



**TENDER DETAILS**

Tender Ref No : NFP/PUR/SB/210080/2120710/R dtd. 11.12.2023

Title/Work Description : Design, Engineering, Supply, Installation and Commissioning of DCS and ESD System for Urea Plant of NFL Panipat, NFL Nangal and NFL Bathinda Units

Tender Publish Date/Bid Submission End Date/ Bid Opening Date : As Per “Critical Dates ” in Tender Details on e-tender Portal

Type of tender : Open Tender–Two Part Bid [Double Cover]

Region : NFL Panipat, NFL Bathinda, NFL Nangal

Tender Inviting Authority : Mahesh Patil, CM (Matls)

National Fertilizers Limited Panipat, Haryana – 132106

**TENDER NOTICE**

NATIONAL FERTILIZERS LIMITED (NFL), a Govt. of India Enterprise referred to herein as the Owner intends to enter into contract for **Design, Engineering, Supply, Installation and Commissioning of DCS and ESD System for Urea Plant of NFL Panipat, NFL Nangal and NFL Bathinda Units.** You are invited to submit a Techno-commercial proposal and Price proposal for the said item through e-Tendering.

The procurement shall be made through e-tendering process on our e-tendering portal :<https://etenders.gov.in/>. The offers in this process are required to be submitted electronically in place of offers in 'hard copy under sealed envelope' as being done conventionally.

For any technical related queries regarding e-tender portal you can call at 24 x 7 Help Desk Number of M/s NIC 0120-4200 462, 0120-4001 002 , 0120-4001 005, 0120-6277 787 , Email : [support-eproc@nic.in](mailto:support-eproc@nic.in); International Bidders are requested to prefix +91 as country code

<b>M/s National Fertilizers Limited, Panipat</b>	
<b>Sh. S.K. Sheoran</b>	<b>Sh. Aayush Kumar</b>
Sr. Manager (Material) , NFL Panipat	Asst Manager(Material) NFL Panipat
Phone: : 7009983894 ; <a href="mailto:sksheoran@nfl.co.in">Email: sksheoran@nfl.co.in</a>	Phone: : 8816080809, <a href="mailto:aayushkumar@nfl.co.in">Email: aayushkumar@nfl.co.in</a>

Tender document (Non-Transferable) can be downloaded from our e-tendering portal and offer submitted through online mode on our e-tendering portal shall only be considered for evaluation. Bids in physical/soft form sent through fax / email / courier / post will not be acceptable. Any future amendment/modification/corrigendum to the tender will be displayed only on our E-Tender Portal <https://etenders.gov.in/>. Bidders are requested to visit our E-Tender Portal regularly in their own interest to check for any amendment/modification/corrigendum to the Tender.

## GENERAL TERMS & CONDITIONS

1	The offer shall be submitted, electronically only on portal URL <a href="https://etenders.gov.in/">https://etenders.gov.in/</a> ;
2	The tenders will be submitted online on the web site <a href="https://etenders.gov.in/">https://etenders.gov.in/</a> ; The tenders will be opened electronically by us from our Panipat office.
3	NFL takes no responsibility for delay, loss or non-receipt of EMD (if any) sent by post/courier.
4	<p><b>SYSTEM FAILURES AND REMEDIAL MEASURES THEREOF/COURSE OF ACTION TO BE FOLLOWED;</b> NFL shall make all out efforts to rectify the problem(s) leading to system failure during the live tendering. However in case the system could not be restored within the reasonable time period as deemed fit by NFL, the following remedial measures shall be taken under such an eventuality:</p> <p>1. Tender is prepared and released but vendors are not able to submit their bids. ---&gt; The due date of closing/opening shall be extended suitably as per sole discretion of NFL</p> <p>2. Bids have been submitted but the same cannot be opened by NFL.-----&gt; The due date of opening shall be extended suitably as per sole discretion of NFL</p>
5	NFL shall make all out efforts to rectify the problem(s) leading to system failure during the live tendering. However bidder must ensure to submit the bid well in time to avoid last minute disappointment.
6	No oral, telephonic, telegraphic tenders or tenders submitted in hard copies/physical form will be entertained.
7	All tenders should be submitted online digitally signed and sealed by using digital certificate.
8	Tenderers are requested to scrutinize the terms and condition of this tender thoroughly as given in tender documents.
9	No amendment to the online bid would be admissible under any circumstances, whatsoever after the closing date and time of receipt of tenders.
10	In case of Two-Part Bid , Price bid of the vendors, who are Eligible and techno-commercially acceptable, shall be opened electronically and time & date for same will be intimated to techno-commercially acceptable bidders.
11	Prices must be on FOR NFL Stores Panipat/ Bathinda/Nangal Basis.
12	If the weight of the material permits dispatch by post parcel/courier, this may clearly be stated in the uploaded documents.
13	<p><b>(A) Payment Terms shall be as follows:</b></p> <p>a) <b>Supply portion :</b> 90% of Purchase order value towards supply portion plus 100% taxes towards supply portion shall be made within 30 days after receipt and acceptance of complete material at respective NFL unit's site through RTGS.</p> <p>b) <b>Installation/ Erection &amp; Commissioning:</b> 100% payment including taxes towards Installation/Erection and Commissioning along with balance payment of supply portion (i.e. 10%) shall be made within 30 days after acceptance of SAT (Site Acceptance Test) at respective NFL unit's site through RTGS. If Installation/Erection and Commissioning gets delayed beyond six months after receipt and acceptance of complete material at respective NFL Unit's site, for reasons not attributable to bidder, then balance 10% payment of supply portion shall be released after six months of receipt and acceptance of complete material at respective NFL Unit's site, against submission of Bank Guarantee(BG format as per Advance payment Bank Guarantee format which is attached at Annexure-X) of equivalent amount (i.e.10%) valid till commissioning.</p> <p>Online BG confirmation shall be arranged by the vendor as detailed in clause no. 44 of the General Terms and Conditions of the NIT.</p> <p>c) <b>Annual Maintenance Contract:</b> Payment shall be quarterly pro-rated at the end of each quarter. Quarterly payment including taxes will be released within fifteen days, against submission of invoice.</p> <p><b>(B) Supply of material and Installation/ Erection &amp; Commissioning services for DCS and ESD Control system of Panipat, Bathinda and Nangal Units shall be delivered, inspected and installed at respective unit's site as mentioned in the Technical section. Therefore, payment shall be released by respective Units based on the separate invoices raised by the supplier for respective Unit. Successful bidder has to supply the material and offer services as per the scope for 1 SET each at Panipat, Nangal and Bathinda Units ( Total 3 SETS).</b></p>

13.1	<p><b>MSME vendor payment through TReDS:</b></p> <p>GoI has introduced electronic platform for facilitating the financing of trade receivables of MSMEs from buyers, through financiers, which is termed as trade receivables Discounting System (TReDS). NFL is already registered on RXIL TreDS platform.</p> <p>MSME Bidders are requested to kindly register on the TreDS platform and avail the TreDS facility, if they want to.</p> <p>The detail of RXIL contact person is as below:  Contact Name : Mr. Prajay Shukla  Contact No. : 8090051171  Email Id : prajay.shukla@rxil.in</p> <p>Bidders upon successful delivery shall submit their invoices along with the mandated enclosures including TreDS details. Upon receipt and acceptance of the supplied material/services and receipt of invoices with the mandated enclosures, NFL shall process the invoice for payment as per details submitted on TreDS platform.</p> <p>Any unfinanced invoice/s of MSME bidders seeking payment from NFL directly shall be processed as per the standard payment terms agreed in PO/Contract.</p> <p>All financing cost for using the facility shall be borne by the MSME bidder only.</p>
14	Complete specifications of the Stores offered together with manufacturer's name brand, etc., of each of the item must be given in the quotations uploaded and descriptive literature should be uploaded along with the quotations
15	Price and delivery quoted by you must be firm and valid for a minimum period of 120 days from the due date of opening of quotation.
16	The tenderer shall quote the price strictly as per the online price bid. Parties should quote one rate for specific quantity quoted by them. Tenders with quotation of different rate for different quantities shall be rejected without any further reference.
17	<p><b>LIQUIDATED DAMAGE FOR SUPPLY:</b></p> <p>It shall be obligatory on the part of suppliers to adhere strictly to the deliveries quoted and accepted by us in our orders. In case of delay in supplies, unless extension of delivery has been granted by us on application by the suppliers, we may at our option either (i) recover liquidated damages from supplier at a sum equal to ½% per week or part thereof of the value of stores not delivered subject to a maximum of 5% of the value of the order, or (ii) purchase elsewhere on account and at the risk and cost of the suppliers the stores not delivered or (iii) cancel the contract without prejudice to our rights under (i) &amp; (ii) above.</p> <p><b>LIQUIDATED DAMAGE FOR COMMISSIONING:</b></p> <p>Final commissioning/hookup of new DCS and ESD system which require plant shut down, shall be done in plant shutdown of 14 days only for each plant, which shall be intimated well in advance.</p> <p>In case of delay in commissioning by supplier, unless extension of delivery has been granted by us on application by the suppliers, we may at our option recover liquidated damages from supplier at a sum equal to 1% per day or part thereof subject to maximum of 5% of basic value of installation/erection &amp; commissioning charges.</p>
18	Uploaded documents must be legible, clear and free from overwriting/erosions. You should sign on all cuttings/over writings. Incomplete quotations in any aspect are liable to be summarily rejected.
19	We reserve the right to accept or reject any quotation in full or in part without assigning any reason thereof. We also reserve the right to split and place order on more than one supplier.
20	NFL will have the right to issue addendum to tender documents to clarify, amend, modify, supplement or delete any of the conditions, clauses or items stated. Addendum so issued will form part of original invitation to tender.
21	NFL reserves the right to postpone the tender opening date and/or time and will intimate all the tenderers well in time, of such postponement along with notice of revised opening date and time.
22	One person will be allowed to represent only one company during discussions/negotiations with NFL. If same person is representing different companies with authorization letter from more than one company, such person will be allowed to represent only the first company called for negotiations.
23	Bidders may ensure that online offer has been digitally signed by appropriate/authorized representative of the Company. Withdrawal of offer/non acceptance of orders placed based on online offers submitted by bidder's will not be allowed on the grounds that offer was not signed by authorized person.
24	The prospective tenderers having any common partners/Directors/ Managing partners, etc. or having any other common criteria shall be considered as Sister/Group/Associates company. In such cases, only one of them will be eligible for participating in the tender.
25	In case, due to some unforeseen circumstances, the date of receiving/opening of the tender happens to be a holiday/closed day, the tender will be opened on the next working day.
26	If a tenderer resorts to any frivolous, malicious or baseless complaints /allegations with an intent to hamper or delay the tendering process or resorts to canvassing/ rigging/ influencing the tendering process, NFL reserves the

	right to debar such tenderer from participation in the present / future tenders up to a period of 2 years.
27	It shall be certified by the tenderer that none of the NFL employee is related to owners/directors. (In case any relative is working in NFL, furnish details separately in uploaded documents).It shall also be certified by the tenderer that none of NFL's ex-employee is employed with them. (In case any ex-employee of NFL is employed, furnish details separately in uploaded documents). It shall be certified by the tenderer that none of blood relation of the owners/directors is participating in this tender in the name of other firm.
28	Subsequent to an order being placed against your quotation, received in response to this 'enquiry', if it is found that the materials supplied are not of the right quality or not in accordance with our specifications (required by us) or received in damaged or broken conditions, not satisfactory owing to any reason of which we shall be the sole judge, we shall be entitled to reject the materials, cancel the contract and buy our requirement from the open market/other sources and recover the loss, if any, from the supplier reserving to ourselves the right to forfeit the security deposit, furnished by the supplier against the contract. The supplier will make his own arrangements to remove the rejected materials within a fortnight of instruction to do so. Thereafter, materials will lie entirely at the supplier's risk and responsibility and storage charges, along with any other charges applicable, will be recoverable from the supplier.
29	<b>Force Majeure:</b> Neither party will be liable for any claim on account of any loss, damage or compensation, whatsoever, arising out of any failure to carry out the terms of this contract, where such failure is caused due to war, rebellion, mutiny, civil commotion, fire, riots, earthquake, drought, flood crop failure, or Act of God or due to any restraint or regulation of the State or Central Government or a local authority/authorities, provided a notice of such occurrence is given to the other party in writing within 10 days from the date of occurrence of the force majeure condition, furnishing therewith a documentary evidence supporting the invoking of the force majeure clause. On cessation of the force majeure, the party invoking force majeure will inform the other party of the period for which the force majeure condition continued and will also give documentary evidence there of this effect.
30	In all cases of disputes, the decision of National Fertilizers Limited shall be final. Failing this, the matter will be referred to the Arbitration in accordance with the Indian Arbitration Act and amendments thereof.
31	<p><b>ARBITRATION:</b> The contract shall be governed by and construed in accordance with the laws of India.</p> <p><i>"Any dispute or difference whatsoever arising between the parties out of or relating to the Construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall .be resolved amicably through negotiations by the Parties. A "Notice of Dispute" shall be given by the party seeking resolution of a dispute to other party. If the dispute is not resolved within Thirty (30) days from the notice, the dispute shall be referred to arbitration as per the procedure mentioned herein below:</i></p> <p><i>A written notice shall be given by contractor invoking arbitration to National Fertilizers Limited, through Designated Authority. Where the claim including determination of interest, if any, being claimed upto the date of commencement of arbitration does not exceed Rs. Five Crore, the reference shall be made to a sole arbitrator. The parties shall mutually agree on the name of sole arbitrator. In case of disagreement upon the name of the sole arbitrator, the appointment of Sole Arbitrator shall be done in accordance with the provisions of Arbitration &amp; Conciliation Act, 1996.</i></p> <p><i>Where the claim including determination of interest, if any, being claimed, upto the date of commencement of arbitration exceeds Rs. Five Crore, the reference shall be made to arbitral tribunal consisting of three arbitrators. Each party shall nominate one arbitrator each within 30 days from the date of receipt of notice of invocation of arbitration and two nominated arbitrators shall appoint the presiding arbitrator within 30 days thereafter. If a Party to the dispute refuses or neglects to nominate an arbitrator on its behalf within period specified, or the two arbitrators fails to nominate Presiding arbitrator, appointment of Arbitrators(s) shall be done in accordance with the provisions of Arbitration &amp; Conciliation Act, 1996.The Arbitration proceeding shall be governed by the Arbitration &amp; Conciliation Act 1996 and any further statutory modification or re-enactment thereof and the rules made there under. It is agreed by and between the parties that in case a reference is made to the Arbitrator for the purpose of resolving the disputes/ differences arising out of the contract by and between the parties hereto the Arbitrator shall not award interest on the awarded amount more than the rate SBI PLR- /Base Rate applicable to NFL on date of award of contract.</i></p> <p><b><u>SEAT OF ARBITRATION:</u></b>  <b><i>The seat and venue of arbitration shall be at Panipat, Haryana.</i></b></p> <p><i>The cost of the proceedings shall be equally borne by the parties, unless otherwise directed by the arbitral tribunal. The decision of the arbitral tribunal shall be final and binding on all parties."</i></p> <p><b>Arbitration for Foreign Vendors/Parties:</b></p> <p><i>"Any dispute arising out of or in connection with the contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre ("SIAC"). In accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("SIAC rules) for the time being in force, which rules are deemed to be incorporated by reference in this clause.</i></p> <p><i>The seat and venue of the arbitration shall be at New Delhi, India.</i></p> <p><i>The language of the arbitration shall be in English</i></p> <p><i>This contract/LOI/IT shall be governed by and construed in accordance with the Laws of India".</i></p> <p>Arbitration for CPSEs and Government Department:-</p>

	In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes related to Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for its resolution through AMRCD as mentioned in DPE OM No. 5/0003/2019-FTS-10937 Dated 14 <sup>th</sup> December 2022 and decision of AMRCD on the said dispute will be binding on both the parties”
32	Jurisdiction: All actions at law or suits arising out of or in connection with this contract or the subject matter thereof will be instituted Panipat court in Panipat district in the State of Haryana.
33	Mode of Payment: The payment shall be released by EFT/ RTGS/NEFT. For electronics fund transfer (EFT) / RTGS process, you may submit your bank particulars i.e. Name of the party/Beneficiary, Parties Banker Name and Address, Branch Name, City, Branch Code, IFSC code of Bank, Bank Account no. (All digits in case of CBS branches), E-mail of beneficiary to enable us to release payment accordingly. All bank charges will be to supplier’s account..
34	LAWS GOVERNING PURCHASE ORDER: The purchase order shall be governed by the laws or Union of India for the time being in force.
35	In case you are registered as MICRO, SMALL or MEDIUM Enterprise under ‘The Micro, Small & Medium Enterprise Development Act, 2006 (MSMED Act)’promulgated by Government of India vide Notification dated 16/06/2006, please indicate the relevant category in your uploaded offer and also submit a copy of the certificate issued by the concerned authorities failing which the bidder shall not be entitled for the benefit under MSMED Act. i. Micro:- Where the investment in Plant & Machinery does not exceed Rs. One Crore and turnover does not exceed Rs. Five Crore. or ii. Small:- Where the investment in Plant & Machinery does not exceed Rs. Ten Crore and turnover does not exceed Rs. Fifty Crore. or iii. Medium: - Where the investment in Plant & Machinery does not exceed Rs. Fifty Crore and turnover does not exceed Rs. Two Hundred and Fifty Crore. However, NFL reserve the right to cancel the order (if any) and blacklist / debar a firm for a period of three years, in case, it is determined that the firm benefitted wrongly from the Public Procurement Policy. The Micro & Small Enterprises (MSEs) shall be entitled for the benefits under the Public Procurement Policy for Micro & Small Enterprises subject to the terms and conditions indicated under heading ‘ Benefits to Micro and Small Enterprises’.
36	RELATIONS: Tenderer must read the following clause carefully. If reply is positive then detail information may uploaded. “Should a tenderer or contractor have a relation or in the case of a firm or company of contractors, one or more of its shareholders employed in NFL the authority inviting tenders shall be informed of the fact at the time of submission of the tender; availing which NFL may in its discretion reject the tender or rescind the contract.”
37	SUBLETTING OF CONTRACT : The successful tenderer shall not sublet or assign the contract or any part of it without obtaining the written permission of NFL in advance. In the event of the successful tenderer’s subletting or assigning the contract or any part thereof without such permission, NFL shall be entitled to cancel the contract and to purchase the goods elsewhere and successful Bidder shall be liable to the National Fertilizers Ltd., for any loss or damage which NFL may sustain in consequence or arising out of such purchases. Even in case NFL permits subletting, NFL shall not recognize any contractual obligation with the person or party to whom subletting is permitted and shall hold the successful Bidder responsible for satisfactory and due & proper fulfilment of the contract.
38	CLEAR UNDERSTANDING : When a tenderer submits his tender in response to this tender document, he will be deemed to have understood fully all requirements, terms and conditions. No request will be entertained on a pretext that the tenderer did not have a clear idea on any particular point and/or a clause of the tender.
39	SECRECY: Any information delivered or otherwise communicated by NFL to supplier in connection with the contract shall be regarded as secret and confidential and shall not without the written consent of NFL be published or disclosed to any third party or made use of by the supplier except for the purpose of implementing the contract.
40	Whenever the bidder is silent about the acceptance of NIT conditions such as bank guarantee, warranty period, liquidated damages etc, it shall be presumed that the bidder has accepted these conditions and no further correspondence seeking specific confirmation about acceptance of these conditions shall be made.
41	In case, a supplier is found guilty of bribery, corruption, dishonesty, mal-practice, submission of forged documents, misrepresentation, spurious supplies, fails to refund the amount due to the Company, fails to return the material issued for reprocessing/manufacturing, such supplier will be blacklisted as per procedures of NFL.
42	The total landed rate(s) including Transportation Charges will remain firm till the complete execution of the order. No revision in rate(s) will be allowed. However any increase/decrease in rates of statutory levies and duties, shall be allowed as per prevailing rules and notifications of Government.

43	<p>Anti-Fraud Policy: All bidders/service providers/ vendors/ consultants etc. shall be required to certify that they would adhere to Anti-Fraud Policy of NFL and not indulge or allow anybody else working in the Company to indulge in fraudulent activities and would immediately apprise the Company of the fraud/suspected fraud as soon as it comes to their notice. In case of failure to do so, the Company may debar them for future transactions. The Policy has been uploaded on the Company's website (www.nationalfertilizers.com under investor desk column) for public information. (Direct link: <a href="http://nationalfertilizers.com/images/pdf/investorsdesk/Anti%20Fraud%20Policy.pdf">http://nationalfertilizers.com/images/pdf/investorsdesk/Anti%20Fraud%20Policy.pdf</a>)</p>
44	<p><b>Earnest Money Deposit (EMD):</b> Tenders must be accompanied by Earnest Money Deposit of <b>Rs. 1,00,000.00 ( 1.00 Lakh)</b> . EMD can be submitted through e-transfer in NFL account through RTGS/NEFT OR Bank Guarantee from any of the Nationalized Bank or scheduled Bank except Rural/ Cooperative Banks, Earnest Money in the proforma specified by NFL for Bid Security/EMD (as per ANNEXURE-VII).Cheques will not be accepted. NFL's Bank Details: Bank Name: Bank of India A/C No: 675130100009001 IFSC Code: BKID0006751 Branch Name: Panipat Branch, Haryana-132103</p> <p>Earnest money deposit shall be forfeited at the sole discretion of NFL in case the tenderer, after intimation from NFL of the acceptance of his tender, either wholly or in part fails to enter into a contract with NFL and/ or changes any of price and terms &amp; conditions of the tender within the validity period of the tender. <b>The Vendors / Contractor shall also arrange to send BG advice (including all BG amendments) by their issuing bank through SFMS platform directly to the NFL Banker, i.e. ICICI Bank Ltd., X1, Senior Mall, Sector-18, Noida, UP, 201301, IFSC Code ICIC0000031, as per the following details: -</b></p> <ol style="list-style-type: none"> <li>i) <b>IFN 760 COV for issuance of bank guarantee.</b></li> <li>ii) <b>IFN 767 COV for amendment of bank guarantee.</b></li> <li>iii) <b>Issuing bank shall mention IFSC Code as ICIC0000031 in field 7035 of IFN 760 COV/ IFN 767 COV.</b></li> <li>iv) <b>Issuing bank shall mention NFL beneficiary code as "NFLNATIONAL04022015" in field 7037 of IFN 760 COV / IFN 767 COV.</b></li> </ol> <p>EMD shall be refunded to the unsuccessful tenderers after placement of order on successful bidder. No interest will be paid on the E.M.D. of either the successful tenderer (s) or unsuccessful tenderer (s). EMD of successful tenderer shall be refunded after submission of SD cum PBG or can also be adjusted against SD cum PBG. NFL shall not accept postal delays in EMD submission due to any reason. EMD shall be submitted separately in sealed envelope ( if same is submitted as BG). Cover should bear following information: Tender Number , "EMD Enclosed" Tender closing date &amp; time, Tender opening date &amp; time ,Name &amp; Address of tenderer. EMD amount must reach us before the techno-commercial opening (as per tender schedule). In case vendor fails to submit the requisite EMD, prior to bid opening (as per tender schedule), the offer is liable to be rejected and may not be opened.</p>
45	<p><b>SECURITY DEPOSIT –CUM- PERFORMANCE BANK GUARANTEE [SD-CUM-PBG]: against Purchase order</b></p> <p>Security deposit-cum Performance bank Guarantee will be furnished by the successful tenderer, for the faithful execution of the Purchase Order, within 15 days of issue of Purchase Order. SD-CUM-PBG will be @ 10 % of PO value ( Basic Value excluding taxes), as detailed below:-</p> <ol style="list-style-type: none"> <li>a. SD-CUM PBG can be submitted through e-transfer in NFL account through RTGS/NEFT.</li> <li>b. Cheques will not be accepted.</li> <li>c. The tenderer will, however, have the option to furnish a Bank Guarantee from any of the Scheduled Bank excluding Gramin/Co-operative Banks, in the Performa specified by NFL (as per ANNEXURE-VIII) for SD-CUM-PBG for the faithful and proper fulfillment of the contract The Bank Guarantee must be valid till the Delivery Period plus Warranty Period together with claim period of three months. The Bank Guarantee must be directly sent to NFL by your Bank through regd, AD.</li> </ol> <p>Bidder shall also arrange to send BG advice (including all BG amendments) by their issuing bank through SFMS platform directly to the NFL Banker, i.e. ICICI Bank Ltd., X1, Senior Mall, Sector-18, Noida, UP, 201301, IFSC Code ICIC0000031, as per the following details: -</p> <ol style="list-style-type: none"> <li>I) IFN 760 COV for issuance of bank guarantee.</li> <li>II) IFN 767 COV for amendment of bank guarantee.</li> <li>III) Issuing bank shall mention IFSC Code as ICIC0000031 in field 7035 of IFN 760 COV/ IFN 767 COV.</li> <li>IV) Issuing bank shall mention NFL beneficiary code as "NFLNATIONAL04022015" in field 7037 of IFN 760 COV / IFN 767 COV".</li> </ol>

	<p>d. The SD-CUM-PBG will be retained by NFL during the currency of contract or till settlement of all the accounts thereof, whichever is later. In case any dispute or difference not settled within the validity of Bank Guarantee, tenderer will arrange to get the Bank Guarantee extended as asked for by NFL, else NFL, at its sole discretion may call upon the Bank to pay the whole or part of the amount of Bank Guarantee.</p>
	<p>e. The above deposit will be deemed to be security for the faithful performance of the contract and for the purpose of Section 74 of the Indian Contract Act, 1872 and for the extension of that section. In the event of any breach of any terms and conditions of the contract, NFL will have the right to encash the Bank Guarantee/SD-CUM-PBG either the whole or part of value of Bank Guarantee or SD-CUM-PBG and tenderer will make good the value of Bank Guarantee/SD-CUM-PBG to the extent of the amount so drawn within 15 days of receipt of intimation from NFL to this effect.</p>
	<p>f. The amount so drawn will not in any way effect any remedy to which NFL may otherwise be entitled or any liability incurred by tenderer under the contract or any law for the time being in force relating thereto or bearing thereupon.</p>
	<p>g. In the event of the forfeiture of whole or part of the SD-CUM-PBG the tenderer will deposit further sum/sums, so as to maintain the full SD-CUM-PBG amount.</p>
	<p>h. The SD-CUM-PBG will be refunded after contract has been successfully completed. It will be lawful for NFL, if any difference or dispute is likely to exist, to defer payment of the SD-CUM-PBG or any portion thereof which may be due for release until such difference and dispute had been finally settled or adjusted.</p>
	<p>i. The SD-CUM-PBG will not carry any interest.</p>
46.1	<p><b>Purchase Order for Supply and Installation/Erection and Commissioning of DCS and ESD system for all the three Units i.e. Panipat, Nangal and Bathinda, shall be issued to the successful bidder after bid finalization, by Panipat Unit.</b></p> <p><b>Work order for Comprehensive Annual Maintenance Contract (CAMC) shall be issued separately by respective individual Units ( i.e. Panipat, Nangal and Bathinda) on yearly basis. However, year-wise CAMC rates shall be quoted by the bidders as per NIT and shall be taken into account while evaluating offers for DCS/ESD main contract for all the three units. These rates shall be valid till the placement of Work Order for AMC of particular year and the expiry of AMC period.</b></p> <p><b>Work Order for 1st year AMC shall be issued before the expiry of Warranty period. Work Orders for AMCs for subsequent years shall be issued before the expiry of previous year AMC period, subject to satisfactory performance during the previous year.</b></p>
46.2	<p><b>Bidder shall submit Security Deposit @ 10% of Work Order value ( Basic Value excluding taxes), within 15 days of issue of Work Order to respective unit on yearly basis for CAMC. Individual Unit shall issue separate Work Orders for CAMC on yearly basis.</b></p>
46.3	<p><b>SECURITY DEPOSIT: against Work Order for CAMC</b></p> <p>Security deposit will be furnished by the successful tenderer, for the faithful execution of the Work Order, within 15 days of issue of Work Order. SD will be charged @ 10 % on WO value ( Basic Value excluding taxes), as detailed below:-</p> <p>a. SD can be submitted through e-transfer in NFL account through RTGS/NEFT.</p> <p>b. Cheques will not be accepted.</p> <p>c. The tenderer will, however, have the option to furnish a Bank Guarantee from any of the Scheduled Bank excluding Gramin/Co-operative Banks, in the Performa specified by NFL (as per ANNEXURE-IX) for SD for the faithful and proper fulfillment of the contract The Bank Guarantee must be valid till the AMC period plus claim period of three months. The Bank Guarantee must be directly sent to NFL by your Bank through regd, AD.</p> <p>d. Bidder shall also arrange to send BG advice BG advice (including all BG amendments) by their issuing bank through SFMS platform directly to the NFL Banker, i.e. ICICI Bank Ltd., X1, Senior Mall, Sector-18, Noida, UP, 201301, IFSC Code ICIC0000031, as per the following details: -</p> <p>I) IFN 760 COV for issuance of bank guarantee.</p> <p>II) IFN 767 COV for amendment of bank guarantee.</p> <p>III) Issuing bank shall mention IFSC Code as ICIC0000031 in field 7035 of IFN 760 COV/ IFN 767 COV.</p> <p>IV) Issuing bank shall mention NFL beneficiary code as “NFLNATIONAL04022015” in field 7037 of IFN 760 COV / IFN 767 COV”.</p>

	<p>e. The <b>SD</b> will be retained by NFL during the currency of contract or till settlement of all the accounts thereof, whichever is later. In case any dispute or difference not settled within the validity of Bank Guarantee, tenderer will arrange to get the Bank Guarantee extended as asked for by NFL, else NFL, at its sole discretion may call upon the Bank to pay the whole or part of the amount of Bank Guarantee.</p> <p>f. The above deposit will be deemed to be security for the faithful performance of the contract and for the purpose of Section 74 of the Indian Contract Act, 1872 and for the extension of that section. In the event of any breach of any terms and conditions of the contract, NFL will have the right to encash the <b>Bank Guarantee/SD</b> either the whole or part of value of Bank Guarantee or <b>SD</b> and tenderer will make good the value of Bank Guarantee/<b>SD</b> to the extent of the amount so drawn within 15 days of receipt of intimation from NFL to this effect.</p> <p>g. The amount so drawn will not in any way effect any remedy to which NFL may otherwise be entitled or any liability incurred by tenderer under the contract or any law for the time being in force relating thereto or bearing thereupon.</p> <p>h. In the event of the forfeiture of whole or part of the <b>SD</b> the tenderer will deposit further sum/sums, so as to maintain the full <b>SD</b> amount.</p> <p>i. The <b>SD</b> will be refunded after contract has been successfully completed. It will be lawful for NFL, if any difference or dispute is likely to exist, to defer payment of the <b>SD</b> or any portion thereof which may be due for release until such difference and dispute had been finally settled or adjusted.</p> <p>j. The <b>SD</b> will not carry any interest.</p>
47	The prices quoted shall be exclusive of all taxes and duties as may be applicable presently or imposed by Govt of India from time to time.
48.1	Provisions of revised "Public Procurement" (Preference to make in India) order 2017 notified vide order no. P-45021/2/2017 BE-II dated 16/09/2020 of Ministry of Commerce and Industry, Department of Industrial Policy and Promotion (DIPP) shall be applicable..
48.2	<p>Bidders seeking benefits under Purchase Preference to Make in India (linked with local content) shall have to comply with the provisions specified under the Public Procurement (Preference to Make in India) order 2017. The salient features of which are as under:</p> <p>(a) Minimum local content: - The 'local content' requirement to categorize a supplier as 'Class-I local supplier' is minimum 50%. For 'Class-II local supplier', the local content requirement is minimum 20%.</p> <p>(b) Margin of Purchase Preference: - The margin of purchase preference shall be 20%.</p> <p>(c) In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/or local content in respect of this procurement, same shall be applicable.</p>
48.3	<p>Being Domestic Tender only "Class-I Local Supplier" &amp; "Class-II Local Supplier" as defined in " Public Procurement(Preference to Make In India) Order 2017" Dated 16/09/2020 shall be eligible to bid in this tender. Non-Local Supplier are not eligible to participate in this tender.</p> <p>In case of procurement for a value up to Rs 10 crore, the "Class -I Local supplier"/"Class-II local supplier" at the time of tender, bidding or solicitation shall be required to indicate percentage of local content &amp; provide self-certification that the item offered meets the minimum local content requirement for "Class -I Local supplier"/"Class-II local supplier" , as the case may be. They shall also give details of the location(s) at which the local value addition is made.</p> <p>In case of procurement for a value in excess of Rs 10 crore, the "Class -I Local supplier"/"Class-II local supplier" shall be required to provide a certificate from Statutory Auditor or Cost Auditor of the Company (in the case of Company) or from practicing Cost Accountant or practicing Chartered Accountant (in respect of supplier's other than Company) giving the percentage of local content.</p>
48.4	A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for Purchase Preference under this Order for procurement by any other procuring entity for the duration of the debarment. A self-certificate to the effect that the bidder has not been debarred by any procuring entity from violation of this order should be enclosed along with techno-commercial bid.
48.5	<p>Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement ( Preference to Make In India) Order. 2017 shall be as per attached Department of Expenditure O.M. dtd. 18.05.2023.</p> <p>Note: Order for total quantity and complete job as per the scope shall be placed on single lowest bidder and shall not be split among different bidders.</p>
48.6	NFL reserves the right to relax the norms on prior experience & turnover for startups (recognized by DIPP)/Micro & Small Enterprises (MSEs) in Public Procurement subject to their meeting of quality and technical specifications. To avail such relaxation, party shall have to submit the relevant certificate issued by concerned authority.
49	Bidders will sign the Integrity Pact as per enclosed format (Annexure XIII) which is an integral part of The tender documents, falling which the tenderer/bidder will stand disqualified from the tendering process and the bid of the



	<p>bidder is rejected. Details regarding Integrity Pact can be viewed on our website: <a href="http://www.nationalfertilizers.com">www.nationalfertilizers.com</a>. The name, address &amp; e-mail address of IEMs are as under:</p> <p>1) Sh. Hermanprit Singh, 12, Bevedre Road, Alipore, Kolkata-700027, e-mail: <a href="mailto:iem@nfl.co.in">iem@nfl.co.in</a>;</p> <p>2) Sh. Rakesh Kumar Agrawal, A-15, Ground Floor, South Extension part-II, New Delhi-110049, e-mail: <a href="mailto:iem@nfl.co.in">iem@nfl.co.in</a></p> <p>Kindly upload duly signed copy of Integrity pact along with other documents.</p>
50	No enhancement of rates will be allowed once the quotation is accepted and the order is placed. Withdrawal from the quotation after its acceptance will entail forfeiture of earnest money, if any, and/or risk purchase without prejudice of our rights of legal remedies.
51	The bidder shall indicate the rates of GST applicable in price bid, for the quoted items indicating clearly the HSN code of item/SAC code in case of services. Kindly mention applicable category of GST ( i.e. whether IGST , CGST, SGST, UGST).
52	For dispatches effected from 01.07.2017 (date of implementation of GST) the bidder/supplier shall provide a proper invoice in the form and manner prescribed under relevant sections of GST.
53	Bidder/Supplier shall have a valid GSTIN/GST, provisional ID and provide invoice and all other documentation ( such as E Way Bill, transportation copy of invoice , etc.) in such form and manner as may be prescribed under GST Act and Rules which are inter-alia necessary to enable NFL to claim input tax credit set off, rebate or refund in relation to payment of GST.
54	MSE owned by Scheduled Cast/ Scheduled Tribe entrepreneurs shall upload valid certificate issued by concerned authorities to qualify for entitlement as SC/ST owned MSE, in addition to valid certificate of registration for MSE, falling which it will be presumed that MSE firm is not owned by SC/ST entrepreneurs.
55	MSE owned by women entrepreneurs shall upload valid certificate issued by concerned authorities falling which it will be presumed that MSE firm is not owned by women entrepreneurs.
56	All MSE Vendors registered with CPSEs are also required to be registered on “TReDS” platform ( <a href="http://www.rxil.in">www.rxil.in</a> ) and “MSME-SAMADHAAN” portal of M/o. MSME. as per Department of Public Enterprises office memorandum No. DPE/7(4)/2017-Fin. Dated 17.10.2018
57	In case you are not registered as MSE, kindly procure at least 25% of value of contract/P.O. as Goods/Services from MSEs and a certificate to this effect will be submitted by you along with invoice as per attached Annexure-XI
58	Quoted prices will remain firm during the currency of contract. The total landed rate(s) including Transportation Charges will remain firm till the complete execution of the order. No revision in rate(s) will be allowed. However any increase/decrease in rates of statutory levies and duties, shall be allowed as per prevailing rules and notifications of Government.
59	<p><b>Evaluation criteria: Please note that evaluation of bids shall be done on overall L-1 basis considering all 3-Units ( i.e NFL Panipat, NFL Bathinda and NFL Nangal) taking together both supply portion (of main DCS &amp; ESD system and warehouse spares) &amp; services portion (installation/erection and commissioning and AMC for 5 years)(excluding optional spares). However, Unit wise prices for supply &amp; services portion are to be quoted in price bid as per price bid format.</b></p> <p><b>Note: Order for total quantity and complete job as per the scope shall be placed on single lowest bidder and shall not be split among different bidders.</b></p>
60	P&F ( if any) must be included in quoted basic price.
61	Freight charges ( if any) must be included in quoted basic price.
62	Please note that any charges, unless specifically mentioned in the price bid, shall not be paid extra. Do not mention extra for any charges. Any other charges applicable, must be specifically mention in price bid.
63	Transit Insurance shall be arranged by Supplier at his own cost.
64	<p><b><u>PRICE/FINANCIAL BID [BOQ]:</u></b></p> <p>Price/Financial Bid in the form of Bill of Quantity (BOQ) is to be submitted online. Price/Financial Bid (BOQ) as given in the e-tender portal under “Work Item Details” section of this Tender must be downloaded and saved at bidders’ local PC / Laptop without any change/tampering. <b>Please note that renaming or changing format of BOQ sheet (file) will not be accepted by system.</b> Bidders shall fill the required details like name of bidder, Basic Prices ( inclusive of P&amp;F, Freight, Transit Insurance for</p>

	<p>supply portion), Basic Price for Installation/Erection and Commissioning and AMC charges, any other Charges &amp; GST Rate in BOQ unprotected cells only, save it and upload the filled-in BOQ at our e-tender portal. No other cells should be changed and/or filled in. Price submitted in form of BOQ shall be final &amp; binding. Price submission in any other form shall be invalid &amp; shall not be considered. Bidders must take into account all the requirements and conditions of the tender documents and the rate quoted by the bidder shall be inclusive of all provisions for incidental expenses necessary for proper execution and completion of the work/supply of material in accordance with the terms &amp; condition of the tender document.</p> <p>Your quoted Landed rates must be on 'FOR NFL Stores, Panipat/Nangal/Bathinda basis' only. Blank fields in uploaded BOQ sheet will indicate that the particular tax/ duty/price head is not applicable &amp; hence is not payable by NFL.</p>			
65	<p><b><u>TENDER OPENING DATE EXTENSION REQUESTS:</u></b></p> <p>Bidder must ensure to submit their online bids before last date &amp; time for online bid submission. However, in exceptional cases Bidders may request for extension in last date of bid submission at their own risk. For such request they have to give written request through email to <a href="mailto:aayushkumar@nfl.co.in">aayushkumar@nfl.co.in</a>; <a href="mailto:sksheoran@nfl.co.in">sksheoran@nfl.co.in</a>; and intimation of such request on telephone/mobile before last date of bid submission along with justifiable reason for requesting extension. Upon timely receipt of such request NFL may consider such request depending upon merit of case &amp; NFL requirement of material. Decision of NFL regarding this shall be final.</p>			
66	<p><b><u>TENDER ACCEPTANCE LETTER AND DEVIATION LIST</u></b></p> <p>BIDDER MUST SUBMIT SELF-CERTIFICATIONS &amp; TENDER ACCEPTANCE LETTER AS PER ANNEXURE-XII ON THEIR LETTER HEAD WITH SIGNATURE &amp; STAMP OF PERSON AUTHORIZED FOR SAME.</p> <p>BIDDER MAY SUBMIT DEVIATION LIST (IF ANY AS PER FORMAT BELOW), HOWEVER PLEASE NOTE THAT OFFERS WITH ANY CONDITION / DEVIATIONS ARE LIABLE TO BE REJECTED OUTHRIGHTLY OR ACCEPTED/ CONSIDERED FOR COMPARISON PURPOSE WITH LOADING CRITERIA AT SOLE OPTION OF NFL.</p> <p>IN THE ABSENCE OF DEVIATION LIST AS PER FORMAT BELOW IT WILL BE PRESUMED THAT NO DEVIATION HAS BEEN QUOTED BY BIDDER.CONDITION/DEVIATION INDICATED ANYWHERE ELSE OTHER THAN DEVIATION LIST SHALL BE IGNORED AND NFL , WITHOUT PREJUDICE TO ANY OTHER RIGHT OR REMEDY, BE AT ITS LIBERTY TO FORFEIT THE EMD SUBMITTED BY SUCH BIDDERS.</p>			
67	<p><b><u>ELIGIBILITY CRITERIA:</u></b></p> <p>Quotation from bidders not meeting the eligibility criteria (Attached as Annexure-II) shall be rejected. Bidders shall upload complete, legible and unambiguous documents (duly numbered) asked in the eligibility criteria along with their offer. NFL reserves the right to complete the evaluation on the basis of details furnished by the bidder, with or without seeking any additional supporting documents/clarifications.</p>			
68	<p>Any Bidder from a country which shares a land border with India will be eligible to participate in this tender, if the bidder is registered with Competent Authority as defined in Ministry Of Finance OM No. F.No. 6/18/2019-PPD Dated 23.06.2020. Definition of "Bidder from a country which shares a land border with India" including other definitions shall be as given in above order. Bidders shall submit certificate in this regard as per following:</p> <p>“ I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all the requirements in this regard and is eligible to be considered [“where applicable, evidence of valid registration by the Competent Authority shall be attached] “</p>			
69	<p><b><u>Name &amp; Address of Consignees/Units:</u></b></p> <table border="1"> <tr> <td>Chief Manager (Mtls.), National Fertilizers Ltd Gohana Road,</td> <td>Chief Manager (Mtls.), National Fertilizers Ltd Sibian Road,</td> <td>Deputy General Manager (Mtls.), National Fertilizers Ltd</td> </tr> </table>	Chief Manager (Mtls.), National Fertilizers Ltd Gohana Road,	Chief Manager (Mtls.), National Fertilizers Ltd Sibian Road,	Deputy General Manager (Mtls.), National Fertilizers Ltd
Chief Manager (Mtls.), National Fertilizers Ltd Gohana Road,	Chief Manager (Mtls.), National Fertilizers Ltd Sibian Road,	Deputy General Manager (Mtls.), National Fertilizers Ltd		

	Panipat-132106 (Haryana).	Bathinda-151003 (Punjab).	P.O. Naya Nangal-140126 Distt. Ropar (Punjab)
70	GSTN of NFL Panipat: 06AAACN0189N1Z8 NFL Bathinda: 03AAACN0189N2ZD NFL Nangal: 03AAACN0189N2ZD		
71	The Finance Act, 2021 has introduced the section 194Q in Income Tax Act, 1961 and made this applicable from 01.07 .2021. In view of above newly introduced section under Income Tax Act, 1961 ; we would like inform that the provisions of section 194Q are applicable on NFL on purchase of goods for FY 2021-2022. Therefore you are requested not to collect TCS u/s 206C (1H). NFL will deduct TDS u/s 194Q in case, purchase of goods of value/ aggregate of value exceeds Rs. 50.00 Lakh in a financial year.		
72	As per circular No. 6/9/2020-PPD dated 24/08/2020 from Ministry of Finance : It shall be mandatory for seller, for Goods & Services to Govt. organizations, including CPSEs, to be registered on GeM and obtain a unique GeM seller ID at the time of placement of Order / acceptance of contract. Successful bidder has to ensure compliance of same at the time of order placement / acceptance of contract.  Kindly create your User ID in GeM portal and intimate us your seller User ID.		
73	<b>Limitation of Liability and Consequential Damages:</b> The maximum aggregate liability of supplier under the contract shall be limited to the total value of contract. Further, neither party to the contract shall have any liability to the other or any third party for loss of profit, loss of interest, loss of production, loss of use of the plant, and the like whether direct or indirect or any other special, indirect or consequential damages arising from their respective performances under or in connection with the CONTRACT.		

DEVIATION LIST FORMAT


(IF APPLICABLE, THEN TO BE SUBMITTED ON LETTER HEAD AS PER FORMAT BELOW)

SI. NO.	Clause No of NFL Tender's General T&C or Technical Section (as applicable)	Clause Brief Description	Deviation quoted by Bidder

**TECHNICAL SECTION [SCOPE OF SUPPLY]: -**

Sr	Item Cd	Item Desc.	UM	Qty Reqd
1	2808000	Design, Engineering, Supply, Installation and Commissioning of DCS and ESD System for Urea Plant of Panipat, Nangal and Bathinda Unit. Technical details specifications as per attached Annexure-I and Annexure-III	ST	3.000

**Annexure-I**


	<b>DCS/ESD SYSTEM FOR UREA PLANTS AT NATIONAL FERTILIZERS LIMITED, PANIPAT, BHATINDA AND NANGAL UNITS</b>	NFL ID CODE	
		2023-24 - INST/PNP/001	
PROJECT: UREA DCS/ESD UPGRADATION	LOCATION : Panipat, Bathinda and Nangal units	Sheet 1 of 51	Rev 00

**Design, Engineering, Supply, Installation and commissioning  
of DCS/ESD system for Urea Plants at  
NFL Panipat, Bhatinda & Nangal Unit  
( Details as per Technical specifications)**

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*Handwritten signatures and initials: V.H.S., Niven, S.P., K. K. Rawat, and others.*

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	<b>DCS/ESD SYSTEM FOR UREA PLANTS AT NATIONAL FERTILIZERS LIMITED, PANIPAT, BHATINDA AND NANGAL UNITS</b>		
		NFL ID CODE	
		2023-24 - INST/PNP/001	
PROJECT: UREA DCS/ESD UPGRADATION	LOCATION : Panipat, Bathinda and Nangal units	Sheet 2 of 51	Rev 00


**GENERAL PROJECT INFORMATION:**

A.	OWNER	:	NATIONAL FERTILIZERS LTD
	CONTACT PERSON (TECHNICAL)	:	DGM (I) NATIONAL FERTILIZERS LIMITED GOHANA ROAD PANIPAT - 132106
	CONTACT PERSON (COMMERCIAL)	:	CM (MATERIALS) NATIONAL FERTILIZERS LIMITED GOHANA ROAD PANIPAT - 132106
D.	NAME OF PROJECT	:	<b>DCS/ESD SYSTEM OF UREA PLANTS AT NFL, PANIPAT, BHATINDA AND NANGAL UNITS</b>
E.	SITE ADDRESS	:	NATIONAL FERTILIZERS LTD. PANIPAT UNIT, GOHANA ROAD, PANIPAT (HARYANA) INDIA 132106  NATIONAL FERTILIZERS LTD. BATHINDA UNIT, SIBIAN ROAD, BATHINDA (PUNJAB) INDIA 151003  NATIONAL FERTILIZERS LTD. NANGAL UNIT, NAYA NANGAL, (PUNJAB) INDIA 140126






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	<b>DCS/ESD SYSTEM FOR UREA PLANTS AT NATIONAL FERTILIZERS LIMITED, PANIPAT, BHATINDA AND NANGAL UNITS</b>		
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## PLANT INTRODUCTION

National fertilizers limited (NFL) is a public sector undertaking under the Ministry of Chemicals & Fertilizers, Government of India. It has four operating plants situated at Nangal (NGL) & Bathinda (BTD) in the state of Punjab, Panipat (PNP) in the state of Haryana and Vijaypur in the state of Madhya Pradesh. The company has an installed capacity of 35.68 LMT of nitrogenous fertilizers under the brand names of "Kisan Urea and Kisan Khad".

NFL Urea plants producing Neem coated Urea. Urea process technology at Panipat plant is Mitsu Toastsu total Recycle C Improved process : annual installed capacity of 5.115 LMT of Urea, Bathinda plant is Mitsu Toastsu total Recycle C Improved process : annual installed capacity of 5.11 LMT of Urea, Nangal plant is Technimont Total Recycle Process : annual installed Capacity of 4.78 LMT of Urea, Vijaypur plants (I &II) is Ammonia stripping process having annual installed capacity of 20.66 LMT of Urea.

NFL intends to Modernize its Instrumentation and control system of Urea Plants located at PANIPAT (85 Km. from Delhi), BATHINDA (350 Km. from Delhi) & NANGAL (100 Km. from Chandigarh).

## PRESENT CONTROL SYSTEM

These Urea plants were commissioned in the year 1977-78. Originally, the control system and field instrumentation in these Urea plants were pneumatic with standalone pneumatic controllers and hard-wired Electro-mechanical relays based shutdown system with ladder logic interlock system.

With time due to ageing and obsolescence, the same were upgraded with standalone electronic controllers and electronic field instrumentation, on piecemeal basis from time to time depending upon the plant requirement and priority. However, the shutdown system is still the original i.e. relay based ladder logic, which is more than forty years old and therefore has outlived its life.


**NFL intends to replace this control and trip interlock system with the latest DCS and ESD system to be installed in existing control room for all the three units (Panipat, Nangal & Bathinda).**

## SCOPE

This specification covers general requirements for the DCS and ESD System with all its auxiliary equipment to be supplied for the above project. The scope includes engineering, supply of system hardware, software, spares, testing at factory & at site, development of user application software and control



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	<b>DCS/ESD SYSTEM FOR UREA PLANTS AT NATIONAL FERTILIZERS LIMITED, PANIPAT, BHATINDA AND NANGAL UNITS</b>		
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strategies, documentation, training, erection commissioning of DCS/ESD & HMI, system integration, maintenance contract & other necessary items to make the system operable & complete to the satisfaction of owner.

It is to be noted that switching from the existing control system to DCS/ESD system within minimum span of time with least disturbance to running plants is the essence of work. Open loops and non critical close loops shall be hooked up with DCS/ESD during pre-commissioning stage in normal running of plant. Most of the installation jobs like panel installation, cable glanding, termination and cold loop checking etc shall be executed in the pre-commissioning stage. Tentative period of completion for all pre-commissioning activities shall be approximately 60 days. Party shall arrange for manpower at NFL site for the above activities. Final commissioning/hookup of new DCS and ESD system which require plant shut down, shall be done in plant shutdown of 14 days only for each plant. Installation, pre-commissioning and commissioning services cost shall be quoted as lumpsum.

Any deviation from the general terms & conditions and the technical specification shall be clearly indicated in the offer.

#### QUOTATIONS

**National Fertilizers Limited, Panipat** on behalf of all the three units of NFL hereby invites sealed bids for all the three projects from eligible bidders for the items mentioned hereunder as per the schedule of requirements and technical specifications enclosed with complete bill of material of the DCS/ESD system for each project location (NFL Panipat, Bathinda & Nangal). Parties may visit the site locations if they have any doubt or clarification regarding the project requirements before quoting with prior intimation.


#### 1.0 GENERAL

1.1 The project shall include replacement of existing control systems and interlocking systems for Urea Plants in the NFL's Fertilizer Complex at Panipat, Bathinda and Nangal Units separately. All of the DCS/ESD equipment will be installed in existing central cabinet room / central control room and central engineering room.

Main plant shall be controlled by modern distributed digital control system (DCS). All the trips and interlocks shall be realized in a fail safe Emergency Shutdown System (ESD). The system layout shall be made keeping in mind the aesthetics and operational conveniences especially during emergencies.


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	<b>DCS/ESD SYSTEM FOR UREA PLANTS AT NATIONAL FERTILIZERS LIMITED, PANIPAT, BHATINDA AND NANGAL UNITS</b>		
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All workstations, auxiliary hardware console and DCS/ESD hardware shall be located in existing control room. Out of which 2 nos. operator stations and 1 no. shift in charge station shall be located in existing urea control room, 3 nos. operator stations, 1 no. shift in charge station, 2 nos. Historian stations, 1 no. SER station, 1 no. DCS/ESD engineering station and 1 no. DCS/ESD engineering cum operator station shall be located in existing ammonia control room as minimum. Distance between ammonia and urea control room is approx. 500 meters. However, location and distribution of stations may vary from unit to unit and shall be finalized during detailed engineering.


1 No. View only station shall be provided for management offices, which are located approximately 100 metres from Ammonia control room. Provision for adding 2 Nos. more view only stations in future shall be readily available in the supplied system.

- 1.2 DCS/ESD shall not be a standalone PLC/SCADA based system. The system architecture shall be server-server/Hybrid-server based. In event of failure of all servers, all other stations shall be able to communicate with the DCS/ESD CPU controller and operation, monitoring & control of plant parameters shall be possible without any interruption.
- 1.3 It is envisaged that requirements of this specifications are met using standard proven software and hardware of the Supplier and shall be latest at the time of shipment.
- 1.4 SITE CONDITIONS OF PLANT AREA

	Panipat	Bathinda	Nangal
Climate	Hot & Humid	Hot & Humid	Hot & Humid
Corrosive atmosphere	ISA Class G3 as per environmental std S71.04- 1985	ISA Class G3 as per environmental std S71.04- 1985	ISA Class G3 as per environmental std S71.04- 1985
Ambient Temperature	Min : (-)1°C Max : 50.0°C	Min : -5°C Max: 50.0°C	Min : -1°C Max: 50.0°C
Relative Humidity	Max : 90% RH	Max : 90% RH	Max : 90% RH
Hazardous area classification	IEC: Zone 2 Gr IIC T4	IEC: Zone 2 Gr IIC T4	IEC: Zone 2 Gr IIC T4

However, it is clarified that DCS/ESD panels and all workstations shall be placed in air conditioned control room.


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	<b>DCS/ESD SYSTEM FOR UREA PLANTS AT NATIONAL FERTILIZERS LIMITED, PANIPAT, BHATINDA AND NANGAL UNITS</b>		
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## 2.0 DCS/ESD DESIGN PHILOSOPHY

### 2.1 Control & Safeguarding system requirements:

The control & safeguarding system will be integrated in the DCS/ESD, i.e. all the process controls and monitoring.

The main objective of control system is safety & reliability. The control system shall be designed to minimize plant energy consumption, adverse environmental impact & operator intervention and to maximize plant availability.

The principle objective of safeguarding systems is the protection of personnel, environment, plant & equipment and to maintain safe operating conditions.

Minimum two redundant controllers (total quantity 4 Nos.) for DCS and one redundant controller (total quantity 2 Nos.) for ESD shall be considered.


However, individual controller loading shall not exceed 50%.

- 2.2 All process and utility units and related facilities of the entire project shall be monitored and controlled from the DCS located at central control room (CCR).
- 2.3 System shall support minimum 3000 tag historian software, out of which 2000 points shall be configurable for 1 second resolution. There shall be no limit on historian data retention time, except the hard disk size.
- 2.4 System shall support 1 second time resolution real time trend for all the system tag/parameters, without any time limit. The minimum x-axis time span for real time trend with 1 second sample rate shall be 30 minutes. Also, all PID loop face plate display shall have real time/historical trend window by default for min. three parameters, i.e. measured or process variable, operator entered or remote/calculated set-point and output value or manipulated value for that particular loop.
- 2.5 Master and Slave Clock System: Complete Master and Slave Clock System shall be provided to ensure uniform time indication (Time stamping) throughout the various plant facilities and time synchronization between ESD, control system etc. Offer shall include necessary hardware for GPS based time synchronization.
- 2.6 System Backup : The entire control software shall be backed up which includes vendor software, control database, user-built programs, source code, data files, schematics and so forth.

Back up must be possible on commercially available media. To recover from an outage, any component of the system must be able to be re-loaded from bulk memory (hard disks).



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2.7 The DCS operator interface shall be the primary integrated window for operation of the control and safeguarding systems and shall provide access to:

- Process control/Data display
- Sequence control status
- Equipment status
- Alarm overview (Process and system alarm)
- Dynamic Graphics
- Trip status overview (This shall be via ESD )
- Override status (Visible from Aux. hardwire console and DCS graphic via ESD)
- Real-time trending
- Historical data trending
- Operator action log
- Events log for process and system alarms
- Machine Monitoring
- Environmental Monitoring

## 2.8 Control System Hierarchy

The control and information systems of the Urea production Complex shall be structured according to a hierarchical model with the following layers:

### a. Basic Monitoring and Control :


This level comprises basic control and monitoring of process, utility, equipment and auxiliary systems and is implemented in the DCS. These functions can be categorized as follows:

**Unit Monitoring :** Unit monitoring comprises all Human Machine Interface (HMI) functions provided to those responsible for monitoring and control of the process and it's environment. These include alarm and monitoring displays, group and detail displays, custom graphic displays, data historisation and retrieval, reporting, etc.

**Regulatory Control :** Basic regulatory control provides closed loop control functions for stable and safe operation around steady points of operation. The basic control functions comprise mainly of flow, level, pressure and temperature control loops required as a minimum to operate and control the process. These loops may also include extended regulatory control functions such as: split range control, override control, ratio control, cascade control. They may also include control based on calculated variables, such as heat duty control,



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pressure compensated temperature control, etc. All of these shall be realized in the central DCS system only.

Basic Sequence Control : Sequence control provides automatic performing of tasks, such as, opening and closing of valves, starting and stopping of pumps, etc. - in a defined sequence. These shall also be realized in central DCS only.

**b. Unit Performance Monitoring :**

Unit performance monitoring provides a further level of DCS reporting to verify the operation of the unit against key design parameters. The following functions are envisaged:

- Material and Utility Balances

Unit production and utility (steam, fuel, and electricity) balance calculations and (periodic) reporting.

- Process Performance Monitoring

Energy consumption related to production. Monitoring and reporting of final product Qualities.

Separate applications software for unit performance monitoring is not required. However, algorithms may be envisaged in DCS system, in which monitoring and logging of key parameters will be done for monitoring the performance of the unit on regular basis. System shall support various hourly/shift/daily/monthly reports/logs, totalizer reports, snap-shot reports etc. in latest MS Excel format only.

**c. Controller Functions :**

Operational control of the plant will normally be from the Master control room (MCR). Facilities shall be provided such that in the event of MCR failure, the controllers shall continue to provide control operation at the last known set point.

The system shall have the capabilities to execute the following control algorithms as a minimum. A list of algorithms available shall be submitted along with quotation.


P, PI, PID with external bias/PID gap/Two position On/Off control/PID On/Off/PID with cascade, ratio/PID with adaptive gain & reset/Lead/lag compensation/Dead time compensation/Manual loader/Low/high signal selection/Temperature/pressure compensation for flow/Pulse inputs scaling/Integration/totalizing (both resettable & non-resettable. Min. 6 digit counter)/Elapsed time computing/Signal selector for min./max./mid value/Velocity limiter/Self tuning/Ramp generation/Alarm generation on input, set point, output, deviation, intermediate computed value, rate of change etc. (Min. 4 Alarms/PV)/Analog inverter/Input/output characterizer etc.

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Following mathematical functions shall be available in the system as a minimum:

Addition/Subtraction/Multiplication/Division/Sq. rooting/square/Moving average /Piece-wise linearization for input/output/Cold junction compensation for all T/C inputs/Exponential functions/Logarithmic functions/Absolute value/Comparator (i.e., greater than, less than, equal to etc.)Pressure & temperature compensation for flow loops etc.

Following logic operations shall be possible in the system as a minimum:

AND, NAND/OR, NOR/EX-OR/Inverter/Flip Flops (SR, JK, Toggle, etc.)/Timers (On delay/Off delay type up to 24 hours)/counters/software flags/numeric etc.

All the above mentioned algorithms/operations shall be resident in the controller EPROMS itself and no external device shall be required to be called to execute these functions.

## 2.9 CONTROLLER AND I/O MODULE HEALTH STATUS:

System shall have provision for continuous monitoring of health of CPU as well as all I/O cards and indicate status of both normal operation and error conditions in software. Further, the entire system shall be password protected at different levels.

## 2.10 Displays

All readouts and graphic displays shall be in S.I. units and all symbols as per ISA respectively and in English. Proper colour codes, graphic density etc. shall be as per NFL's requirement.


System shall be able to handle instrument tag numbers consisting of minimum 12 characters.

Display call up time for various displays shall be a one second irrespective of displays' total dynamic I/O points, density. Refresh time of real time data on a standard operation display/customized graphic displays shall be one second.

The system shall have the following types of displays with their brief requirements as explained below:

### a. Overview Display


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This shall give an idea of the overall plant status with less emphasis on details. This can either be in the form of a deviation overview, overview of various plant units, alarm status of all tags etc. This display shall not be used for plant control. Similarly no alarm shall be acknowledged from this display. It should be possible to approach any other operating display from overview with minimum of operations. All these features shall be user configurable.

b. Group Display

This shall be a group of tags; analog or digital in any mix. It should be possible to control/monitor any loop from this display. Loop parameters like alarm status, PV, SV, MV values, mode status (Auto/Manual/Cascade) etc. shall be displayed prominently for each loop. This display should be conveniently linked to the plant overview display, detailed loop status display and also to the relevant graphic pages of the plant, for ease of operation.

c. Detailed Loop Status Display

This shall give in analog/digital form all the parameters of a particular loop like alarm set points, P, I, D values bias, loop status, PV, SV, MV values, limits on output or set point, algorithm description, controller action, other configuration details etc. This display shall be used mainly by engineers for changing constants, tuning a loop etc. Real time trends of PV, MV, SV for tuning purposes shall be available in this display.

d. Displays For Alarm Handling

This shall be one of the most important displays of the system. This shall have following features as a minimum. DCS system shall have latest; windows based alarm manager with 1 second or better time resolution. In addition to various process alarms, the system shall also store operator action journal, system error messages, any other event, etc. Alarm manager shall also have historian facilities and there shall not be any storage limit except hard disk size for retention period of various alarms/events.


- i. A list of alarms based on occurrence with most recent alarm on top.
- ii. A common list of latest 100 alarms for the whole plant in chronological order.
- iii. Ack/scrolling ALM history and most recent alarms shall be possible through software targets on the same display.

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iv. The alarm list in each case shall give the tag no., the service description, type of alarm and the time of occurrence, status, acknowledgement information.

v. It shall be possible to assign alarms on PV, SV, MV, rate of change (PV, SV), deviation, ratio, as well as on any intermediate computed value in case of a complicated algorithm.

vi. The system should have minimum 3 levels of alarm priority with different colour and tone : Emergency, high & low.

vii. It should be possible to disable alarms one by one (i.e. tag-wise) or globally in a unit of the plant through a single command.

viii. It should be possible to assign different priorities to more than one alarm for the same tag. (e.g. it should be possible to assign different priorities to "high" & "low" alarms of the same loop).

ix. The system software should automatically histories all alarms earlier than the latest 100 alarms..

x. All system alarms (hardware & software) shall be available in a separate alarm summary with its own acknowledgment key and a dedicated hooter.

xi. Operator action log

In alarm system, a common list of all defeated alarms shall appear disregarding their alarm types, priorities, grouping, unit etc.

e. Trend Displays

i. Minimum Sampling Time For Any Trend Shall Be 1s or less.


ii. It shall be possible to assign different sampling times tag wise independently without any limitation with user configurable DB.

iii. It shall be possible to store all trends for long time historian without any time limit on retention period, except the hard disk size.

iv. Bidder to give more details regarding data storage and retrieval.

v. On-line archiving of trends shall be possible.


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Real time trends of 2 hours time base shall be generated perfectly from the control stations. This should not need any history. In case of power failure, no loss of real time, historical and trend data shall occur.

f. Graphic Displays

These displays shall be used most frequently for control and monitoring of the plant by operators. They shall have the following features as a minimum.

- i. Graphics shall be fully dynamic & interactive.
- ii. Overlays feature shall be provided to superimpose windows of various types and sizes on a graphic. The overlay can be a face plate of a loop, a part of any graphic, a trend, a message etc. It should be possible to have more than one overlay of different type on any graphic and they all are should be freely movable within main graphic window.

Bidder to explain the same particular to the system quoted.

Bidder have to specify the maximum numbers of overlays of different sizes, opened on a standard base graphics and any other limitations.

- iii. Bidder to confirm the total number of colours available (minimum 32). Font size shall be freely configurable.
- iv. Background colour of graphic shall be freely selectable.
- v. It shall be possible to build frequently used symbols and store the same in a library through which they can be recalled for future use.

Graphics builder shall have all ISA symbols in library form, so that standard, uniform graphics can be generated in a less time.

- vi. It shall be possible to assign at least 4 modifier conditions to a graphic character/object. By modifier conditions it is meant change of colour, size, filling & visibility of a pattern etc.
- vii. Graphic builder package shall be easy to operate without any detailed knowledge of hardware/software.

g. Configuration Displays

These shall be used for configuring a loop and shall be mainly used by engineer. These should also be dynamic and should show the various loop


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intermediate parameters in the loop in digital form. It shall be possible to effect "on line" configuration changes using these displays.

Online changes made in the controller sub system, shall not affect the output of a closed loop or process.

Changing of units, ranges, alarm values, dead bands, alarm priority, linearization etc. of one I/O shall not affect the others. The last good values hold feature shall be implemented in the system with alarms.

High level programming language support -

The system shall provide proper and secure facilities for developing, modifying, compiling and running of user written programs in any high level language like C, C++, VB or any other 3<sup>rd</sup> party optimization package etc. It shall be possible to modify, compile and download the program without affecting the normal controller operation.

h. System Diagnostic Displays

These shall be arranged in a hierarchical fashion such that a fault in any of the units of the system can be traced up to module level by suitable annunciation. Modules and individual channel level fault diagnostics with immediate alarms on all operator stations are a must. The following information shall be available through these displays as a minimum.


Bidder to explain the various diagnostic features/facilities/to stays available in the system including maintenance procedures.

- i. Type and location of malfunctioning unit.
- ii. Nature of fault.

2.11 Internal Security

The system shall carry out regular and extensive self-testing. In general, transient errors shall be handled either by immediate re-try or by the inclusion of additional information within the systems which allows minor fault recoveries. Errors which cannot recover in such a way shall result in an audible system alarm of high priority on operator station, historian and alarm printers and smooth changeover to the redundant unit shall occur wherever provided. In all cases, the transfer of control, communication etc. To the backup equipment shall be totally transparent to the control and monitoring of the process and shall not result in any spurious bumps or changes to process output states. In case of control node failure, the output shall be configurable in a fail safe manner by


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default (or predefined) configuration value/status. Items which shall network and regularly thereafter shall include:

- Control processor, I/O processor and communication processors.
- System communication network modules.
- Links to other network devices.

2.12 While preparing DCS database, all configuration like graphic symbols, color codes, control/logic schematics, etc. shall be based on ISA/IEC1131 standards.

### 3.0 ESD DESIGN CRITERIA :

3.1 The safeguarding system (ESD) shall automatically bring the relevant equipment or part of the plant to a safe condition, when a critical process variable reaches the limit of an acceptable control value.


3.2 Safeguarding systems (ESD) shall work independently of the control system with their own initiating and actuating devices. Process variables used for safeguarding shall be directly measured where possible.

3.3 The ESD shall be a system with a very high degree of reliability, TUV certified Safety Class – 6 and SIL3 as per IEC61508, as a minimum irrespective of plant's safety integrity level. The system shall be microprocessor based programmable controller with fault tolerant redundant processors based on TMR/QMR technology. The system shall be designed, manufactured, tested and commissioned to comply with the requirements of IEC 61508/61511. The ESD system shall be approved for use in SIL 3 classified loops. The crippled mode running for unlimited time period, without degradation in safety class is a mandatory feature of safety ESD. Programming software, methodology and language supported shall conform to IEC1131 and shall be approved by TUV for designed safety class.

The following shall be adhered to while selecting the TMR/QMR system:

- a) TMR/QMR CPU's shall be applied.
- b) If a CPU fails, the other(s) shall continue to operate. In single CPU operation, system to be certified to operate without any time limitation of faulty CPU repair.
- c) TMR/QMR/Redundant buses shall be supplied.
- d) TMR/Redundant analog input and output modules/cards shall be supplied.
- e) TMR/Redundant digital input modules/cards shall be supplied.
- f) TMR/Redundant digital output modules/cards shall be supplied.


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- g) Redundant communication interface modules/cards shall be supplied.
- h) Redundant Power supply modules/cards shall be supplied.
- i) In case of failure of complete processor system, i.e., system outputs shall take fail safe state automatically unless otherwise specified.

Operator interface for critical trips shall be mosaic display with illuminated push button for trip, reset, inactivation etc. and LED indication for each element of trip & actions.

The operator will be informed about a trip situation by a warning sound (to be different from the audible signal from the alarm system), and a LED display will clearly inform about the alarms in trip position. The first up alarm will flash.


3.4 ESD Safety critical signals shall comply with the following:

- Signals to/from the ESD shall be hardwired always.
- ESD circuits shall be de-energized to trip and be "fail safe".
- In the whole system there shall not be any Non-safety signals/cards.
- 2 out of 3 voting logic system up to field sensor level shall be considered for all trip parameters. In short, 2 out of 3 trip sensor/transmitters philosophy shall be employed for all the trip input parameters, which may cause complete plant disruption, directly or indirectly. All these three diff transmitters shall be wired to three diff. cards of ESD to distribute/ minimize the risk of card failure. The control shall be median control through hardwired repeat outputs from ESD marshalling cabinets.
- All the interlocks in ESD shall be realized by 4-20 mA, 24 V DC, 2 wire transmitters only.

3.5 ESD shall be responsible for the realization of total plant interlocks and no other ESD system is acceptable at individual package unit/machines, etc. at other location, other than main ESD system at central control room. All the field instrument signals from various field instruments, package units, machines, etc. shall be brought to central cabinet room for realization of safety interlock in this central ESD only.

3.6 ESD system application software shall allow incremental download to carry out online modifications, without affecting the running plant. There shall be facilities to monitor the running logic in FBD format in real time mode from engineering station. Also the engineering station of ESD shall allow forcing of any of the hardware input/output or intermediate local variables in complete system by software method. Forcing shall be enabled via dedicated displays on the engineering workstations. Activation of the said facilities shall be annunciate and


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logged at the operator workstations. This shall not bypass outputs to signalling devices, VDU alarms display, etc. Bypassing/forcing shall be password protected & TUV approved.

- 3.7 Integrated SOE of 256 inputs with additional 20% spare to be supplied in ESD. ESD system must have integrated Sequence of Event software running on a dedicated PC with Windows GUI features, to find out the cause of the trip with 1 millisecond time resolution. Storage of various system alarms, process events with proper time stamp with 1 millisecond resolution and sorting, exporting various event reports into latest Microsoft Excel, Access or DBF format is a must for later on analysis of any event/trip. This SOE PC shall be located in separate console in the central control room to have round the clock access by operation group.
- 3.8 ESD shall have facilities to communicate with proposed DCS so that seamless integration of DCS / ESD could be achieved. There shall not be any tag/parameter limits on DCS/ESD gateway communication and the update time of complete ESD parameter sets on DCS shall not take more than 1 second.
- 3.9 All major machines/units 'Emergency trip' push buttons on Auxiliary Consoles at Control room shall be triplicated with 2 out of 3 philosophy with one 3PST (3 Pole Single Throw) push button switch (mushroom type head). Three poles of the push button switch shall be connected to three separate input channels of three separate digital input cards of ESD.
- 3.10 For a group of interlocks, having common cause of trip, shall be grouped together and will drive a digital output channel from ESD, which will be wired to Central Control room located auxiliary console lamp. Once after actuation of a trip, the final output shall not resume, unless all the input parameters are normal and operator presses a RESET button. The ready to reset condition (healthiness of all input parameters) shall be indicated to operator from above mentioned lamp. Also the RESET push button switch shall be hard wired to ESD from auxiliary console.

#### 4.0 ALARM MANAGEMENT

The purpose of an alarm is to bring the operator's attention to an abnormal event, such that he can take action to rectify the situation. During normal operation the Alarm Philosophy shall be that there are no active alarms present. To enable the operator to respond appropriately, alarms shall be categorized according to the following three priorities reflecting the severity of the abnormal situation, as a minimum


- An ESD alarm is an indication that a trip has occurred. A "First Failure" indication shall discriminate between related ESD alarms to identify the first initiator of a trip with 1 ms time resolution.

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- A shutdown level alarm indicates that immediate operator action is required to prevent a trip condition (in this case it is also referred to as a pre-alarm), or is used for essential parameters for proper operation of the plant (e.g. quality alarms) in DCS operator console with diff. hooter/ sound.

- Secondary alarms draw only attention to an abnormal situation that could result in a severe operational upset if not acted upon. This shall also be reported at DCS operator station with diff. hooter/sound

Alarm acknowledgement and first failure resetting shall be from the DCS keyboard, not locally from equipment panels or solenoids.

On measurements that can lead to a trip, pre-alarms shall be implemented, provided the operator has sufficient response time to take corrective action.


The alarm management of the DCS shall be developed with the following objectives:

- Minimize the number of active alarms;
- Optimize the information contained in the alarms;
- Obtain effective alarm presentation by using Human Factor design principles and practice.

Further techniques shall be employed to optimise the operator interface to the alarm system.

Methods to be used are suppression techniques (static or dynamic), first failure indication and alarm overview displays in addition to the alarm list. The overview displays provide a layered structure of related alarms in annunciation screens.



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## 5.0 INPUTS/OUTPUTS:

### I/O Summary of UREA PLANT DCS FOR Panipat, Bathinda and Nangal Unit

Sr. No.	I/O Description	Type of I/O	Panipat Unit	Bathinda Unit	Nangal Unit
1	Redudant Analog Input for close loop and	AIR	95	107	108
2	Non Redudant Analog Input from field	AINR	264	278	252
3	Redudant Analog Output to field	AOR	75	74	107
4	Non Redudant Analog Output to field	AONR	39	37	100
5	Redudant Digital Input from field	DIR	40	46	20
6	Redudant Digital output to field	DOR	20	20	18
7	Redudant Digital Input from MCC	DIR	81	70	47
8	Redudant Digital output to MCC	DOR	50	40	75
9	Analog Input Non Redundant from MCC	AINR	36	28	87
	Total I/O for DCS		700	700	814

### I/O Summary of UREA PLANT ESD FOR Panipat, Bathinda and Nangal Unit

Sr. No.	I/O Description	Type of I/O	Panipat Unit	Bathinda Unit	Nangal Unit
1	Redudant Analog Input from field	AIR	92	93	142
2	Redudant Digital Input from field	DIR	160	142	60
3	Redudant Digital output to field	DOR	84	82	53
4	Analog Input Redundant from MCC	AIR	29	28	18
5	Redudant Digital Input from MCC	DIR	100	100	108
6	Redudant Digital output to MCC	DOR	105	125	112
	Total I/O for ESD		570	570	493

### I/O CARDS:


All the I/O cards shall have individual/group channel to channel isolation with isolated power supply and A/D conversion. Analog input/output cards shall be galvanically isolated and digital input/output cards shall be optically isolated. All I/O cards shall be intelligent type with microprocessor/microcontroller based hardware and capable of all type of signal conditioning, self-diagnostic, fail safe value configurable (programmable) and time stamping at I/O card level.

Maximum I/O channel densities for both DCS/ESD system shall be as below.

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- Analog Input : 16
- Analog Output : 16
- Digital Input : 32
- Digital Output : 32
- SOE Inputs : 32

If vendor provides combined AI/AO module, it will be acceptable in redundant configuration only.

All analog input cards shall be of same type, i.e. 4-20 mA input.

I/O module loading will not be more than 80%, only 6 channels of 8 channel module, 12 channels of 16 channel modules and 24 channels of 32 channel module are to be used as maximum.

All I/O cards in individual category shall be of same type with latest model/revision only. No different bulk I/O cards or I/O cards with degraded features shall be accepted in any of the category in a mix mode supply. In case modules with higher no. of channels are quoted then the additional channels shall be treated as spare.

**Analog I/Os to Field:** Galvanic Isolation through safety barriers (make: P&F/MTL/Phoenix/Stahl only) shall be part of supply.

**Digital Input/ Output to Fields:** all potential free contacts shall be through relay (OMRON/Siemens/ABB make) and potential contacts shall be through barriers (make: P&F/MTL/Phoenix/Stahl only). Dis/DOs from MCC to DCS/ESD shall be with relays only. These shall be part of supply.

All barriers/relays shall be of single make throughout the system.

Note: For ESD systems, flexible I/O design with single channel integrity shall also be considered. However, in such case, I/O loading shall not be more than 80% of the total capacity of the controller and all other marshalling components like safety barriers, interposing relays, fuse terminals etc. shall also be part of supply.

## 6.0 SCOPE OF HARDWARE AND SOFTWARE:

### 6.1 CABINETS/PANELS:

The complete DCS/ESD system panels (including marshalling panels, PDB panels, DCS/ESD hardware panels, barriers panels, relay panels, Auxiliary equipment panels, electrical interface panels, other control package unit


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hardware panels e.g. Bently Nevada vibration monitoring system, Woodward Digital Governors, anti surge control etc.) shall be supplied with either 1200 mm (W) x 800 mm (D) x 2100 mm (H) or 800 mm (W) x 800 mm (D) x 2100 mm (H) standard RITTAL make panels with 100 mm black powder coated metal base frame and RAL7035 colour shade. These shall be self standing type with front and rear doors openable. All the cabinets shall be provided with door locks and it should be possible to open all of them with a single key. Door handles shall be flush type. All cabinets, wherever applicable, shall have cooling fans mounted at the top, protected by canopies as per heat load of panels. Fans shall be suitable for continuous operation and mounted on self-lubricated bearings. All the cabinet fans and lights shall run on 220 V AC Utility power supply. High quality & washable type filters shall be provided at the bottom of front & rear doors. Cabinets shall be provided with an internal ventilation system, in order to extract the heat produced by electronic circuits assuring that all devices properly work in the specified temperature range. Each cabinet shall be provided with 4 ventilation louvers (one on each door, two on front side, two on back side at bottom) of 5-micron size with wire mesh to prevent dust & rodent at bottom only. A temperature measuring system with digital display with potential free digital alarm signal shall be provided in case the temperature exceeds the set value for each control cabinet. The cabinet room shall be provided with one number humidity sensor with analog 4-20 ma output to be connected in DCS for monitoring on operator console. The relevant DCS/ESD hardware shall be installed in dedicated panels. 100 mm channel base shall be provided at the bottom for mounting of cabinets. Cable entries to the cabinets shall be through removable gland plates at bottom.

## 6.2 OPERATOR CONSOLES:

All the operator workstations (which will be placed in central control room) shall have dual seamless display and shall be mounted on designed consoles with proper mounting arrangements for Dell make TFT/LED monitors of 24" size (minimum).

Shift in-charge Monitoring Station, SER PC and One Historian PC shall also be mounted on designated closed console with proper mounting arrangements for Dell make TFT/LED monitors of 24" size (minimum).

Total 9 numbers metallic consoles are required.

All consoles shall be lockable and have proper cooling arrangement.

100 mm channel base shall be provided at the bottom for mounting of consoles. Cable entries to the consoles shall be through cable glands.

## 6.3 HUMAN MACHINE INTERFACE (HMI) :


All Engineering stations and Servers shall be latest Intel Xeon Quad/Octa core

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processor, minimum 16 GB RAM, DVD Writer, minimum 1 TB Hard Disk in RAID-5 configuration, Hot swappable type, dual power supply, dual ethernet communication, 3.3 GHz or better clock Speed. PC shall be server grade machines of DELL make only.

All Operator Stations, Monitoring stations, view only stations, historian stations and SER Station shall be latest Intel Xeon Quad/Octa core processor, minimum 16 GB RAM, DVD Writer, minimum 1 TB Hard Disk in RAID-1 configuration, dual Ethernet communication, 3.3 GHz or better clock Speed. PC shall be of DELL make only.

The license copy of latest operating system Window and Antivirus shall be provided with each station and servers.

Each HMI system shall include one Dell make TFT/LED monitors of 24" size and one keyboard and mouse.

The operator's HMI/Servers with keyboards and mouse shall provide Latest MS Windows HMI. The operator shall use dedicated operator membrane keyboard (No. of keys to be mentioned) in addition to QWERTY keyboard to manipulate the DCS. The access to these displays shall be protected by key lock switch and/ or a password.

Dedicated RAID controller is to be provided along with each engineering station/Server/Workstation machines for RAID configuration.

Bidder to supply licensed engineering software for minimum two no. of machines each for DCS and ESD.


For Third party integration, System have capability of integration of industry standard communication protocol or field bus for digital communication with automation system like DCS, PLC & PC etc. open interface with OPC (OLE for process control) and Latest MS office applications are required.

There shall be minimum 2 nos. of engineering station (1 no. engineering station and 1 no. engineering cum operator station) from where the complete DCS/ESD project can be developed and deployed on any other operator/control station, independently. The engineering stations (2 nos.) and historian stations (2 nos.) shall have the capability to be used as operator station also. Non-availability of engineering station shall not affect the plant normal operation and shall neither cause any historical/trend data loss. All operator station shall be independent of engineering stations, self bootable and do not require engineering station for putting them into normal operation or restoring them after rebooting, once the developed project is deployed. System should allow on-line modification, addition / deletion or change in any control loop or part thereof.

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Communication with operator stations to be installed in Urea control room shall be through dual redundant optical fibre armoured cables (in bidder's scope). All communication hardwires shall be dual redundant. . Separate network cabinet in urea control room shall be provided. Distance between ammonia and urea control room is approx. 500 meters.

Number of Operator stations/Engineering stations required and their tentative placement for the complete system design for each project location are as under: (however, placement location of operator stations can be changed at discretion of individual unit of NFL).

- Operating Station : 5 Nos.
- Shift In-Charge Monitoring Station Urea control room : 1 No.
- Shift In-Charge Monitoring Station Ammonia control room : 1 No.
- Engineering Stations : 2 Nos.
- Historian Stations : 2 Nos.
- View only station : 1 No.
- SER station : 1 No.


#### 6.4 REDUNDANCY AND HARDWARE FEATURES:

6.4.1 The system shall be 100% fault tolerant and dual redundant for control processor, system bus, data highway communication, I/O for closed loops, power supply and communication. All the system hardware cards, including I/O cards of DCS/ESD shall have ISA G3 level corrosion protection. All the hardware including control/communication processors, networks, cables, all type of system cards, all type of I/O cards shall be hot replaceable/swappable.

6.4.2 The system shall be built on the latest state-of- the-art hardware and software platform and hardware/software/firmware revisions of complete system will be latest at the time of supply. The system architecture shall have Microsoft Windows latest version of operating systems. Bidder shall quote for technologically superior and updated hardware and software options. Bidder to inform NFL for the updates in software/hardware releases as and when released in future also. The system reliability shall be stated in terms of MTBF in hours. Bidder shall state the mean times to repair assumed in the calculation of MTBFs (The minimum mean time to repair possible shall be assumed to be 4 hours).

6.4.3 The system architecture shall be compliant to IEEE 802.XXX with dual redundant and 100% fault tolerant. System availability shall be better than


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99.99%. All Workstations should be directly sitting on Plant Communication Loop as INDEPENDENT NODES. No operating Station should be connected to Plant communication loop through a server. However, "View only remote monitoring stations" which are meant for monitoring only and no plant operation is to be performed from these, can be connected to plant communication loop through server. The minimum bandwidth of main system communication network shall be 100 MBPS.

- 6.4.4 The scan time of all type of analog /digital inputs cards & DCS/ESD algorithm (Scan time means the sum of total time required for reading an input, running control algorithm and writing the output values) shall be better than the required scan time of the fastest running control/closed loop like anti surge algorithm in the plant for various turbo machinery etc. However, in any case, this shall not to exceed the following figures for any type of channel.

Scan time:

DCS Open/Closed loops: 250 m Sec to 1Sec configurable


ESD Safety & Trip Interlocks: 200 m Sec

- 6.4.5 Complete system hardware/software/communication load including CPU uses shall not exceed 50% system load even after the complete implementation of project and running at peak load. This includes redundant control processor load also.
- 6.4.6 All operator stations and engineering stations shall be OPC compliant for minimum 250 tags.
- 6.4.7 System shall have 50% spare margin in software memory/load for future spare addition without replacing/upgrading any existing system hardware/software at all the levels. System shall be capable of loading up to 100% without any overrun/degradation of performance, etc. System shall report all type of load limit alarms, diagnostic alarms up to channel level, communication alarms, system hardware failure alarm and other global information with alarm facility on engineering/operator station in real time with 1 second resolution.
- 6.4.8 System shall support various Hourly/Shift/Daily/Monthly Reports/Logs, Totalizers reports, SNAP shot reports, etc. in Latest Microsoft excel format only. The layout and type of reports/data, nos. of tags per report, etc. shall be as per owner's requirement. All the operator stations, historian stations, SER station and engineering stations shall be equipped with Latest MS Office licensed copy.
- 6.4.9 ESD system shall have integrated hardware for 256 SER points with 1 ms time stamping (as per point 8, page 15), and windows based alarm manager with 1 second

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or better time resolution. In addition to process alarms, the system shall also store operator action journal, system error messages, etc.

- 6.4.10 Complete system hardware shall be certified for ISA G3 class corrosion level protection and shall be compatible with various RFI/EMI immunity as per IEC.
- 6.4.11 All hardware shall be protected against RFI and EMC signals as per IEC standards.
- 6.4.12 DCS system shall have fast MODBUS I/O cards/Communication gateways for interconnecting with ESD systems and other various types of control systems like Woodward Governors/Vibration monitoring system/Weep hole monitoring systems/Analysers and GDS, etc. via RS485 interface and MODBUS protocol. The link shall be one way, i.e. the information in DCS shall be used as view only purpose. No remote writing facilities from DCS to other system via MODBUS are permissible. The communication module and links shall be 100% fault tolerant. Internal communication bus on which various intelligent devices within a node shall communicate and this shall also be 100% redundant / fault tolerant The signal exchange between various other system and DCS shall be hardwired if they are to be used for control/decision making purpose in DCS.
- 6.4.13 Network cabinet shall be provided with the system. Required number of network cabinets shall be part of supply to suit I/O count.
- 6.4.14 Name and Tag Plates

Each instrument, equipment, cabinet, panel included in BIDDER's scope of supply shall have its individual name and tag plate which matches with the documents submitted .

All name and tag plates, or plates for brevity, shall be designed and supplied by the BIDDER which will be made of black Acrylic sheet and screwed with SS screw to the panel. Tag numbers shall be engraved or embossed in white color only. The naming philosophy shall be as per OWNER requirement.


## 6.5 POWER DISTRIBUTION CABINET AND POWER SUPPLY :

- 6.5.1 Purpose of such cabinet is to allow power distribution from UPS to DCS system cabinets, Aux. cabinets. Cabinet will be organized in standard modules consisting of MCBs (double pole type), Main isolation switches and standard fuses with LED indications. Fuse rating to be specified by vendor.
- A proper protecting cover shall be provided at the terminals
  - MCBs for all equipment: DCS/ESD, peripherals, panels, cabinets and direct supply to some auxiliary devices and panels.
  - 20 % spare MCBs to be provided.





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- Nameplates showing tag number or equipment number for each MCB.
- One Power on lamp indication.
- Fuse rating shall be decided during detailed Engineering.
- In coming cables shall be terminated on dedicated bus bar from where power to individual circuit shall be tapped off. No looping of any kind is permitted. Isolation for each circuit shall be through two-pole MCB.

6.5.2 Purchaser shall offer two feeders of 110 V AC +/- 10% , 50 Hz +/-3 HZ UPS power to the vendor's PDB Panel located inside cabinet room, from where all other panels shall be fed with 110 V AC power supply. These two feeders will terminate on two separate adequate rated MCBs to be provided in PDB. Vendor shall provide further distribution of 110 V AC UPS feeders as per system requirement using adequate rated MCBs.

24 V DC REDUNDANT Power supply required for DCS/ESD/Field instrumentations/Auxiliary panels and relay panels shall be in vendor scope. The Power Supply make shall be Weid-muller/ Phoenix only. The Power Supply loading shall not exceed 50% load in non redundant load conditions.

Separate distribution of 220/110 VAC to be provided in the PDB for utility supply to different cabinets.

Power supply unit status shall be indicated on the faceplate of PDB panel doors from outside with the help of Digital Voltmeters and shall be remotely communicated via alarm contacts, which will be wired to DCS and annunciate in DCS operating station.

6.5.3 One no prewired power distribution panel with suitable MCB for 110VAC and 24VDC for field instrument/panel and Urea control room panel instrument shall be in scope of DCS vendor. This panel shall be placed in existing urea control room. Tentative 25 nos. MCBs for field instruments of 110VAC and 15 Nos. for 24VDC may be included in scope of DCS vendor (Final quantities shall be finalized during detailed engineering). Suitable redundancy of power supply including diode o-ring and rating of the power supply may be mentioned suitably in technical specification of DCS.

#### 6.6 DCS–ESD COMMUNICATION INTERFACE & SYSTEM INTEGRATION :

The DCS and ESD shall sit on the same redundant network through common switch for seamless integration and data transfer.


The DCS, ESD systems shall be engineered as one integrated control and safeguarding system with respect to operator presentation. The DCS HMI shall be the single operating window for the integrated control and safeguarding system. Communications of the ESD with the DCS shall be accomplished via dedicated redundant, single fault tolerant serial links. The DCS and ESD system shall be of same make.

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An Open Control Systems Network shall allow the integrated control and safeguarding system to communicate with third party control systems, auxiliary information systems and higher-level automation systems utilizing OPC connectivity standards.

Only non-critical information shall be exchanged via the Open Control Systems Network. Critical information shall be transferred with hardwired connections.

Dedicated control systems for Package Units shall not be used. All control and interlocks of these shall be realized in central DCS/ESD systems only.

All commands/communication and statuses to the MCC shall be hardwired and be routed via Interposing Relay Cabinets.

Electrical SCADA is not required. All DI/DOs and AI/AOs shall be hardwired as per Electrical / Instrument Interface philosophy. DIs/DOs from MCC to DCS/ESD shall be with relays only.

- a. For start / stop of all electrical equipment, local/remote selector switch shall be located in MCC. Local/Remote selection provision shall be in DCS/ESD HMI.
- b. Local stop push button on LCS (local control station) shall be always effective.
- c. In Remote mode motor can be started or stopped from DCS.
- d. In Local mode motor can be started from field but can also be stopped from DCS.
- e. Auto / Manual selection shall be in DCS.


Special attention shall be given to network security of the Open Control Systems Network. Firewall shall prevent unauthorized access from the office network to the Open Control Systems Network.

#### 6.7 System Status (CPU, I/O cards, etc.)


System diagnostics shall be presented on the Engg. Workstation and DCS with flashing points in alarm condition, turning to steady state upon alarm acknowledgement.

#### 7.0 WARRANTY

Supplier shall include the warranty period for all the components of the systems as outlined in this Contract. The warranty period shall be 12 months from successful completion of site acceptance test of the complete system or 24 months from date of receipt and acceptance of 100% material at site whichever is earlier. Supplier shall replace any defective or inappropriate component supplied within warranty


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period and shall make good such deficiency within one day from the date the same is brought to his notice and depute their service engineer to site, if required, free of cost.

## 8.0 TECHNOLOGY AND OBSOLESCENCE

The offered DCS/ESD systems shall incorporate advanced state of art technology for all components, which shall guarantee freedom from obsolescence at least for 10 years.

The supplier to provide unconditional service, maintenance and spares supply support for a period of 10 years from the date of SAT to be signed after commissioning and successful trial run of the plant. The supplier shall furnish a certificate to this effect from their principal ensuring hardware and software support (including supply of periodic updated software versions) for a minimum period of 10 years after SAT. The detailed address, with contact person, of the principal shall also be mentioned in the offer.

The supplier of DCS will provide software / firmware upgrades for the next 10 years at Free of Cost. This shall include:

### a. Software and Documentation updates

Any changes, revisions, de-bugging patches, etc. to the systems and application software shall be provided to NFL on a continuous basis as and when they are released / developed by the vendor or the principal manufacturer. Also updates to documentation shall be provided.

### b. Hardware/firmware updates

The vendor shall undertake to keep NFL informed about any development in the hardware/firmware versions. This shall be obligatory on the part of the vendor. Any developments arising out of shortcomings of the systems in the performing its designed task shall be carried out by the vendor at NFL's site in the form of regular engineering charge orders free of cost including hardware and deputation of vendor's engineer to site.

The revisions brought out for enhancement of performance shall be made available to NFL.

The supplier / principal shall have NFL on their mailing list for all software, hardware and firmware updates and developments.


## 9.0 EXPANDABILITY

Systems shall be designed with 20% installed pre-wired spare capacity for all I/O type cards of each type considering at 80% loading capacity of I/O Cards for

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project development. Each I/O module shall not be loaded more than 80% i.e. only 6 channels of 8 channel module, 12 channels of 16 channel modules and 24 channels of 32 channel module are to be used as maximum. However, all the channels of I/O modules shall be completely prewired till marshalling cabinet including power supply, terminals/barriers, interposing relays, pre-fab cables other accessories, etc. In addition to above, offer shall include 10% prewired I/O card of each type or minimum 01 no. each type, whichever is higher, completely prewired up to marshalling panel.

In case of Flexible I/O design (ESD system only), I/O loading shall not be more than 80% of the total capacity of the controller. However, 100% channels of controller shall be completely prewired till marshalling cabinet including power supply, terminals/barriers, interposing relays, pre-fab cables other accessories, etc in order to maintain 20% spare prewired channel philosophy. In addition to above, offer shall also include 10% or minimum 01 no. controller containing 10% I/O of each type completely prewired up to marshalling panel.

Also, 10% spare space shall be available throughout the system for allowing undefined future expansion including system cabinets, marshalling cabinets, network cabinets, control panels and mimics.

Communication networks and cables shall have a spare load capacity of 50% as a minimum.

Plant wide networks shall have a node connection spare allowance of 50 % as a minimum.

Local networks shall have a node connection spare allowance of 30 % as a minimum.

#### 10.0 Warehouse Spares (Mandatory Spares)


Warehouse Spares is to be part of supply, considering 10% of total installed quantity or minimum 1 no. of modules for non-redundant / 2 nos. of modules for redundant installations used in the system. All IT hardware, prefab cables, special cables, bought out items and termination units shall be part of warehouse spares.

10.1.1	Central Control/communication Processor, Central Processor cards, etc. (for redundant nodes) and any other system hardware cards	10% or minimum 2 modules, whichever is higher, for each type of cards, comprising the complete node of each type
10.1.2	Central Control/communication Processor, Central Processor cards, etc. (for non-redundant nodes) and any other system hardware cards	10% or minimum 1 modules, whichever is higher, for each type of cards, comprising the



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		complete node of each type
10.2	System Pre-fab cables, other than I/O Card cables	10% of each type with all connectors, plugs, etc.
10.3	Preloaded Operator Station Dell make with latest Intel Xeon Quad/Octa core processor, minimum 16 GB RAM, DVD Writer, minimum 1 TB Hard Disk in RAID-1 configuration, dual Ethernet communication, 3.3 GHz or better clock Speed, two no.s 24" wide screen LED color monitors, membrane keyboard with all type of cables/power chords/mouse along with all licensed softwares.	1 SET
10.4	Preloaded Server machine Dell make with latest Intel Xeon Quad/Octa core processor, minimum 16 GB RAM, DVD Writer, minimum 1 TB Hard Disk in RAID-5 configuration, Hot swappable type, dual power supply, dual ethernet communication, 3.3 GHz or better clock Speed, 24" wide screen LED color monitors with all type of cables/power chords/mouse along with all licensed softwares.	1 SET
10.5	Preloaded engineering station Dell make with latest Intel Xeon Quad/Octa core processor, minimum 16 GB RAM, DVD Writer, 1 TB Hard Disk in RAID-5 configuration, Hot swappable type, dual power supply, dual ethernet communication, 3.3 GHz or better clock Speed, 24" wide screen LED color monitors with all type of cables/power chords/mouse along with all licensed softwares.	1 SET
10.6.1	RAID-I Hard Disk set as installed	1 set of each type with all connectors, plugs, etc.,
10.6.2	RAID-5 Hard Disk set as installed	1 set of each type with all connectors, plugs, etc.,
10.7	Various Keyboards/mouse, membrane keyboard etc. other than provided with the spares at clause no. 10.3, 10.4 and 10.5	10% of each type, comprising the complete set.
10.8	Relays	10% of each type of RELAYs, including relevant terminal modules/sockets/bases, etc.
10.10	Pushbuttons, Lamps, Selector switches	10% of each type, comprising the complete set.






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10.11	All type of system/PDB/Marshalling cabinet /console filters	100%
10.12	All type of system/PDB/Marshalling cabinet/console fan	10% of each type, comprising the complete set.
10.13	All type of system/PDB/Marshalling cabinet/console Tube lights	10% of each type, comprising the complete set.
10.14	All type of various PDBs Voltmeters	10% of each type , subject to min. of 1 no.
10.15	I/O Cards	10% of each type of card, including relevant terminal modules/pre-fab system cables, etc., subject to minimum of 1 no. each
10.16	Various System Battery, Terminators	10% or min. 1 no. of each type
10.17	All system Fuses and various glass fuses	100%
10.18	All PDB fuse, like HRC, GSA Fuses, etc.	50% of total qty. of each type
10.19	24 V DC Bulk Power Supply modules and redundancy module	10% of each type , subject to min. of 1 no. of each type
10.20	IS Barriers (make: P&F/MTL/Phoenix/Stahl only) for AI/AO/DI/DO/current converters/for VMS & Woodward	10% of each type of instruments, subject to minimum 5 nos. of each type
10.21	I to I converters	10% of each type.

#### Notes


1	The above spares do not include commissioning spares. The above shall be purely warehouse spares (mandatory spares).
2	Wherever "Each Type" is specified, it means "of the Type/make/model/size and exactly replaceable"
3	Wherever "% qty." is specified, Bidder to quote in next higher rounded figure. However Minimum One No of each type is to be included in the scope. All Items, required for successful commissioning of DCS/ESD, will be in the scope of supply by Bidder, even if these items are not specifically indicated above. Where ever redundant modules are used, one spare means one redundant modules.







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**10.0 (a)** The vendor shall also provide as a part of the scope of supply, necessary commissioning spares, if any, free of charge.

**10.0 (b) Optional Spares**

The vendor shall submit a list of recommended two-year spares for trouble free operation of the system, along with individual item rates, in the technical unpriced bid, which shall be valid for 1 year after warranty period. Separate Order if required for these spares shall be placed within the validity period (i.e. for 1 year after warranty period), by individual Units. The vendor shall provide a justification for the list of spares offered. This shall not be considered for bid evaluation.

The commercial terms for procurement of these spares through separate order, if required, later on within validity period (i.e. for 1 year after warranty period) shall be same as applicable to earlier main order. The rates along with GST on FOR NFL Stores Basis shall be provided in the Techno commercial unpriced bid.

**11.0 Annual Maintenance Contract (AMC)**


The supplier shall furnish charges for comprehensive maintenance contract of the entire DCS/ESD on a yearly basis for a period of five years after warranty period as per clause no.7.0 which covers following services.

- a. Parts replacement services : This service provides parts replacement of faulty parts of DCS & ESD system
- b. Preventive maintenance services: Deputation of trained engineer for 4 visits annually of 2 man days at each project location.
- c. Corrective maintenance services: 6 man days of trained expertise staggered into number of emergency visits per year at each project location with interchangeability amongst the three project location.


The cost of AMC is part of loading of total price for evaluating the price bid. During the warranty period and AMC periods, problems in software such as bugs, etc. shall be patched free of charge.

**12.0 Deputation of vendor's engineer:**

- a. The supplier shall depute one engineer at site for 2 months after SAT (final acceptance of the system), free of charge.



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- b. The engineer posted shall be the one who is involved in executing the technical aspects of the system from the initial stage. The engineer shall assist the purchaser in maintenance and upkeep of the system including all necessary liaisons with the vendor offices and personnel. The resident engineer shall also impart on-the-job training to NFL's operation and maintenance staff.

### 13.0 TRAINING:

Supplier shall train Clients' maintenance engineers as well as operations staff at their centre of excellence. The training imparted shall be by qualified and experienced staff available. It shall be exhaustive and aimed at making clients' maintenance & operations staff self reliant for most of the day to day applications. For training, supplier shall make available as close a model of the system with all the representative nodes, as the actual system to be installed. It is envisaged that following be covered in the training:

#### 13.1 Training for Maintenance Staff

- System architecture
- Functions of each node
- Hardware in each node.
- Complete application soft: This shall cover everything from basics like generation of various system nodes to advance language programming, configuration and debugging etc.
- Commonly occurring hardware problems and the maintenance procedures to be followed.
- Various diagnostic programmes available and their use and interpretation
- Routine preventive maintenance procedures
- Maintenance of various peripheral devices like printers, copiers etc

The requirement of maintenance/configuration training for instrument maintenance personnel at vendors centre of excellence for each project location (Panipat, Bathinda & Nangal) shall be as given below:


10 persons X 5 days each = 50 man-days training for DCS  
10 persons X 5 days each = 50 man-days training for ESD

#### 13.2 Training of Operations Staff

This shall be restricted to the operation of the system. This shall broadly cover the following:



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- System architecture
- Functions of each node
- Functions of various keys in the keyboard.
- Display hierarchy, access methods for various displays, switching between different displays etc
- Generation of displays like graphics, group, trend groups, etc
- Control of plant from various displays.
- Alarm handling
- Maintenance of various peripheral devices like printers, copiers etc.

The requirement of operational training shall be total 10 persons x 5 days each = 50 man days for each project location (Panipat, Bathinda & Nangal).

- 13.3 On site training : The training for a group of Ten persons from operation / maintenance imparting knowledge of complete operation & routine maintenance of the DCS/ESD system at site for a period of one week.

**NOTE:** Travelling, Boarding, Lodging of NFL persons deputed for training shall be in NFL's scope. Other training expenses shall be borne by the bidder. For purposes of training, detailed literature, instruction & maintenance manuals in English shall be arranged by the Bidder.

#### 14.0 EQUIPMENT LOCATION:

- 14.1 The Control room is divided into three parts as main control room area, Cabinet room and Engineering Room. All of the DCS/ESD equipment will be installed in the existing central cabinet room / central control room and central engineering room in ammonia plant. All of these three rooms are in close vicinity of each other. (approximate 50 m) of each other. However, 1 no. PBD, 1 no. network cabinet and 2 nos auxiliary panels shall be placed in existing Urea control room. The existing Urea control room located at a distance of 500 meters from Ammonia control room.


- 14.2 The DCS/ESD panels including system hardware cabinets and marshalling cabinets, PDB panels, network cabinets, Barrier panels, relay panels shall be located in the existing ammonia cabinet room.

- 14.3 The engineering station and one of the redundant historian operator station shall be placed in engineering room. Complete engineering activity of whole plants instrumentation & control system, downloading, online monitoring, changes shall be carried out from this engineering room.





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14.4 Three numbers HMI stations (2 operator stations & 1 S/I station) are to be placed in existing Urea control room located at a distance of 500 meters from Ammonia control room (point no. 1.1, page 4). Other HMI stations (operator stations, S/I station, Historian stations, Engineering stations & SOE station) shall be located in existing Ammonia control room.

#### 15.0 Auxiliary or Back Up Panels/consales :

##### 15.1 Auxiliary panels for Panipat and Bathinda Unit :

The Bidder shall supply two numbers of pre wired auxiliary panels with barriers/power supplies/MCBs, terminals and other accessories shall be supplied for mounting the existing Bently Nevada Vibration Monitoring System, Woodward Governor system, LEL Gas detector systems, Urea reactor weep hole monitoring system, Weather monitoring systems etc. These shall be located in the central cabinet room/Urea control room.

The details of mounting and wiring will be provided during detailed engineering. The colour shade shall be RAL7035 only. The size of these panels shall be 800 mm (W) x 800 mm (D) x 2100 mm (H) having single door both side openable. Each panel shall be provided with following hardware as minimum (details shall be provided during detailed engineering).

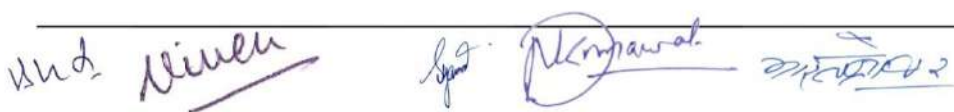
- Provision of 110 V AC power from PDB (redundant output) with MCBs
- Provision of 24 V DC, 10A power from PDB (redundant output) with MCBs
- Barriers AI/AO 30 Nos.
- Barriers DI/DO 20 Nos.
- MCBs 6 Nos.
- Terminals strips 125 Nos.

##### 15.2 Auxiliary panels for Nangal Unit:


The Bidder shall supply two numbers of pre wired auxiliary panels with barriers/power supplies/MCBs, terminals and other accessories shall be supplied for mounting control circuit for the existing CA-1 CO2 compressors, K1N CO2 compressors etc.

The details of mounting and wiring will be provided during detailed engineering. The colour shade shall be RAL7035 only. The size of the panels shall be 2100(H)x1200(W)x800(D) mm and 850(H)x700(W)x175(D) mm respectively and having single door both side openable. Each panel shall be provided with following hardware as minimum (details shall be provided during detailed engineering).

- Provision of 110 V AC power from PDB (redundant output) with 4 nos MCBs



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- b. Provision of 24 V DC, 10A power from PDB (redundant output) with 4 nos MCBs
- c. Barriers AI/AO 30 Nos.
- d. Barriers DI/DO 35 Nos.
- e. Terminals strip 175 Nos.
- f. 14 No's Digital Indicators / HMI Digital Indicator having input current 4-20 mA and Supply voltage 110 Vac. Dimension size is Height 45 mm and Width 96 mm .
- g. 6 No's Ampere meter 72x72 Sq. mm (Analog motor of Moving Coil Type with rectifier)
- h. 30 No's Led Indicating Lamps (Red , Blue ,Green, Yellow)With LVGP Protection. Make Siemens/L&T/ Tectonics etc.
- i. 35 No's Selector Switch 2-Pole, 2-Position. "Local-Remote" Rotary Type with Pad Locking In Remote Position.
- j. 26 No's Mushroom type Emergency Push Buttons with key switches. (Make Swistec/EOA/ Siemens/L&T/ Tectonics, having 3 NO/NC contacts).

15.3 Auxiliary Hardwired console for all three units :

One Auxiliary console shall be provided for high priority discrete hardwired safety functions, which shall be manually operated. The console shall be installed in the central control room along with other HMI consoles. The console shall be equipped with:

- Hardwired Annunciation windows (Generally 4x4 windows- total 32 nos. of windows , Minilec make with microprocessor based unit.
- 20 nos. - Mushroom type Emergency Push Buttons with key switches. (Make Swistec/EOA/ Siemens/L&T/ Tectonics, having 3 NO/NC contacts).

**16.0 Earth pits/Grounding Systems**

Bidder shall construct earth pits for System Ground and frame/cabinet Ground etc. as per the system requirement. All the various system earth pits like System Ground, Safety Ground, Intrinsic ground, etc. shall be constructed in the peripheral area of cabinet room outside the control/cabinet room building. If the required earth pit resistance is not achieved with two earth pit, there shall be multiple earth pit connected in parallel. Similarly, if diff. system requires diff. earth pits, there shall be a group of multiple earth pits in the area outside the control room/cabinet room. No. of earth pits shall be as per requirement of earthing resistance and design of the system. However, minimum two earth pit for system ground and two earth pits for frame/cabinet ground shall be


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constructed for use in Ammonia Plant and minimum two earth pits for system ground and two earth pits for frame/cabinet ground shall be constructed for use in Urea Plant.

There shall be 2 type Earthing points, one shall be insulated system earth bus bar and the other shall be safety earth bus bar. There shall be total 4 nos. of such Earth bus bar provided in the each cabinet ( two on either side). The looping of the Earthing points should be in such a way that a break in one circuit will not affect complete earthing . Both the earthing points will be provided at a single point . Inside the cabinet this shall be done by the BIDDER. A ground fault detection circuitry shall monitor floating electrical circuits in field wiring via an alarm indicator, when resistance to earth fails for all types of I/O. BIDDER to specify total numbers of earthpits. All inter panel and system component grounding/earthing shall be carried out by BIDDER inside cabinet room, with 100% redundant looping. All type of earthing cables from the pits to system cabinets and within the cabinets shall be in vendor's scope.

#### 17.0 FIELD INTERFACE:


17.1 Multi core cables connected to junction boxes in the field individually will be connected to the marshalling racks. In the marshalling racks, the signals will be routed through the system cables connected to the I/O cards of the DCS/ESD system. No field bus, profibus or multiplexers allowed.

17.2 The signal exchange between electrical and instrumentation shall be via Electrical/Instrument interface panels, located in the proposed cabinet area. Two numbers interface panel (800 mm (W) x 800 mm (D) x 2100 mm (H) for analog and digital signal exchange shall be provided and placed in MCC. One panel shall be used as Analog interface panel and another panel shall be used for digital interface panel. Analog Interface panel shall be used for various Motor Bearing/Winding RTD inputs from electrical/field devices to Instrument Control systems, various VFD signals like 4-20 ma speed signals, motor current indications, DCS controller output to VFD located at Electrical Substation, etc. For motor current indication, analog interface panel shall have pre-wired installed current to current (I to I) convertors. The I to I convertors shall have 0 to 1 Ampere input and 4 to 20 mA output and shall be of ABB/Elster/Phoenix make only. Digital Interface panel shall be used for various Digital input and Digital output signals from / to Electrical/Instrument systems like various pump/motor running indication, stop command to MCC, etc. Required number of Current to Current (I to I) convertors for current indications of various electrical motors are as under :

**Panipat unit : 65**  
**Bathinda unit : 65**  
**Nangal unit : 65**


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17.3 Inside the cabinet room/control room, cables shall be laid in perforated aluminium cable trays below false flooring. The cable entry for all the panels shall be from bottom only. There shall be physical segregation of various type/signal of cables like power cables, signal cables, communication and system cables. All system/communication cables shall run in closed, flexible, PVC conduit only inside cabinet/control room, below the false flooring.

17.4 All the existing field instrument signal/power including trip/interlock signal and control cables shall be terminated to individual new marshalling panels and corresponding DCS hardware panels via field JB's. There shall be 10% space margin available in all the panels on marshalling and relevant system hardware side panels. These marshalling cabinets shall be used to terminate all field cables as well as for grouping of various signals from the field devices, properly tagged ferruled tested and terminated.

In the system and marshalling cabinets, the cabinets shall have facilities for supporting all cables throughout the length of their run within the cabinet. Cable clamping arrangement shall be provided to secure all cables where they leave the cabinet. Cable tray / trunking shall be sized to have 30% spare capacity after all cabling and wiring has been installed. Internal wiring shall be done inside all closed PVC troughs with proper cross ferruling. There shall be sufficient space between PVC troughs and TBs for ease of wiring/maintenance. The detail specifications of internal panel wiring/color codes and ferruling are specified in further sections are to be followed.

17.5 Various I/Os meant for DCS/ESD shall be properly identified and segregated within the marshalling and corresponding DCS/ESD hardware panels. This means that analog input, analog output, digital input and digital output shall be accommodated in separate columns. There shall be further segregation of terminals for Safety/ Trip Interlocks and process control I/Os.


I/O modules shall not have mixed signals from field and MCC. Separate I/O modules shall be used for the signals from field and signals from MCC. All interposing relays for MCC drive DIs & DOs shall be accommodated in separate panels with segregation.

Digital Input barriers shall be used for digital input signals coming from field. Interposing Relays shall be used for Digital outputs to field, Digital Inputs from MCC and Digital Output to MCC. Contact rating of relays shall be 10A/240VAC. Card mounted Relays not acceptable. Separate 24VDC Socket mounted relays, 4 NO/NC of OMRON/Siemens/ABB make with LED indicators and built in surge suppressor are acceptable only. All cabling for DI/DO of MCC & DO for field Solenoid Valves should be through fuse TB.

**18.0 Wire Termination and internal wiring :**

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All the Field AI/AO, Field DI and MCC AI terminals for connecting field cables shall be WAGO/PHEONIX make, screw less, side-side entry, knife-disconnect type suitable for 0.5 sqmm to 4 sqmm cables. No looping of common terminals shall be done on the terminals. All outputs for solenoid valves (Field DO), MCC DI/DO shall be provided with WAGO/PHEONIX make, screw less, side-side entry type, fused terminals with LED indication. Wiring shall be PVC insulated 600-volt grade with copper conductor. Power cable shall be 600 / 1100 volt grade. Double Decker terminals shall not be used.

Conductor shall be multi strand type and size shall be as mentioned below.

For analog input/output : 0.75 sq mm, multi strand 12 pair or single pair individual/overall shielded with white (+) / Black (-) color codes.

For Digital Inputs : 1.5 sq mm, multi strand, flexible, 12 pair or single pair individual/overall shielded with Grey (+) / Grey(-) color

For Digital Outputs : 1.5 sq mm multi strand, flexible, 12 pair or single pair individual/overall shielded with Red (+)/Blue (-) color

For 110 V AC power cable : 3 Core, multi strand, flexible, RED(P) / BLACK (N) /GREEN (E), Sizing shall be based on load, however min. size shall be 4 sq mm,

For 24 V DC power cable : 2 core, multi strand, flexible, RED (+)/ Blue (-), sizing shall be based on load, however min. size shall be 4 sq mm


Adequate segregation of terminals and accordingly marshalling panels and wiring shall be maintained to allow quick identification of wires. Internal layout of marshalling racks shall ensure that there is no overcrowding of components and maintenance accesses are properly obtained. Terminal strips shall be easily accessible and ferrules readable. All components shall be mounted on front and rear surfaces of the mounting plate. No component shall be mounted on the sides/doors/gland plates or in the bolting space provided between two adjacent cabinets.

I/O and interconnecting wiring shall be tagged at each end with the identification tags. Ferruling shall be double cross ferruling with continuous sleeve. No discrete ferrules shall be accepted. There shall be uniform colour codes for ferrule sleeves various type of signals. All system cable/wire ferrules shall be of white colour with black fonts, whereas all other ferrule sleeve colour shall be yellow with black fonts.

#### 19.0 DISTRIBUTION OF RESPONSIBILITIES:



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#### 19.1 SUPPLIER'S (BIDDER'S) RESPONSIBILITIES:

SUPPLIER shall depute a team of experienced engineers, technicians and other staff for the purpose of installation, pre-commissioning and commissioning of the system at site. Following activities are included in the SUPPLIER's scope:

- DCS/ESD System engineering and commissioning and plant start up assistance.
- Supply of complete system hardware / software / cabinets / consoles / mounting facilities / Factory testing / Packing / Forwarding / Unpacking / transportation to site of the system and inspection of the same for any damages.
- Safety earthing of all panels in a redundant loop form (preparation of earthing grid and distribution to all panels).
- Intrinsic safe earthing of all panels (preparation of earthing grid and distribution to all panels).
- Construction of required number of earth pits with approved drawings, supply of all related hardware and distribution to all panels.
- Mounting of all hardwired devices in various cabinets including complete wiring of all these devices with DCS/ESD marshalling or system panel.
- Inter cabinet wiring/inter cabinet cable layout for all signal/pre-fab cables layout, power supply and system cables wiring in vendor's scope.
- Powering up the system, loading the system programming and configuration and carry out internal loop checks for correctness of wiring in Supplier's scope.
- Complete database generation including dynamic graphics, logging reports, management information reports, various displays, historic data base, shall be in Bidder's scope. Implementing control strategies and any advance level control strategies given by the Licensor/owner. Further to this application software shall be successfully implemented and optimized till the plant operations are stabilized. Any modification changes required shall be done by Bidders concerned engineer. Tuning of loops, implementing any configuration and graphics, interlock changes etc. required during commissioning of the plant is in bidder's scope.
- During pre-commissioning and commissioning the Supplier shall provide required manpower to carry out the above activities. During this period of pre-commissioning and commissioning assistance, if any time is lost due to fault in the system or any other reason attributed to the Supplier, the assistance period shall be extended by that period at no additional cost to the owner.
- Integration/communication of the system with third party devices.
- Developing of design and detail engineering documents



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- Developing and providing of Wiring diagrams of field cables up to I/O cards including inter cabinet wiring.
- Providing documentation in required number of sets during engineering and also as-built documents after commissioning, supplying the same on soft copies/electronic media.
- Providing certification for the systems specified by TÜV (AK6) wherever required.
- Preparation of specifications, procurement, inspection, erection, integration and commissioning of all bought out items included in Bidder's scope of supply.
- Any deviations from the specifications are to be highlighted by the Bidder in the offer.
- Bidder to specify the total boot time required for complete system and normal operations to be resumed if there is a loss of complete 110 VAC UPS supply, on resumption of the power the system shall boots automatically on its own with the latest check pointed data without any user intervention. It shall be possible to reboot the system and download other node in case of unavailability of main file server or hard disk failure, with the CD-ROM, Hard disk etc. Bidder to clearly indicate any limitations related to system boot.
- In case of mains powers fluctuations, the system shall be capable of withstand the complete loss of supply upto 20 msec. In other words, the hold-up time for the system shall be 20 m sec without affecting its normal operation.
- Bidder shall indicate the communication protocols supported along with complete performance and details of error detection methods used for :
  - a. Main data highway.
  - b. Internal I/O communication bus.
- Bidder shall indicate the maximum number of nodes possible on main data highway, maximum number of I/O modules possible on one I/O communication bus and the distance limitations for each.
- Bidder shall indicate the maximum permissible distance between a node and a peripheral device like printer/copier, operator console, storage unit etc.
- Distance limitation between gateway and other devices.
- All the hardware and software for DCS/ESD shall be delivered in one lot.

#### 19.2 NFL'S RESPONSIBILITIES:

- Receipt of system at site, Transportation of system from site stores to Cabinet room /control room under the supervision of vendor.


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- Installation/Erection of system in control room/cabinet room at site including welding/fabrication of channel supports in trenches under the supervision of vendor.
- Cable entry to marshalling cabinet, Cable glands preparation and termination of field cables at marshalling cabinet under the supervision of vendor's Engineer.
- Routing of all data highway cables/internal bus cables for DCS/ESD through rigid GI conduits within control room below false flooring as well as between various control room/MCC rooms of the plant under the supervision of vendor.
- NFL shall provide P &IDs of the plant, interlock drawings, logic narratives and control loop narratives.

## 20.0 BOUGHT OUT ITEMS IN BIDDER'S SCOPE:

### a. 1 No. DELL LAPTOP computer

Laptop with all backup programs loaded shall be part of supply for carrying out, off line modifications in program and graphics. If required the same shall be used as stand by programmer/ Engineering Station. Minimum specification of this laptop shall be 15.6" Full HD (1920 x 1080 pixels) and antiglare display, 8GB RAM, 1 TB SSD storage, minimum Intel, i3 processor, 3 USB 3.0 port, One HDMI port, One serial communication port, One LAN port, CD/DVD-Writer, Wi-Fi connectivity, latest OS Window 10 and antivirus.

### b. System shall be furnished with Executives Tables with attached computer desks - 5 nos. (Godrej make)/ chairs (Godrej make) - 20 nos. / file racks (Godrej/Delite make) - 2 nos./ Manual racks with glass door (Godrej/Delite make) - 2 nos./ Almirahs (Godrej/Delite make) - (3 nos.).

### c. Three numbers computer tables for Engineering stations/Engineering room along with all required facilities.

### d. Printers with cover and furniture for installation:

#### 1. Logging Printer

Quantity: One no. colour Ink jet printer for A3 size paper  
Make: Hewlett-Packard/Cannon  
Supply: Universal power supply

#### 2. Alarm and Event Printer

Quantity: Two Black/white Laser printers A4 Size.  
Make: Hewlett-Packard/Cannon  
Supply: Universal power supply

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3. Printer with Engineering Station

Quantity: One no.

Type: Color Laser Printer up to A3 Size with Scanner and Copier functions for taking prints of Engineering Graphics / Sequence charts / User Programs etc.

Make: Hewlett-Packard/Cannon

Supply : Universal power supply,

Note: All the printers shall be of single make.

e. USB 2.0 compatible Storage Hard Disk of 4 TB capacity of standard make: 2 nos.

f. 2 Nos. LVS (Large Video Screen) of 65" size, UHD(4K) LED display, smart, Sony/Samsung/LG/Panasonic make shall be provided for both control room i.e. 1 No LVS to be provided for Urea control room and 1 No LVS to be provided for Ammonia control room. DCS vendor shall make necessary arrangement for display of DCS graphics on LVS. Both the offered LVS shall be of single make.

**21.0 INSPECTION AND CHECKS OF DCS/ESD SYSTEM :**

The system and all its 100 % associated components shall be inspected and tested at the Bidder's works by Owner. Owner reserve the right to inspect any bought out items offered by the Bidder at the sub-vendor's works.

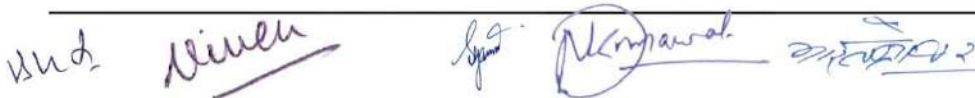
Cost of inspecting/testing shall be borne by the Bidder. For final integrated inspection of the system, the Bidder shall give a minimum notice of 3 weeks to Owner

The inspection shall briefly envisage the following:


**21.1 Factory acceptance test (FAT) :**

The FAT shall be performed when the complete system, including all hardware and software components, to be supplied by the Bidder, has been assembled and prepared for operation in the factory.

Throughout the factory acceptance test, Bidder shall provide all necessary test equipment's and consumables and shall make all necessary connection to all hardwires as many times required. Owner shall carry out 100% functional checking of all hardware/software modules.



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The objective of the testing procedures is to ensure that all hardware components and the related software modules (standard function blocks) are free from errors/defects when being tested individually and in the system configuration. The tests shall be performed with the aid of test programs permitting easy location of defective components and/or software modules.

During the factory acceptance test, the complete system must remain 100 % operational for at least 100 consecutive hours with no hardware and/or software failures.

The Bidder shall provide test and simulation equipment, appropriate testing staff and any service utilities to perform the test in an efficient and timely acceptable manner. The course and duration of the test procedure shall be specified by the Bidder. Simulation equipment for simultaneous testing of 100 % of I/O-signals shall be kept available by the Bidder/manufacturer (with multiple plug-in connectors).

The Owner and the Bidder shall agree upon the start of the test. If any failures occur within said 100 hours the test shall be restarted when the failure has been corrected and the system shall be re-tested for another 100 consecutive hours.

During FAT Bidder shall prepare a report signed by the Owner and the Bidder.


After the factory acceptance test has been successfully completed the system shall be ready for transportation to plant site.

Additionally the communication between ESD system and DCS shall also be tested. The procedure, e.g. simulation or test program has to be clarified between NFL and Bidder. Following test/inspection shall be performed.

**Hardware Inspection:**

- a. Checks on general workmanship like fabrication quality, paint quality.
- b. Dimensional inspection for base frame, height, depth, removable gland plates etc.
- c. Power supply, wiring checks for fans, tube lights etc.
- d. Supply/signal wiring checks including colour code checking, checking of ferrules, correctness of wiring, size of wires, proper segregation of wires etc.
- e. Provision of terminals of correct size and type.
- f. Operation of various lamps, push buttons, HRC fuses on each HMI, annunciators,


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relays, ammeters and other instruments mounted on the consoles or within the cabinets.

- g. Megger test for power distribution cabinets.
- h. Provision of earthing bus bars for safety earth/intrinsic safety earth.
- i. If a group of panels/consoles is to be mounted and bolted together in the final layout frozen the same shall be offered for inspection exactly in the same fashion to check inter panel wiring, mechanical alignment etc.
- j. All system modules shall be checked for their correct mountings in respective slots as per configuration frozen.
- k. Redundancy wherever specified shall be checked for :  
Power supply, I/O cards, CPUs, Communication (between nodes as well as within a node).
- l. Scan times as specified shall be checked for all inputs/outputs.
- m. Individual modules wherever possible shall be checked for their performance.
- n. All volatile memory shall be checked for battery backup by tripping power for the duration given in the BIDDER's specifications.


**Software Checks :**

- a. 100% check on the generated data base. This includes checks on:
  - Correctness of tag number and description.
  - Measuring range.
  - Input type, input conditioning.
  - Algorithms to be executed.
  - Output type and conditioning.
- b. All graphics shall be checked 100% for static and dynamic details. These include:
  - Checking all graphics for correctness w.r.t. P&ID.
  - Checks on line thickness, colour, equipment's, tags, units of measurement.
  - Checking of modifier conditions wherever specified.
  - Switching between various operating pages as per philosophy frozen.
  - Operation of all touch targets.
- c. Operation of all keys on the keyboard shall be checked. Various printing operations like, operator changes, alarms, guide messages, screen printing etc. shall be



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simulated and checked at random.

- d. Group displays shall be checked for correctness of grouping.
- e. Alarm priorities shall be checked for all alarms.
- f. All complicated loops shall be checked 100% from input stage to output for correctness of configuration.
- g. All logic & sequence operations shall be checked 100% from input to output by forcing/enabling various I/Os through software.
- h. Any higher language programmes shall be checked 100% either by simulation or by feeding requisite inputs and checking the outputs.
- i. SOE Logging operation shall be checked.
- j. Bidder to inform 30 days in advance for FAT before the despatch of materials.  
Party to submit detailed documents of FAT/SAT procedure/certificates in advance.  
Party to send the FAT compliance report in advance for despatch clearance.

#### 21.2 Site acceptance test (SAT) :

After transportation to plant site the Bidder has to investigate and prove all system components and devices against transportation and erection damages.

This level of testing will take place on site after the system has been installed and certified as operational by the Bidder.


The integrated system shall run uninterruptedly for four weeks from date of commissioning of the whole plant. NFL will take over the system from the supplier after final Site Acceptance Test. Any loss of time due to reasons like power failures, forced shutdowns etc. which are due to no fault of the supplier shall be counted as run time. However, if any major software/hardware failure of the system occurs due to which the system or a part thereof has to be shutdown the test shall be conducted afresh on the whole system.

The Bidder shall have the responsibility to ensure that the installed hardware including the software supplied is fully operational.

The testing procedure shall include mechanical checks of the system including all system links connected according to the Bidder's specification.



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After this the diagnostic software will be loaded and self-test routines of the DCS/EDS system shall ensure that all system components are in acceptable condition as well as the communication links are working properly.

The application software will be loaded. If the system shows no deviation to the normal operation, the system will be ready for loop checks.

When the system operates normally for continuously 30 days, after completion of the loop checks and all simulation test, the DCS/ESD system shall be considered as accepted by the Owner.

DCS/ESD vendor shall prepare exhaustive SAT document and shall submit for NFL approval.

A certificate of acceptance shall be signed by the representatives of the NFL and Bidder.


**22.0 DOCUMENTATION/DRAWINGS:** This clause shall be applicable for all three units separately.

22.1 Documentation/drawings shall be supplied as per requirements given below (hard copies) :

Sr. No.	ITEM	NO. OF COPIES			
		With Quotation	For approval after P.O.	After approval for information	Final / As-built
a.	Architecture (one line diagram) of the quoted system.	2	2	2	6
b.	Detailed bill of material upto module level & including all bought out auxiliary items with catalogues.	2	2	2	6



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Sr. No.	ITEM	NO. OF COPIES			
		With Quotation	For approval after P.O.	After approval for information	Final / As-built
c.	Bill of material, make/model number, with catalogues for all bought out items.	2	2	2	6
d.	Proposed organisation chart for job execution.	2			
e.	Detailed schedule of job execution.	2	2	2	-
f.	Standard dimensional drawings for:				
i)	Operator/dummy consoles.	2	2	2	6
ii)	System cabinets/ marshalling cabinets/ power distribution cabinets for diff. level power distribution	2	2	2	6
g.	Final layout drawings including internal hardware mounting details for all cabinets and consoles.	2	2	2	6
h.	Calculation of total power load requirement.	2	2	2	6
i.	Expected heat dissipation.	2	2	2	6
j.	License Software CDs/DVDs and portable hard disks sets (system and application software)	-	-	-	2
k.	Schematic drawings for Earthing System	2	2	2	6
l.	Loop schematic for:				
i)	Analog closed loops		2	2	
ii)	Analog open loops.		2	2	
iii)	Digital I/Os		2	2	
m.	Loop configuration drawings.		2	2	6
n.	Nest loading and I/O assignments.		2	2	6





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Sr. No.	ITEM	NO. OF COPIES			
		With Quotation	For approval after P.O.	After approval for information	Final / As-built
o.	Copy of different log formats available.		2	2	
p.	Logic/Ladder drawings.		2	2	6
q.	Printouts of all generated graphics.		2	2	6
r.	Software loading calculations for various system nodes with spare margins available.	2	2	2	6
s.	Factory acceptance test (FAT) plan.		2	2	3
t.	Standard system documentation available for all system nodes like:				
i)	Instruction manuals.			2	4
ii)	Software reference manuals.			2	4
iii)	Installation instructions.			2	4
iv)	Algorithm library.			2	4
v)	Standard symbol library.			2	4
vi)	Any other documents.			2	4

Three set of final documentation shall be provided in CDs/ DVDs in MS Office environment.


22.2 As-built Drawings: This clause shall be applicable for all three units separately.

Developing of existing P&IDs drawings of urea plant in latest auto-cad P &ID software shall be in vendor's scope. Tentative quantity of drawings 30 nos. Party to convert P &IDs hardcopies of urea plant to softcopies.

Bidder's site representative shall mark up all engineering modifications done at site on Three master copies to be maintained by him at site

Bidder shall incorporate all the changes made at site in his "master copy" and submit as-built documentation to NFL as per requirements given above.


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### 23.0 Redundancy Requirements:

#### 23.1 Closed Loops/Interlock Logic

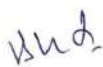
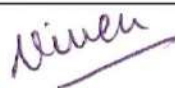



a	Analog input/output modules	:	1:1	yes
b	Digital input/output modules	:	1:1	yes
c	Control, logic & sequence processor modules	:	1:1	yes
d	I/O communication processor module	:	1:1	yes
e	Data highway communication processor modules	:	1:1	yes
f	I/O communication bus & associated hardware	:	1:1	yes
g	Power supply modules at all level	:	1:1	yes

(All of above modules shall be hot swappable type, which can be replaced during plant running condition. On failure it shall changeover to healthy one without any loss of control/information and changeover shall be bump less)


#### 23.2 Open Loops

a	Analog input/output modules	:	Not required
b	Data acquisition processor	:	1:1 yes
c	I/O communication processor	:	1:1 yes
d	Data highway communication processor	:	1:1 yes
e	I/O communication bus & associated hardware	:	1:1 yes
f	Power supply modules, at all levels	:	1:1 yes

(All of above modules shall be hot swappable type, which can be replaced during plant running condition. On failure it shall changeover to healthy one without any loss of control/information and changeover shall be bump less)

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- 23.3 Signal Isolation Requirements  
Input signal isolation for analog inputs : Yes Required  
Type : Galvanic Isolation

**24.0 I/O card details :**

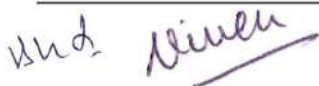



1	<b>Digital input card</b>	
	No. Of channel	Max. 32 channels per card
	Interrogation voltage	24 v dc
	Earth fault detection ckt.	Yes, with alarms
	Over current protection	Yes , with alarms
	Loop current	Max. 2 amp.
	Surge with stand capacity	Yes , as per IEC
2	<b>Digital output card</b>	
	No. Of channel	Max. 32 channels per card
	Driving voltage	As per NFL requirement
	Earth fault detection ckt.	Yes , with alarms
	Over current protection by	Yes , with alarms
3	<b>Analog input card</b>	
	No. Of channel	Max. 16 channels per card
	Driving voltage	24 v dc, suitable for 2 wire, 24 v dc transmitters as well as capable of accepting 4-20 ma dc input current from 4 wire transmitters also.
	Channel isolation	Yes, >1000v dc as per IEC, all the I/O cards shall have individual/group channel to channel with isolated power supply and A/D conversion for individual channel.
	Over current protection by	yes, required with alarm
	Max loop current	yes, required with alarm
	Surge with stand capacity	yes, required with alarm
	Short circuit protection	yes, required with alarm
	Type of adc /resolution	min. 13 bit
	Accuracy	better than +/- 0.1%, which includes all input signal conditioning cards,



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		including terminal assembly resistor accuracy also.
<b>4</b>	<b>Analog output card</b>	
	No. Of channel	Max. 16 Channels per card
	Driving voltage	24 V DC, Min. Output load shall be 750 ohm
	Channel isolation	YES, >1000V DC as per IEC, All the I/O cards shall have individual/group channel to channel with isolated power supply and A/D conversion for individual channel.
	Over current protection by	Yes, Required with alarm
	Max loop current	Yes, Required with alarm
	Surge with stand capacity	Yes, Required with alarm
	Short circuit protection	Yes, required with alarm
	Type of ADC/resolution	Min. 10 Bit
	Accuracy	Better than +/- 0.3%, which includes all input signal conditioning cards, including Terminal assembly resistor accuracy also.
<b>5</b>	<b>Control station/Controller</b>	
	User ram	Min. 32 MB
	Min. Cycle time for input scanning	50 ms
	Min. Cycle time for algorithm execution	To be specified by the bidder
	Min. Cycle time for output writing	50 ms
	Normal software loading	30%
	Software loading in worst condition	40%
	Future margin available in software load	50% minimum.
	Redundancy offered	Yes , full, fault tolerant, hot swappable





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## Annexure-II

### Eligibility criteria for procurement of DCS&ESD system

Sr. No.	Conditions	Documents Required from bidder
1	The bidder must be the OEM of offered DCS & ESD or the authorized representative of OEM. The OEM should be in the manufacturing field of DCS & ESD for at least 10 years. Bidders must have supplied and commissioned at least one full-fledged integrated DCS & ESD system of quoted model/series in India in Ammonia plant/Urea plant/ Petroleum-oil Refinery during last seven (07) years as on previous to the month in which NIT is published.	(I) In case of authorized representative an undertaking from OEM on his letter head in support of being an authorized representative. (II) The copies of Purchase Orders as a proof of OEM being in DCS & ESD manufacturing field for at least 10 years. (III) Copy of Purchase Order as a proof that the quoted model/series is supplied in last seven (07) years. (IV) Detailed address and contact No. of the company and concerned person to whom this equipment has been supplied.
2	The quoted model/series should be latest & must have given satisfactory service for a minimum period of 1 year during the last seven (07) years as on previous to the month in which NIT is published.	The satisfactory performance certificate of the quoted model/series, on the official Letter Head of user for at least one full-fledged integrated DCS & ESD System for a minimum period of 1 year on continuous basis, during the last seven (07) years. All the relevant documents if any shall also be furnished in support of the satisfactory performance.
3	The bidders must have manufacturing facilities / Centre of excellence in India for carrying out complete Engineering, execution of job & after sales support.	(I) Details indicating complete address of their establishments in India with their contact person name, address and phone numbers etc. on its letter head pad. (II) Undertaking on their letter head pad that they shall provide spare & service support for quoted DCS System for a period of at least 10 years from the date of supply of the DCS & ESD System.
4	Average annual financial turnover of the company during last three (3) years ending 31st March-2023 should be at least Rs. 5.75 Crores.	Party shall submit financial standing through Audited Balance sheet / Profit & Loss account for the last three years (for the year 2020-21, 2021-22 & 2022-23). In case, audited balance sheet / P&L account statement is not available, turnover certificate duly certified by chartered accountant with UDIN to be submitted.
5	The bidder should have positive Net worth during last three financial year(2020-21, 2021-22& 2022-23).	Net worth certificate duly certified by Chartered Accountant with UDIN to be submitted.

Shd.

Shree

Spand

N. K. Jaiswal

20/03/23



**Contractor's Obligations w.r.t. personnel deployed and labor related compliance**

a) The CONTRACTOR shall be governed by and shall comply with the provisions of various applicable labour laws like Contract Labour (Regulation & Abolition) Act 1970, Payment of Wages Act 1936, Employers Liability Act 1938, Employment of Children Act 1938, Industrial Disputes Act, 1947, Factories Act, 1948, Minimum Wages Act 1948, Employees' Compensation Act 1923, Employees' State Insurance Act 1948, Employee Provident Fund & Misc. Provisions Act 1952, Maternity Benefit Act 1961, Payment of Bonus Act 1965, Payment of Gratuity Act 1971, Equal Remuneration Act 1976, Building & Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 (BOCW) along with BOCW Welfare Cess Act 1996, or any modifications thereof or any other law/ Code (s) relating thereto and rules made thereunder from time to time. (THE ABOVE ACTS ARE ONLY ILLUSTRATIVE AND NOT EXHAUSTIVE.)

b) The contractor shall comply with all applicable Central, State statutes/ labour laws/codes/schemes including all other applicable statutory rules and regulations in force relating to the contract and keep NFL indemnified in respect thereof. The contractor shall, to the extent, he is liable, comply with & give all intimation/ notices required under any Government Authority, instrument, rule or order made under any Act of Parliament, State laws or any regulations or bye-laws of any local authority relating to the contract. The Contractor shall, to the extent that he is liable to pay, indemnify NFL against any liability in respect of any fee/ charges/ fines/ penalty payable under any Act of Parliament, State Laws or any Govt. instrument, rule or order or enactment, any regulations, bye-laws of any local authority in respect of the contract awarded. In case of any violations, omissions, commissions, the consequence/s, if any, including the cost thereto shall be exclusively borne by the CONTRACTOR and NFL shall have no liability whatsoever on this account.

c) In case the CONTRACTOR selected for award of contract does not have a PF code, He shall be required to obtain the same. The contractor shall timely apply and obtain requisite labour licences & other requisite registrations/ licenses/ clearances from the concerned Authorities and submit a certified stamped copy of the same. Contractor shall ensure its uninterrupted continuity throughout the period of contract/ applicability.

d) The Contractor shall depute only physically and medically fit 'adult' persons against the contract i.e. persons below the age of 18 years shall not be allowed to be engaged for execution of work. The contractor may employ such persons as He may think fit and the persons so employed shall be employees of contractor for all purposes and shall not be deemed to be in the employment of NFL for any purpose whatsoever.

e) The Contractor shall pay wages directly to the persons employed by him under the Contract, within the stipulated period i.e. by 7th of the following month, by direct credit in his/her bank account through NEFT/RTGS or by way of cheque. The wage rates should not be less than the stipulated minimum wage rates notified by Appropriate Government from time to time with respect to the work performed/ rendered, without any discrimination on grounds of caste/ creed/ religion/ gender. CONTRACTOR shall also enrol/ cover all eligible/ entitled personnel under EPF, EPS, EDLI, ESI, Labour Welfare Fund, & all the other applicable statutory Acts/ Codes/ schemes and ensure deduction & deposition of the requisite contributions – employee's as well as employer's - for the same with the concerned Authorities/ departments within the due date (i.e. 15th of the following month in case of deposition under EPF & Misc. Provisions Act and by 21st of the following month in case of depositions under ESI Act).

f) The Contractor is also required to discharge all other statutory obligations including timely submission of reports, returns to concerned Authorities and maintain updated registers and records in prescribed proforma under all the various applicable statutes/ Labour Laws/Code(s) including the rules made thereunder enacted and/or amended by the Appropriate Government from time to time.

g) The contractor shall on monthly basis submit a certified stamped copy of wage sheet besides documentary evidence in support of wage payment, deduction & deposition of EPF, ESI, Labour Welfare. The contractor shall also submit a certified stamped copy w.r.t. any other payment made/ benefit extended by him towards fulfilment of his statutory obligations under applicable statutes and/or his contractual obligations towards NFL. Submission of these and other requisite documents/ records and proper maintenance and production of the same as when requisitioned by Authorities/ NFL has to be ensured for smooth clearance/ settlement of bills/payments.

h) CONTRACTOR shall follow prescribed safety regulations & procedures and shall adhere with safe work practices.

**Annexure IV: Price Bid Format**

Sl. No.	Item Description	Unit of Measurement	Quantity	HSN Code	Per Unit BASIC RATE ( inclusive of P&F, Freight charges and Transit Insurance, if any) for supply portion and Per Unit BASIC RATE for Installation/Erection and Commissioning and AMC charges In Figures To be entered by the Bidder in Rs.	GST rate in % applicable on (f)	Per Unit GST applicable on (f) In Rs.	Any other Charges per unit including Taxes in Rs.	TOTAL BASIC AMOUNT Without Taxes in Rs. (j=f*d)	TOTAL LANDED AMOUNT With Taxes ON FOR NFL STORES of respective Unit (i.e Panipat/Nangal/Bathinda) BASIS in Rs. k= j+(h*d)+(i*d)
a	b	c	d	e	f	g	h	i	j	K
1	Supply of Complete DCS and ESD Control System for Urea Plant as per Technical Specifications attached at Annexure-I of Bid document for <b>Panipat Unit</b>	LOT	1							
2	Supply of Warehouse Spares (Mandatory Spares) of DCS and ESD Control System of Urea Plant as per Technical Specifications attached at S.N. 10 of Annexure-I of Bid document for <b>Panipat Unit</b>	LOT	1							
3	Installation/Erection & Commissioning charges for Installation/Erection & Commissioning of DCS & ESD System of Urea Plant as per Annexure-I and Annexure-III of Bid document, for <b>Panipat Unit</b>	Lump Sum	1							
4	AMC charge for 1st year after warranty period of entire DCS and ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Panipat Unit</b>	Year	1							

5	AMC charge for 2nd year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Panipat Unit</b>	Year	1							
6	AMC charge for 3rd year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Panipat Unit</b>	Year	1							
7	AMC charge for 4th year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Panipat Unit</b>	Year	1							
8	AMC charge for 5th year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Panipat Unit</b>	Year	1							
9	Supply of Complete DCS and ESD Control System for Urea Plant as per Technical Specifications attached at Annexure-I of Bid document for <b>Nangal Unit</b>	LOT	1							
10	Supply of Warehouse Spares (Mandatory Spares) of DCS and ESD Control System of Urea Plant as per Technical Specifications attached at S.N. 10 of Annexure-I of Bid document for <b>Nangal Unit</b>	LOT	1							
11	Installation/Erection & Commissioning charges for Installation/Erection & Commissioning of DCS & ESD System of Urea Plant as per Annexure-I and Annexure-III of Bid document, for <b>Nangal Unit</b>	Lump Sum	1							
12	AMC charge for 1st year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Nangal Unit</b>	Year	1							

13	AMC charge for 2nd year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Nangal Unit</b>	Year	1							
14	AMC charge for 3rd year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Nangal Unit</b>	Year	1							
15	AMC charge for 4th year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Nangal Unit</b>	Year	1							
16	AMC charge for 5th year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Nangal Unit</b>	Year	1							
17	Supply of Complete DCS and ESD Control System for Urea Plant as per Technical Specifications attached at Annexure-I of Bid document for <b>Bathinda Unit</b>	LOT	1							
18	Supply of Warehouse Spares (Mandatory Spares) of DCS and ESD Control System of Urea Plant as per Technical Specifications attached at S.N. 10 of Annexure-I of Bid document for <b>Bathinda Unit</b>	LOT	1							
19	Installation/Erection & Commissioning charges for Installation/Erection & Commissioning of DCS & ESD System of Urea Plant as per Annexure-I and Annexure-III of Bid document for <b>Bathinda Unit</b>	Lump Sum	1							
20	AMC charge for 1st year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Bathinda Unit</b>	Year	1							

21	AMC charge for 2nd year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Bathinda Unit</b>	Year	1							
22	AMC charge for 3rd year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Bathinda Unit</b>	Year	1							
23	AMC charge for 4th year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Bathinda Unit</b>	Year	1							
24	AMC charge for 5th year after warranty period of entire DCSand ESD Control System of Urea Plant as detailed in Annexure-I and Annexure-III of Bid document, for <b>Bathinda Unit</b>	Year	1							
										<b>Grand Total= k1+k2+...+k23 +k24</b>

I/We have read all the terms and conditions of the NIT and the Annexure(s) thereto and agree to accept and abide by the same in toto. The above quotation has been prepared after taking into account all the terms and conditions of the NIT.

Dated:

Signature of Tenderer or their Authorized Representative \_\_\_\_\_

Name & Address of Tenderer \_\_\_\_\_

Place:

Phone Number \_\_\_\_\_

Fax No. \_\_\_\_\_

Email ID \_\_\_\_\_

**Note: (i) Bidders have to fill Price bid as per above format. Evaluation shall be done on overall L-1 basis considering total price for supply ( of main DCS & ESD system and warehouse spares) and services ( installation/erection and commissioning and AMC for 5 years) portion for all 3 units together i.e. k1+k2+k3+k4+.....+k23+k24.**

**(ii) Commissioning spares as per para 10.0(a) of Annexure-I, if any, to be provided free of charge by the bidder.**

**(iii) Optional spares as per para 10.0(b) of Annexure-I, shall not be considered for bid evaluation.**

**(iv) Bidders have to fill per unit basic price ( inclusive of P&F, Freight charges and Transit Insurance, if any) for supply portion ( i.e. supply of main DCS & ESD system and warehouse spares) and per unit basic price for services portion ( i.e. installation/erection and commissioning and AMC for 5 years)**

**Annexure-V**

**Certification Form: Make In India (Local Content)**

**Tender Ref. No.:** NFP/PUR/SB/210080/2120710/R

To  
Chief Manager (Materials)  
NFL Panipat

Sub: Self Certification as per clause 9(a) of Revised Public Procurement (Preference to Make in India Order, 2017 of DPIIT dated:16.09.2020

Sir,  
I.....(authorized signatory) for M/s..... a  
'Class I Local Supplier'/ 'Class II Local Supplier' at the time of tender, bidding or solicitation hereby confirm that the item meets the Local Content requirement for Class I Local Supplier' /'ClassII Local Supplier' (**Tick appropriate option & cut the other one**) and the Local Content percentage is.....

The address is as below, where the local content/ value addition is made:  
[Factory Address]

For M/s.....  
Authorized Signatory  
(with company seal & Name)

Note: Provide above certificate from Statutory Auditor or Cost Auditor of the Company (in the case of Company) or from practicing Cost Accountant or practicing Chartered Accountant (in respect of supplier's other than Company).

**Annexure-VI**

**Model Clause Certificate: Public Procurement No. 1  
(On Company's Letter Head)**

**Tender Ref. No.:** NFP/PUR/SB/210080/2120710/R

To  
Chief Manager (Materials)  
NFL Panipat

Sub: Model Clause Certificate as per Annexure-III (Tenders) of Restrictions under rule 144 (xi) of the General financial Rules (GFRs) 2017, dated: 23.07.2020

Sir,  
I.....(authorized signatory) for M/s.....  
have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. We certify that this bidder M/s.....[**Vendor Name & address**] is not from such a country or, if from such a country, has been registered with the competent authority [**Tick appropriate option & cut the other one**]. We hereby certify that we fulfil all requirements in this regard and is eligible to be considered [**attach evidence of valid registration certificate with competent authority**].

For M/s.....  
Authorized Signatory  
(with company seal & Name)



**DRAFT OF BANK GUARANTEE FOR BID SECURITY DEPOSIT/EMD**

IN CONSIDERATION OF NATIONAL FERTILIZERS LIMITED (NFL), HAVING ITS REGISTERED OFFICE AT SCOPE COMPLEX, CORE-III, 7 INSTITUTIONAL AREA, LODHI ROAD, NEW DELHI-110003 (HEREINAFTER CALLED NFL WHICH EXPRESSION SHALL UNLESS REPUGNANT TO THE SUBJECT OR CONTEXT INCLUDES ITS SUCCESSORS AND ASSIGNS) HAVING AGREED TO EXEMPT \_\_\_\_\_ (HEREINAFTER CALLED THE, THE SAID TENDERER(S)' WHICH EXPRESSION SHALL UNLESS REPUGNANT TO THE SUBJECT OR CONTEXT INCLUDES HIS SUCCESSORS AND ASSIGNS) FROM THE DEMAND UNDER THE TERMS AND CONDITIONS OF TENDER NO \_\_\_\_\_ FOR \_\_\_\_\_ HEREINAFTER CALLED "THE SAID TENDERER' OF SUCH BID SECURITY DEPOSIT FOR THE DUE FULFILMENT

BY THE SAID TENDERER(S) OF THE TERMS AND CONDITIONS CONTAINED IN THE SAID TENDER \_\_\_\_\_ FOR \_\_\_\_\_ ON PRODUCTION OF BANK GUARANTEE FOR RS. \_\_\_\_\_ (RUPEES \_\_\_\_\_ ONLY).

1. WE \_\_\_\_\_ BANK HEREINAFTER REFERRED TO AS 'THE BANK' DO HEREBY UNDERTAKE TO PAY TO NFL AN AMOUNT NOT EXCEEDING RS. \_\_\_\_\_ (RUPEES \_\_\_\_\_ ONLY) AGAINST ANY LOSS OR DAMAGE CAUSED TO OR SUFFERED BY 'NFL' REASON OF ANY BREACH BY THE SAID TENDERER(S) OF ANY OF THE TERMS AND CONDITIONS CONTAINED IN THE SAID TENDER (THE DECISION OF THE COMPANY AS TO ANY SUCH BREACH HAVING BEEN COMMITTED AND LOSS SUFFERED SHALL BE BINDING ON US.

2. WE \_\_\_\_\_ BANK DO HEREBY UNDERTAKE TO PAY THE AMOUNTS DUE AND PAYABLE UNDER THIS GUARANTEE WITHOUT ANY DEMUR MERELY OR A DEMAND FROM 'NFL' STATING THAT THE AMOUNT CLAIMED IS DUE BY WAY OF LOSS OR DAMAGE CAUSED TO OR WOULD CAUSE TO OR SUFFERED BY 'NFL' BY REASON OF ANY BREACH BY THE SAID TENDERER(S) OF ANY OF THE TERMS OR CONDITIONS CONTAINED IN THE SAID TENDER OR BY REASON OF THE SAID TENDERER'S FAILURE TO KEEP THE TENDER OPEN. ANY SUCH DEMAND MADE ON THE BANK SHALL BE CONCLUSIVE AS REGARDS THE AMOUNT DUE AND PAYABLE BY THE BANK UNDER THIS GUARANTEE. HOWEVER, OUR LIABILITY UNDER THIS GUARANTEE SHALL BE RESTRICTED TO AN AMOUNT NOT EXCEEDING \_\_\_\_\_ (RS \_\_\_\_\_ ONLY).

3. WE \_\_\_\_\_ BANK FURTHER AGREE THAT THE GUARANTEE HEREIN CONTAINED SHALL REMAIN IN FULL FORCE AND EFFECT DURING THE PERIOD THAT WOULD BE TAKEN FOR THE FINALISATION OF THE SAID TENDER AND THAT IT SHALL CONTINUE TO BE ENFORCEABLE TILL THE SAID TENDER IS FINALLY DECIDED AND ORDER PLACED ON THE SUCCESSFUL TENDERER AND/ OR TILL ALL THE DUES OF NFL UNDER/OR BY VIRTUE OF THE SAID TENDER HAVE BEEN FULLY PAID AND ITS CLAIMS SATISFIED OR DISCHARGED OR TILL A DULY AUTHORISED OFFICER OF NFL CERTIFIED THAT THE TERMS AND CONDITIONS OF THE SAID TENDER HAVE BEEN FULLY AND PROPERLY CARRIED OUT BY THE SAID TENDERER(S) AND ACCORDINGLY DISCHARGES THE GUARANTEE. UNLESS A DEMAND OR CLAIM UNDER THIS GUARANTEE IS MADE ON US IN WRITING ON OR BEFORE THE \_\_\_\_\_ TO INCLUDE 3 MONTHS CLAIM OVER AND ABOVE THE PERIOD MENTIONED IN THE PARAGRAPH FOR THE VALIDITY OF THE BANK GUARANTEE IN THE TENDER WE SHALL BE DISCHARGED FROM ALL LIABILITY UNDER THIS GUARANTEE THEREAFTER.

4. WE \_\_\_\_\_ BANK, LASTLY UNDERTAKE NOT TO REVOKE THIS GUARANTEE DURING ITS CURRENCY EXCEPT WITH THE PREVIOUS CONSENT OF 'NFL' IN WRITING. DATED \_\_\_\_\_ DAY OF \_\_\_\_\_ 200

CORPORATE SEAL

FOR BANK.

**ANNEXURE-VIII**

**SECURITY DEPOSIT-CUM-PERFORMANCE BANK GUARANTEE FORMAT**

(To be prepared on Stamp paper issued in the name of Bank)

This BANK GUARANTEE No. \_\_\_\_\_ made this day of \_\_\_\_\_ between \_\_\_\_\_ a bank incorporated and having its registered office at \_\_\_\_\_ (hereinafter called BANK) which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assigns on the one part and NATIONAL FERTILIZERS LIMITED, a Company registered in India under Companies Act, 1956 and having its registered office at Core - III, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi - 110 003, India to the context or contrary to the meaning thereof include its successors and assigns on the other part. WHEREAS in pursuance to the agreement dated \_\_\_\_\_ (hereinafter called CONTRACT) entered into between National Fertilizers Limited (hereinafter called OWNER and \_\_\_\_\_ a Company incorporated in \_\_\_\_\_ (hereinafter called CONTRACTOR) which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assigns, for supply of \_\_\_\_\_ as envisaged in the Contract, Contractor has to submit a Security Deposit-cum-Performance Bank Guarantee for Rs. \_\_\_\_\_. CONTRACTOR accordingly agrees to furnish the Security cum performance Bank Guarantee as hereinafter contained towards fulfillment of all of its obligations under the contract.

NOW THIS DEED WITNESSES AS FOLLOWS:

1. In pursuance of the Contract, the Bank hereby guarantees as a direct responsibility to OWNER that the BANK is holding the amount of Rs. \_\_\_\_\_ at Owner's disposal and hereby promises and shall be bound to pay to OWNER, forthwith at Owner's written notice stating that the contractor has failed to fulfill its obligations under the contract for reasons for which contractor is liable and without any protest or demur and without recourse to contractor and without asking for any reasons as to whether the amount if lawfully asked for by Owner or not, the entire amount or the portion thereof as mentioned by Owner in the notice. The decision of the Owner as to whether the terms and conditions of this Security Deposit cum Performance Bank Guarantee have been observed or not shall be final and binding on the BANK. In any case, however the Bank's responsibility under this Security Deposit-cum- Performance Bank Guarantee is limited to Rs. \_\_\_\_\_.

2. This Security Deposit-cum-Performance Bank Guarantee shall be valid for an initial period of \_\_\_\_\_ Months from the date of this Bank Guarantee No. \_\_\_\_\_ dated \_\_\_\_\_ given by the Bank to Owner become effective. Upon issuance of Commissioning / Erection / Completion certificate according to terms of contract on expiry of \_\_\_\_\_ months after the issuance of the above mentioned certificate of commissioning / erection / completion certificate, the Security Deposit-cum-Performance Bank Guarantee shall become null and void.

3. This Security Deposit-cum-Performance Bank Guarantee shall be in addition to and shall not affect or be affected by any other security now or hereafter held by Owner on account of money hereby intended to secure and Owner at its discretion and without any further consent from the Bank, and without affecting its rights against the Bank, may compound with, give time or other indulgence to or make any other arrangement with Contractor and nothing done or omitted to be done by Owner in pursuance of any authority or permission contained in this guarantee, shall effect discharge of the liability of the Bank.

4. UNLESS PREVIOUSLY CANCELLED BY THE OWNER, this Security Deposit cum- Performance Bank Guarantee will remain in force initially up to \_\_\_\_\_ months from the effective date of Bank Guarantee No. \_\_\_\_\_ dated \_\_\_\_\_ given by the Bank to the Owner and subject to provisions of paragraph 2 above will stand automatically cancelled on the expiry of the said period. Unless demand or claim under this Bank Guarantee is made on Bank in writing within three months from the date of expiry of this Bank Guarantee, all the rights of Owner against the Bank shall be forfeited and Bank shall be relieved and discharged from all the liabilities hereunder.

5. Any notice by way of request, demand or otherwise hereunder may be sent by post to the Bank, addressed as aforesaid, and if sent by post, it shall be deemed to have been given at the time when it would be delivered in due course of post, and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate, signed by an officer of the owners, to the effect that the envelope was so posted, shall be conclusive.

6. The Security Deposit-cum-Performance Bank Guarantee is to be returned to the Bank after its expiry in terms of Paragraph 4 above.

7. The Bank declares that it has the power to issue this guarantee and the undersigned have full power to do so.

Dated \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_

(Indicate the name of the Bank with stamp)



**BANK GUARANTEE FOR SECURITY DEPOSIT FORMAT****Annexure - IX**

(To be prepared on Stamp paper issued in the name of Bank)

This BANK GUARANTEE No. \_\_\_\_\_ made this day of \_\_\_\_\_ between \_\_\_\_\_ a bank incorporated and having its registered office at \_\_\_\_\_ (hereinafter called BANK) which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assigns on the one part and NATIONAL FERTILIZERS LIMITED, a Company registered in India under Companies Act, 1956 and having its registered office at Core - III, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi - 110 003, India to the context or contrary to the meaning thereof include its successors and assigns on the other part.

WHEREAS in pursuance to the agreement dated \_\_\_\_\_ (hereinafter called CONTRACT) entered into between National Fertilizers Limited (hereinafter called OWNER and \_\_\_\_\_ a Company incorporated in \_\_\_\_\_ (hereinafter called CONTRACTOR) which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assigns, for supply of \_\_\_\_\_ as envisaged in the Contract, Contractor has to submit a SECURITY DEPOSIT for Rs. \_\_\_\_\_. CONTRACTOR accordingly agrees to furnish the Bank Guarantee for Security Deposit as hereinafter contained towards fulfillment of all of its obligations under the contract.

**NOW THIS DEED WITNESSES AS FOLLOWS:**

1. In pursuance of the Contract, the Bank hereby guarantees as a direct responsibility to OWNER that the BANK is holding the amount of Rs. \_\_\_\_\_ at Owner's disposal and hereby promises and shall be bound to pay to OWNER, forthwith at Owner's written notice stating that the contractor has failed to fulfill its obligations under the contract for reasons for which contractor is liable and without any protest or demur and without recourse to contractor and without asking for any reasons as to whether the amount if lawfully asked for by Owner or not, the entire amount or the portion thereof as mentioned by Owner in the notice. The decision of the Owner as to whether the terms and conditions of this BANK GUARANTEE FOR SECURITY DEPOSIT have been observed or not shall be final and binding on the BANK. In any case, however the Bank's responsibility under this BANK GUARANTEE FOR SECURITY DEPOSIT is limited to Rs. \_\_\_\_\_

2. This BANK GUARANTEE FOR SECURITY DEPOSIT shall be valid for an initial period of \_\_\_\_\_ months from the date of this Bank Guarantee No. \_\_\_\_\_ dated \_\_\_\_\_ given by the Bank to Owner become effective. Upon issuance of Commissioning / Erection / Completion certificate according to terms of contract on expiry of \_\_\_\_\_ months after the issuance of the above mentioned certificate of commissioning / erection / completion certificate, the BANK GUARANTEE FOR SECURITY DEPOSIT shall become null and void.

3. This BANK GUARANTEE FOR SECURITY DEPOSIT shall be in addition to and shall not affect or be affected by any other security now or hereafter held by Owner on account of money hereby intended to secure and Owner at its discretion and without any further consent from the Bank, and without affecting its rights against the Bank, may compound with, give time or other indulgence to or make any other arrangement with Contractor and nothing done or omitted to be done by Owner in pursuance of any authority or permission contained in this guarantee shall effect discharge of the liability of the Bank.

4. UNLESS PREVIOUSLY CANCELLED BY THE OWNER, this Bank Guarantee for Security Deposit will remain in force initially up to \_\_\_\_\_ months from the effective date of Bank Guarantee No. \_\_\_\_\_ dated \_\_\_\_\_ given by the Bank to the Owner and subject to provisions of paragraph 2 above will stand automatically cancelled on the expiry of the said period. Unless demand or claim under this Bank Guarantee is made on Bank in writing within three months from the date of expiry of this Bank Guarantee, all the rights of Owner against the Bank shall be forfeited and Bank shall be relieved and discharged from all the liabilities hereunder.

5. Any notice by way of request, demand or otherwise hereunder may be sent by post to the Bank, addressed as aforesaid, and if sent by post, it shall be deemed to have been given at the time when it would be delivered in due course of post, and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate, signed by an officer of the owners, to the effect that the envelope was so posted, shall be conclusive.

6. The BANK GUARANTEE FOR SECURITY DEPOSIT is to be returned to the Bank after its expiry in terms of Paragraph 4 above.

7. The Bank declares that it has the power to issue this guarantee and the undersigned have full power to do so. Dated \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_.

(Indicate the name of the Bank with stamp)

**ANNEXURE-X**

**PROFORMA FOR BANK GUARANTEE AGAINST  
ADVANCE PAYMENT**

(On Stamp Paper issued in the Name of the Bank)

**Guarantee No.**.....

**Dated**.....

In consideration of the National Fertilizers Limited, a Company incorporated under the Indian Companies Act and having its registered office at SCOPE Complex, Core-III, Institutional Area, Lodhi Road, New Delhi 110 003 (hereinafter called "NFL") having agreed to advance a sum of Rs..... (Rupees..... only) to M/s..... (Hereinafter called "SUPPLIER") as .....% advance against supplies against Purchase Order No..... dated..... for Rs..... (Rupees..... only). We, .....(Bank), having its registered office at ..... (Hereinafter referred to as the "BANK") do hereby undertake to pay immediately on demand by NFL an amount not exceeding Rs..... (Rupees..... only) [i.e. Rs.....as Principal Amount and Rs. .... as Interest for ..... Months]. NFL can demand, against this Bank Guarantee, only an amount equivalent to an amount not adjusted by NFL against the supplies by the Supplier as per the Purchase Order.

2. Bank do hereby undertake to pay the amounts due and payable under this guarantee without any protest or demur immediately on a demand by NFL. Any such demand made on the Bank shall be conclusive as regards the amount due and payable and the Bank will make the payment immediately without referring to Supplier.

3. The Bank further agrees that the guarantee herein contained shall remain or shall be released to the Supplier when the deliveries are completed or advance made towards supplies are fully adjusted bill of deliveries with earlier certification by NFL.

4. We..... (Bank) further agree with the NFL that NFL shall have the fullest liberty without the Bank's consent and without effecting in any manner or obligations hereunder to vary any of the terms and conditions of the Purchase Order or to extend time of performance by the Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by NFL against the Supplier and to forebear or enforce any of the terms and conditions relating to the No..... Dated..... and the Bank shall not be relieved from its liability by reasons of any such variation or extension being granted to the Supplier or for any forbearance, act or omission on the part of NFL or any indulgence by the NFL to the Supplier or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving Bank.

5. We..... (Bank) further agree that it shall not revoke this guarantee during its currency of Guarantee except with the previous consent of NFL in writing.

6. This guarantee will not be discharged due to the change in constitution of the Bank or the Contractor(s)/Supplier(s). Also the guarantee will not be discharged due to change in the constitution or Management of NFL.

7. We..... (Bank) agree to extend the validity of the guarantee for the period(s) as asked for by M/s .....

8. Notwithstanding anything contained herein before, our total liability under this guarantee is restricted to Rs..... (Rupees..... only) and shall remain in force until..... unless a demand or claim to enforce a claim under this guarantee is made against us in writing on or before the date i.e..... all rights of NFL, under this guarantee shall be forfeited and the Bank shall be released and discharged from all liabilities hereunder.

Dated:.....

Bank.....

(Corporate Seal of Bank)

## ANNEXURE-XI

This is to certify that we have procured Goods/Services as detailed as below from MSEs (Micro, Small, Enterprises) for use against NFL order/contract no. ----- Dated-----

Sr. No.	Value of contract/P.O. awarded by NFL (in Rs.)	Value of Goods/Services procured from MSE's against Contract/P.O. (in Rs.)	% Procurement from MSE's

Signature

Name

Name of Company/Firm

## ANNEXURE-XII

### SELF-CERTIFICATIONS/DECLARATIONS&TENDER'S T&C ACCEPTANCE LETTER

(On Bidders Letter-Head)

To,  
Chief Manager (Mtls.)  
National Fertilizers Limited,  
Panipat.

**Sub:** Self-Certifications & Acceptance of T&C of NFL Tender No. NFP/PUR/SB/210080/2120710/R Dated 11.12.2023 for Design, Engineering, Supply, Installation and Commissioning of DCS and ESD System.

Dear Sir,

With reference to above:

1. We hereby certify that Subject Tender documents (including all additional documents, annexures, corrigendum's, addendums etc.) have been read and understood by us. Terms & Conditions laid out in the subject tender documents are fully acceptable to us in its totality / entirety. In the event our offer is found acceptable and order is awarded to us, the complete tender document shall be considered to be part of awarded order unless and until the same are relaxed/overruled/incorporated in the order. We specifically confirm following:

SL. No.	Condition	Bidder's Comment
1	Pl. confirm that Item Description of Material Offered is as per Technical Section and acceptance of all T&C of Annexure-I	
2	Warranty shall be as per clause no. 7.0 of Annexure – I and party shall submit Warranty Certificate to this effect along with supply.	
3	Submission of Certification Form: Make in India (Local content) as per Annexure-V and Model Clause Certificate as per Annexure-VI on your Letter head.	
4	a. Submission of EMD as per clause no. 44 of general Terms and Conditions. b. Submission of SD-cum-PBG as per clause no. 45 of General Terms and Conditions. c. Submission of Security Deposit against Work Order as per clause no. 46.2 and 46.3 of GTC.	
5	The bidder shall arrange to send BG advice (including all BG amendments) by their issuing bank through SFMS platform directly to the NFL Banker as detailed at S.N. 44 of GTC. Please attach SWIFT copy of the same if you have submitted EMD in form of BG.	
6	Documents uploaded to meet the Eligibility Criteria as per Annexure-II.	
7	Submission of a list of recommended two-year spares for trouble free operation of the system, along with individual item rates, in the technical unpriced bid, which shall be valid for 1 year after warranty period. as per clause no.10.0(b) (Optional Spares) of Technical Specifications (Annexure-I) of NIT. This shall not be considered	

	for bid evaluation.	
8	Acceptance of Contractor's Obligations w.r.t. personnel deployed and labor related compliance as per Annexure-III.	
9	Acceptance all the points of clause no. 11, annual Maintenance Contract( AMC) of Annexure –I.	
10	Acceptance of following clauses: Inspection and Checks of DCS/ESD System( Clause 21.0 of Annexure-I) Factory Acceptance Test ( FAT ) ( clause 21.1 of Annexure-I) Site Acceptance Test ( clause 21.2 of Annexure-I)	
11	Submission of Documentation/Drawings as detailed in clause no. 22.0 of Annexure-I	
12	Submission of signed and stamped Integrity Pact as per General T&C Clause 49	
13	Submission of signed and stamped copy of NIT as a token of acceptance of all the terms and conditions of the NIT.	
14	Payment Terms	Accepted as per General T&C Clause 13
15	GST	Quoted in Price Bid.
16	Offer Validity	120 days from the date of opening of the tender
17	Liquidated Damages	Accepted as per General T&C Clause 17
18	Price Basis	FOR NFL Stores Panipat/Nangal/Bathinda
19	Bank Charges	To Supplier Account
20	Transit Insurance	Under Supplier's Scope
21	PAN No	
22	GST No.	
23	Gem Seller ID:	
24	Office/Works Address where PO need to be issued(in case you offer is found acceptable and order is awarded to you)	
25	HSN Code (min. 6 Digit)	
26	Category of Enterprise – Micro/Small/Medium/None [If covered under Public Procurement Policy for MSE as per General T&C clause 35 then submit Udyam certificate ]	
27	<p>a. Delivery Period from the date of receipt of PO/LOI for supply portion.</p> <p>b. Time period for erection and commissioning from the date of intimation of site readiness.</p>	<p>a. To be quoted by bidder</p> <p>b. (i) Tentative period of completion of pre-commissioning activities shall be approx. 60 days.</p> <p>(ii) Final commissioning/hookup of new DCS and ESD system which require plant shut down, shall be done in plant shutdown of 14 days only for each plant.</p>
28	Offer acceptance/rejection	Acceptable as per clause no. 19 of GTC
29	Local Content of Offered Product [Refer Public Procurement (Preference to make in India) order	

	2017 dated 16.09.2020]	
30	<b>Class of Supplier</b> [Refer Public Procurement (Preference to make in India) order 2017 dated 16.09.2020]	
31	<b>Certification regarding Class of Supplier as per clause 48.3 of General T&amp;C</b> [Refer Public Procurement (Preference to make in India) order 2017 dated 16.09.2020]	

2. (i) **No deviation to any of the terms & conditions of the tender documents has been quoted by us.** We further confirm that any deviation ,variation or additional conditions etc or any mention, contrary to the Tender Documents and its Amendments(s) / Clarification(s) / Addenda / Errata (if any) as mentioned at 1.0 above found anywhere in our Techno – Commercial Bid and / or price Bid, implicit or explicit, shall stand unconditionally withdrawn, without any cost implication whatsoever to the NFL, failing which, NFL without prejudice to any other right or remedy be at its liberty to forfeit the EMD

OR

- (ii) **Deviation to the terms & conditions of the tender documents as per deviation list submitted has been quoted by us.** We further confirm that any deviation ,variation or additional conditions etc or any mention, contrary to the Tender Documents and its Amendments(s) / Clarification(s) / Addenda / Errata (if any) as mentioned at 1.0 above found anywhere in our Techno – Commercial Bid and / or price Bid **other than deviation List** , implicit or explicit, shall stand unconditionally withdrawn, without any cost implication whatsoever to the NFL failing which, NFL without prejudice to any other right or remedy be at its liberty to forfeit the EMD.

[CHOOSE ONLY ONE FROM ABOVE AS APPLICABLE.BY DEFAULT 2(i) WILL BE CONSIDERED IF BOTH ABOVE IS SUBMITTED]]

3. We hereby certify that

- (i) None of the NFL employee is related to owners/directors.  
(In case any relative is working in NFL, furnish details separately).
- (ii) None of NFL's ex-employee is employed with us.  
(In case any ex-employee of NFL is employed, furnish details separately)
- (iii) None of blood relation of the owners/directors is participating in this tender in the name of other firm.
- (iv) We have not been been blacklisted by any government department/public sector undertaking/co- operative Unit.
- (v) We have not been delisted by any government department/public sector undertaking/co- operative Unit in the last two years of participating in the tender.
- (vi) No other Firm/sister concerns/associates belonging to the our group is participating/submitting the tender for the job against this tender
- (vii) We have not been debarred by any procuring entity from violation of provisions of Public Procurement (Preference to make in India) order 2017 notified vide order no. P- 45021/2/2017- PP (BE-II) dated 16.09.2020 of Ministry of Commerce and Industry, Department of Industrial Policy and Promotion (DIPP).
- (viii) Local Value Addition is done at our following works/offices[ GIVE ADDRESS OF YOUR WORKS/OFFICES]

- 
- (ix) None of the tender documents including BOQ has been tampered with.
- (x) We have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all the requirements in this regard and is eligible to be considered [“where applicable, evidence of valid registration by the Competent Authority shall be attached]
- (xi) We have submitted our EMD of Rs \_\_\_\_\_vide UTR No \_\_\_\_\_ Dated \_\_\_\_\_  
[Strike out if not applicable]



4. We hereby certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Dated: Signature of Tenderer :

Place: Name & Address of Tenderer :

Mobile No. :

Email :.



### INTEGRITY PACT

Integrity Pact (IP) is a tool developed by Transparency International (TI) to help governments, businesses and civil society, which are prepared to fight corruption in the field of public contracting and procurement. NFL, as one of its endeavors to maintain and foster most ethical and corruption free business environment, have decided to adopt the Integrity Pact, to ensure that all activities and transactions between the Company (NFL) and its Counterparties (Bidders, Contractors, Vendors, Suppliers, Service Providers/Consultants etc.) are handled in a fair and transparent manner, completely free of corruption. Accordingly, a Memorandum of Understanding (MoU) on Integrity Pact has been signed on 9th May, 2014 by NFL with Transparency International India (Indian chapter of Transparency International).

Integrity Pact is aimed at reducing corrupt practices during procurement and contracts through an agreement between the Principal (NFL) and Counterparties. The agreement seeks commitment from the persons/officials of both the parties not to demand or accept any bribe or gift. Only those vendors/bidders who enter into such an integrity pact with the buyer qualify to participate in the bidding process.

Integrity Pact is implemented through Independent External Monitors who ensure that concerned parties comply with their respective obligations under the Integrity Pact. Independent External Monitors (IEMs) nominated by Central Vigilance Commission (CVC) shall monitor the activities. Any tender related complaint, for tenders covered under Integrity Pact having value of Rs.1 (one) crore and above, may be addressed to the Independent External Monitors (IEMs) as per details given below:

(IEMs)

(1). Shri Hermanprit Singh  
12, Bevedre Road, Alipore  
Kolkata-700027  
E-mail: [iem@nfl.co.in](mailto:iem@nfl.co.in);

(2). Shri Rakesh Kumar Agrawal  
A-15, Ground Floor  
South Extension part-II  
New Delhi-110049  
E-mail: [iem@nfl.co.in](mailto:iem@nfl.co.in);

(To be executed on plain paper and submitted along with technical bid/tender documents for tenders having a value of Rs. 1 crore or more. To be signed by the bidder and NFL.)

National Fertilizers Limited (NFL) herein after referred to as "The Principal".

AND

\_\_\_\_\_ herein after referred to as "The Bidder/Contractor"

#### PREAMBLE

The Principal intends to award, under laid down organizational procedures, contract/s for DCS & ESD System. The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of and of fairness/transparency in its relations with its Bidder(s) and/or Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor/s (IEM), 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:-
  - a) 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 self or third person, any material or immaterial benefit which the personal is not legally entitled to.
  - b) The Principal will during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the process or the contract execution.
  - c) 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 IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

#### **Section 2 – Commitments of the Bidder(s)/Contractor(s)**

1. The Bidder(s)/Contractor(s) commit himself 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:

- a. The Bidder(s)/contractor(s) will not, directly or through any other persons 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 other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage or during the execution of the contract.
  - b. The Bidder(s)/Contractor(s) 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 cartelization in the bidding process.
  - c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractors will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or documents provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  - d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the bidder(s)/contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. All the payments made to the India agent/representative have to be in Indian Rupees only.
  - e. The Bidder(s)/Contractor(s) 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(s)/Contractor(s) 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 contract**

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or to terminate the contract, if already signed, for such reasons.

### **Section 4: Compensation for Damages**

1. If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.

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 of the Contract value or the amount equivalent to Performance Bank Guarantee.

#### **Section 5: Previous Transgression**

1. The Bidder declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the TII's anti-corruption 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 and appropriate action can be taken including termination of the contract, if already awarded, for such reason.

#### **Section 6: Equal treatment of all Bidders/Contractors/Sub-contractors.**

1. The Principal will enter into agreements with the identical conditions as this one with all bidders, contractors and sub-contractors.
2. 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 violation Bidder(s)/Contractor(s)/Sub-contractors(s).**

If the Principal obtains knowledge of conduct of a Bidder(s)/ Contractor(s) which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

#### **Section 8: Independent External Monitor/Monitors**

1. The Principal appoints competent and credible Independent External 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. It will be obligatory for him to treat the information and documents of bidders /contractors as confidential. He reports to the Chairman & Managing Director, NFL.
3. The Bidder(s)/Contractor(s) 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(s)/Contractor(s)/Subcontractor(s) 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 take corrective action, 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 Chairman & Managing Director, NFL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should be occasion arise, submit proposals for correcting problematic situations.
7. Monitor shall be entitled to compensation on the same terms as being extended to/provided to Independent Directors on NFL Board.
8. If the Monitor has reported to the Chairman & Managing Director, National Fertilizers Limited, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Chairman & Managing Director, NFL has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
9. The word "Monitor" word 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 contract, and for all other Bidder 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 Chairman & Managing Director of NFL.

#### **Section 10: Other Provisions**

- This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal i.e., New Delhi.
- Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- If the contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

- 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 intentions.

- A person signing IP shall not approach the courts while representing the matters to IEMs and he/she will await their decision in the matter.

• COMPLIANCE WITH LABOUR LAWS/CODES/SCHEMES:

"The bidder (s)/Contractor (s) shall, wherever applicable, comply with all the statutory requirements relating to the contracts such as relevant Labour Laws/Codes/Schemes including but not limited to the EPF & Misc. Provisions Act-1952, the ESI Act-1948, the payment of Bonus Act-1965, the Contract Labour (Regulation & Abolition) Act, 1970, the Minimum Wages Act-1948, etc. as amended from time to time and for the time being in force."

(For & on behalf of the Principal)

(For & on behalf of Bidder/Contractor)

(Office Seal)

*[Handwritten Signature]*  
09/12/2023  
महेश मण्डल  
मुख्य प्रबंधक (सामग्री)

(Office Seal)

Place: PANIPAT

Date: 09/12/2023

Witness 1: Aayush Kumar.

Witness 1:

(Name & Address)

(Name & Address)

AAUSH KUMAR  
AM (M+Is.)  
NFL PANIPAT

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

Witness 2:

*[Handwritten Signature]*

Witness 2:

(Name & Address)

(Name & Address)

S.K. Sheoran  
Sr. Mgr (M+Is)  
NFL Panipat

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

## Loading Criterion

**The tenderers must accept the terms and conditions stipulated in NIT failing which the offer is liable to be rejected at the sole discretion of NFL.** NFL however, may at its sole discretion accept offers having deviation to NIT terms and conditions in respect of EMD, security deposit and liquidated damages etc. by adopting the stipulated loading criteria, where ever applicable, as under:-

### Evaluation and Comparison of Price Bids:

The evaluation of bids shall be done on the basis of "landed cost" at plant site. The evaluation of bids shall take into consideration the following aspects: - All cost implications including the following; wherever applicable – deficient bids shall be loaded for cost of deficiency on Base Price, which shall include cost of spares, inspection, packing, forwarding and any other charges/taxes/duties etc. up to our site in case of Indian Vendors and CIF Port of Discharge in case of foreign bidders. - Base Price of equipment and material;

- The cost of spare parts for erection, commissioning and maintenance spares as required. This cost will be added to the cost of equipment. Non-quoted spares will be loaded at the highest rate quoted by any other bidder or at estimated price in case quoted prices of other bidder are not available.

- **Loading Taxes and Duties for Indian Bidders:-**As quoted by Indian Bidders, otherwise as applicable.

- **Third Party Inspection charges** wherever applicable. Wherever Bidders have not indicated third party Inspection charges, highest third party Inspection charges quoted by other Bidder shall be loaded for comparison purpose. -

- **Calculation of Supervision Charges for Erection and Commissioning:** Wherever Bidder has not indicated per diem rate and duration of stay at site for carrying out erection and commissioning services at site, the offer will be loaded from the highest rate and maximum period quoted by the other Bidder including cost of to & fro air fare charge and income tax to be borne by NFL wherever applicable. -

The tenderers must accept the terms and conditions stipulated in NIT failing which the offer is liable to be rejected at the sole discretion of NFL. NFL however, may at its sole discretion accept offers having deviation to NIT terms and conditions in respect of EMD, Security Deposit and Liquidated Damages etc. by adopting the loading criteria as below. All loadings shall be on CIF (Import)/ Ex- Works (Domestic) prices.

- **EMD:** Full EMD value shall be loaded to the quoted rates of those tenderers who have not submitted the requisite EMD along with the quotations to generate competition. - **Payment Terms: Deviation in Payment Terms:** The deviation in differential payment terms with respect to NIT clause shall be loaded as under for interest @ prime lending rate (SBI MCLR) + 1% for the period:

#### (a) Interest calculation against Mobilization Advance.

Sr. Payment Terms Period of Loading

1. Advance against LOI/PO Full delivery period + 30 days

#### (b) Interest calculation on progressive payment

Interest on Progressive payment shall be calculated on FOB/Exworks price for the following period:

Sr no. Payment Terms

Period of Loading

#### Against submission of

1.	Drawing	Full delivery period less one month
2.	Against drawing Approval	Full delivery period less one month
3.	Against placement of PO for raw material	a. If delivery period < 8 months Full delivery period less two months b. If delivery period > 8 months Full delivery period less three months
4.	Against Shipment of raw materials	Full delivery period less five months or five months whichever is more
5.	Against Receipt of raw materials	Full delivery period less six months or four months, Whichever is more
6.	Against Payment for dispatch of materials/through bank	a. Foreign Bidders Three months. b. Indian Bidders Depending on Conditions viz. Ex-works – one and half months FOR destination –one month
7.	Against Payment within 30 days	Nil.

-Interest will also be charged on advance payment if supplies get delayed beyond delivery schedule stipulated in the P.O.

- **For Other Deviations, Following Loading criteria shall be done: i. Packing and Forwarding (P &F):** 2% of Basic Price if party has not quoted P&F charges i.e. 1% each for packing and or forwarding respectively. Also NFL's maximum liability to pay such charges shall be limited to the amount loaded for evaluation purposes.

ii. **Loading of freight in percentage terms as under:** Inland Transportation Charges:

A) In case weights and distances are known for all suppliers:

i) FOR SMALLS: Inland transportation charges shall be calculated at the rate of Rs. 5.00 per KM/MT.

(ii) FOR TRUCK LOADS: @ Rs. 4 per KM/MT

B) While undertaking item-wise evaluation where item wise weights are not available, the following procedure shall be adopted for calculating transportation charges up to NFL site:

1. Transportation from the vendors -- 1% of CIF/Ex-works Prices situated within a distance of 400 KMS.
2. Transportation from the vendors -- 2% of CIF/Ex-works Prices situated within a distance of 401 to 800 KMS.
3. Transportation from the vendors -- 3% of CIF/Ex-works Prices situated at a distance of more than 800 KMS.

All Indian parties are required to quote ex-works Price and freight charges up to NFL Site, compulsorily. If all the parties have given freight charges up to site the same shall be considered for evaluation. However, if only some parties have given freight charges, NFL reserves the right to load for such parties who have not quoted freight charges with freight



charges as above. NFL's decision on this regard shall be final and binding on these Bidders.

**iii. Transit Insurance Premium as below: Inland Insurance:** The inland insurance shall be calculated at the rate of 0.15% of CIF/FOR prices. For Foreign Bidder: Transit Insurance @0.11% of FOB/FCA price shall be taken for calculating assessable value for working of the custom duty. The above transit insurance shall not be considered for working out the landed cost. For arriving at the landed cost, transit insurance shall be calculated @0.15% of (FOB/FCA cost + Ocean/ air freight+P&F+Port Handling + Inland Freight).For Indian Bidder: To arrive at the landed prices, the transit insurance shall be calculated @ 0.11% of (Basic Price +P&F+Exciseduty+CST/VAT + other statutory taxes/levies (if any) + Inland Freight) for Indian bidders.

**iv. Loading On Account Of Longer Delivery Period** a) Wherever Bidders quoted delivery is higher than the preferred delivery period

as indicated in the ITB document, the following loading criterion shall be applied: Loading @ 2 % per month on FOB/ Ex-works price for the following periods: Delivery Quoted Loading Period Foreign/Indian Bidders (Effective delivery-Preferred delivery)

In order to account for Sea shipment and port clearance time the difference between FOB delivery date and EX-Works delivery date is to be considered as 1.5 months. No credit shall be given for early delivery period. Quoted delivery has to be computed for effective delivery as given below. Preferred delivery for Foreign Bidder has to be as per FOB delivery at port of loading and for Indian Bidder as delivery on ex-works basis. b) The loading as mentioned at (a) shall not be applied in case the quoted delivery does not meet the project requirement and the Bid shall not be qualified.

**- Calculation of Effective Delivery Period** The delivery shall be counted from LOI. Wherever the Bidder does not agree to the above condition following criteria will be used for calculating the effective delivery period for evaluation purpose:

Delivery basis as per Bidder offer -	Loading in months To be added to quoted delivery
Ex-works basis for Foreign Bidders -	15 days
On readiness for Inspection for Foreign Bidders -	One month
From receipt of PO -	One month
From drawing approval -	Two months or time indicated for Submission of approval
,whichever is more.	
On receipt of Letter of Credit -	Two months

When the Bidders ask for grace period for applicability of damages, the same shall be added to the quoted delivery period. The delivery period computed on the above basis shall be taken as delivery period for each Bidder for the purpose of evaluation."

**v. Loading on account of discrepancy in the Warranty/Guarantee Period:** Wherever bidders quote reduced warranty period, following loading criteria shall be adopted: [10% of CIF/ex-works price x (No. of Months as per NIT- No. of Months quoted)]

No. of Months as per NIT

**vi. Loading on account of discrepancy in Performance Bank Guarantee:** PBG Quoted Loading Criteria Less than 10% - 10% - quoted percentage of CIF/Ex-works prices

NOTE: Over-riding Conditions for (v) & (vi) above. If the sum of (v) & (vi) above is more than 10% of CIF/ex-works prices, then the loading shall be limited to 10%

**vii. Non-submission of SD:** The loading shall be adopted for shortfall in the bank guarantee agreed by the bidder, for example, NIT calls for bank guarantee for 10%, then loading shall be done as under @ lending rate (SBI MCLR) + 1% , on short fall in Bank Guarantee value agreed by the bidder for delivery period with additional one month period. Bank guarantee for SD Loading Criteria Less than 10%. (10% - quoted percentage) of basic price @ prime lending rate (SBI MCLR + 1%); on short fall in Bank Guarantee value agreed by the bidder for delivery period with additional one month period.

Bank guarantee for SD Loading Criteria (10%- quoted percentage)of basic price @ prime lending rate (SBI MCLR + 1%), on short fall in Bank Guarantee value agreed by bidder for delivery period with additional one month period.

**Viii. Loading for discrepancy in acceptance of Liquidated damages Clause:** If deviation is noted in quoted damages, the proportionate loading for shortfall shall be added as follows:

Quoted Damages	Loading Criteria
i) 0.5 % per week subject to a ceiling of 5% of total order value -	NO LOADING.
ii) 0.5 % per week subject to a ceiling of 2.5 % of total order value. -	2.5% LOADING
iii) Damages accepted on undelivered value Instead of total order value -	2.5% loading.
iv) Non-acceptance of damages -	5% loading

- In case any of the vendor does not accept our standard L.D clause or accept LD less than a ceiling limit of 5%, loading for balance amount shall be done on the quoted (Ex-works/CIF value) prices.

Whenever the bidder is silent about the acceptance of NIT conditions such as performance bank guarantee, warranty period, liquidated damages etc, it shall be presumed that the bidder has accepted these conditions and no loading shall be done while undertaking evaluation.

No.F.1/4/2021-PPD  
Government of India  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division  
\*\*\*\*\*

264-C, North Block, New Delhi.  
18.05.2023.

**OFFICE MEMORANDUM**

**Subject: Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.**

The undersigned is directed to refer two Preferential Procurement Orders mandated for the Public Procurement in India, namely:

- i. Public Procurement Policy for Micro and Small Enterprises (MSEs) Order dated 23.03.2012 (PPP-MSE Order) issued by Ministry of Micro, Small and Medium Enterprises (MoMSME) in exercise of the powers conferred in Section 11 of the MSME Development Act, 2006. (Last revised on 09.11.2018)
- ii. Public Procurement (Preference to Make in India) Order, 2017 (PPP-MII order), under Rule 153(iii) of the General Financial Rules (GFRs) 2017, approved by the Cabinet. Implementation of this PPP-MII order is monitored by Department for Promotion of Industry and Internal Trade (DPIIT). (Last revised on 16.09.2020.)

2. It has been brought to the notice of this Department that concurrent application of these two orders are creating confusion to the procuring entities and different procuring entities interpret them differently. In order to bring predictability both to the procuring entities as well as bidders, following guidelines are being issued.

**Guidelines**

3. The Class-I local suppliers, under PPP-MII Order, participating in any government tender, may or may not be MSEs, as defined under the MSME Act. Similarly, MSEs participating in any government tender, may or may not be Class-I local suppliers. Suppliers may be categorised in following four broad categories for consideration or applicability of purchase preference:

Category	Terminology
Supplier is both MSE & Class-I local supplier.	"MSE Class-I local supplier"
Supplier is MSE but not Class-I local supplier.	"MSE but non-Class-I local supplier"
Supplier is not MSE but is Class-I local supplier.	"Non-MSE but Class-I local supplier"
Supplier is neither MSE nor Class-I local.	"Non-MSE non-Class-I local supplier"

4. The applicability of PPP-MSE Order and PPP-MII Order in various scenarios, involving simultaneous purchase preference to MSEs and Class-I local suppliers under PPP-MSE Order and PPP-MII Order respectively, shall be as under:

- a) *Items covered under Para 3(a) of PPP- MII Order, 2017 for which Nodal Ministry has notified sufficient local capacity and competition:* For these items, only Class-I local suppliers are eligible to bid irrespective of purchase value. Hence, Class-II local suppliers or Non-local suppliers, including MSEs which are Class-II local suppliers/ Non-local suppliers, are not eligible to bid. Possible scenarios can be as under:
  - (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
  - (ii) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is given to MSEs as per PPP-MSE Order. Balance quantity is to be awarded to the L-1 bidder.
- b) *Items reserved exclusively for procurement from MSEs as per PPP-MSE Order:* These items are reserved exclusively for purchase from MSEs. Hence, non-MSEs are not eligible to bid for these items. Possible scenarios can be as under:
  - (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
  - (ii) L-1 is "MSE non-Class-I local supplier" - Purchase preference is to be given to Class-I local supplier as per PPP-MII Order. Balance quantity, is to be awarded to L-1 bidder.
- c) *If items are neither notified for sufficient local capacity nor reserved for MSEs, then the process will be as follows:*
  - c (a) Items covered under Para 3A(b) of PPP-MII Order are divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:
    - (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
    - (ii) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is to be given to MSEs, if eligible, as per PPP-MSE Order. Balance quantity is to be awarded to L-1 bidder.
    - (iii) L-1 is "MSE but non-Class-I local supplier" - Purchase preference is to be given to Class-I local suppliers, if eligible, as per PPP-MII Order. Balance quantity is to be awarded to L-1 bidder.
    - (iv) L-1 is "Non-MSE non-Class-I local supplier" - Purchase preference is to be given to MSEs as per PPP-MSE Order. Thereafter, purchase preference is to be given to Class-I local suppliers for "50% of the tendered quantity minus quantity allotted to MSEs

above" as per PPP- MII Order. For the balance quantity, contract is to be awarded to L-1 bidder. (Kindly refer to the illustrative example in the annexure).

- c (b) Items covered under Para 3A(c) of PPP-MII Order, 2017 are non-divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:
- (i) L-1 is "MSE Class-I local supplier" - Contract is awarded to L-1.
  - (ii) L-1 is not "MSE Class-I local supplier" but the "MSE Class-I local supplier" falls within 15% margin of purchase preference - Purchase preference is to be given to lowest quoting "MSE Class-I local supplier". If lowest quoting "MSE Class-I local supplier" does not accept the L-1 rates, the next higher "MSE Class-I local supplier" falling within 15% margin of purchase preference is to be given purchase preference and so on.
  - (iii) If conditions mentioned in sub paras (i) and (ii) above are not met i.e. L-1 is neither "MSE Class-I local supplier" nor "MSE Class-I local supplier" is eligible to take benefit of purchase preference, the contract is to be awarded/ purchase preference to be given in different possible scenarios as under:
    - A. L1 is "MSE but non-Class-I local supplier" or "Non-MSE but Class-I local supplier" – Contract is be awarded to L1.
    - B. L1 is "Non-MSE non-Class-I local supplier" - First purchase preference to be given to MSE as per PPP-MSE Order. If MSE not eligible/ does not accept - purchase preference to be given to Class- I Local supplier as per PPP-MII Order. If Class-I Local supplier also not eligible/ does not accept – contract to be awarded to L-1.
- d) *Items reserved for both MSEs and Class-I local suppliers:* These items are reserved exclusively for purchase from MSEs as well as Class-I local suppliers. Hence, only "MSE Class-I local supplier" are eligible to bid for these items. Non-MSEs/Class-II local suppliers/ Non-local suppliers cannot bid for these items. Hence the question of purchase preference does not arise.
- e) Non-local suppliers, including MSEs falling in the category of Non-local suppliers, shall be eligible to bid only against Global Tender Enquiry.

  
(Kanwalpreet)  
Director

Tel.:-223093811; email: - kanwal.irss@gov.in

To

1. Secretaries of all Central Government Ministries/ Departments.
2. Secretary Department of Public Enterprises with a request for issuing suitable instructions to all Central Public Sector Enterprises in this regard.

Page 3 of 4

**Annexure**

**Example explaining applicability in scenario explained in para 4 c (a)(iv)**

(Scenario: Divisible items, both MSEs as well as Class-I local suppliers eligible for purchase preference and L-1 is "Non-MSE non-Class-I local supplier")

**Item** – Desktop computer

**Qty** – 50 Nos.

**Details of bids received**

Sr. No.	Name of bidder	Rates quoted	Price Ranking	Status of bidder
1.	A	100	L1	"Non-MSE non- Class-I local supplier"
2.	B	110	L2	"Non-MSE but Class-I local supplier"
3.	C	112	L3	"MSE but non- Class-I local supplier"
4.	D	115	L4	"Non-MSE but Class-I local supplier"
5.	E	118	L5	"MSE but non- Class-I local supplier"
6.	F	120	L6	"MSE Class-I local supplier"

1. In this case, first purchase preference is to be given to MSEs as per PPP-MSE Order for 25% of tendered quantity of 50 Nos. i.e. 12.5 Nos. (rounded off to the next whole number say 13 Nos). Accordingly, invite L3 (bidder C), whose quoted rates falls within 15% margin of purchase preference to match L1 price i.e. Rs. 100/- for quantity of 13 Nos. Bidder "E" and "F", although MSEs, will not get purchase preference since their quoted rates don't fall within 15% margin of purchase preference. Bidder C will be considered for order of 13 Nos. on confirmation of reduction of price.
2. For 50% of balance quantity of 37 number (tendered quantity of 50 – 13 awarded to bidder C; assuming bidder C has confirmed to accept L1 rates), purchase preference will be given to lowest Class-I local supplier as per PPP-MII Order. Accordingly, bidder B will be invited to match L-1 price for 50% of 37 Nos i.e. 18.5 (say 19 Nos of computers). If bidder "B" does not accept the L1 price i.e. price of Rs. 100/- per unit, next higher Class-I local supplier falling within 20% margin of purchase preference, i.e. bidder "D", may be invited to match L-1 price for 19 Nos. of computers and so on.
3. For remaining quantity i.e. 18 Nos (50-13-19), the contract will be awarded to lowest quoting bidder i.e. Bidder "A", who is L-1 in the example.

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## **Annexure-XVI**

### **BENEFITS TO MICRO AND SMALL ENTERPRISES (MSEs):**

With reference to the Order of the Ministry of MSME , under the Public Procurement Policy March 2012 , Micro and Small Enterprises shall be entitled for benefits, subject to terms and conditions, as under:

- i) Micro and Small Enterprises (MSEs) registered under Udyam Registration are eligible to avail the benefits under the policy.
- ii) To reduce transaction cost of doing business, MSEs will be facilitated by providing them tender documents free of cost, exempting MSEs from payment of earnest money deposit, adopting e-procurement to bring transparency in tendering process. However, exemption from paying Performance Bank Guarantee is not covered under the policy. MSEs may also be given relaxation in prior turnover and prior experience criteria during the tender process, subject to meeting of quality and technical specifications.

However, there may be circumstances (like procurement of items related to public safety, health, critical security operations and equipment, etc.) where procuring entity may prefer the vendor to have prior experience rather than giving orders to new entities.

- iii) In tender, participating Micro and Small Enterprises (MSE) quoting price within price band of L1+15 (fifteen) per cent shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE and such MSE shall be allowed to supply up to 25(twenty five) per cent of total tendered value. The 25(twenty five) per cent quantity is to be distributed proportionately among these bidders, in case there are more than one MSEs within such price band.
- iv) Within this 25% (Twenty Five Percent) quantity, a purchase preference of four (4) per cent s reserved for MSEs owned by Scheduled Caste (SC)/Scheduled Tribe (ST) entrepreneurs and three (3) percent is reserved for MSEs owned by women entrepreneur (if they participate in the tender process and match the L1 price).However, in event of failure of such MSEs to participate in tender process or meet tender requirements and L1 price, four percent sub-target for procurement earmarked for MSEs owned by SC/ST entrepreneurs and three (3) percent earmarked to women owned by SC/ ST entrepreneurs:
  - a) In case of proprietary MSE, proprietor(s) shall be SC /ST;
  - b) In case of partnership MSE, the SC/ ST partners shall be holding at least 51% (fifty-one percent) shares in the unit;
  - c) In case of Private Limited Companies, at least 51% (fifty-one percent) share shall be held by SC/ ST promoters.
- vi) In case of tender item cannot be split or divided, etc. the MSE quoting a price within the band L1+15% may be awarded for full/ complete supply of total tendered value to MSE, considering the spirit of the Policy for enhancing Govt. Procurement from MSEs.
- vii) This Policy is meant for procurement of only goods produced and services rendered by MSEs. Traders/ distributors/ sole agent/ Works Contract are excluded from the purview of the policy.

अरुण कुमार पण्डा  
सचिव  
Arun Kumar Panda  
Secretary



**MSME**

भारत सरकार  
सूक्ष्म, लघु और मध्यम उद्यम मंत्रालय  
उद्योग भवन, राफी मार्ग, नई दिल्ली-110 011  
GOVERNMENT OF INDIA  
MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES  
UDYOG BHAWAN, RAFI MARG, NEW DELHI-110 011  
13<sup>th</sup> November, 2018

D.O. No. 21(8)/2018-MA

Dear *Secretary*,

As you must be aware, Hon'ble PM has launched a far reaching Support and Outreach initiative for the benefit of Micro, Small and Medium Enterprises (MSME). One of the key announcements made in this regard is the amendment to the Public Procurement Policy (PPP). The changes effected therein are expected to improve the market accessibility and enhance competitiveness of the MSEs. They will also help in women empowerment.

2. The amendments so effected have been duly notified vide Government of India Gazette Notification S.O 5670(E) dated 9<sup>th</sup> November, 2018. A copy is enclosed herewith for ready reference.

3. The amendments made in the PPP are as follows:-

- (a) Increase in percentage of procurement of goods and services by Government Departments/CPSEs from MSEs from the present at least 20% to at least 25% of their total procurement; and
- (b) Provide a minimum 3% reservation for women owned MSEs within the above mentioned 25% reservation.

4. It may please be noted that the amended policy has come into force with immediate effect i.e. from 9<sup>th</sup> November, 2018 (date of the publication of the notification).

5. I shall be grateful if all the CPSEs under your control are advised to implement the above changes made to the Public Procurement Policy and to provide information on procurements made from MSEs owned by women. MSME SAMBANDH Portal has been updated accordingly for the benefit of the CPSEs.

6. Top Priority may kindly be accorded to this matter.

*Regards,*

Yours sincerely,  
*Arun Kumar Panda*  
(Arun Kumar Panda)

To  
Secretaries (All Ministries & Departments)

Copy to: Chief Secretaries, All States / UTs

## MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES

## ORDER

New Delhi, the 9th November, 2018

S.O. 5670(E).—In exercise of powers conferred by section 11 of the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006), the Central Government hereby makes the following amendments to the Public Procurement Policy for the Micro and Small Enterprises (MSEs) Order, 2012 namely :—

1. (i) This Order may be called the Public Procurement Policy for Micro and Small Enterprises (MSEs) Amendment Order, 2018.  
(ii) This shall come into force on the date of its publication in the Official Gazette.
2. Throughout the Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012, (hereinafter referred to as the said Order), for the figures and word "20 per cent", wherever they occur, the figures and word "25 per cent" shall be substituted.
3. After paragraph 4 of the said Order, the following paragraph shall be inserted, namely:-  
"4A. Special provision for Micro and Small Enterprise owned by women. Out of the total annual procurement from Micro and Small Enterprises, 3 per cent from within the 25 per cent target shall be earmarked for procurement from Micro and Small Enterprises owned by women.

[F. No. 21(22)-2018-MA]

RAM MOHAN MISHRA, Addl. Secy. &amp; Development Commissioner



No. P-45021/2/2017-PP (BE-II)  
Government of India  
Ministry of Commerce and Industry  
Department for Promotion of Industry and Internal Trade  
(Public Procurement Section)

Udyog Bhawan, New Delhi  
Dated: 16<sup>th</sup> September, 2020

To

All Central Ministries/Departments/CPSUs/All concerned

**ORDER**

**Subject: Public Procurement (Preference to Make in India), Order 2017– Revision; regarding.**

Department for Promotion of Industry and Internal Trade, in partial modification [Paras 2, 3, 5, 10 & 13] of Order No.P-45021/2/2017-B.E.-II dated 15.6.2017 as amended by Order No.P-45021/2/2017-B.E.-II dated 28.05.2018, Order No.P-45021/2/2017-B.E.-II dated 29.05.2019 and Order No.P-45021/2/2017-B.E.-II dated 04.06.2020, hereby issues the revised 'Public Procurement (Preference to Make in India), Order 2017" dated 16.09.2020 effective with immediate effect.

**Whereas** it is the policy of the Government of India to encourage 'Make in India' and promote manufacturing and production of goods and services in India with a view to enhancing income and employment, and

**Whereas** procurement by the Government is substantial in amount and can contribute towards this policy objective, and

**Whereas** local content can be increased through partnerships, cooperation with local companies, establishing production units in India or Joint Ventures (JV) with Indian suppliers, increasing the participation of local employees in services and training them,

**Now therefore the following Order is issued:**

1. This Order is issued pursuant to Rule 153 (iii) of the General Financial Rules 2017.
2. **Definitions:** For the purposes of this Order:

*'Local content'* means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

*'Class-I local supplier'* means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-I local supplier' under this Order.

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'Class-II local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-II local supplier' but less than that prescribed for 'Class-I local supplier' under this Order.

'Non - Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than that prescribed for 'Class-II local supplier' under this Order.

'L1' means the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.

'Margin of purchase preference' means the maximum extent to which the price quoted by a "Class-I local supplier" may be above the L1 for the purpose of purchase preference.

'Nodal Ministry' means the Ministry or Department identified pursuant to this order in respect of a particular item of goods or services or works.

'Procuring entity' means a Ministry or department or attached or subordinate office of, or autonomous body controlled by, the Government of India and includes Government companies as defined in the Companies Act.

'Works' means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'.

**3. Eligibility of 'Class-I local supplier'/'Class-II local supplier'/'Non-local suppliers' for different types of procurement**

(a) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', as defined under the Order, shall be eligible to bid irrespective of purchase value.

(b) Only 'Class-I local supplier' and 'Class-II local supplier', as defined under the Order, shall be eligible to bid in procurements undertaken by procuring entities, except when Global tender enquiry has been issued. In global tender enquiries, 'Non-local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'. In procurement of all goods, services or works, not covered by sub-para 3(a) above, and with estimated value of purchases less than Rs. 200 Crore, in accordance with Rule 161(iv) of GFR, 2017, Global tender enquiry shall not be issued except with the approval of competent authority as designated by Department of Expenditure.

(c) For the purpose of this Order, works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.

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### 3A. Purchase Preference

(a) Subject to the provisions of this Order and to any specific instructions issued by the Nodal Ministry or in pursuance of this Order, purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified here under.

(b) In the procurements of goods or works, which are covered by para 3(b) above and which are divisible in nature, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.
- ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.

(c) In the procurements of goods or works, which are covered by para 3(b) above and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
- ii. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.
- iii. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.

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(d) "Class-II local supplier" will not get purchase preference in any procurement, undertaken by procuring entities.

**3B. Applicability in tenders where contract is to be awarded to multiple bidders -** In tenders where contract is awarded to multiple bidders subject to matching of L1 rates or otherwise, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

a) In case there is sufficient local capacity and competition for the item to be procured, as notified by the nodal Ministry, only Class I local suppliers shall be eligible to bid. As such, the multiple suppliers, who would be awarded the contract, should be all and only 'Class I Local suppliers'.

b) In other cases, 'Class II local suppliers' and 'Non local suppliers' may also participate in the bidding process along with 'Class I Local suppliers' as per provisions of this Order.

c) If 'Class I Local suppliers' qualify for award of contract for at least 50% of the tendered quantity in any tender, the contract may be awarded to all the qualified bidders as per award criteria stipulated in the bid documents. However, in case 'Class I Local suppliers' do not qualify for award of contract for at least 50% of the tendered quantity, purchase preference should be given to the 'Class I local supplier' over 'Class II local suppliers'/ 'Non local suppliers' provided that their quoted rate falls within 20% margin of purchase preference of the highest quoted bidder considered for award of contract so as to ensure that the 'Class I Local suppliers' taken in totality are considered for award of contract for at least 50% of the tendered quantity.

d) First purchase preference has to be given to the lowest quoting 'Class-I local supplier', whose quoted rates fall within 20% margin of purchase preference, subject to its meeting the prescribed criteria for award of contract as also the constraint of maximum quantity that can be sourced from any single supplier. If the lowest quoting 'Class-I local supplier', does not qualify for purchase preference because of aforesaid constraints or does not accept the offered quantity, an opportunity may be given to next higher 'Class-I local supplier', falling within 20% margin of purchase preference, and so on.

e) To avoid any ambiguity during bid evaluation process, the procuring entities may stipulate its own tender specific criteria for award of contract amongst different bidders including the procedure for purchase preference to 'Class-I local supplier' within the broad policy guidelines stipulated in sub-paras above.

**4. Exemption of small purchases:** Notwithstanding anything contained in paragraph 3, procurements where the estimated value to be procured is less than Rs. 5 lakhs shall be exempt from this Order. However, it shall be ensured by procuring entities that procurement is not split for the purpose of avoiding the provisions of this Order.

**5. Minimum local content:** The 'local content' requirement to categorize a supplier as 'Class-I local supplier' is minimum 50%. For 'Class-II local supplier', the 'local content' requirement is minimum 20%. Nodal Ministry/ Department may prescribe only a higher

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percentage of minimum local content requirement to categorize a supplier as 'Class-I local supplier'/ 'Class-II local supplier'. For the items, for which Nodal Ministry/ Department has not prescribed higher minimum local content notification under the Order, it shall be 50% and 20% for 'Class-I local supplier'/ 'Class-II local supplier' respectively.

6. **Margin of Purchase Preference:** The margin of purchase preference shall be 20%.
7. **Requirement for specification in advance:** The minimum local content, the margin of purchase preference and the procedure for preference to Make in India shall be specified in the notice inviting tenders or other form of procurement solicitation and shall not be varied during a particular procurement transaction.
8. **Government E-marketplace:** In respect of procurement through the Government E-marketplace (GeM) shall, as far as possible, specifically mark the items which meet the minimum local content while registering the item for display, and shall, wherever feasible, make provision for automated comparison with purchase preference and without purchase preference and for obtaining consent of the local supplier in those cases where purchase preference is to be exercised.
9. **Verification of local content:**
  - a. The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier'/ 'Class-II local supplier', as the case may be. They shall also give details of the location(s) at which the local value addition is made.
  - b. In cases of procurement for a value in excess of Rs. 10 crores, the 'Class-I local supplier'/ 'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
  - c. Decisions on complaints relating to implementation of this Order shall be taken by the competent authority which is empowered to look into procurement-related complaints relating to the procuring entity.
  - d. Nodal Ministries may constitute committees with internal and external experts for independent verification of self-declarations and auditor's/ accountant's certificates on random basis and in the case of complaints.
  - e. Nodal Ministries and procuring entities may prescribe fees for such complaints.
  - f. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

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- g. A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in the manner prescribed under paragraph 9h below.
- h. The Department of Expenditure shall issue suitable instructions for the effective and smooth operation of this process, so that:
  - i. The fact and duration of debarment for violation of this Order by any procuring entity are promptly brought to the notice of the Member-Convenor of the Standing Committee and the Department of Expenditure through the concerned Ministry /Department or in some other manner;
  - ii. on a periodical basis such cases are consolidated and a centralized list or decentralized lists of such suppliers with the period of debarment is maintained and displayed on website(s);
  - iii. in respect of procuring entities other than the one which has carried out the debarment, the debarment takes effect prospectively from the date of uploading on the website(s) in the such a manner that ongoing procurements are not disrupted.

**10. Specifications in Tenders and other procurement solicitations:**

- a. Every procuring entity shall ensure that the eligibility conditions in respect of previous experience fixed in any tender or solicitation do not require proof of supply in other countries or proof of exports.
- b. Procuring entities shall endeavour to see that eligibility conditions, including on matters like turnover, production capability and financial strength do not result in unreasonable exclusion of 'Class-I local supplier'/ 'Class-II local supplier' who would otherwise be eligible, beyond what is essential for ensuring quality or creditworthiness of the supplier.
- c. Procuring entities shall, within 2 months of the issue of this Order review all existing eligibility norms and conditions with reference to sub-paragraphs 'a' and 'b' above.

**d. Reciprocity Clause**

- i. When a Nodal Ministry/Department identifies that Indian suppliers of an item are not allowed to participate and/ or compete in procurement by any foreign government, due to restrictive tender conditions which have direct or indirect effect of barring Indian companies such as registration in the procuring country, execution of projects of specific value in the procuring country etc., it shall provide such details to all its procuring entities including CMDs/CEOs of PSEs/PSUs, State Governments and other procurement agencies under their administrative control and GeM for appropriate reciprocal action.

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- ii. Entities of countries which have been identified by the nodal Ministry/Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all items related to that nodal Ministry/ Department, except for the list of items published by the Ministry/ Department permitting their participation.
  - iii. The stipulation in (ii) above shall be part of all tenders invited by the Central Government procuring entities stated in (i) above. All purchases on GeM shall also necessarily have the above provisions for items identified by nodal Ministry/ Department.
  - iv. State Governments should be encouraged to incorporate similar provisions in their respective tenders.
  - v. The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.
- e. Specifying foreign certifications/ unreasonable technical specifications/ brands/ models in the bid document is restrictive and discriminatory practice against local suppliers. If foreign certification is required to be stipulated because of non-availability of Indian Standards and/or for any other reason, the same shall be done only after written approval of Secretary of the Department concerned or any other Authority having been designated such power by the Secretary of the Department concerned.
- f. "All administrative Ministries/Departments whose procurement exceeds Rs. 1000 Crore per annum shall notify/ update their procurement projections every year, including those of the PSEs/PSUs, for the next 5 years on their respective website."

**10A. Action for non-compliance of the Provisions of the Order:** In case restrictive or discriminatory conditions against domestic suppliers are included in bid documents, an inquiry shall be conducted by the Administrative Department undertaking the procurement (including procurement by any entity under its administrative control) to fix responsibility for the same. Thereafter, appropriate action, administrative or otherwise, shall be taken against erring officials of procurement entities under relevant provisions. Intimation on all such actions shall be sent to the Standing Committee.

**11. Assessment of supply base by Nodal Ministries:** The Nodal Ministry shall keep in view the domestic manufacturing / supply base and assess the available capacity and the extent of local competition while identifying items and prescribing the higher minimum local content or the manner of its calculation, with a view to avoiding cost increase from the operation of this Order.

**12. Increase in minimum local content:** The Nodal Ministry may annually review the local content requirements with a view to increasing them, subject to availability of sufficient local competition with adequate quality.

**13. Manufacture under license/ technology collaboration agreements with phased indigenization:** While notifying the minimum local content, Nodal Ministries may make special provisions for exempting suppliers from meeting the stipulated local content if the product is being manufactured in India under a license from a foreign manufacturer who holds intellectual property rights and where there is a technology collaboration agreement / transfer of technology agreement for indigenous manufacture of a product developed abroad with clear phasing of increase in local content.

**13A.** In procurement of all goods, services or works in respect of which there is substantial quantity of public procurement and for which the nodal ministry has not notified that there is sufficient local capacity and local competition, the concerned nodal ministry shall notify an upper threshold value of procurement beyond which foreign companies shall enter into a joint venture with an Indian company to participate in the tender. Procuring entities, while procuring such items beyond the notified threshold value, shall prescribe in their respective tenders that foreign companies may enter into a joint venture with an Indian company to participate in the tender. The procuring Ministries/Departments shall also make special provisions for exempting such joint ventures from meeting the stipulated minimum local content requirement, which shall be increased in a phased manner.

**14. Powers to grant exemption and to reduce minimum local content:** The administrative Department undertaking the procurement (including procurement by any entity under its administrative control), with the approval of their Minister-in-charge, may by written order, for reasons to be recorded in writing,

- a. reduce the minimum local content below the prescribed level; or
- b. reduce the margin of purchase preference below 20%; or
- c. exempt any particular item or supplying entities from the operation of this Order or any part of the Order.

A copy of every such order shall be provided to the Standing Committee and concerned Nodal Ministry / Department. The Nodal Ministry / Department concerned will continue to have the power to vary its notification on Minimum Local Content.

**15. Directions to Government companies:** In respect of Government companies and other procuring entities not governed by the General Financial Rules, the administrative Ministry or Department shall issue policy directions requiring compliance with this Order.

**16. Standing Committee:** A standing committee is hereby constituted with the following membership:

Secretary, Department for Promotion of Industry and Internal Trade—Chairman  
Secretary, Commerce—Member  
Secretary, Ministry of Electronics and Information Technology—Member  
Joint Secretary (Public Procurement), Department of Expenditure—Member  
Joint Secretary (DPIIT)—Member-Convenor

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The Secretary of the Department concerned with a particular item shall be a member in respect of issues relating to such item. The Chairman of the Committee may co-opt technical experts as relevant to any issue or class of issues under its consideration.

**17. Functions of the Standing Committee:** The Standing Committee shall meet as often as necessary, but not less than once in six months. The Committee

- a. shall oversee the implementation of this order and issues arising therefrom, and make recommendations to Nodal Ministries and procuring entities.
- b. shall annually assess and periodically monitor compliance with this Order
- c. shall identify Nodal Ministries and the allocation of items among them for issue of notifications on minimum local content
- d. may require furnishing of details or returns regarding compliance with this Order and related matters
- e. may, during the annual review or otherwise, assess issues, if any, where it is felt that the manner of implementation of the order results in any restrictive practices, cartelization or increase in public expenditure and suggest remedial measures
- f. may examine cases covered by paragraph 13 above relating to manufacture under license/ technology transfer agreements with a view to satisfying itself that adequate mechanisms exist for enforcement of such agreements and for attaining the underlying objective of progressive indigenization
- g. may consider any other issue relating to this Order which may arise.

**18. Removal of difficulties:** Ministries /Departments and the Boards of Directors of Government companies may issue such clarifications and instructions as may be necessary for the removal of any difficulties arising in the implementation of this Order.

**19. Ministries having existing policies:** Where any Ministry or Department has its own policy for preference to local content approved by the Cabinet after 1<sup>st</sup> January 2015, such policies will prevail over the provisions of this Order. All other existing orders on preference to local content shall be reviewed by the Nodal Ministries and revised as needed to conform to this Order, within two months of the issue of this Order.

**20. Transitional provision:** This Order shall not apply to any tender or procurement for which notice inviting tender or other form of procurement solicitation has been issued before the issue of this Order.



(Rajesh Gupta)  
Director

Tel: 23063211

[rajesh.gupta66@gov.in](mailto:rajesh.gupta66@gov.in)

F.No.6/18/2019-PPD  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division

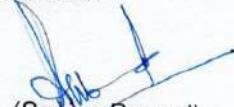
161, North Block,  
New Delhi  
23rd July, 2020

**Office Memorandum**

**Subject: Insertion of Rule 144 (xi) in the General Financial Rules (GFRs), 2017**

Rule 144 of the General Financial Rules 2017 entitled 'Fundamental principles of public buying', has been amended by inserting sub-rule (xi) as under:

*Notwithstanding anything contained in these Rules, Department of Expenditure may, by order in writing, impose restrictions, including prior registration and/or screening, on procurement from bidders from a country or countries, or a class of countries, on grounds of defence of India, or matters directly or indirectly related thereto including national security; no procurement shall be made in violation of such restrictions.*

  
(Sanjay Prasad)

Joint Secretary (PPD)

Email ID: [js.pfc2.doe@gov.in](mailto:js.pfc2.doe@gov.in)

Telephone: 011-23093882

To,  
(1) Secretaries of All Ministries/ Departments of Government of India  
(2) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

F.No.6/18/2019-PPD  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division

161, North Block,  
New Delhi  
23rd July, 2020

**Order (Public Procurement No. 1)**

**Subject: Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017**

Attention is invited to this office OM no. 6/18/2019-PPD dated 23<sup>rd</sup> July 2020 inserting Rule 144 (xi) in GFRs 2017. In this regard, the following is hereby ordered under Rule 144 (xi) on the grounds stated therein:

**Requirement of registration**

1. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority, specified in **Annex I**.
2. This Order shall not apply to (i) cases where orders have been placed or contract has been concluded or letter/notice of award/ acceptance (LoA) has been issued on or before the date of this order; and (ii) cases falling under **Annex II**.

**Transitional cases**

3. Tenders where no contract has been concluded or no LoA has been issued so far shall be handled in the following manner: -
  - a) *In tenders which are yet to be opened, or where evaluation of technical bid or the first exclusionary qualificatory stage (i.e. the first stage at which the qualifications of tenderers are evaluated and unqualified bidders are excluded) has not been completed: No contracts shall be placed on bidders from such countries. Tenders received from bidders from such countries shall be dealt with as if they are non-compliant with the tender conditions and the tender shall be processed accordingly.*
  - b) *If the tendering process has crossed the first exclusionary qualificatory stage: If the qualified bidders include bidders from such countries, the*

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entire process shall be scrapped and initiated *de novo*. The *de novo* process shall adhere to the conditions prescribed in this Order.

- c) As far as practicable, and in cases of doubt about whether a bidder falls under paragraph 1, a certificate shall be obtained from the bidder whose bid is proposed to be considered or accepted, in terms of paras 8, 9 and 10 read with para 1 of this Order.

#### Incorporation in tender conditions

4. In tenders to be issued after the date of this order, the provisions of paragraph 1 and of other relevant provisions of this Order shall be incorporated in the tender conditions.

#### Applicability

5. Apart from Ministries / Departments, attached and subordinate bodies, notwithstanding anything contained in Rule 1 of the GFRs 2017, this Order shall also be applicable
  - a. to all Autonomous Bodies;
  - b. to public sector banks and public sector financial institutions; and
  - c. subject to any orders of the Department of Public Enterprises, to all Central Public Sector Enterprises; and
  - d. to procurement in Public Private Partnership projects receiving financial support from the Government or public sector enterprises/ undertakings.
  - e. Union Territories, National Capital Territory of Delhi and all agencies/ undertakings thereof

#### Definitions

6. "Bidder" for the purpose of this Order (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.
7. "Tender" for the purpose of this Order will include other forms of procurement, except where the context requires otherwise.
8. "Bidder from a country which shares a land border with India" for the purpose of this Order means

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- a) An entity incorporated, established or registered in such a country; or
- b) A subsidiary of an entity incorporated, established or registered in such a country; or
- c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
- d) An entity whose *beneficial owner* is situated in such a country; or
- e) An Indian (or other) agent of such an entity; or
- f) A natural person who is a citizen of such a country; or
- g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

9. "Beneficial owner" for the purpose of paragraph 8 above will be as under:

- (i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation—

- a. "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;
  - b. "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
- (ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership or entitlement to more than fifteen percent of capital or profits of the partnership;
  - (iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
  - (iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

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(v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

10. "Agent" for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons.

#### Sub-contracting in works contracts

11. In works contracts, including turnkey contracts, contractors shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in paragraph 8 above. This shall not apply to sub-contracts already awarded on or before the date of this Order.

#### Certificate regarding compliance

12. A certificate shall be taken from bidders in the tender documents regarding their compliance with this Order. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law.

#### Validity of registration

13. In respect of tenders, registration should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

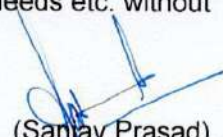
#### Government E-Marketplace

14. The Government E-Marketplace shall, as soon as possible, require all vendors/ bidders registered with GeM to give a certificate regarding compliance with this Order, and after the date fixed by it, shall remove non-compliant entities from GeM unless/ until they are registered in accordance with this Order.

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Model Clauses/ Certificates

15. Model Clauses and Model Certificates which may be inserted in tenders / obtained from Bidders are enclosed as **Annex III**. While adhering to the substance of the Order, procuring entities are free to appropriately modify the wording of these clauses based on their past experience, local needs etc. without making any reference to this Department.

  
(Sanjay Prasad)  
Joint Secretary (PPD)  
Email ID: [js.pfc2.doe@gov.in](mailto:js.pfc2.doe@gov.in)  
Telephone: 011-23093882

To

- (1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform these provisions to all procuring entities.
- (2) Secretary, Department of Public Enterprises with a request to immediately reiterate these orders in respect of Public Enterprises.
- (3) Secretary DPIIT with a request to initiate action as provided under Annex I
- (4) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

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### Annex I: Competent Authority and Procedure for Registration

- A. The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)\*.
- B. The Registration Committee shall have the following members\*:
- i. An officer, not below the rank of Joint Secretary, designated for this purpose by DPIIT, who shall be the Chairman;
  - ii. Officers (ordinarily not below the rank of Joint Secretary) representing the Ministry of Home Affairs, Ministry of External Affairs, and of those Departments whose sectors are covered by applications under consideration;
  - iii. Any other officer whose presence is deemed necessary by the Chairman of the Committee.
- C. DPIIT shall lay down the method of application, format etc. for such bidders as stated in para 1 of this Order.
- D. On receipt of an application seeking registration from a bidder from a country covered by para 1 of this Order, the Competent Authority shall first seek political and security clearances from the Ministry of External Affairs and Ministry of Home Affairs, as per guidelines issued from time to time. Registration shall not be given unless political and security clearance have both been received.
- E. The Ministry of External Affairs and Ministry of Home Affairs may issue guidelines for internal use regarding the procedure for scrutiny of such applications by them.
- F. The decision of the Competent Authority, to register such bidder may be for all kinds of tenders or for a specified type(s) of goods or services, and may be for a specified or unspecified duration of time, as deemed fit. The decision of the Competent Authority shall be final.
- G. Registration shall not be granted unless the representatives of the Ministries of Home Affairs and External Affairs on the Committee concur\*.
- H. Registration granted by the Competent Authority of the Government of India shall be valid not only for procurement by Central Government and its agencies/ public enterprises etc. but **also for procurement by State Governments and their agencies/ public enterprises etc. No fresh registration at the State level shall be required.**

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- I. The Competent Authority is empowered to cancel the registration already granted if it determines that there is sufficient cause. Such cancellation by itself, however, will not affect the execution of contracts already awarded. Pending cancellation, it may also suspend the registration of a bidder, and the bidder shall not be eligible to bid in any further tenders during the period of suspension.
- J. For national security reasons, the Competent Authority shall not be required to give reasons for rejection / cancellation of registration of a bidder.
- K. In transitional cases falling under para 3 of this Order, where it is felt that it will not be practicable to exclude bidders from a country which shares a land border with India, a reference seeking permission to consider such bidders shall be made by the procuring entity to the Competent Authority, giving full information and detailed reasons. The Competent Authority shall decide whether such bidders may be considered, and if so shall follow the procedure laid down in the above paras.
- L. Periodic reports on the acceptance/ refusal of registration during the preceding period may be required to be sent to the Cabinet Secretariat. Details will be issued separately in due course by DPIIT.

[\*Note:

- i. In respect of application of this Order to procurement by/ under State Governments, all functions assigned to DPIIT shall be carried out by the State Government concerned through a specific department or authority designated by it. The composition of the Registration Committee shall be as decided by the State Government and paragraph G above shall not apply. However, the requirement of **political and security clearance as per para D shall remain and no registration shall be granted without such clearance.**
- ii. Registration granted by State Governments shall be valid only for procurement by the State Government and its agencies/ public enterprises etc. and shall not be valid for procurement in other states or by the Government of India and their agencies/ public enterprises etc.]

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## Annex II: Special Cases

- A. Till 31<sup>st</sup> December 2020, procurement of medical supplies directly related to containment of the Covid-19 pandemic shall be exempt from the provisions of this Order.
- B. *Bona fide* procurements made through GeM without knowing the country of the bidder till the date fixed by GeM for this purpose, shall not be invalidated by this Order.
- C. *Bona fide* small procurements, made without knowing the country of the bidder, shall not be invalidated by this Order.
- D. In projects which receive international funding with the approval of the Department of Economic Affairs (DEA), Ministry of Finance, the procurement guidelines applicable to the project shall normally be followed, notwithstanding anything contained in this Order and without reference to the Competent Authority. Exceptions to this shall be decided in consultation with DEA.
- E. This Order shall not apply to procurement by Indian missions and by offices of government agencies/ undertakings located outside India.

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### Annex III

#### Model Clause /Certificate to be inserted in tenders etc.

(While adhering to the substance of the Order, procuring entities and GeM are free to appropriately modify the wording of the clause/ certificate based on their past experience, local needs etc.)

#### Model Clauses for Tenders

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
  - a. An entity incorporated, established or registered in such a country; or
  - b. A subsidiary of an entity incorporated, established or registered in such a country; or
  - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
  - d. An entity whose *beneficial owner* is situated in such a country; or
  - e. An Indian (or other) agent of such an entity; or
  - f. A natural person who is a citizen of such a country; or
  - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- IV. The *beneficial owner* for the purpose of (iii) above will be as under:
  1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation—

    - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;

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- b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
  3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
  4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
  5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- VI. *[To be inserted in tenders for Works contracts, including Turnkey contracts]* The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Model Certificate for Tenders (for transitional cases as stated in para 3 of this Order)

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered."*

Model Certificate for Tenders

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the*

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*Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”*

**Model Certificate for Tenders for Works involving possibility of sub-contracting**

*“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”*

**Model Certificate for GeM:**

*“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this vendor/ bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this vendor/ bidder fulfills all requirements in this regard and is eligible to be considered for procurement on GeM. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”*

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