



**AIR SEPARATION UNIT TO BE DEVELOPED BY BOO PROCESSOR  
TO GENERATE OXYGEN AND NITROGEN FOR COAL  
GASIFICATION COMPLEX AT BARDHMAN, WEST BENGAL**



**COAL GAS INDIA LIMITED (CGIL)**

**Date 25.05.2026**

**CORRIGENDUM-VII**

**NIT NO., : NIT No: PNMM/PC-217/E-002 Dated 31.12.2025**

**SUB. : AIR SEPARATION UNIT TO BE DEVELOPED BY BOO PROCESSOR TO  
GENERATE OXYGEN AND NITROGEN FOR COAL GASIFICATION COMPLEX  
AT BARDHMAN, WEST BENGAL**

This is for information to all Bidders who are willing to participate in the subject NIT, that CORRIGENDUM-VII date 25.05.2026 is being issued and shall be read in conjunction to the NIT and subsequent Amendments issued till date.

\*All other terms & conditions of NIT shall be as per original NIT and subsequent Amendment(s).

For & on behalf of  
COAL GAS INDIA LIMITED (CGIL)

*Ritu Agarwal*  
*25/5/26*

(Ms. Ritu Agarwal)  
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CORRIGENDUM-VII dated 25.05.2026**



Sl. No.	Reference of Bidding Document				Existing Clause	Modifica tion	Amended Clause
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<b>PART I, COMMERCIAL</b>							
<b>Instruction To Bidders</b>							
1				<b>General</b>		M	Wherever <b>BOO Processor</b> is written the same may be replaced with <b>BOO Operator</b> in the entire tender document.
<b>Conditions of Contract</b>							
2			1.7	<b>DEFINITION</b>	<p><b>“Production Plant”</b> means the following plant, at OWNER’s designated land set up by the BOO PROCESSOR:</p> <p>A brand New Air Separation Unit (ASU) with its necessary ancillary facilities to be designed, engineered, financed and installed by BOO Processor on site allocated to BOO Processor under license for use from CGIL. The New Air Separation Unit, which would be owned by BOO Processor, to operate, monitor and maintain the New Air Separation Unit for the production and supply of gaseous / liquid products as specified in Volume II, Design Basis, to CGIL at Delivery Point and required facilities for supply of products viz. Oxygen, Nitrogen and Argon for fulfilling Coal Gasification Plant requirements. The Air Separation Unit shall also include all Ancillary Equipment, Utilities System and</p>	M	<p>“Production Plant” means the following plant, at OWNER’s designated land set up by the BOO <del>PROCESSOR</del><b>OPERATOR</b>:</p> <p>A brand New Air Separation Unit (ASU) with its necessary ancillary facilities to be designed, engineered, financed and installed by BOO <del>Processor</del><b>OPERATOR</b> on site allocated to BOO <del>Processor</del><b>OPERATOR</b> under license for use from CGIL. The New Air Separation Unit, which would be owned by BOO <del>Processor</del><b>OPERATOR</b>, to operate, monitor and maintain the New Air Separation Unit for the production and supply of gaseous / liquid products as specified in Volume II, Design Basis, to CGIL at Delivery Point and required facilities for supply of products viz. Oxygen, Nitrogen <del>and Argon</del> for fulfilling Coal Gasification Plant requirements. The Air Separation Unit shall also include all Ancillary Equipment, Utilities</p>



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					Interconnecting Pipelines upto Delivery Point. The Air Separation Unit shall have design characteristics as set forth in tender documents.		System and Interconnecting Pipelines upto Delivery Point. The Air Separation Unit shall have design characteristics as set forth in tender documents. Wherever Argon is written the same shall be deleted
3			3.22	<b>Build</b>	New Clause added	A	The BOO Operator shall carry out its own detailed soil investigation for the proposed plant. Design of Foundation system of the plant shall be based, only on the site specific report and nothing extra shall be paid on account of this. In the event the BOO OPERATOR encounters any underground obstructions, the same shall be removed by BOO OPERATOR without any extra cost implication to the OWNER.
4		15 of 53	4.5	<b>OWN</b>	New Clause added	A	The BOO OPERATOR shall communicate to the OWNER 180 days before its targeted date for <b>Mechanical Completion</b> of the Production Plant, indicating its readiness for receipt of utilities and supply of Products/ Byproducts.  OWNER shall take cognizance of the same and interact with its representatives to arrange the supply of utilities and receipt of Products to facilitate



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							<p>commissioning, PGTR and declaring FDD of ASU by the BOO OPERATOR.</p> <p>The OWNER shall communicate to the BOO OPERATOR 180 days before various target dates for <b>Mechanical Completion</b> of various concurrent LSTK contracts for its CGP, indicating its readiness for receipt of Products/ Byproducts for commissioning, PGTR and continuous productions.</p> <p>BOO OPERATOR should understand that the OWNER's CGP is also under simultaneous development through its various representatives and that the actual requirements will gradually develop into the peak requirement prescribed in the contract over a period of time.</p> <p>Upon receipt of such communication by one Party from the other, the Parties shall jointly work together for the success of one another or, in the case of potential delays from the supporting Party, shall discuss alternatives for the successful mechanical completion of the other Party. In any case, failure to meet the requirements shall be dealt with as per the provisions of the respective contracts under the</p>



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							circumstances.
5		15 of 53	4.6	<b>OWN</b>	A new Clause added	A	<p>COMMISSIONING: The BOO OPERATOR shall notify the OWNER regarding the Mechanical Completion and readiness of the Production Plant for commissioning.</p> <p>OWNER shall arrange to provide the agreed utilities required for First Commissioning at the agreed battery limit (i.e., commissioning upon mechanical completion of Production Plant).</p> <p>Oxygen &amp; Nitrogen as produced during the commissioning and up to First Delivery Date shall be supplied to OWNER on demand, free of cost.</p>
6		15 of 53	4.7	<b>OWN</b>	A new Clause added		<p><b>PERFORMANCE GUARANTEE TEST RUN [PGTR]</b></p> <p>For First Commissioning and till the completion of First Test Run for capacity and product quality demonstration of ASU, if BOO OPERATOR fails to demonstrate the performance with respect to capacity and product quality(s), the BOO OPERATOR will be given an opportunity for corrective engineering till the performance is</p>



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							demonstrated through subsequent test runs within the first delivery date. However utilities shall be provided on free of cost on first test run only and shall be charged as per actuals for subsequent test runs for successful PGTR
7		17 of 53	7.3	<b>QUANTITY</b>	If, from time to time, Coal Gasification Plant requires Oxygen & Nitrogen gas in excess of the maximum hourly demand rate, BOO PROCESSOR will, during the term of the Agreement, deliver to Coal Gasification Plant such gas to the extent that such gases are available for Coal Gasification Plant and delivery thereof may be made within the flow and pressure limitations of BOO PROCESSOR's installed equipment. For purposes of the Agreement, any gas delivered hereunder in excess of 5% of the quantities as mentioned under Article 7.2.3 shall be deemed to be Supplemental gas.	M	If, from time to time, Coal Gasification Plant requires Oxygen & Nitrogen gas in excess of the maximum hourly demand rate, BOO <del>PROCESSOR</del> <b>OPERATOR</b> will, during the term of the Agreement, deliver to Coal Gasification Plant such gas to the extent that such gases are available for Coal Gasification Plant and delivery thereof may be made within the flow and pressure limitations of BOO <del>PROCESSOR's</del> <b>OPERATOR's</b> installed equipment. <del>For purposes of the Agreement, any gas delivered hereunder in excess of 5% of the quantities as mentioned under Article 7.2.3 shall be deemed to be Supplemental gas.</del>  <b>Wherever Supplemental Oxygen and Supplemental Nitrogen is written the same shall</b>



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							<b>be deleted.</b>
8		18 of 53	8.4.1	<b>SPECIFICATIONS</b>	New clause added in Clause no 8.0	A	<p>BOO OPERATOR shall ensure that the moment off-spec Products are detected to be produced, the Product is bypassed and diverted from the supply pipeline, to avoid the supply of off-spec Products to the OWNER. Any off-spec Product supplied inadvertently may be rejected by the OWNER by providing the BOO OPERATOR first with verbal notice and subsequently written confirmation by e-mail within 24 hours of delivery thereof</p> <p>Any rejected Product shall be deemed to be 'short fall in supply' for measurement/ payment purposes even if measured and supplied. The quantification of the same shall be undertaken from the records captured in the electronic/ digital systems.</p>
9		21 of 53	10.1.3	<b>INSTALLATION AND FIRST DELIVERY</b>	BOO PROCESSOR, at its expense, will construct the Oxygen Distributing System, Nitrogen	D	The referred clause stands deleted



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					Distributing System and Respective Utilities Distributing System within OWNER's Plant and will also extend and connect these systems to the Delivery Point designated by OWNER at BOO PROCESSOR's Production Plant boundary prior to the First Delivery of Product.		
10		31 of 53	16.6	<b>PLANT AVAILABILITY</b>	BIDDER shall guarantee minimum Plant Availability Factor for Production Plant as 100%.	M	BIDDER shall guarantee minimum Plant Availability Factor for Production Plant as 100% i.e plant shall be in operation for not less than 330 days in a year.
11		34 of 53	20.0	<b>INSURANCE</b>	New Clause added	A	Owner shall take necessary cover of OWNER's plant, facilities and operating personnel under insurance along with coverage of third party liability.
12		40 of 53	27.1 (b)	<b>ON ACCOUNT OF NOT MEETING SPECIFIED LIMITS OF PURITY</b>	The BOO Processor shall supply Oxygen and Nitrogen strictly conforming to the Specified Purity. The supply of Oxygen and/or Nitrogen shall be deemed Non-Compliant if the purity falls below the Specified Limits at any time. Without prejudice to any other rights of the OWNER under the Contract, the following shall apply in case of Non-Compliant supply: i. The BOO Processor shall immediately take all necessary corrective measures at its own cost to restore	M	The BOO <del>Processor</del> <b>OPERATOR</b> shall supply Oxygen and Nitrogen strictly conforming to the Specified Purity. The supply of Oxygen and/or Nitrogen shall be deemed Non-Compliant if the purity falls below the Specified Limits at any time. <del>Without prejudice to any other rights of the OWNER under the Contract, the following shall apply in case of Non-Compliant supply:</del> i. <del>The BOO Processor shall immediately take all necessary corrective measures at its own cost to restore</del>



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					<p>compliance with the Specified Limits. If not resolved with specified time limit the same shall be treated as Breach of Contract, entitling the OWNER to exercise its rights including suspension of payments, procurement from alternate sources at BOO Processor's risk and cost, and/or termination of Contract.</p>		<p><del>compliance with the Specified Limits. If not resolved with specified time limit the same shall be treated as Breach of Contract, entitling the OWNER to exercise its rights including suspension of payments, procurement from alternate sources at BOO Processor's risk and cost, and/or termination of Contract</del></p> <p><b>Any off-spec Product supplied may be rejected by the OWNER and shall be considered no supply and Price Reduction as per 27.1 (a) shall apply.</b></p>
13		52 of 53	47.0	<b>FINAL COMPLETION CERTIFICATE</b>	<p>47.1. On completion of 25 (Twenty five) years from the First Delivery Date, OWNER has the following options and the BOO Processor agrees to the same:</p> <p>a. Terminate the Agreement due to efflux of time. OR</p> <p>b. Take over the Plant OR</p> <p>c. Extend the Agreement on mutually agreed terms and conditions in writing between OWNER and BOO Processor for further operation of the plant beyond 25 (twenty-five) Years for such time period as set out in Article 5.1 of this Agreement.</p>	M	<p>47.1. On completion of 25 (Twenty-five) years from the First Delivery Date, OWNER has the following options and the BOO Processor <b>OPERATOR</b> agrees to the same:</p> <p>a. <del>Terminate the Agreement due to efflux of time.</del> <b>Closure of Contract</b> OR</p> <p>b. Take over the Plant OR</p> <p>c. Extend the Agreement on mutually agreed terms and conditions in writing between OWNER and BOO Processor <del>OPERATOR</del> for further operation of the plant beyond 25 (twenty-five) Years for such time period as set out in Article 5.1 of this Agreement.</p>



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							<b>The OWNER shall confirm its preferred end of term option not later than 24 months before Contract expiry.</b>
14			47.5	<b>FINAL COMPLETION CERTIFICATE</b>	New Clause added	A	<p>For (a) above, OWNER has right to decommission the plant. If the OWNER notifies the BOO OPERATOR to proceed with decommissioning, the BOO OPERATOR shall prepare a Decommissioning Plan not later than 18 months before the Contract Expiry Date.</p> <p>The plan shall include:</p> <ul style="list-style-type: none"> <li>• plant shutdown procedures,</li> <li>• dismantling methodology,</li> <li>• hazardous material handling procedures,</li> <li>• waste disposal methods,</li> <li>• site restoration measures.</li> </ul> <p>The '<b>Decommissioning Plan</b>' shall be submitted to the Owner for review.</p> <p><b>a) Dismantling and removal of facilities</b></p> <p>Upon contract expiry and where decommissioning is implicitly/ explicitly opted by the OWNER, the BOO OPERATOR shall dismantle the entire Production Plant installed on the leased land up to the Battery Limits and remove it from the Production Plant Site without any cost implications</p>



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							<p>to the OWNER.</p> <p>The BOO Operator shall ensure that dismantling and disposal activities comply with the latest:</p> <ol style="list-style-type: none"><li>i. applicable safety regulations</li><li>ii. Environmental regulations.</li></ol> <p><b>b) Environmental restoration obligations</b></p> <p>The BOO OPERATOR shall restore the site to an environmentally safe and stable condition, including:</p> <ul style="list-style-type: none"><li>• removal of hazardous materials,</li><li>• remediation of contaminated soil,</li><li>• proper disposal of industrial waste.</li></ul> <p>All environmental restoration activities shall comply with all applicable environmental laws and regulations in effect at the time. The residual value of the Production Plant calculated by the BOO OPERATOR should include cost towards this provision, and the OWNER shall not be liable to compensate for anything whatsoever in this regard.</p>



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							<p>The BOO OPERATOR shall remain liable for any residual contamination caused by its operations.</p> <p><b>c) Site restoration standard</b></p> <p>BOO Operator shall restore the site to a condition suitable for industrial reuse. Restoration may include:</p> <ul style="list-style-type: none"><li>• removal of foundations where required</li><li>• levelling off the ground</li><li>• removal of construction debris.</li></ul> <p>The Owner may require certain infrastructure (such as underground utilities) to remain in place.</p> <p><b>d) Decommissioning security</b></p> <p>To ensure compliance with the decommissioning obligations, the BOO Operator shall maintain a Decommissioning Security in the form of a Bank Guarantee. Value of the BG shall be 1% of the original project capital cost.</p> <p>Original project capital cost shall be calculated as follows: <math>FMCBM * XMROI * 25 * 12</math></p>



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							<p>The security shall remain valid until the Owner certifies completion of the site restoration.</p> <p><b>e) Final inspection and release</b></p> <p>Upon completion of dismantling and restoration activities:</p> <p>(i) The BOO Operator shall notify the Owner. (ii) The Owner shall conduct a <b>Final Site Inspection</b>. (iii) If restoration is satisfactory, the Owner shall issue a <b>Site Clearance Certificate</b>.</p> <p>Upon issuance of the certificate:</p> <ul style="list-style-type: none"><li>The Decommissioning Security shall be released.</li><li>The BOO Operator shall be discharged from further site obligations, except for latent environmental liabilities.</li></ul>



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<b>Conditions of Contract</b>							
15			10.6	<b>INSTALLATION AND FIRST DELIVERY</b>	Should OWNER fail to supply utilities by the date set forth in the schedules, contained in Articles 12.2, 23 & 25 or should OWNER be unable to receive the Product through no fault of BOO PROCESSOR, First Delivery shall be deemed to take place after three months from the Time Schedule indicated elsewhere in the Agreement or actual delivery whichever occurs first as per requirement of OWNER. BOO PROCESSOR will invoice OWNER, and OWNER will pay the Fixed Monthly Charges as set forth and adjusted under Article 15, plus the amount of any taxes as set forth in Article 17, effective such date of First Delivery.	A	<b>The referred clause stands deleted</b>
16			10.8	<b>INSTALLATION AND FIRST DELIVERY</b>	OWNER reserves the right to reschedule (i.e. postponement) the first delivery date within 06 (Six) months from date of issue of Letter of Award, and such rescheduling can be for a maximum period of 12 (Twelve) Months. On such re-scheduling, the re-scheduled date shall be the date of First Delivery of Product under the Agreement and OWNER will not pay anycharges (including Monthly Fixed Charges)		<b>Should OWNER fail to supply utilities by the date set forth in the schedules, contained in Articles 12.2, 23 &amp; 25 or should OWNER be unable to receive the Product through no fault of BOO OPEARTOR, First Delivery shall be deemed to take place on the First Delivery Date as per Scheduled Delivery Date. However, OWNER reserves the right to reschedule (i.e. postponement) the first delivery date within 06</b>



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					during this period. If the re-scheduling extends beyond 12 months, payment shall be determined through mutual agreement between the OWNER and the BOO Process.		(Six) months from date of issue of Letter of Award, and such rescheduling can be for a maximum period of 12 (Twelve) Months. On such re-scheduling, the re-scheduled date shall be the date of First Delivery of Product under the Agreement and OWNER will not pay any charges (including Monthly Fixed Charges) during this period. If the re-scheduling extends beyond 12 months, payment shall be determined through mutual agreement between the OWNER and the BOO Process.
17			14.8	<b>OWNER's OBLIGATION</b>	New clause added	A	OWNER shall provide the physical possession of the land for ASU plant within 1 (one) month from the date of execution of lease deed. The Lease deed shall be executed within 30 (Thirty) days from the date of LOA.
18		40 of 53	27.1 (a)	<b>ON ACCOUNT OF SHORT FALL IN OXYGEN/NITROGEN GAS</b>	If the BOO PROCESSOR at any time fails to ..... .....The damages for such Shortfall will be equivalent to:  Damages= (Total Requested Quantity- Total supplied quantity)/ Total Requested Quantity (Fixed Charge per + Variable Charge) x Total supplied quantity x per 1000NM3 of Gaseous Oxygen/ Nitrogen  Fixed Charges per 1000NM3 of Gaseous Oxygen/	M	If the BOO <del>PROCESSOR</del> <b>OPERATOR</b> at any time fails to ..... .....The damages for such Shortfall will be equivalent to:  <b>A=</b> [Total Requested Qty (O <sub>2</sub> +N <sub>2</sub> )- Total supplied Qty (O <sub>2</sub> +N <sub>2</sub> )] XFixed Monthly Charge/( Total Requested Qty (O <sub>2</sub> +N <sub>2</sub> ))  <b>B =</b> (Total Requested Qty of O <sub>2</sub> - Total supplied Qty of O <sub>2</sub> ) X Variable Charge of O <sub>2</sub>



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					<p>Nitrogen shall be derived from Article-15.</p> <p>The above damages will be computed separately for Oxygen &amp; Nitrogen based on the Shortfall on monthly basis.</p> <p>Wherever applicable, yearly average WPI/CPI will be considered for computing the Fixed Job work Charge and Variable Charge</p> <p>However, the above Damages will be applicable only if the BOO PROCESSOR is not able to arrange Oxygen/Nitrogen from alternative sources in case of shortfall in supply during the period of Agreement.</p>		<p><b>C = (Total Requested Qty of N<sub>2</sub>- Total supplied Qty of N<sub>2</sub>) X Variable Charge of N<sub>2</sub></b></p> <p><b>PRS on Shortfall = (A+B+C)</b></p> <p>Total O2 requested Qty shall be equal to or less than 136000 Nm<sup>3</sup>/hr</p> <p>Total N2 requested Qty shall be equal to or less than 46800Nm<sup>3</sup>/hr</p> <p>Wherever applicable, yearly average WPI/CPI will be considered for computing the Fixed Job work Charge and Variable Charge</p> <p>However, the above Damages will be applicable only if the BOO <del>PROCESSOR</del><b>OPERATOR</b> is not able to arrange Oxygen/Nitrogen from alternative sources in case of shortfall in supply during the period of Agreement.</p>
19			28.9	<b>LIABILITY</b>	A New Clause added	A	BOO OPERATOR accepts liability for damage to CGIL property to the extent that such damage results directly from any breach of contract or negligence in connection with performance of this contract.



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**COAL GAS INDIA LIMITED (CGIL)**

**NIT No: PNMM/PC-217/E-002 Dated 31.12.2025  
CORRIGENDUM-VII dated 25.05.2026**



Sl. No.	Reference of Bidding Document				Existing Clause	Modifica tion	Amended Clause
	Part / Sec.	Page No.	Clause No.	Subject / Heading			
20			50.0	<b>INDEMNIFICATION</b>	New Clause Added in CoC	A	<p>Each party hereby agrees to indemnify the other and hold the other harmless from any actions, lawsuits, demands, claims, losses, expenses, costs, including but not limited to legal fees, and damages, arising from the injury, illness or death of their respective employees while engaged in activities connected with the Agreement, whether or not such injury, illness or death is claimed to have been caused by, resulted from, or was in any way connected with the negligence of the party to be indemnified.</p> <p>The BOO OPERATOR shall wholly indemnify against all suits, claims, costs, damages, charges and expenses arising out of or in connection with carrying out of the work to which the Agreement relates where such cases/suits or claims are brought by the members of the public, neighboring owners or workmen employed by the BOO OPERATOR on the work by the workmen's representative(s). The BOO OPERATOR shall be solely responsible for defending any claim raised by a third party arising out of or in consequence of any action or omission on the part of the BOO OPERATOR during the Agreement period.</p>



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<b>PART I, COMMERCIAL</b>							
<b>Conditions of Contract</b>							
21			1.50	<b>DEFINITIONS</b>	A new definition is added as 1.50	A	<b>“Job work”</b> means and includes conversion of raw materials into Oxygen & Nitrogen and utilities will be supplied by CGIL as described in the relevant clauses.
22			1.51	<b>DEFINITIONS</b>	A new definition is added as 1.51	A	<b>“Scheduled Delivery Date (SDD)”</b> shall mean 34 (Thirty-Four) months from the Date of LOA, by which the BOO Operator is required to complete construction, commissioning, performance guarantee test, and make the Facility ready for supply of Products in accordance with the Contract.
23			1.52	<b>DEFINITIONS</b>	A new definition is added as 1.52	A	<b>“First Delivery Date (FDD)”</b> shall mean the actual date on which the BOO Operator commences continuous and compliant supply of Products (Oxygen & Nitrogen) to the Owner after successful completion of commissioning and Performance Guarantee Tests, and acceptance thereof by the Owner. FDD shall commence on Scheduled delivery date.



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24			1.53	<b>DEFINITIONS</b>	A new definition is added as 1.53	A	<p><b>“Deemed First Delivery Date (DFDD)” shall mean</b> If the First Delivery Date (FDD) is not achieved by the Scheduled Delivery Date (SDD) due to reasons solely attributable to the OWNER, the <b>Deemed First Delivery Date (DFDD)</b> shall be deemed to occur after SDD</p> <p>From such DFDD, the OWNER shall pay the Fixed Monthly Charges in accordance with Clause 10.6 of the Conditions of Contract (CoC), irrespective of whether actual delivery has commenced.</p>
25			3.1	<b>BUILD</b>	BOO PROCESSOR shall install the Production Plant for manufacture and supply of Oxygen gas and Nitrogen gas to OWNER for its Coal Gasification Plant as per the terms of the Agreement within the stipulated period from the date of issue of LOA under the Agreement and subject to the schedule mentioned in Article 12.2 here in below.	M	BOO <del>PROCESSOR</del> <b>OPERATOR</b> shall install the Production Plant for manufacture and supply of Oxygen gas and Nitrogen gas to OWNER for its Coal Gasification Plant <b>on Job Work Basis</b> as per the terms of the Agreement within the stipulated period from the date of issue of LOA under the Agreement and subject to the schedule mentioned in Article 12.2 here in below.
26			12.2	<b>TIME SCHEDULE &amp; DURATION OF AGREEMENT</b>	BOO Processor shall achieve the First Delivery Date within a period of 34 (Thirty Four) Months from the date of issue of Letter of Acceptance.	M	BOO <del>Processor</del> <b>OPPERATOR</b> achieve the First Delivery Date within a period of 34 (Thirty Four) Months from the date of issue of Letter of



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Sl. No.	Reference of Bidding Document				Existing Clause	Modification	Amended Clause
	Part / Sec.	Page No.	Clause No.	Subject / Heading			
					OWNER shall provide the physical possession of the land for ASU plant within 1 (one) month from the date of LOA. The schedule of providing main Operation Power and Utilities for commissioning shall be decided based on mutual agreement between OWNER and BOO PROCESSOR at the time of Kick Off meeting,		Acceptance. The schedule of providing main Operation Power and Utilities shall be provided <del>decided based on mutual agreement between OWNER and BOO PROCESSOR at the time of Kick Off meeting,</del> <b>3 months prior to Mechanical Completion period.</b>
27			<b>14.7</b>	<b>OWNER's OBLIGATION</b>	Failure by OWNER to comply with its obligations in Article 14 in accordance with the agreedtime schedule shall result in extension of the schedule for First Delivery of Oxygen gas & Nitrogen gas set forth in Article 12.2 by an equivalent period of the delay by OWNER in complying with any such obligation.	D	The referred clause stands deleted
28			<b>14.9</b>	<b>OWNER's OBLIGATION</b>	New clause added	A	Owner shall provide the utilities i.e Power, Cooling water, MP steam to BOO Processor's OPERATOR's battery Limit 3 months prior to Mechanical Completion
29			<b>15.1.1</b>	<b>Adjustment/ Regulation of Prices (Conversion charge) for Oxygen &amp; Nitrogen:</b>	Existing clause as per 15.1.1 of CoC	M	The referred clause is Modified on account of One fixed charge for ASU instead of two different fixed charges for O <sub>2</sub> & N <sub>2</sub> . Refer Apendix –I attached with this Corrigendum for Modified clause of "Adjustment/ Regulation of Prices



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Sl. No.	Reference of Bidding Document				Existing Clause	Modification	Amended Clause
	Part / Sec.	Page No.	Clause No.	Subject / Heading			
							(Conversion charge) for Oxygen & Nitrogen”.
30			25.3	<b>Electrical Power</b>	Power shall be provided free of cost from state grid at 132 KV NOTE: Electrical Design Philosophy to be followed.	M	<b>The referred clause is modified hereunder:</b> Power shall be provided free of cost at 11 kV Voltage Level. NOTE: For further electrical tie-in point details, refer Sl. No. 4.3 of Section 2.4 Engineering Specification-Electrical of NIT for ASU Plant.
31			29.0	<b>TEMPORARY TAKEOVER OF THE PLANT BY OWNER</b>		D	The referred clause stand deleted
32			47.2	<b>FINAL COMPLETION CERTIFICATE</b>	For (b) above, OWNER shall take over the Production Plant after its valuation through a OWNER appointed valuer, after condition survey.	M	For (b) above, OWNER shall take over the Production Plant after its valuation through a <del>OWNER</del> <b>Jointly</b> appointed valuer, after condition survey.
33			10.0	<b>EVALUATION METHODOLOGY</b>	As per Clause 10.0 of Sec-II	M	Revised “EVALUATION METHODOLOGY” is attached with this corrigendum as per revised guarantee Parameters and considering One Fixed charge of ASU in place of two fixed charges for O <sub>2</sub> & N <sub>2</sub>



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SI. No.	Reference of Bidding Document				Existing Clause	Modification	Amended Clause
	Part / Sec.	Page No.	Clause No.	Subject / Heading			
34			Annexure VIII	PREAMBLE To SOR	As per Annexure VIII of Sec-III	M	Revised "PREAMBLE To SOR" is attached with this corrigendum as per revised guarantee Parameters and considering One Fixed charge of ASU in place of two fixed charges for O <sub>2</sub> & N <sub>2</sub>
35				BoQ		M	Revised "BoQ" is attached with this corrigendum as per revised guarantee Parameters and considering One Fixed charge of ASU in place of two fixed charges for O <sub>2</sub> & N <sub>2</sub>

## 10.0 EVALUATION METHODOLOGY (Rev-1)

10.1 Price evaluation of commercially and technically acceptable offers will be carried to arrive at the lowest evaluated price for selection of successful bidder and who shall be considered for Notification of Award.

10.2 For evaluation and comparison of Prices, BOO operation shall be considered under Tolling model.

10.2.1 Accordingly, Net Present Value (NPV) for supply of Oxygen & Nitrogen will be carried out for 25 (twenty five) years of operation subsequent to First Delivery Date, considering 7920 hrs operation per year and at discount rate of 10% p.a, based on the following formula:

$$\text{Total Cash flow (Discounted @10\% for 25 years)} = \text{FMC} \times 12 + \text{VC}_{\text{Oxygen}} \times \underline{\text{Q}_{\text{Oxygen}}} + \text{VC}_{\text{Nitrogen}} \times \underline{\text{Q}_{\text{Nitrogen}}} + \sum (\underline{\text{P}_{\text{Utilities}}} \times \text{Q}_{\text{Utilities}})$$

Where :

**FMC** = Fixed Monthly charge in Rupees

**VC<sub>Oxygen</sub>** = Variable Charge of Oxygen in Rupees per NM<sup>3</sup>

**VC<sub>Nitrogen</sub>** = Variable Charge of Nitrogen in Rupees per NM<sup>3</sup>

**Q<sub>Oxygen</sub>** = Quantity of Oxygen in NM<sup>3</sup> per year i.e 1,36,200 x7920 NM<sup>3</sup>

**Q<sub>Nitrogen</sub>** = Quantity of Nitrogen in NM<sup>3</sup> per year i.e 46,800 x7920 NM<sup>3</sup>

**P<sub>Utilities</sub>** = Price of Utilities (Power, MP Steam & Cooling water)

**Q<sub>Utilities</sub>** = Weighted Quantity of utilities (Power, MP Steam & Cooling water r)

**P<sub>Utilities</sub>** shall be as indicated in Conditions of Contract/BoQ.

**FMC, VC<sub>Oxygen</sub>, VC<sub>Nitrogen</sub> and Q<sub>Utilities</sub>** to be indicated by bidder as per Schedule of Prices/BOQ in the Price Bid.

10.2.2 The quantity of Oxygen & Nitrogen mentioned above is exclusively for the purpose of NPV evaluation. However, during the actual operation of plant, Owner, reserves the right to receive any amount of Oxygen & Nitrogen subject to above respective yearly capacity utilization of plants depending upon requirement.

10.3 Net Present Value (NPV) analysis carried out for 25 (twenty five) years of operation subsequent to First Delivery Date, considering 330 days per year and at discount rate as mentioned above. The NPV of prices so obtained on the first delivery date i.e 34 (Thirty four) months from EDC shall be further discounted to arrive at the present value on the date of EDC. The total least cash outflow so obtained shall be the selecting criteria for Bidder for the award of Work.

10.4 Yearly Cash flows for the Products delivered by BOO Operator and utilities provided by Owner, as identified in the above formula, will be worked out for NPV evaluation purpose as per the following guidelines.

A	PRODUCTS
	Supply of Oxygen and Nitrogen of specified quality and quantity, as per Guaranteed ratio/quantities as quoted in the Price Bid, shall be on chargeable basis and Owner shall pay for this to the Bidder. Pricing formula for Supply of Oxygen & Nitrogen shall comprise of following three components:
i)	<p><b>Fixed Monthly Charge for the ASU Plant</b></p> <p>The Fixed Monthly charge (in Rupees ) shall have three components ;</p> <ol style="list-style-type: none"> <li>1) Constant amount (towards ROI of the BOO Operator);</li> <li>2) Component related to WPI for manufactured Products (towards maintenance cost &amp; other overheads).</li> <li>3) Component related to CPI for industrial workers (towards manpower cost).</li> </ol> <p>Fixed Monthly Charge shall be calculated on the basis of the following formula:</p> $\mathbf{FMC_M = FMC_{BM} \times [XM_{ROI} + XM_{WPI} \times WPI_N / WPI_O] + (XM_{CPI} \times CPI_N / CPI_O)}$ <p>Where,</p> <p><math>\mathbf{FMC_M}</math> = Fixed Monthly Charge computed on account of Oxygen &amp; Nitrogen (ASU Plant) delivered to OWNER and will remain valid for that month, it will be released on pro-rata basis from first delivery date upto the end of the month and thereafter on monthly basis every month (e.g. If the first delivery date is 15<sup>th</sup> January than <math>\mathbf{FMC_{MO}}</math> will be computed on pro-rata basis from 15<sup>th</sup> January to 31.01.2020.and from February onwards it will be computed in Calendar monthly basis)</p> <p><math>\mathbf{FMC_{BM}}</math> = Base monthly charge as per the Letter of Award</p> <p><math>\mathbf{XM_{ROI}}</math> = Constant Component on account of Return On Investment (which will not be adjusted due to inflation)</p> <p><math>\mathbf{XM_{WPI}}</math> =Constant Component related to “Wholesale Price Index for Manufactured Products”</p> <p><math>\mathbf{XM_{CPI}}</math> =Constant Component related to “Consumer Price Index for Industrial Labour”</p> <p><math>\mathbf{WPI_N}</math> = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month prior to Billing month or latest available</p>

	<p>as on that date.</p> <p>WPI<sub>O</sub> = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month of submission of Bid or latest available as on that date.</p> <p>CPI<sub>N</sub> = Average Consumer Price Index for Industrial workers as last declared by Office of Economic Advisor for the month prior to billing month.</p> <p>CPI<sub>O</sub> = Consumer Price Index for Industrial workers for the month of FOA (Fax of Acceptance) / LOI(Letter of Intent)or last published month before LOA.</p> <p><b>The Constant Component -XM<sub>ROI</sub> , XM<sub>WPI</sub> &amp; XM<sub>CPI</sub> to be quoted by the Bidder in the Schedule of Rate / BOQ .</b></p> <p><b>Note-1:</b> [M<sub>ROI</sub> + XM<sub>WPI</sub> + XM<sub>CPI</sub> = 100.0]</p>
ii)	<p><b>Variable charge per Nm3 of Oxygen</b></p> <p>Variable Charge per Nm3 of Oxygen (VC<sub>Oxygen</sub>) = A<sub>MO</sub> x (WPI<sub>N</sub> / WPI<sub>O</sub>)</p> <p><b>Where,</b></p> <p>A<sub>MO</sub> = is to be quoted in the Price Bid, as per Schedule of Prices/BOQ</p> <p>WPI<sub>N</sub> = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month prior to Billing month or latest available as on that date.</p> <p>WPI<sub>O</sub> = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month of submission of Bid or latest available as on that date.</p> <p><b>Variable charge per Nm3 of Nitrogen</b></p> <p>Variable Charge per Nm3 of Nitrogen (VC<sub>Nitrogen</sub>)= A<sub>MN</sub> x (WPI<sub>N</sub> / WPI<sub>O</sub>)</p> <p><b>Where,</b></p> <p>A<sub>MN</sub> = is to be quoted in the Price Bid, as per Schedule of Prices/BOQ</p> <p>WPI<sub>N</sub> = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month prior to Billing month or latest available as on that date.</p> <p>WPI<sub>O</sub> = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month of submission of Bid or latest available as on that date.</p>

**Note for 'A' above:**

*Percent change in WPI/CPI for future years is to be considered based on percent change in WPI/CPI for manufactured products in last five years from the date of opening of commercial offer. Cashflows for the components related to WPI/CPI will be increased for the 25 years period at the rate of derived percent change of WPI/CPI per year in the NPV working.*

*For bid evaluation/NPV calculation purpose, WPI (Average annual escalation for last five years) and CPI (average annual escalation for last five years) shall be considered as 3.90% and 4.0% respectively*

**B UTILITIES PROVIDED BY OWNER**

Utilities as per the Guaranteed Quantity, as quoted by the Bidder shall be considered for evaluation. Yearly cashflow on account of utilities provided by Owner at their battery limit will be worked out on the basis of Unit rate of Utilities mentioned below:

SL. No	Utilities	Price /Unit
1.	Cooling Water Circulation, M3	Rs 46.475
2.	Power, KWh	Rs 6.08
3.	MP Steam, MT	Rs 1400

For evaluation, Percent change in WPI of Utilities for future years will be applied based on average percentage change per annum in WPI for manufactured Products during last five years from the date of bid closing date. Cashflow for the Utilities will be increased for 25 years period at the rate of derived percent change of WPI per year in the NPV working.

**C. Guaranteed Consumption Figures of utilities of ASU Plant**

Sl. No	Raw Materials/ Utilities	Unit Rate (R)	Consumption per Hour (Q)				
			Turndown (50%)	Normal (100%)	With 20% additional Margin (120%)	At 60% Plant Load	80% Plant Load
1.	Cooling Water Circulation, M <sup>3</sup> (CC)	46.475					
2.	Power, KWh (P)	6.08					

3.	MP Steam, (MPS)	1400					
4.	Guaranteed Total Works Cost "A"/ Hour = $\sum(Q \times R)$ {Sl.No.1-3}						
5.	Production figures at respective loads (per Hour): "N" (Nm3/hr)	91500 Nm3/hr (Oxygen- 68100 Nm3/hr Plus Nitrogen -23,400) "N1" (Nm3/hr)	152500 Nm3/hr (Oxyge n- 113500 Nm3/hr Plus Nitroge n- 39,000) "N2" (Nm3/hr )	183000 Nm3/hr (Oxyge n- 136200 Nm3/hr Plus Nitroge n- 46,800) "N3" (Nm3/h r)	10980 0 Nm3/h (Oxy gen- 8172 0 Nm3 /hr Plus Nitr oge n- 28,0 80) "N4 " (Nm 3/hr)	146400 Nm3/hr (Oxyge n- 108960 Nm3/hr Plus Nitroge n- 37,440) "N5" (Nm3/hr )	
6.	Guaranteed Specific Work Cost/ Nm3 of (Oxygen++Nitrogen-) ("S" = A/N) for Respective Loads						
D.	For bid evaluation, the ASU plant will be considered to be operating at sum of total production capacity of Oxygen & Nitrogen at Normal supply						
	Plant Load	Turndown (50%)	Normal Load (100%)	At 120% Load	At 60% Load	At 80% Load	
	Weightage(%) to be considered for evaluation	4	72	16	4	4	
E.	The above operating capacity window or operation time on each utilities mentioned is exclusively for the purpose of NPV evaluation. Payment during anytime of contract period would be as per the actual capacity point and Utilities and CGIL will have the option to receive any amount of O <sub>2</sub> & N <sub>2</sub> Gas throughout the agreement to meet its requirement within the limit of turndown and 50%.						
F.	For the purpose of evaluation the Guaranteed Specific Work cost indicated at sl. No. 6.of table C shall be considered after applying the weightage specified at table D for each plant load case.						

<b>G.</b>	<b>NPV Calculation</b>  NPV shall be calculated based on the following:  (i) Fixed monthly charges to be submitted by bidder as per (i) of A above (ii) Variable charges (NM <sup>3</sup> of Oxygen & Nitrogen) to be submitted by bidder as per (ii) of A above (iii) Utility cost evaluated as per clause no. C,D E & F above.
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**Note:** Optional prices quoted in the Schedule of Prices/BOQ shall not be considered in the evaluation

**15.1.1 Adjustment/ Regulation of Prices (~~Conversion charge~~) for Oxygen & Nitrogen:**

The conversion charge of gases shall comprise of two components:

- i) Fixed Monthly charge
- ii) Variable Charge

**15.1.1.1 Fixed Monthly charge for ASU plant:**

The Fixed Monthly charge shall have three components

- 1) Constant amount (towards ROI of the BOO Processor);
- 2) Component related to WPI for manufactured Products (towards maintenance cost & other overheads).
- 3) Component related to CPI for industrial workers (towards manpower cost).

Fixed Monthly Charge shall be calculated on the basis of the following formula for ASU

$$FMC_M = FMC_{BM} \times [XM_{ROI} + XM_{WPI} \times (WPI_N / WPI_O) + (XM_{CPI} \times CPI_N / CPI_O)]$$

Where,

$FMC_{(M)}$  = Fixed Monthly Charge computed on account of Oxygen & Nitrogen (ASU Plant) delivered to OWNER and will remain valid for that month, it will be released on pro-rata basis from first delivery date upto the end of the month and thereafter on monthly basis every month (e.g. If the first delivery date is 15<sup>th</sup> January than  $FMC_M$  will be computed on pro-rata basis from 15<sup>th</sup> January to 31<sup>st</sup> January and from February onwards it will be computed in Calendar monthly basis)

$FMC_{BM}$  = Base monthly charge as per the Letter of Award

$XM_{RO}$  = Constant Component on account of Return on Investment (which will not be adjusted due to inflation)

$XM_{WPI}$  = Constant Component related to "Wholesale Price Index for Manufactured Products"

$XM_{CPI}$  = Constant Component related to "Consumer Price Index for Industrial Labour"

$WPI_N$  = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month prior to Billing month or latest available as on that date.

$WPI_O$  = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month of submission of Bid or latest available as on that date.

$CPI_N$  = Average Consumer Price Index for Industrial workers as last declared by Office of Economic Advisor for the month prior to billing month.

$CPI_O$  = Consumer Price Index for Industrial workers for the month of Letter of Award or last published month before LOA.

The Constant Component - $XM_{RO}$ ,  $XM_{WPI}$  &  $XM_{CPI}$  to be quoted by the Bidder in the Schedule of Rate / BOQ .

The Bidder will quote  $FMC_{BM}$ ,  $XM_{ROI}$ ,  $XM_{WPI}$  and  $XM_{CPI}$  for ASU in the Price Bid,

Table-1: Table for values for Fixed Monthly charge for ASU

(To be indicated in the Price Bid)

S.No	Price Factors	Values to be quoted by the Bidder
1.0	$FMC_{BM}$ (Rs./ Month)	To be indicated in the Schedule of Price/BOQ
2.0	$XM_{ROI}$ (Note-1)	
3.0	$XM_{WPI}$ (Note-1 )	
4.0	$XM_{CPI}$ (Note-1 )	

Note:

- 1)  $XM_{ROI} + XM_{WPI} + XM_{CPI} = 100.0$
- 2) The price adjustment /regulation under the formula referred in Article- 15.1.1.1, will be made on monthly basis commencing from the First Delivery of the Product.

#### 15.1.1.2 Variable charge per Nm<sup>3</sup> of Oxygen

Other than the fixed monthly charges, there will be variable cost formula per Nm<sup>3</sup> of Oxygen Gas and will have one component related to WPI for Manufactured Products and will take care of cost towards consumables, chemicals etc.

$$\text{Variable Charge per Nm}^3 \text{ of Oxygen (VC}_{Oxygen}) = A_{MO} \times (WPI_N / WPI_O)$$

Where,

$A_{MO}$  = is to be submitted in the Price Bid, as per Schedule of Prices/BOQ

$WPI_N$  = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month prior to Billing month or latest available as on that date.

$WPI_O$  = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month of submission of Bid or latest available as on that date.

Table-1: Table for values for Variable charge per Nm<sup>3</sup>

S.No	Price Factors	Values to be quoted by the Bidder
1.0	A <sub>MO</sub> (Rs./ Nm <sup>3</sup> of Oxygen)	To be indicated in the Schedule of Price/BOQ

#### 15.1.1.4 Variable charge per Nm<sup>3</sup> of Nitrogen

Other than the fixed monthly charges, there will be variable cost formula per Nm<sup>3</sup> of Nitrogen Gas and will have one component related to WPI for Manufactured Products and will take care of cost towards consumables, chemicals etc.

$$\text{Variable Charge per Nm}^3 \text{ of Nitrogen (VC}_{\text{Nitrogen}}) = A_{\text{MN}} \times (\text{WPI}_{\text{N}} / \text{WPI}_{\text{O}})$$

Where,

A<sub>MN</sub> = is to be submitted in the Price Bid, as per Schedule of Prices/BOQ

WPI<sub>N</sub> = Average Wholesale Price Index as per Office of Economic Advisor for Manufactured Products for the month prior to Billing month or latest available as on that date.

WPI<sub>O</sub> = Average Wholesale Price Index as per RBI/Office of Economic Advisor for Manufactured Products for the month of submission of Bid or latest available as on that date.

Table-1: Table for values for Variable charge per Nm<sup>3</sup> of Nitrogen

S.No	Price Factors	Values to be quoted by the Bidder
1.0	A <sub>MN</sub> (Rs./ Nm <sup>3</sup> of Nitrogen)	To be indicated in the Schedule of Price/BOQ

**Note:**

The price adjustment /regulation under the formula referred in Article- 15.1.1.4, will be made on monthly basis commencing from the First Delivery of the Product.

Subject to the provisions of Article 15.1 hereof, BOO PROCESSOR will Invoice OWNER the Fixed monthly charge and Variable Charge for the Product supplied and as adjusted as per Article 15.1.1 Such invoice will be payable within the 30 (thirty) days of its submission.

15.2 The Fixed monthly base charge for ASU and Variable Monthly base charge for Oxygen & Nitrogen shall remain fixed for the entire Agreement except for variation/adjustment in the Product Prices as per the Article 15.1.1. Price for Oxygen & Nitrogen shall be paid based on the actual quantity of Oxygen & Nitrogen supplied by BOO PROCESSOR to OWNER.

15.3 However, if no Oxygen & Nitrogen is lifted by OWNER, no Variable Charges shall be payable. Only the Fixed monthly charge shall be payable subject to the provisions of Article 15.1.1 hereof.

**Note: Wherever Fixed Monthly Charges for Oxygen & Nitrogen is written the same shall be replaced with Fixed monthly Charges for ASU plant**

## ANNEXURE-VIII TO SECTION III

### PREAMBLE TO SCHEDULE OF PRICES

#### 1.0 Pricing formula for Products/and Utilities

##### 1.1 Product :Oxygen & Nitrogen

Pricing formula shall comprise of the following two components ;

- a) Fixed Monthly Charge for ASU Plant;
- b) Variable charge per Nm<sup>3</sup> of Oxygen
- c) Variable charge per Nm<sup>3</sup> of Oxygen Nitrogen

##### 1.2 Deleted

##### 1.3 Utilities

The supply of Utilities, by OWNER, shall be considered at the following rates. Bidder is required to quote Guaranteed Consumption figures of Utilities as detailed in Design basis, Technical Part of NIT.

Sl. No.	Feed / Utility	Unit	Unit Rate
1.0	MP Steam	MT	Rs 1400
2.0	Power	kwh	Rs 6.08
3.0	Cooling Water	M <sup>3</sup>	Rs. 46.475

The above Utilities will be provided by the Owner free of cost during the operation of the Contract.

The above rates of utilities mentioned are exclusively for the purpose of evaluation. Payment during anytime of contract period would be as per the actual capacity point and Utilities and CGIL will have the option to receive any amount of O<sub>2</sub>& N<sub>2</sub> Gas throughout the agreement to meet its requirement.

##### 1.4 Prices quoted by bidder shall be exclusive of Taxes and Duties.

##### 2.0 Bidders should submit bid in Indian Rupees only and receive payment in Indian Rupees only.

**3.0** A copy of BOQ, uploaded by Bidder in the CPP Portal keeping price blank (hiding the price) and in place indicating "Quoted" or "√", as a confirmation of price quoted against each head, shall be submitted in Cover-2 Part-II of Bid.

#### **4.1 Price Detail for Oxygen & Nitrogen**

#### **4.2 Fixed Monthly Charge**

##### **4.2.1 Fixed Monthly Charge for the ASU plant**

The Fixed Monthly charge (in Rupees ) shall have three components ;

- 1) Constant amount (towards ROI of the BOO Operator);
- 2) Component related to WPI for manufactured Products (towards maintenance cost & other overheads).
- 3) Component related to CPI for industrial workers (towards manpower cost).

Fixed Monthly Charge shall be calculated on the basis of the following formula:

$$\mathbf{FMC_M = FMC_{BM} \times [XM_{ROI} + XM_{WPI} \times WPI_N / WPI_O] + (XM_{CPI} \times CPI_N / CPI_O)}$$

Where,

$FMC_M$  = Fixed Monthly Charge computed on account of Oxygen& Nitrogen(ASU Plant) delivered to OWNER and will remain valid for that month, it will be released on pro-rata basis from first delivery date upto the end of the month and thereafter on monthly basis every month (e.g. If the first delivery date is 15<sup>th</sup> January than  $FMC_{MO}$  will be computed on pro-rata basis from 15<sup>th</sup> January to 31.01.2020.and from February onwards it will be computed in Calendar monthly basis)

$FMC_{BM}$ = Base monthly charge as per the Letter of Award

$XM_{ROI}$  = Constant Component on account of Return On Investment (which will not be adjusted due to inflation)

$XM_{WPI}$  =Constant Component related to "Wholesale Price Index for Manufactured Products"

$XM_{CPI}$  =Constant Component related to "Consumer Price Index for Industrial Labour"

$WPI_N$  =Average Wholesale Price Index as per RBI/Office of Economic Advisor for Manufactured Products for the month prior to Billing month or latest available as on that date.

$WPI_O$  =Average Wholesale Price Index as per RBI/Office of Economic Advisor for Manufactured Products for the month of submission of Bid or latest available as on that date.

$CPI_N$  =Average Consumer Price Index for Industrial workers as last declared by Reserve Bank of India/Office of Economic Advisor for the month prior to billing month.

$CPI_O$  = Consumer Price Index for Industrial workers for the month of FOA (Fax of Acceptance) / LOI(Letter of Intent)or last published month before LOA.

**The Constant Component - $X_{M_{ROI}}$ ,  $X_{M_{WPI}}$ & $X_{M_{CPI}}$  to be quoted by the Bidder in the Schedule of Rate / BOQ.**

The Bidder will quote  $FMC_{BM}$ ,  $X_{M_{ROI}}$ , $X_{M_{WPI}}$  and  $X_{M_{CPI}}$ for Oxygen in the Price Bid/BOQ,

- 1)  $X_{M_{ROI}}+X_{M_{WPI}} + X_{M_{CPI}}= 100.0$
- 2) The price adjustment /regulation under the formula referred in Article- 15.1.1.1, will be made on monthly basis commencing from the First Delivery of the Product.

**4.3 Variable charge**

**4.3.1 Variable charge per Nm3 of Oxygen**

Variable Charge per Nm3 of Oxygen( $VC_{oxygen}$ ) =  $A_{MO} \times (WPI_N / WPI_O)$

**Where,**

$A_{MO}$  = is to be submitted in the Price Bid, as per Schedule of Prices/BOQ

$WPI_N$ =Average Wholesale Price Index as per RBI/ Office of Economic Advisor for Manufactured Products for the month prior to Billing month or latest available as on that date.

$WPI_O$  =Average Wholesale Price Index as per RBI/ Office of Economic Advisor for Manufactured Products for the month of submission of Bid or latest available as on that date.

**4.3.2 Variable charge per Nm3 of Nitrogen**

Variable Charge per Nm3 of Nitrogen ( $VC_{Nitrogen}$ )=  $A_{MN} \times (WPI_N / WPI_O)$

**Where,**

$A_{MN}$  = is to be submitted in the Price Bid, as per Schedule of Prices/BOQ

$WPI_N$ = Average Wholesale Price Index as per RBI/ Office of Economic Advisor for Manufactured Products for the month prior to Billing month or latest available as on that date.

WPI<sub>o</sub>= Average Wholesale Price Index as per RBI/ Office of Economic Advisor for  
 Manufactured Products for the month of submission of Bid or latest available as

#### 4.0 GUARANTEED CONSUMPTION FIGURES OF UTILITIES OF ASU PLANT

Bidder to indicate the Guaranteed Quantity of Feed & Utilities in the Price Bid

Sl. No	Raw Materials/ Utilities	Unit Rate (R)	Consumption per Hour (Q)				
			Turndown (50%)	Normal (100%)	With 20% additional Margin (120%)	At 60% Plant Load	80% Plant Load
1.	Cooling Water Circulation, M <sup>3</sup> (CC)	46.475					
2.	Power, KWh (P)	6.08					
3.	MP Steam, (MPS)	1400					
4.	Guaranteed Total Works Cost "A"/ Hour = $\sum(Q \times R)$ {Sl.No.1-3}						
5.	Production figures at respective loads (per Hour): "N" (Nm3/hr)		91500 Nm3/hr (Oxygen- 68100 Nm3/hr Plus Nitrogen -23,400) "N1" (Nm3/hr)	152500 Nm3/hr (Oxygen- 113500 Nm3/hr Plus Nitrogen -39,000) "N2" (Nm3/hr)	183000 Nm3/hr (Oxygen- 136200 Nm3/hr Plus Nitrogen -46,800) "N3" (Nm3/hr)	109800 Nm3/hr (Oxygen- 81720 Nm3/hr Plus Nitrogen -28,080) "N4" (Nm3/hr)	146400 Nm3/hr (Oxygen- 108960 Nm3/hr Plus Nitrogen -37,440) "N5" (Nm3/hr)

Note : Values for Guaranteed Consumption Figures to be quoted upto 3<sup>rd</sup> decimal place.