

**Amendment No. 4**

Date: 19.01.2018

**Tender Package Name: Construction of 2X50 MVA, 220/33 kV Nagrota (New) substation including LILO of 220kV Kishenpur-Barn S/C line on D/C Tower at Nagrota Substation under PMDP Sceme-15**

**Tender Specification No- RECTPCL/PIA/JKPDD/SS & LILO-01of 2017 Dated: 18-11-2017**

S. No.	Clause No.	Existing Clause	To be Read as
<b>A. INVITATION FOR BIDS , SEC-I, VOL-I</b>			
<b>1</b>	<b>Clause No-3.1 (a)</b>	<b>a) Construction of 220/33 kV Nagrota Grid Substation:-</b>  i. 220KV Line Bay- 2 nos. ii. 220KV Bus Coupler Bay- 1 no. iii. Aux., Neutral & Tertiary buses- 1 no. iv. 220KV Transformer Bay- 2 nos. v. 220 KV Transfer Bus Bay- 1 no. vi. Power Transformer (2x50 MVA, 220/33KV, 3-Phase) - 2 nos. vii. 33KV Line Bay- 4 nos. viii. 33KV Bus Coupler Bay- 1 no. ix. 33KV Transformer Bay (33 KV side of 220/33KV Transformer)- 2 nos. x. 33KV Aux. Bay- 1 no. <b>xi. Construction of Auxiliary Sub Station</b> xii. Common Miscellaneous works of 220/ 33 KV Grid Station xiii. Common Civil works of 220/ 33 KV Grid Station (Rural Areas)	<b>a) Construction of 220/33 kV Nagrota Grid Substation:-</b>  i. 220KV Line Bay- 2 nos. ii. 220KV Bus Coupler Bay- 1 no. iii. Aux., Neutral & Tertiary buses- 1 no. iv. 220KV Transformer Bay- 2 nos. v. 220 KV Transfer Bus Bay- 1 no. vi. Power Transformer (2x50 MVA, 220/33KV, 3-Phase) - 2 nos. vii. 33KV Line Bay- 4 nos. viii. 33KV Bus Coupler Bay- 1 no. ix. 33KV Transformer Bay (33 KV side of 220/33KV Transformer)- 2 nos. x. 33KV Aux. Bay- 1 no. xi. Common Miscellaneous works of 220/ 33 KV Grid Station xii. Common Civil works of 220/ 33 KV Grid Station (Rural Areas)

S. No.	Clause No.	Existing Clause	To be Read as
	<b>Clause No-3.1 (b)</b>	<p>Construction of 220kV LILO for Nagrota Substation:-</p> <p>The following transmission lines and sub-stations are included in the scope of the Contractor under various packages:</p> <ul style="list-style-type: none"> <li>➤ Construction of S/C LILO of Barn-Kishenpur Transmission Line- 5 KMs on 220 kV D/C Tower.</li> </ul> <p>This Specification covers the following scope of works:</p> <p>.....</p> <p>.....</p> <p>iii) Fabrication and supply of all type of transmission line towers, including River crossing towers (wherever applicable) as per Employer’s design/drawings including fasteners, step bolts, hangers, D-shackles etc. ;</p> <p>.....</p> <p>.....</p> <p>vi) Classification of foundations for different type of tower and casting of foundations for tower footings as per Employer’s foundations drawing;</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Construction of 220kV LILO for Nagrota Substation:-</p> <p>The following transmission lines and sub-stations are included in the scope of the Contractor under various packages:</p> <ul style="list-style-type: none"> <li>➤ Construction of S/C LILO of Barn-Kishenpur Transmission Line- 5 KMs on 220 kV D/C Tower.</li> </ul> <p>This Specification covers the following scope of works:</p> <p>.....</p> <p>.....</p> <p>iii) Fabrication and supply of all type of transmission line towers, including River crossing towers (wherever applicable) as per <b>Contractor’s design/drawings</b> including fasteners, step bolts, hangers, D-shackles etc. ;</p> <p>.....</p> <p>.....</p> <p>vi) Classification of foundations for different type of tower and casting of foundations for tower footings as per <b>Contractor’s foundations drawing;</b></p> <p>.....</p> <p>.....</p> <p>.....</p>

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		The above scope of work is indicative and the detailed scope of work is given in the Technical Specification (Volume-II) of the Bidding Documents.	The above scope of work is indicative and the detailed scope of work is given in the Technical Specification (Volume-II) of the Bidding Documents.
<b>B. INSTRUCTION TO BIDDER, SEC-II, VOL-I</b>			
<b>1</b>	<b>Clause no-6.4</b>	The Bidder's designated representative(s) is/are invited to attend a pre-bid meeting, which, if convened, will take place at the venue and time stipulated in the IFB. The purpose of the meeting will be to clarify any issues regarding the e-procurement method, the Bidding Documents in general and the Technical Specifications in particular. The Bidder is requested, as far as possible, to submit any question in writing, to reach the Employer not later than one week before the meeting. It may not be practicable at the meeting to answer questions received late, but questions and responses will be transmitted as indicated hereafter. Minutes of the meeting, including the text of the questions raised (without identifying name of the bidders) and the responses given, together with any responses prepared after the meeting, will be transmitted without delay through the e-bidding portal only. Any modification of the Bidding Documents listed in ITB Sub-Clause 5.1, which may become necessary as a result of the pre-bid meeting shall be made by the Employer	The Bidder's designated representative(s) is/are invited to attend a pre-bid meeting, which, if convened, will take place at the venue and time stipulated in the IFB. The purpose of the meeting will be to clarify any issues regarding the e-procurement method, the Bidding Documents in general and the Technical Specifications in particular. The Bidder is requested, as far as possible, to submit any question in writing, to reach the Employer not later than one week before the meeting. It may not be practicable at the meeting to answer questions received late, but questions and responses will be transmitted as indicated hereafter. Minutes of the meeting, including the text of the questions raised (without identifying name of the bidders) and the responses given, together with any responses prepared after the meeting, will be transmitted without delay through the e-bidding portal only. <b>Any modification of the Bidding Documents listed in ITB Sub-Clause 5.1, which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of Clarification/Amendment/Addendum pursuant to ITB Clause-6 &amp; 7 respectively and not through the minutes of the pre-bid meeting.</b>

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		<p>exclusively through the issue of an Addendum pursuant to ITB Clause 7 and not through the minutes of the pre-bid meeting.</p> <p>Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.</p>	<p>Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.</p>
2	<b>Clause No-7.2</b>	<p>The amendment will be notified only through the portal <a href="http://www.mstcecommerce.com/eeprohome/rectpcl">http://www.mstcecommerce.com/eeprohome/rectpcl</a>. The amendments to the Bidding Documents will be binding on the bidders and the notification of the amendment through portal shall be deemed to be construed that such amendment(s) to the Bidding Documents have been taken into account by the Bidder in its bid.</p>	<p>The amendment will be notified only through the portal <a href="http://www.mstcecommerce.com/eeprohome/rectpcl">http://www.mstcecommerce.com/eeprohome/rectpcl</a>. <b>The clarifications/amendments/addendums to the Bidding Documents will be binding on the bidders and the notification of the clarifications / amendments / addendums through portal shall be deemed to be construed that such clarifications / amendments / addendums to the Bidding Documents have been taken into account by the Bidder in its bid.</b></p>
3	<b>Clause No- 9.I. (ix)</b> <b>New Clause</b>	No such Clause	<b>Bidder shall submit signed copy of bid document alongwith all clarifications/ amendments/addendums thereof issued in the e-bidding portal.</b>
4	<b>Clause No- 9.II</b>	<p><b>Soft Copy Part</b></p> <p>Soft copy part of the bid shall comprise of following documents to be uploaded on the portal as per provisions therein.</p> <p>(a) <u>As part of First Envelope (Cover-1 of the e-Bidding Portal)</u></p> <p>(i) Programmed file -Attachments (Attachment to Bid Form</p>	<p><b>Soft Copy Part</b></p> <p>Soft copy part of the bid shall comprise of following documents to be uploaded on the portal as per provisions therein.</p> <p>(a) <u>As part of First Envelope (Cover-1 of the e-Bidding Portal)</u></p> <p>(i) Programmed file -Attachments (Attachment to Bid Form including attachment to QR) in</p>

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		<p>including attachment to QR) in MS Excel format &amp; its revision covering various attachments, Integrity Pact and bid form for first envelope.</p> <p><b>(ii)</b> Scanned copies of all the documents mentioned at 15.4 of ITB as part of Cover-2 of the e-Bidding portal.</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>MS Excel format &amp; its revision covering various attachments, Integrity Pact and bid form for first envelope.</p> <p><b>(ii)</b> Scanned copies of all the documents mentioned at 15.4 of ITB as part of Cover-2 of the e-Bidding portal.</p> <p><b>(iii) Bidder shall submit signed &amp; scanned copy of bid document alongwith all clarifications/ amendments/ addendums thereof issued in the e-bidding portal.</b></p> <p>.....</p> <p>.....</p>
<b>C. GENERAL CONDITIONS OF CONTRACT, SEC-IV, VOL-I</b>			
<b>1</b>	<b>Clause No-39, Limitations Liability</b>	<p><b><u>Limitation of Liability:</u></b></p> <p><b>(i) Liability after expiration of Defects Liability Period</b></p> <p>The Contractor shall have no liability to the RECTPCL for any loss of or damage to the RECTPCL's physical property which occurs after the expiration of the Defects Liability Period unless caused by gross misconduct of the Contractor.</p> <p><b>(ii) Exclusive Remedies</b></p>	<p><b><u>Limitation of Liability:</u></b></p> <p><b>(i)</b> Except in cases of gross negligence or willful misconduct,</p> <p>(a) the Contractor and the Employer shall not be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the Employer and</p>

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		<p>The RECTPCL and the Contractor intend that their respective rights, obligations and liabilities as provided for in these conditions shall alone govern their rights under the Contract and in relation to the Works.</p> <p>Accordingly, the remedies provided under the Contract in respect of or in consequence of:</p> <ul style="list-style-type: none"> <li>a) any breach of Contract, or</li> <li>b) any negligent act or omission, or</li> <li>c) death or personal injury, or</li> <li>d) loss or damage to any property</li> </ul> <p>are to be to the exclusion of any other remedy that either may have against the other under the law governing the Contract or otherwise.</p> <p><b>(iii) Mitigation of Loss or Damage</b></p> <p>In all cases the party claiming a breach of contract or a right to be indemnified in accordance with the contract shall be obliged to take all reasonable measures to mitigate the loss or damage</p>	<p>(b) the aggregate liability of the Contractor to the Employer, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Contractor to indemnify the Employer with respect to patent infringement.</p> <p><b>(ii) Liability after expiration of Defects Liability Period</b></p> <p>The Contractor shall have no liability to the RECTPCL for any loss of or damage to the RECTPCL's physical property which occurs after the expiration of the Defects Liability Period unless caused by gross misconduct of the Contractor.</p> <p><b>(iii) Exclusive Remedies</b></p> <p>The RECTPCL and the Contractor intend that their respective rights, obligations and liabilities as provided for in these conditions shall alone govern their rights under the Contract and in relation to the Works.</p> <p>Accordingly, the remedies provided under the Contract in respect of or in consequence of:</p>

S. No.	Clause No.	Existing Clause	To be Read as
			<p>e) any breach of Contract, or  f) any negligent act or omission, or  g) death or personal injury, or  h) loss or damage to any property</p> <p>are to be to the exclusion of any other remedy that either may have against the other under the law governing the Contract or otherwise.</p> <p><b>(iv) Mitigation of Loss or Damage</b></p> <p>In all cases the party claiming a breach of contract or a right to be indemnified in accordance with the contract shall be obliged to take all reasonable measures to mitigate the loss or damage</p>
<b>D. SAMPLE FORMS &amp; PROCEDURES, SEC-IX, VOL-I</b>			
<b>1</b>	<b>Appendix-7 (Guarantees, Liquidity Damages for Non- performance)</b>	<b>Existing Appendix</b>	<b>Revised Appendix for Guarantees, Liquidity Damages for Non-performance is annexed at Annexure-1 to Amendment-4.</b>

**4.7 GUARANTEES, LIQUIDATED DAMAGES FOR NON – PERFORMANCE**

1. The equipment offered shall meet the rating and performance requirements stipulated in Technical Specification for various equipment or indicated in Data requirement.
2. The ratings and performance figures of the below mentioned equipments are guaranteed by you.

<b>Sl.</b>	<b>Equipment</b>	<b>Parameter to be taken for applying differential price factor (F)</b>
1.	50 MVA, 220/33 kV, Three Phase Power Transformer	Differential Copper loss (KW)
		Differential Iron loss (KW)
		Auxiliary Losses (KW)

3. If the aforementioned guarantees are not established at factory tests, then the Employer at his discretion may reject or accept the equipment after assessing the liquidated damages as per table above against the Contract and such amounts plus GST payable thereon shall be deducted from the Contract Price or otherwise recovered from the Contractor. However, the equipment under no circumstances shall be accepted if the measured losses are beyond the permissible limit mentioned at clause 4 (e) of this appendix.

**4. GUARANTEE, EVALUATION OF LOSSES & PENALTIES**

The bidder shall indicate the Guaranteed values of No load losses, load losses and auxiliary losses in his bid.

**a. Capitalization Formula for Transformer Losses**

The rate of Capitalization of transformer losses depends upon the rate of interest, rate of electrical energy per kWh, life of transformer and average annual loss factor. In computing the rate of capitalization of iron losses, copper losses and auxiliary losses, following realization assumptions have been made:

- i) Rate of interest ( $r = 12.5\%$ )
- ii) Rate of electrical energy ( $EC = Rs. 7/kW$ )
- iii) Life of the transformer ( $n = 35$  Years)
- iv) Average annual loss factor ( $LS = 0.432$ )
- v) Annual load factor ( $LF = 60$ )

**Capitalized Cost of Transformer** = Initial cost + Capitalized cost of annual iron losses + Capitalized cost of annual copper losses + Capitalized cost of annual auxiliary losses.

$$\text{Capitalized cost of iron losses per KW} = 8400 \times \text{EC} \times \frac{(1+r)^n - 1}{r(1+r)^n}$$

$$\text{Capitalized cost of copper Losses per kW} = 8400 \times \text{EC} \times \frac{(1+r)^n - 1}{r(1+r)^n} \times \text{LS}$$

$$\text{Capitalized cost of auxiliary Losses per kW} = 0.4 \times 8400 \times \text{EC} \times \frac{(1+r)^n - 1}{r(1+r)^n}$$

- b. The measured losses of each transformer shall not exceed the value in the tender, by more than the tolerance admissible as per **IS: 2026**. The losses need to be very low.
- c. The No load loss in Kilo watts at rated voltage and rated frequency shall be guaranteed. The excess of difference between test values of total losses and No load losses in 'Kilo-watt' over corresponding guaranteed losses shall be recovered. In case of fraction of KW, the penalties shall be applied for full KW.
- d. **Liquidated Damage for Excessive Losses:** On testing, if it is found that actual losses are more than the values quoted including maximum tolerance, the liquidate damages shall be recovered from the bidder.

Liquidated damages shall be applied in the following manner depending on the variation of losses with respect to the maximum values:

- i. Measured losses exceeding Maximum value by 0 to +5%: rates of LD that calculated from above formula.
  - ii. Measured losses exceeding Maximum value by > +5% to +10%: Twice the rates of LD that calculated from above formula.
  - iii. Measured losses exceeding Maximum value by > +10% to +15%: Four times the rates of LD that calculated from above formula.
- e. **REJECTION :**  
The Employer may reject any transformer if during tests or service any of the following conditions arise:
- i) No load loss exceeds the guaranteed value by 15% or more.
  - ii) Load loss exceeds the guaranteed value by 15% or more.
  - iii) Total losses exceed the guaranteed value by 10% or more.