio-data of technical personnel must be submitted before 15 (fifteen) days from the date of deployment for OIL's approval.
e) Personnel deployed by the contractor shall be changed/replaced by the contractor if it is desired by OIL to do so. OIL shall not be required to give any reason for such request/instruction.
f) Qualification of technical personnel:
i) Supervisor: Should have valid Certificate of Competency, issued or recognised by Electrical Licensing Board, Government of Assam. The supervisor shall be Graduate Engineer or diploma holder with experience of minimum two years or ITI certificate holder with experience of minimum five years.
ii) Technician: Should have valid Electrical workman permit issued or recognised by State Licensing Board, Government of Assam.
g) Minimum No. of personnel to be deployed by Contractor: Graduate Engineer/Diploma Holder/ ITI certificate holder - 1 no., Technician- 2 nos.

C. Office Set up

1. The contractor shall have an office set up at Duliajan. The contractor shall have to furnish the address of the office, telephone/mobile number & email id. Within 15 days of LOA

for the Operation and maintenance Service contract.

2. The contractor personnel shall report to Engineer in charge everyday at 7.00AM.

3. The contractor shall possess requisite no. of computer/laptop, storage devices, printer, software, internet connection and any other infrastructure required for providing Operation and Maintenance Services.

D. Transportation , Tools and tackles

a. The contractor shall arrange transportation for man and materials.

b. The contractor shall arrange tools and tackles required for installation and operation and maintenance of meters like digital multimeter/Tongtester and Aluminium ladder etc..

E. General Points Related to HSE

1. Safety measures to be taken by the Contractor:

a) While carrying out a job, contractor personnel must isolate live parts by switching off incoming power supply or by removing fuses. Testing tools like test lamps etc. must be used before start of work for ascertaining non-availability of power.

b) When a ladder is used, one person shall be engaged at all times for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and handholds shall be provided on the ladder and the ladder shall be used at an inclination not steeper than 45° from horizontal.

c) The contractor shall submit one undertaking on safety measures to be adopted at site that he himself is aware of all electrical/safety and other hazards associated with the execution of the contract and has understood the necessary safety requirements to be adopted and that he/she shall not violate:

i) Stated safety procedures

ii) Statutory rules and regulation

iii) Shutdown procedure

iv) Company(OIL) and departmental procedure while execution of the contract and carrying out any job that he/she shall be responsible and accountable for violation.

2) General HSE points to be adopted by the Contractor:

1) It will be solely the Contractor's responsibility to fulfill all the legal formalities with respect to the Health,Safety and Environmental aspects of the entire job (namely, the person employed by him, the equipment used, the environment etc.) under the jurisdiction of the district of that state where it is operating. The contractor has to ensure that all sub-contractors hired by him/her comply with the same requirement as the contractor himself/herself and shall be liable for ensuring compliance all HSE laws by the sub- contractors.

2) Contractor must employ a competent person as his/her own supervisor for supervising the jobs under the contract. The supervisor should possess valid electrical supervisor's license of competency which shall be valid for operating in Assam.

3) Contractor should have an office setup at Duliajan for easy and fast movement/processing of manpower, materials and related matters.

4) The number of work persons hired/engaged by the contractor shall depend on the quantum and/or exigency of jobs. Company engineer/ company supervisor may direct the contractor/contractor's supervisor to hire more persons if considered essential.

5) Every person deployed by the contractor must wear safety gadgets to be provided by the contractor. The Contractor shall provide proper Personal Protective Equipment (PPE) as per the hazard identified and risk assessed for the job and conforming to statutory requirement and company PPE schedule. These PPEs shall be approved by the departmental engineer and must be supplied to the workmen before commencement of job.

6) All the safety gears mentioned in the contract are to be provided to the working personnel before commencement of the work. Also, proper usage of the PPE by the working personnel shall be ensured by the supervisor appointed by the contractor.

7) The Contractor shall prepare a written Safe Operating Procedure (SOP) for the work to be carried out, including an assessment of risk, wherever possible and safe methods to deal with the same. The SOP should clearly state the risk arising to men,machineries & material from the mining operation / operations to be done by the contractor and how it is to be managed. The SOP should be updated /amended from time to time if required. The contractor shall also provide a copy of the SOP to the person designated by the mine owner who shall be supervising the contractor's work.

8) Contractor has to ensure that all work is carried out in accordance with the statutory rules and regulations and SOP and for the purpose they may deploy adequate qualified and competent personnel for the purpose of carrying out the job in a safe manner. For work of a specified scope/nature, they should develop and provide to Engineer in Charge a site specific code of prctice.

9) It will be entirely the responsibility of the Contractor or his/her Supervisor/representative to ensure strict adherence to all HSE measures and statutory rules during operation in OIL's installations and safety of workers engaged by him/her. The crew members will not refuse to follow any instruction given by company's Safety Officer / Engineer / Official / Supervisor/Junior Engineer for safe working/ operation.

10) All persons deployed by the contractor for working in a mine must undergo Mines Vocational Training, initial medical examination, PME. They should be issued cards stating the name of the contractor and the work and its validity period, indicating status of MVT, IME & PME.

11) Any issues regarding compensation arising out of the job carried out by the Contractor whether related to pollution, Safety or Health will be settled and payable by the contractor only.

12) Any compensation arising due to accident of the Contractor's personnel while carrying out the job, will be payable by the contractor only.

13) The contractor shall have to report all incidents and accidents including near missesto Engineer in Charge / departmental representative of the concerned department of OIL.

14) The contractor has to keep a register of the persons employed by him/her. The contractor's supervisor shall take and maintain attendance of his/her workpersons every day for the work, punctually.

15) If the company arranges any safety class / training for the working personnel at site (company employee, contractor worker, etc) the contractor will not have any objection to any such training.The workpersons shall be marked present during the period of such training.

16) Contractor/supervisor of the contractor shall arrange daily tool box meetings before commencement of work and regular site safety meetings and maintain records of the same.

17) Registers of records/details of workpersons, daily attendance, accident report etc. are to be maintained in Form B, E, J (as per Mines Rules 1955) by the contractor.

18) A contractor employee must, while at work, take reasonable care for the health and safety of people who are also at the employee's place of work and who may be affected by the employee's act or omissions at work. This shall also be ensured by the contractor's supervisor.

19) A contractor employee must, while at work, cooperate with his employer or other persons so far as is necessary to enable compliance with any requirement under the act or the regulations that is imposed in the interest of health, safety and welfare of the employee or any other person.

20) Contractor's arrangements for health and safety management shall be consistent with those for the company.

21) In case Contractor is found non-compliant of HSE laws as required, company will have the right for directing the contractor to take action to comply with the requirements, and for

further non-compliance, the contractor will be penalized prevailing relevant Acts/Rules/Regulations.

22) When there is a significant risk to health,environment or safety of a person or place arising because of a non-compliance of HSE measures, company will have the right to direct the contractor to cease work until the non-compliance is corrected.

23) The contractor should prevent the frequent change of his/her contractual employees as far as practicable.

24) The contractor should frame a mutually agreed bridging document between OIL & the contractor with roles and responsibilities clearly defined.

25) For any HSE matters not specified in the contract document, the contractor will abide by the relevant and prevailing Acts/rules/regulations/ pertaining to Health, Safety and Environment.

F.ADDITIONAL SAFETY ISSUES RELATED TO ELECTRICAL ENGINEERING DEPARTMENT:

The contractor shall ensure that all workmen engaged by him/her are provided with the PPEs required while carrying out a job

1) The contractor personnel must use the PPE's and other safety gadgets during work/working hours. Any workperson found without proper safety gadgets will not be allowed to work in the fields or in operational areas and no mandays will be considered for the same even though the contractor's personnel is present.

2) The contractor shall hold full responsibility for safety of his employed personnel while on duty and will follow safe operating procedures while carrying out at any job. Company shall not be held responsible for any work accident due to negligence towards the work/due to non - obeying of company supervisor's instructions by the contractor's personnel.

3) No worker under the contract shall operate any Electrical/feeder without the prior permission of the engineer or his authorized representative.

4) The Contractor/ Supervisor shall be familiar about the guidelines of Central Electricity Authority Regulations, 2010.

5) The contractor personnel shall take every possible care to keep the environment clean and free from pollution.

6) While providing the services, the contractor personnel shall follow the procedures and systems taking all control measures in all the stages of works to avoid any untoward incidents/accidents.

7) The contractor must ensure that the tools & tackles used by his/her worker are perfectly safe to operate.

Special Terms And Condition (For Item No. 10 & 30) for Supply, Installation & Commissioning of A.C. Direct Connected Single & Three Phase four wire Static Energy Meter with prepayment facility, Accuracy Class1.0 for 230 Volt and 415 Volt System with Pilfer Proof Meter Box and Operation and Maintenance Service for 5 (Five) Years .

1. Pre- bid conference will be held with the bidders to enable them to seek clarification on the technical specification and other points in the tender documents that may necessary for submission of tender. Date and venue of pre -bid conference will be informed to the bidder at the time of issue of tenders or will be informed later on.

2. The bidder has to agree to supply, install, and commission and to provide operation and maintenance services for additional 20% of meters at the same rate, if required.

3. The delivery of the meters shall be staggered into 3 to 5 lots. The bidder shall plan the delivery schedule in such a way that the supply, installation and commissioning of all the

meters are completed within18 months from the date of placement of order.

4. **The meters shall be guaranteed for a period of 5 (Five Years) Years from the date of commissioning against manufacturing defects arising out of faulty design or bad workmanship or components failure. Life of battery used in the meter shall be guaranteed for 10 years.** The meter/battery found defective within above guaranty period shall be replaced at free of cost within 15 days of receipt of intimation of failure/defects.

5. The bidder shall submit filled in Guaranteed Technical Particulars(GTP) of the meters. The bidder shall furnish all the necessary information as desired in the Schedule of Guaranteed Technical Particulars and data, appended with this Specification. If the bidder desire to furnish any other information in addition to the details as asked for, the same may be furnished against the last item of this Annexure. - 1 and 2.

6. The bidder shall quote installation and commissioning charge per meter basis and payment shall be made on actual.

7. The bidder shall submit copy of type test certificates for the offered meters and the pilfer proof box along with the technical bid.

i) Type Testing of Meter

The offered meter (Both Single Phase and Three Phase meter) should be type tested at any NABL accredited testing laboratory in accordance with IS 15884/2010 with latest amendments. The type test report should not be more than 5 (Five) years old. A copy of the Type Test results should be enclosed with the offer. If there is any modification in the design / parameters of the specifications or use of constituent materials in the offered meters, which may affect the characteristics as well as parameters of the meter, revised type test certificates as per the design, parameters and constituent material used in the offered meter, shall have to be submitted failing which the offer may be liable to be rejected.

a)Type Test Certificate from any NABL accredited Lab. shall only be considered.

b) Meter shall pass all the acceptance and routine tests as laid down in IS:15884/2010 with latest amendments and also additional tests as prescribed in this specification.

b) Type test certificate should contain the following information clearly:

1) Class of accuracy.

2) Meter constant

ii) Type testing of meter box

The bidder must furnish type test report including material verification of the offered / sample meter box from any NABL accredited testing laboratory along with the technical bid without which the offer will not be considered. Type test report should not be more than 5 years old.

Type testing at any recognized NABL accredited laboratory/CIPET in respect of one meter box as per the specified size, selected from any one of the offered lot during supply is to be conducted by the supplier at their own cost after placement of order for verification of material and quality of the box. If the type test results are not found satisfactory, the offered lot of meter along with the meter box will be rejected.

8. The bidder shall submit two sample meter with Customer Interface Unit (CIU) , connecting cable with connectors fixed to cable of each offered type and pilfer proof box (two for single phase and two for three phase) along with the offer. The sample meter shall be tested for the features that the bidder mentioned in the technical bid and confirmation of Guaranteed Technical Particulars(GTP) ,in presence of bidder's representative. All the features with GTP

mentioned in the offer shall be checked and shall be recorded for evaluation. Workshop facility shall be provided by OIL at Duliajan. The sample meter shall be returned after testing.

9. The meters shall be inspected at the manufacture's works unless otherwise specially agreed upon by the manufacturer and OIL and the entire test as per relevant IS should be carried out in presence of OIL's representatives.

i) OIL may carry out the inspection at any stage of manufacture. The manufacturer shall grant free access to OIL's representative at a reasonable time when the work is in progress. Inspection and acceptance of any equipment under this specification by OIL ,shall not relieve the supplier of his obligation of furnishing the equipment in accordance with the specification and shall not prevent subsequent rejection if the equipment is found to be defective.

ii) All acceptance tests and inspection shall be made at the place of manufacturer, unless otherwise especially agreed upon by the Bidder and OIL at the time of purchase. The Bidder shall provide all reasonable facilities without charge to the inspector, to satisfy him/her that the equipment is being tested in accordance with the specification.

iii) The supplier shall keep OIL informed in advance, about the manufacturing programme for each lot so that arrangement can be made for inspection.

iv) OIL reserves the right to insist for witnessing the acceptance / routine testing of the bought out items. The supplier shall give 15 days' advance intimation to enable OIL to depute his representative for witnessing the acceptance and routine tests.

v) OIL reserves the right to get type tested any meter or meter box etc. from any of the offered lots, reserve at any destination stores.

vi) Acceptance tests :

A) The acceptance tests as stipulated in CBIP / IS (with latest amendments) shall be carried out by the supplier in presence of OIL's representative.

B) Also the following additional tests are to be carried out on one meter randomly selected from each lot offered for inspection / acceptance testing.

(i) Magnetic induction of external origin (AC & DC)
(ii) Tamper & Fraud protection, as per of this specification.
(iii) Test of endurance upto 150% of IMAX, for two hours, followed by verification of limits of error.
(iv) Verification of internal components.
(v) Test of disconnect the output supply when credit reach to zero.
(vi) Test of reconnect the output supply on providing credit limit/charging with new token.
(vii) Test of disconnect output supply if load/current exceeded the preset value in the meter.
(viii) Test of reconnect output supply if load/current falls below the preset value in the meter.
(ix) Test of visible and audible low credit warning.
(x) Test of credit balance and debit.

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vii) Routine Tests :

Each and every meter of the offered lot shall undergo the routine tests as well as functional tests as per IS: 15884/2010 with latest amendment and after sealing the meters, the manufacturers will submit the routine test report of all the meters as well as a statement showing seal Sl. Nos. against each meter. Sl. No. of offered lot in soft copy (MS WORD or EXCEL format) to OIL, along with offer letter for acceptance test.

viii) TEST FACILITIES :

The Bidder shall submit the details of the equipment available for carrying out the various tests as per relevant Standards.

ix) DOCUMENTATION : a) One set of routine test certificates shall accompany each dispatch consignment. b) The acceptance test certificates in case pre-dispatch inspection or a routine test certificate in cases where inspection is waived has to be submitted to OIL. 9. Submission of Drawing/ operational manuals i) Three (3) copies of drawing complete in all respect should be submitted to the OIL for accordance of approval within one month after placement of order. 10 copies of approved drawing are to be submitted for distribution to sites. ii) Ten sets of operating manuals shall be supplied to the office of the Head - Electrical for distribution at sites. 10. Principle of operation of the meter, outlining the methods and stages of computation of various parameters starting from input voltage and current signals including the sampling rate, if applicable shall be furnished by the bidder at the time of commissioning. 11. Training: The bidder shall impart training to 10 nos. of OIL's personnel on principle of operation, setting and resetting of meters, data retrieval from the meter, processing and preparation of reports, etc. 12. Bidders should compulsorily fill Annexure-I- GTP of single phase meter & Annexure-II- GTP of three phase meter. 13. The bidder shall submit work plan for supply, installation and commissioning of meters within one month of placement of order. 14. 70% payment shall be made against receipt of materials at site and balance 30% of payment including installation and commissioning charges shall be made after successful commissioning of meters. 15. The bidder shall quote for Operation and Maintenance Services for per meter for five years indicating yearly break up. Payment shall be made on quarterly basis. OIL reserve the right to increase or decrease the number of meters offered for operation and maintenance services. 16. The starting dates for operation and maintenance service shall be the date on which last meter is installed and commissioned. 17. The supply, installation shall be completed in 18 months from the date of placement of order, failing which liquidated damage of 0.05% shall be deducted per week with maximum of 7.5% of the total value of the tender . 18. The bidder shall submit technical catalogue/literature with connection diagram of offered meter with pre-payment facilities along with the offer.	

NOTE:

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the NIT terms and conditions of NIT.

Annexure- DDD

INTEGRITY PACT

Between

Oil India Limited (OIL) hereinafter referred to as "The Principal"

And

(Name of the bidder).....hereinafter referred to as "The Bidder/Contractor"

Preamble :

The Principal intends to award, under laid down organizational procedures, contract/s for Tender No. **SDI6388P15.** The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s and Contractor/s.

In order to achieve these goals, the Principal cooperates with the renowned international Non-Governmental Organisation "Transparency International" (TI). Following TI's national and international experience, the Principal will appoint an external independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 - Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.

2. The Principal will, during the tender process treat all Bidders with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.

3. The Principal will exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a Page 2 of 6 substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder/Contractor

(1) The Bidder/Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

1. The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which h e/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2. The Bidder/Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, Subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.

3. The Bidder/Contractor will not commit any offence under the relevant Anticorruption Laws of India; further the Bidder/Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

4. The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

(2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from tender process and exclusion from future Contracts

If the Bidder, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or risibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

1. If the Bidder/Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Principal is entitled also to exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressions within the company hierarchy of the Bidder and the

amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.

2. The Bidder accepts and undertakes to respect and uphold the Principal's Absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.

3. If the Bidder/Contractor can prove that he has restored/recouped the Damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.

1. A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.

Section 4 - Compensation for Damages

1. If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to 3 % of the value of the offer or the amount equivalent to Earnest Money Deposit/Bid Security, whichever is higher.

2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

3. The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount or the liquidated damages, the Bidder/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

Section 5 - Previous transgression

1. The Bidder declares that no previous transgression occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/Contractor/Subcontractors

1. The Bidder/Contractor undertakes to demand form all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.

2. The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.

3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 - Criminal charges against violating Bidders/Contractors/ Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor, which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - External Independent Monitor/Monitors (three in number depending on the size of the contract) (to be decided by the Chairperson of the Principal)

1. The Principal appoints competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.

3. The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor with confidentiality.

4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

6. The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.

7. If the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8. The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Chairperson of the Principal.

Section 10 - Other provisions

1. This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.

2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

3. If the Contractor is a partnership or a consortium, this agreement must be, signed by all partners or consortium members.

4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intensions.

R BARMAN
SR MANAGER MATERIALS (IP) ----------

For the Principal For the Bidder/Contractor

Place. Duliajan. Witness 1 : .....

Date 25.02.2015 . Witness 2 : .....

Annexure -3

Checklist to be submitted by the bidder

[The following check list must be completed and submitted with the offer. These will ensure that your offer is properly evaluated. Please tick mark Yes or No. to the following question, in the right hand column]

Please indicate YES/NO against each clause		
1	Whether quote for supply, Installation and Commissioning and Operational Maintenance Service for 5 (Five) Years for Oil India Limited, Duliajan	YES/NO
2	Whether quoted as OEM of single phase/three phase electronic energy meter and whether documentary evidences submitted	YES/NO
3	Whether quoted as authorized dealer of OEM of single phase /three phase electronic energy meter and whether documentary evidences submitted	YES/NO
4	Whether documentary evidence of last 5 years experience of supply , installation commissioning of energy meters record submitted	YES/NO
5	Whether submitted documents reflecting last three years Annual turnover of Bidder.	YES/NO
6	Whether pre bid survey of the site carried out	YES/NO
7	Whether submitted the undertaking of submission of valid Electrical Contractor License issued or recognised by Licensing Board, Govt. of Assam before placement of firm order.	YES/NO
8	Whether submitted the undertaking of employing technician having valid Electrical wireman/electrician license issued or recognised by Electrical Licensing Board, Government of Assam before placement of firm order.	YES/NO
9	Whether submitted the undertaking of employing a supervisor having valid Supervisor's Certificate of Competency, issued or recognised by Electrical Licensing Board, Government of Assam before placement of firm order.	YES/NO
10	Whether sample meters shall be submitted within 15 days from the date of bid opening.	YES/NO
11	Whether submitted copy of type test certificates for the offered meters along with the technical bid.	YES/NO
12	Whether submitted filled in guaranteed technical parameter of single phase and three phase meter , Annexure -1 and annexure-2	YES/NO
13	Whether offered meter guaranteed for Five years from the date of commissioning.	YES/NO
14	Whether quoted for Operational Maintenance Services for Five years and break up for one year	YES/NO
15	Whether submitted the delivery schedule	YES/NO
16	Whether agreed to Payment Terms	YES/NO
17	Whether agreed to Penalty Terms	YES/NO

18	Whether offered meter conforms to all the standards as mentioned in the specification.	YES/NO
19	Whether offered meter suitable for the ENVIRONMENTAL CONDITIONS as mentioned.	YES/NO
20	Whether offered product meet all the technical specification.	YES/NO
21	Whether offered meter able to disconnect the load in case of exceeding the load limit (KW).	YES/NO
22	Whether Material of Construction of the offered meter is non-hygroscopic non ageing and conform to tests as specified in relevant Standards	YES/NO
23	Whether offered meter conform to the degree of protection IP 51	YES/NO
24	Whether offered meter is wall mounted projected type.	YES/NO
25	Whether a diagram of connections shall be provided inside the cover of the terminal block.	YES/NO
26	Is there any multiplying factor for KHW reading in the offered meter meter?	YES/NO
27	Whether data stored in non-volatile memory (NVM).	YES/NO
28	Whether stored data retain for 5 years under un-powered condition.	YES/NO
29	Whether offered meter display the required parameter in both Auto Display and Push Button mode as per the given sequence.	YES/NO
30	Whether self- diagnostic feature available with the offered meter.	YES/NO
31	Whether necessary base computer software provided with the meter.	YES/NO
32	Whether separately highlighted any deviation from the technical specification	YES/NO
33	Whether offered item is tested in Govt./NABL accredited laboratory	YES/NO
34	Whether abide by the clause of replacement of defective meters	YES/NO
35	Whether Accuracy class of meter is 1.0	YES/NO
36	Carry out all the Operational Maintenance Services as per scope of work.	YES/NO
37	Provide Minimum Experienced Diploma Holder/Graduate Engineer – 1 no. , Technician- 2 nos. for Operational Maintenance Services.	YES/NO
38	Whether submitted the undertaking of awareness of aware of all electrical/safety and other hazards associated with the execution of the contract	YES/NO

Note: Deviations to any terms and conditions of the tender must be explicitly mentioned. Otherwise it will be construed that the bidder agrees to all the terms and conditions of the tender fully as it is.

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Annexure-I

Guaranteed Technical Pararmeter - Single Phase Energy Meter

Particulars	Specification	Bidder's specification
Applicable Standards	Offered meter should comply to IS: 13779 & IS: 15884: 2010	
Reference Voltage	240V (L-N) (-20%to+15%)	
Current Rating	10-60A	
Starting Current	0.2%of rated current	
Accuracy	Class1.0 as per to IS 13779:1999 & IS 15884:2010 for ActiveEnergy	
Operating Temperature range	-10 deg C to 55 deg C	
Humidity	<= 95%	
Frequency	50 Hz+/-5%	
Influence Quantities	As per IS 13779	
Power Consumption of meter	As per IS 13779.	
Meter Display	Min 6digit LED/ LCD Display with legends to identify parameters on meter	
Parameters to be measured	Instantaneous-V, I, kW, Power factor Cumulative –Active Energy, Apparent Energy, Average power factor. Previous Month parameters: Maximum Demand in kW, kWh, Average PF.	
Power Quality Information	Logging of quality of supply events like power on/off, over/under voltage, over current (20events)	
Maximum Demand	Should have Maximum Demand register KW with integration period of 30 minutes through monthly auto/manual reset.	
Load Survey/Interval Data	45days data to be recorded with 30 minutes integration period for Active Energy, Apparent energy, Average Voltage, Average Current.	
Time of Use	Offered meter should support 8 tariff registers/ 8 time zones per day.	
LED / LCD Indicators	Offered meter should display LED indicator for pulse/kWh. Offered meter should show tamper display in the meter display however meter	

	should display switch status.	
Tamper/Event Recording	Offered meter should record last 30 events considering all tampers defined should be detected and logged as tamper events on first in first out basis along with date & time of occurrence and restoration, total tamper counts with tamper identification. Snap shot of kWh, V and I should be recorded along with the following tamper events. Cover open detection Neutral disturbance Magnetic Interference	
Alarm	Offered meter should have alarm for power on/off, Over current to consumer.	
Measuring Elements	Meter should have two measuring elements-one in phase and other in neutral path.	
Anti-Tamper features	As per CEA Regulations.	
Connect/Disconnect Indication	Connect /Disconnect facility to be provided on both the wires i.e. phase and neutral simultaneously. Status of Relay – indication of status of relay i.e. Connected / Disconnected should be available on display as well as through communication. Connection and Disconnection should also be logged as events.	
RTC& time Synchronization	Meter shall have RTC with 20years calendar programmed in the memory and provision for time synchronization	
Data Retention	Non Volatile Memory (non battery backed up) with10 yearsdata retention in absence of power.	
Meter Housing	High grade engineering plastic, IP51,provision for sealing meter cover to meter base, provision for sealing terminal cover, provision for sealing any other compartment for communication module	

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Annexure-2

General Technical Parameter - Three Phase Energy Meter

Particulars	Specification	Bidder's Specification
Applicable Standards	Offered meter should comply to IS: 13779 & IS: 15884: 2010	
Reference Voltage	240V (L-N) (-20% to+15%)	
Current Rating	10-60 A	
Starting Current	0.2/0.4 % of rated current	
Accuracy	Class1.0 as per to IS 13779:1999 & IS15884:2010 for Active Energy	
Operating Temperature range	-10degC to 55degC	
Humidity	<= 95%	
Frequency	50Hz+/-5%	
Influence Quantities	As per IS13779	
Power Consumption of meter	As per IS13779	
Meter Display	Min6digit LCD Display with legends to identify parameters on meter	
Parameters to be measured	Instantaneous-V, I, kW, Power factor Cumulative –Active Energy, Apparent Energy Average power factor. Previous Month parameters: MD in kW, kWh, Average PF	
Power Quality Information	Logging of quality of supply events like power on/off, over/ under voltage, over current (20events)	
Maximum Demand	Should have Maximum Demand register kW with integration period 30minutes.Resets should be auto/manual mode, maximum five times allowed in 24 hours.	
Load Survey /Interval Data	45days data to be recorded with 30minutes integration period for Active Energy, Average Voltage, Average Current.	
Time of Use	Meter should support 8tariff registers/ 8	

Particulars	Specification	Bidder's Specification
	time zones per day.	
LED/LCD Indicators	Meter should display LED/LCD indicator for pulse/kWh. Offered meter will show tamper display in the meter display however meter will display switch status.	
Tamper / Event Recording	Meter should record last 30 events considering all tampers defined will be detected and logged as tamper events on first in first out basis along with date &time of occurrence and restoration, total tamper counts with tamper identification. Snapshot of kWh, V and I shall be recorded along with the following tamper events. Cover open detection Neutral disturbance Magnetic Interference	
Alarrm	Offered meter will have alarm for power on/off, Over current to consumer.	
Measuring Elements	Meter should have two measuring elements-one in phase and other in neutral path.	
Anti-Tamper features	As per CEA Regulations.	
Connect/Disconnect Indication	Connect/Disconnect facility to be provided on both the wires i.e. phase and neutral simultaneously. Status of Relay – indication of status of relay i.e. Connected / Disconnected should be available on display as well as through communication. Connection and Disconnection should also be logged as events.	
RTC& time Synchronization	Meter shall have RTC with 20years calendar programmed in the memory and provision for time synchronization	
Data Retention	Non Volatile Memory (non battery backed up) with10years data retention in absence of power.	
Meter Housing	High grade engineering plastic, IP51, provision for sealing meter cover to meter base, provision for sealing terminal cover, provision for sealing any other compartment for communication module	

PRICE SHEDULE

(To be submitted as Notes & attachment only in Price Bid)

TENDER NO. SDI6388P15 DT: 24.02.2015

	UNIT PRICE (RS)	TOTAL PRICE (RS)
ITEM NO. 10 SINGLE PHASE METER		
ITEM NO.20 INSTALLATION AND COMMISIONING OF ITEM NO. 10		
ITEM NO. 30 THREE PHASE METER		
ITEM NO.40 INSTALLATION AND COMMISIONING OF ITEM NO. 30		
OPERATION & MAINTENANCE COST (OMC) FOR 5 YEARS FOR BOTH ITEM NO. 10 & 30		
PACKING AND FORWARDING		
EXCISE DUTY		
CST/VAT		
SERVICE TAX ON INSTALLATION & COMMISIONING AND OMC		
FREIGHT CHARGE UPTO DULIAJAN		
ANY OTHER CHARGES WHICH IS NOT SHOWN ABOVE		
TOTAL VALUE		

Bidders Response Sheet **Annexure-FFF**

Tender No.	
Bidders Name	

Sl No.	Description	Remarks
1	Name of Bidder	
2	Whether tender document purchased from OIL's offices.	
3	Place of Despatch	
4	Whether Freight charges have been included in your quoted prices	
5	Whether Insurance charges have been included in your quoted prices	
6	Make of quoted Product	
7	Offered Validity of Bid as per NIT	
8	Delivery Period in weeks from placement of order	
9	Complied to Standard Payment Terms of OIL or not.	
10	Bid Security Submitted (if applicable)	
11	Details of Bid Security Submitted to OIL (if applicable)	
	a) Bid Security Amount (In Rs):	
	b) Bid Security Valid upto:	
	c) Name and Full Address of Issuing Bank:	
12	Confirm that the Bid Security submitted (In case of Bank Guarantee) is in toto as per format provided in the tender.	
13	Bid Security if Not submitted reasons thereof	
14	Whether you shall submit Performance Security in the event of placement of order on you (if applicable)	
15	Integrity Pact Submitted (if applicable)	
16	Confirm that the Integrity Pact submitted is in toto as per format provided in the tender.	
17	Whether submitted documents in support of General Qualification criteria of NIT	
18	If bidder is Small scale unit whether you have quoted your own product	
19	If bidder is Small scale unit whether you are eligible for purchase preference (as per Govt guideliness)	
20	Whether filled up the bank details for online payment as per Annexure GGG	

NOTE: Please fill up the greyed cells only.

Technical Bid Checklist **Annexure-EEE**

Tender No.	
Bidder's Name :	

		Compliance by Bidder	
SL. NO.	**BEC / TENDER REQUIREMENTS**	Indicate 'Confirmed' / 'Not Confirmed' / Not applicable	Indicate Corresponding page ref. of unpriced bid or Comments
1	**Bidder to confirm that he has not taken any exception/deviations to the bid document .**		
2	**Confirm that the product offered strictly conform to the technical specifications.**		
3	**Confirm that the Offer has been made with Bid Bond / Bank Guarantee / Earnest Money along with the offer (Wherever Applicable) ?**		
4	**Confirm unconditional validity of the bid for 120 days from the date of opening of techno-commercial bid.**		
5	**Confirm that the prices offered are firm and / or without any qualifications?**		
6	**Confirm that all relevant fields in the on-line biding format been filled in by the bidders for the items quoted by them.**		
7	**Confirm that the the price bid is in conformity with OIL's online bidding format ?**		
8	**Confirm that the Bid comply with all the terms & conditions ?**		
9	**Confirm that the offers and all attached documents are digitally signed using digital signatures issued by an acceptable Certifying Authority (CA) as per Indian IT Act 2000.**		
10	**CONFIRM THAT YOU HAVE SUBMITTED THE DULY SIGNED INTEGRITY PACT DOCUMENT (Wherever Applicable)**		
11	**CONFIRM THAT YOU HAVE SHALL SUBMIT PERFORMANCE BANK GUARANTEE AS PER NIT IN THE EVENT OF PLACEMENT OF ORDER ON YOU (Wherever Applicable)**		
12	**CONFIRM THAT YOU HAVE SUBMITTED DOCUMENTS AS PER GENERAL QUALIFICATION CRITERIA**		

NOTE: Please fill up the greyed cells only.

ANNEXURE - GGG

(TO BE FILLED UP BY ALL THE VENDOR IN THEIR OWN LETER HEAD)
(ALL FIELDS ARE MANDATORY)

Tender No.	**:……**
Name of Beneficiary	**:M/s……**
Vendor Code	**:……...**
Address	**:..…….**
	..……..
Phone No. (Land Line)	**:..…….**
Mobile No.	**:..…….**
E-mail address	**:..…….**
Bank Account No. (Minimum	
Eleven Digit No.)	**:..…….**
Bank Name	**:..…….**
Branch	**:..…….**
Complete Address of your	**:..…….**
Bank	**:..…….**
IFSC Code of your Bank	
a) RTGS	**:……...**
b) NEFT	**:……...**
PAN	**:……...**
VAT Registration No.	**:……...**
CST Registration No.	**:……...**
Service Tax Registration No.	**:……...**
Provident Fund Registration	**:……...**

I/We confirm and agree that all payments due to me/us from Oil India Limited can be remitted to our above mentioned account directly and we shall not hold Oil India Limited responsible if the amount due from Oil India Limited is remitted to wrong account due to incorrect details furnished by us.

……
Office Seal **Signature of Vendor**

Counter Signed by Banker:
Seal of Bank:

Enclosure: Self attested photocopies of the following documents-

1) **PAN Card**
2) **VAT Registration Certificate**
3) **Service Tax Registration**
4) **CST Registration**
5) **Provident Registration Certificate**
6) **Cancelled cheque of the bank account mentioned above (in original).**
7) **Bank Statement not older than 15 days on the date of submission.**