



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

**DELHI AVIATION FUEL FACILITY PRIVATE LIMITED
AVIATION FUELLING STATION
SHAHBHAD MOHAMMADPUR
IGI AIRPORT
NEW DELHI-110061**



TENDER NO: DAFFPL/FF/2025-26/04

**INVITING TENDER FOR SUPPLY INSTALLTION TESTING &
COMMISSIONING OF EMEGENCY PANEL WITH ALLIED WORKS**

BID DUE DATE & TIME: 1500 Hrs. IST on 03rd November 2025

OPENING OF TECHNICAL BIDS: 1100 Hrs. IST on 04th November 2025



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PRICE BID

NOTE: BIDDERS ARE REQUESTED TO SIGN AND STAMP ALL THE PAGES OF THE TENDER DOCUMENT AND SEND THE SAME BACK IN THEIR OFFER AS A TOKEN OF UNCONDITIONAL ACCEPTANCE OF TENDER TERMS. THE DEVIATIONS, IF ANY, SHOULD BE MENTIONED SEPARATELY ON BIDDER'S LETTER HEAD IN TECHNICAL BID. THE DEVIATIONS MENTIONED ANYWHERE ELSE SHALL NOT BE CONSIDERED. IN ABSENCE OF DEVIATION SHEET, IT WOULD BE CONCLUDED THAT BIDDER HAS ACCEPTED THE TENDER TERMS WITHOUT ANY DEVIATIONS. CORRECTIONS IN TENDER DOCUMENT WILL NOT BE ACCEPTED.



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

CHAPTER 1: NOTICE INVITING TENDER (NIT)

Delhi Aviation Fuel Facility Private Limited (DAFFPL) is a Joint Venture comprising Indian Oil Corporation Ltd. (IOCL), Bharat Petroleum Corporation Ltd. (BPCL), and Delhi International Airport (P.) Ltd. (DIAL).

Delhi Aviation Fuel Facility Private Limited (DAFFPL) invites tenders in prescribed tender form under the two-bid system. For viewing details including EMD, BID QUALIFICATION CRITERIA etc. please visit our e-Tendering web site <http://daffpl.enivida.com>

The bids are to be submitted on the e-Tendering portal (<http://daffpl.enivida.com>) of **Delhi Aviation Fuel Facility Private Limited (DAFFPL)**.

Any query or clarification with regard to this tender may please be referred to below address & phone nos. on any working day during office working hours.

Mr. Manish Kumar Asst Manager Projects manish.kumar@daffpl.in , 9810640818	Mr. Ajay Singh Deputy Manager ajay.singh@daffpl.in , 9999946309	vishvajit@daffpl.in
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Delhi Aviation Fuel Facility Private Ltd (DAFFPL) invites bids from eligible bidders for the work detailed below:

1	Tender No.	DAFFPL/FF/2025-26/04.
2	Name of Work	Supply, Installation, Testing & Commissioning of Emergency Panel with Allied Works Complete as per Specifications.
3	Tender Fee	Nil.
4	Pre-Bid Meeting Date	13 th October 2025.
5	Pre-Bid Meeting Time & Venue	1500 HRS (IST) at DAFFPL, Aviation Fuelling Station, Shahabad Mohammadpur, New Delhi-110061.
6	Last date of Submission of Query	Up to 1500 HRS (IST) on 27 th October 2025.
7	Last date for Query Response	By 29 th October 2025.
8	Bid Due Date & Time	Up to 1500 HRS (IST) on 03 rd November 2025.



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

9	Technical Bid Opening Date & Time	On or After 1100 HRS (IST) on 04 th November 2025.
10	Delivery/Work Completion Period	05 Months from the date of award/LOI/PO/WO.
11	Bid Validity	4 Months from date of opening of price bids

- Purchase order for supply part will be placed by DAFFPL and work order for installation part including testing and commissioning works will be placed by fuel farm operator M/s IOSPL on behalf of DAFFPL. The billing by contractor shall be done on DAFFPL only in both cases.
- Earnest Money Deposit (EMD) (also referred to as Bid Security):** Bidder shall be required to submit the Earnest Money Deposit (EMD) in favor of Delhi Aviation Fuel Facility Private Limited. The EMD in either form has to be submitted on or before the due date & due time of bid submission of this tender with a covering note mentioning the tender no.

Direct bank transfer for Tender Fee and Earnest Money Deposit to DAFFPL account as detailed below. The UTR Reference and date shall be provided in the Tender portal for DAFFPL verification.

Name of Account	DELHI AVIATION FUEL FACILITY PRIVATE LTD.
Account No.	39040531887
Name of Branch	Corporate Accounts Group-II Branch, New Delhi
IFSC Code	SBIN0017313
SWIFT	SBININBB824
MICR	110002562
PAN	AAACS8577K
TAN	DELS55939C
BSR	0017313

- The bidders not submitting EMD by due time & date shall be rejected & their bids shall not be evaluated further.
- The EMD amount shall be 1.0 (One) Lakh INR.**
- EMD Exemption:**
Submission of EMD is not required in the following cases:
 - Government organization & Public Sector Undertaking of the Central / State Government. (Central Public Sector Enterprises are requested to give a self-declaration on their letter head to this effect)



- ii. Startups as recognized by Department for Promotion of Industry and internal trade. (Such Startups are requested to give a self-declaration on their letterhead along with valid documentary proof to this effect)
- iii. Micro & Small Enterprises (MSE's), as defined in MSE procurement policy issued by department of Micro, Small & Medium Enterprises (MSME)/Nation Small Scale Industries Corporation (NSIC). (Eligible Bidders are requested to submit self-declaration on their letterhead along with a copy of their valid Registration MSME/NSIC certificate to this effect.)

d. EMD Submission:

- i. EMD amount up to Rs. 1 Lakh:
 - EMD to be submitted through Demand Draft, Bankers Cheque, Swift Transfer or online payment (NEFT/RTGS/UPI) in DAFFPL account along with the offer.
- ii. EMD amount more than Rs. 1 Lakh:
 - EMD can be submitted through Demand Draft, Bankers Cheque, Swift Transfer or online payment (NEFT/RTGS/UPI) in DAFFPL account along with the offer or through Bank Guarantee (BG). Validity of BG in lieu of EMD shall be at least 3 months beyond bid validity. Bank Guarantee must be as per DAFFPL format.
- iii. Scanned Copy of EMD instrument i.e. Bank Guarantee/Demand Draft etc. has to be uploaded in the un-priced bid and the bidder should also ensure that the original EMD instrument in physical form duly enclosed in a sealed envelope is submitted to the tendering authority.

e. Release of EMD:

- i. EMD of bidders disqualified during techno-commercial bid evaluation shall be released without any interest within 30 days of approval of price bid opening.
- ii. EMD of bidders qualified in the techno-commercial bid but unsuccessful in the price bid stage shall be released without any interest within 30 days of issuance of order/ LoA. EMD of



the successful bidder shall be released after receipt of an acceptable SD.

- iii. Wherever SD is not applicable, EMD of the successful bidder shall be returned after complete execution of the order.
- iv. In case bidder has been holiday listed before award of work.

f. Forfeiture of EMD:

Earnest Money shall be forfeited in the following circumstances:

- i. In case the bidder tampers the tender document, alters / modifies / withdraws the bid Suo-moto after opening the bids (Technical bids in case of two bid system) within the validity period.
 - ii. In case the bidder submits false/fraudulent/fake/ forged documents.
 - iii. In case the tender is accepted, and the contractor fails to deposit the ISD/SD or to execute the contract.
 - iv. In case of failure of the bidder to get the documents verified as per the specified time schedule in the tender. (Where verification is done through the Original Document Verification process)
- g. If bid Security / EMD is in the form of bank guarantee, it shall be in the form of irrevocable bank guarantee issued by any Indian Scheduled Bank (other than Co-operative Bank) will be accepted.

3. PAYMENT TERMS: The payment will be made after making the necessary deductions as applicable & stipulated elsewhere in the tender document for materials, security deposit or any money due to the Owner etc.

- Payment will be released at the earliest, maximum by 30 days upon completion of all requirements (scope of works/documents/etc.) and after acceptance of Tax Invoice
- Notwithstanding any other clause of the tender documents, payment for Goods and Service Tax amount claimed in the invoice for work done by the successful bidder will be released only after the invoice is reflected in GSTR-2B of DAFFPL/Owner.
- PBG/SD/retention amount will be released after completion of guarantee/warranty/defect liability period.
- Advance Payment is not permissible in this contract.



The following payment terms shall be applicable:

For Supply Part:

- 60% will be released within 30 days after receiving invoice upon the receipt and acceptance of material at site along with applicable documents adjusting deductible if any.
- 20% after completion of installation of individual work and certification by site engineer/PMC on prorata basis.
- Balance 20% of material consumed after completion of installation, testing & commissioning of all works in all respect and handover of same to operations.

- Payment for Goods and Service Tax amount claimed in the accepted invoice by the successful bidder will be released only after the invoice is reflected in GSTR-2B of DAFFPL/Owner.

For Installation Part:

- 60% will be released after completion of installation & testing of individual work and certification by site engineer/PMC on prorata basis.
- Balance 40% after completion of installation, testing & commissioning of all works in all respect and handover of same to operations.
- Payment for Goods and Service Tax amount claimed in the accepted invoice by the successful bidder will be released only after the invoice is reflected in GSTR-2B of DAFFPL/Owner.

Note: Payment will be done on actual consumption of material & actual works carried out. Amount for unused material will be adjusted in final billing/payment.

Arrangement for the Transit e-way Bill under the GST Act for all purchases is the responsibility of the successful bidder/contractor.

4. SECURITY DEPOSIT:

Security deposit (SD) amount shall be equivalent to 10% of the Total Contract Value (there shall not be any upper ceiling for security deposit amount). Total Contract Value shall mean the totality of such remuneration exclusive of Goods and Service Tax. While initially the SD amount shall be 10% of the Work Order value (exclusive of GST), once the work is executed, the total Security Deposit will be on the value of the work actually executed and not on the value of the work order.



The Security Deposit shall be made up of Initial Security Deposit and retention monies of a sum equal to 10% (ten percent) of the gross value of each bill up to and until the recovery of full Security deposit is achieved.

The successful bidder is required to deposit Initial Security Deposit in an amount equal to 2.5% (Two- and one-half percent) of the total contract value in one or more of the following modes:

- a. By Online transfer (NEFT/RTGS/UPI)/Demand draft/Pay Order drawn on a Banking Branch of a Nationalised / Scheduled Bank payable at the location as specified. (Cheques shall not be accepted).
- b. If the Earnest Money Deposit has been made in by Demand Draft or Bankers Cheque or Online transfer (NEFT/RTGS/UPI), the contractor may be permitted to adjust the same towards part of the Initial Security Deposit and pay the balance in the manner stipulated at (a) above.
- c. By Bank Guarantee(s) in the prescribed form, from a Scheduled Bank in India acceptable to DAFFPL, provided the amount covered by such Bank Guarantee is not less than Rs.1,00,000 (Rupees One Lakh only). This Bank Guarantee shall be valid up to a period of 3 (three) months beyond the end of the Defect Liability period.

Alternatively, the vendor also can deposit the full SD amount by DD or Bankers cheque or Bank Guarantee (if the amount of SD is higher than Rs. 1 lac) initially itself in which case no ISD will be required to be furnished and no deductions shall be made from running bills.

The Initial Security Deposit/Security deposit shall be submitted to DAFFPL by above mentioned modes within 10 days from acceptance of purchase/work order.

The amount will be returned to the bidder without any interest at the end of the warranty / guarantee/defect liability period subject to fulfilment of all contractual obligations by the Bidder. The bank guarantee shall have a minimum claim period of 06 months beyond its validity/expiry date.

5. **PRICE REDUCTION FOR DELAY IN DELIVERY/COMPLETION OF WORK:**

The inability of successful bidder to execute orders in accordance with the agreed delivery/completion period will entitle DAFFPL, at its options, to:

- a) Accept delayed delivery & work completion at prices reduced by a sum equivalent to half percent (0.5%) of the total order value excluding taxes (i.e. sum of amount of purchase order excluding taxes for supply part & amount of work order excluding taxes for installation/services part) for every week of



delay or part thereof which is to be considered as a week, limited to a maximum of 10% of the total order value(excluding taxes). The applicable taxes on value/amount for price reduction shall be additional. The date of supply of all material & work completion i.e., completion of project at DAFFPL site shall be considered for calculation of price reduction.

If final executed value is less than the total order value, then price reduction will be calculated on final total actual executed (supply+installation) value during final billing/payment and adjusted (if applicable).

- b) The price reduction clause shall become applicable for delivery of material/equipment or/and date of completion of works beyond the scheduled delivery/completion period.
- c) Delivery/Completion Period shall be counted from the date of notification of award or letter of intent.

6. BID-QUALIFICATION CRITERIA

- a) Firstly, the technical bid shall be opened. The Bids shall be initially scrutinized by DAFFPL as per tender requirements of BQC (Bid qualification criteria).
- b) Techno-Commercial bids of only those vendors who qualify the BQC will be processed further.
- c) The price bids of only techno-commercially qualified bidders will be opened, evaluated and shortlisted for Placement of Purchase/Work Order.

Bidders need to meet the following bid-qualification criteria to qualify for techno-commercial bidding:

➤ **Technical Criteria:**

The bidder shall have satisfactorily executed either of the following during the last 7 years ending 30/09/2025:

The Bidder should have completed at least **one similar work**, costing not less than **INR 68.07 Lakhs**.

OR

The Bidder should have completed at least **two similar works**, each costing not less than **INR 42.54 Lakhs**.

OR

The Bidder should have completed at least **three similar works**, each costing not less than **INR 34.03 Lakhs**.

Notes:

- a. Similar works means electrical works at 440V or higher voltage level



- including supply, installation, testing & commissioning of switchgear panel of 440 volts or higher voltage level.
- b. The untampered/non-modified copies of original purchase/work orders and completion certificates/proof w.r.t. above criteria to be submitted along with bid.
- c. For the same project finalized against one tender, if separate orders for supplies and services or variation orders or amendment orders are issued in continuation of the original purchase/work order, then the total value of works completed against the supply & installation components of the original work orders, subsequent variation/ amendment orders put together shall be accepted as one single work completed.
- d. Ongoing contracts (i.e. not successfully completed) shall not be considered irrespective of the value of works completed up to the period mentioned in the tender.
- e. EPC/BOO/BOOT Contracts containing the components indicated in similar works criteria shall also be considered for the purpose of qualification.
- f. Similar works carried out by the Bidder in India or abroad shall be considered. For the works carried out abroad and payments received by the Bidder in foreign currency, proof of remittance shall also be required. The same shall be converted to INR based on the exchange rate as per SBI TT Selling rate as on the last day of the month previous to the one in which the tender was invited to arrive at Work order/completed value amounts.
- g. Similar work as mentioned above should be carried out by the standalone Bidder. Credentials of works executed by Group companies shall not be considered.
- h. Experience of works executed as part of JVs / Consortiums/ MoU Parties shall not be accepted, even if a single involved partner/ party bids for the tender.
- i. Documents submission against Similar Work criteria:
- 1) In case of Work Order from Indian Government Bodies/Indian PSUs: Copies of Contract Document/Purchase order/Work Order along with either completion certificates consisting of date of completion & executed value.
 - 2) In case of Work Orders from Private Parties (Parties other than specified above), DAFFPL Reserves the right to seek a Certificate



from CA certifying value of work executed with TDS certificates (where applicable)/ bank statement shall be required.

7. FINANCIAL CAPACITY

Bidder shall have a minimum average annual turnover of **Rs. 21.63 Lakhs** as per audited financial results in the preceding three financial/calendar years (FY24-25, 23-24 & 22-23). "Turnover shall mean Consolidated Turnover in case of a Bidder having wholly owned subsidiaries"

Note: Turnover for this purpose should be as per audited P&L statement including Balance Sheet/ Published Account/ Profit & Loss Account Statement of the tenderer having UDIN. However, if the tenderer is not required to get its accounts audited under Section 44AB of the Income Tax Act, 1961, certificate from a practicing Chartered Accountant towards the turnover of the tenderer along with copies of its income tax return should be obtained/submitted.

Total revenue as per schedule III of companies' act, 2013 (earlier revised schedule VI of companies Act, 1956) shall be considered as Turnover. Audited balance sheet / published accounts on calendar year basis shall also be acceptable. The financial statements copy must bear the registration number of the authorised chartered accountant and its seal. (This is not applicable for published annual reports).

If the bidder's accounts/financial statement is not audited for FY 2024-2025 as on date of bid submission, then certificate w.r.t. annual turnover (with UDIN) duly certified by practicing Chartered Accountant shall be submitted.

The above criteria (Technical & Financial) are to be met for acceptance of the bid.

8. OTHER INFORMATION OF BQC:

- a) Parties who are affiliates of one another can decide which affiliate will make a bid. Only one affiliate may submit a bid. Two or more affiliates are not permitted to make separate bids directly or indirectly. If 2 or more affiliates submit a bid, then any one or all of them are liable for disqualification.
- b) In case the bidder is an Indian arm (subsidiary, authorized agent, branch office or affiliate) of a foreign bidder, then the foreign bidder shall have to full fill each eligibility criteria. If such foreign company desires that the contract be entered into with the Indian arm, then a proper back to back continuing



(parent company) guarantee shall be provided by the foreign company clearly stating that in case of any failure of any supply or performance of the equipment, machinery, material or plant or completion of the work in all respects and as per the warranties/ guarantees that may have been given, then the foreign company shall assume all obligations under the contract. Towards this purpose, it shall provide such comfort letter/guarantees as may be required by the Owner. The guarantees shall cover inter alia the commitment of the foreign company to complete the entire work in all respects and in a timely fashion, being bound by all the obligations under the contract, an undertaking to provide all necessary technical and financial support to the Indian arm or to render the same themselves so as to ensure completion of the contract when awarded, an undertaking not to withdraw from the contract till completion of the work, etc.

9. EVALUATION OF BIDS

- a) Project purchase/work order shall be placed on the successful L1 bidder (Technically qualified bidder quoting overall lowest rate) based on Overall Bid amount for Supply, Installation, Testing & Commissioning of All Materials.
- b) Part offers will be rejected. Bidder has to quote for all items in a lot for us to consider them.
- c) If the cost of two or more bids comes out the same, then preference will be given to the bidder having more turnover in the last three financial years for each category separately.
- d) DAFFPL reserves the right to place an order in part or complete for all/any items for which the bidder has quoted for.
- e) Any efforts by a bidder to influence the owner, the bid evaluation process, bid comparison or contract award decisions may result in the rejection of their bid.
- f) Qualification of Bidder: The experience details and financial & technical capabilities of the bidder(s) shall be examined to determine whether the bidder(s) meet the Bid Qualification Criteria.
- g) The Owner will examine the bids to determine whether they are complete & if they are free of any computational errors, whether the documents have been properly signed and whether the bids are generally in order.
- h) The bids without requisite Bid Security/EMD and/or updated/final price bid will not be considered, and bids of such bidder Bidder(s) shall be summarily rejected.
- i) To assist in the examination, evaluation and comparison of technical bids, the owner/ may, at its discretion, ask the Bidder for clarifications on the bid. The request for such clarifications and the response thereto shall be through the e-tendering portal/e-mails.
- j) Prior to the evaluation and comparison of the bids, the owner will determine the substantial responsiveness of each bid to the bidding documents. For the



purpose of this article, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding document without material deviations or reservations. A material deviation or reservation is one which affects in any substantial way the scope, quality, or performance of the works or which limits in any substantial way, inconsistent with the bidding document, the DAFFPL's rights or Bidder's obligation under the contract and retention of which deviation or reservation would affect unfairly the competitive position of other bidders presenting substantially responsive bids. The owner's determination of bid responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

- k) A bid determined as substantially non-responsive after final evaluation will be rejected by the Owner and shall not subsequently be allowed by the Owner to be made responsive by the Bidder by correction of the non-conformity.
- l) The successful bidder shall be required to physically visit DAFFPL office along with original copies of all documents submitted along with the bid and subsequently during bid clarification as per the tender's terms & conditions.
- m) **DAFFPL shall place the order on the successful bidder only after physical verification of the documents as mentioned above.**
- n) **The successful bidder shall sign contact agreement within 30 Days from date of purchase order/work order/LOI placed/issued on the bidder.**
- o) The successful bidder shall ensure adherence/compliance to all the tender terms & conditions for the supply and/or execution of works as may be applicable & as mentioned in the tender document or elsewhere (bid clarification, work order, any specific instruction etc.)



CHAPTER 2: GENERAL INFORMATION & INSTRUCTIONS TO BIDDER

1. The Tender is floated in Two Bid system consisting of Part 1 - Technical Bids (Bid Qualification Criteria - BQC, Technical Bid) and Part 2 - Price Bid.
2. DAFFPL reserves their right to negotiate the quoted prices with the lowest bidder.
3. The bidder should be able to supply/execute the entire size/type/quantity bid by them. Bidders cannot bid for part items or part quantity. The bidder cannot sublet the works.
4. The bids submitted should be valid as per the details mentioned in NIT. Once accepted it will remain firm till completion of contracts/orders.
5. The Owner may, at its discretion, extend the bid due date, in which case all rights and obligations of the Owner and the Bidders, previously subject to the bid due date, shall thereafter be subject to the new bid due date as extended. The same will be hosted in the e-tendering portal.
6. No bid shall be modified subsequent to the due date & time or extension, if any, for submission of bids. Bidder(s) to note that Price changes after submission of bid shall not be allowed. In case any bidder gives revised prices/price implication, his bid shall be rejected. No bid shall be allowed to be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder. Withdrawal of a bid during this interval shall result in the forfeiture of Bidder's EMD.
7. Bids that do not meet the Bid qualification criteria as specified in the bid document shall be rejected. A bid with an incomplete scope of work and/or which does not meet the techno-commercial requirements as specified in the bid document, shall be rejected. Conditional bids will be liable for rejection.
8. The Owner will examine the bids to determine whether they are complete, whether any computational errors have been made, whether the documents have been properly signed and whether the bids are generally in order.
9. The bids without requisite EMD and/or not in the prescribed Performa and within prescribed timelines will not be considered and bids from such bidder(s) shall be rejected.
10. Please refer to query submission end date / time in tender calendar. DAFFPL reserves the right to respond to the query posted by the bidder. However, DAFFPL reserves the right to respond to the queries after cutoff date / time mentioned in tender calendar.
11. We request the bidder to carefully go through all tender documents before submitting the offer. Please note that any exceptions or deviations to the tender document are necessarily to be recorded in the attached deviation statement only. Any exceptions/deviations brought out elsewhere in the bid shall not be considered.
12. The bidders may be invited for a presentation to DAFFPL during Techno-



- commercial evaluation before the price bid opening.
13. The bidders to provide their bank details, PAN, Goods & Service Tax Registration No., VAT as applicable for updating vendor master file. You are also requested to keep us informed of any change in address / status of your business / contact details including email address etc.
 14. Please note that queries related to scope of work, tender specifications, terms & conditions etc., should be submitted on e-tender portal/e-mail before the query closing date. Any modification in the bid document that may become necessary as a result of the Pre-Bid meeting shall be made by the owner exclusively through the issues of corrigendum/ addendum posted at e-tender portal.
 15. **UNSOLICITED POST BID MODIFICATION:** Bidders are advised to quote strictly as per terms and conditions of the Bidding Document. After tender submission due date & time/extended due date & time (as the case may be) the bidders shall not make any subsequent price changes, whether resulting or arising out of any technical / commercial clarifications sought/allowed on any deviations or exceptions mentioned in the bid.
 16. EMD & Techno Commercial bid shall be opened on or after the date mentioned on the tender opening date on e-tender portal. Price Bid of only those bidders whose offer is found meeting both BQC & techno-commercially acceptable, shall be opened on a later date as decided by DAFFPL.
 17. DAFFPL reserves the right to accept any one or more bids in whole or in part or reject any or all bids without assigning any reason. DAFFPL reserves the right to accept any one or more bids in part. Decision of DAFFPL in this regard shall be final and binding on the bidder.
 18. A Pre-bid meeting shall be conducted & same is scheduled as per details mentioned in NIT at the office of DAFFPL, New Delhi. All prospective bidders can participate in the same. Any clarification regarding the tender shall be sorted out during the pre-bid meeting.
 - a. The purpose of the pre-bid meeting is to clarify any doubts of the BIDDER about the interpretation of the provisions of the tender.
 - b. Bidder(s) are requested to submit their queries, mentioning firm name, clause no. & clause as per tender document in order to have fruitful discussions during the meeting.
 - c. All the Bidder(s) are requested to attend the pre-bid meeting to be held at the DAFFPL Office as per schedule.
 19. **Delivery Period/Work Completion Period:** Time is the essence of the contract. The scope of work has to be completed within the delivery period mentioned in NIT. DAFFPL Shall appreciate early delivery.
 20. The contractual delivery/completion period is inclusive of all the lead time for procurement of raw materials, manufacturing approvals, the manufacturing, inspection / testing, packing or any other activity whatsoever required to be accomplished for effecting the delivery at the required delivery point.
 21. The bidder/ contractor shall refer to various sections of this tender document for detailed scope of work. It is the vendor's/contractor's/bidder's responsibility to execute the job in all respects as per specification furnished



- by consultant / owner and as per applicable codes, standards & in line with statutory requirements.
22. The field circumstances shall also be taken into consideration and methods suitable to the site conditions shall be adopted with concurrence of the Engineer-in-charge and in line with manuals, instructions of respective equipment and specified codes and standards. The successful accomplishment of the project is greatly influenced by teamwork, workmanship of the workers and supervisors.
 23. The Contractor/Bidder shall employ only such workers and supervisors who have considerable experience of similar work and who can work temperamentally in good harmony and co-operation.
 24. The bidder shall bear all costs associated with the preparation and submission of the bid and the Owner will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.
 25. **The bidders should have a valid class 3 Digital sign certificate with encryption.**
 26. Bidders are requested to register on our E-Tendering portal on <https://daffpl.enivida.com>
 27. Bidders can contact e-portal helpdesk numbers 011-49606060, 9355030617 during 9:30hrs to 18:00hrs on working days for any query/assistance for registration & tender documents submission.
 28. Bidders are requested to submit their bids taking full notice of all the technical specifications, terms and conditions, forms & attachments to this tender. Bids must be submitted only through e-Tender portal (<https://daffpl.enivida.com>).
 29. The owner is not responsible for any delays from the bidder end.
 30. The owner reserves the right to make any changes in terms and conditions of purchase/works before the due date of bid submission and to reject any or all bids received incomplete.
 31. The owner at its discretion reserves the right to verify information/documents submitted by the bidders.
 32. Bidder to submit documents/information to satisfy the bid qualification criteria. Bidders should also be able to produce further information as and when required by DAFFPL within a time limit as specified by DAFFPL.
 33. Bidders would be qualified based on data and documents submitted by them.
 34. The owner's decision on any matter regarding short listing of vendors shall be final and no correspondence in this regard will be entertained.
 35. The vendors who are on IOCL/BPCL/DIAL holiday list or delisted will not be considered.
 36. The bidder is expected to examine all instructions, forms, attachments, terms and specifications in the tender document. The entire tender document together with all its attachments thereto shall be considered to be read, understood and accepted by the bidder, unless deviations are specifically



stated seriatim by the bidder. Failure to furnish all information required in the tender document or submission of a bid not substantially responsive to the tender documents in every respect will be at bidder risk and may result in the rejection of his bid. The bidder scope of supplies as specified in the material requisition shall be in strict compliance with the scope detailed therein and in the bid document.

37. Bidders in their own interest shall ensure that they submit their bid, complete in all respects, well within the specified bid due date and time. No relaxation shall be given for the delay due to any unforeseen event in submission of bid.
38. At any time prior to the bid due date, DAFFPL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bid document. The amendment will be notified through our portal for e-tender to all prospective bidders and will be binding on them. In order to provide prospective bidders with reasonable time in which to take the amendment into account in preparing their bids, we may, at our discretion, extend the bid due date.
39. The bid prepared by the bidder and all correspondence/ drawings and documents relating to the bid exchanged by bidder and the owner shall be written in ENGLISH language, provided that any printed literature furnished by the bidder may be written in another language so long as accompanied by an ENGLISH translation, in which case, for the purpose of interpretation of the bid, the ENGLISH translation shall govern.
40. Declaration with the bid qualification criteria that bidder has not been banned or delisted by any Government or quasi-Government agencies or Public Sector Undertaking (PSU) as per declaration format (provided as annexure) of the tender document should be submitted along with the bid.
41. Bidders are advised to submit bids based strictly on the terms & conditions and specifications contained in the tender document and not to stipulate any deviations. Each Bidder shall submit only one bid. A Bidder who submits more than one bid will be rejected. Alternative bids will not be accepted.
42. ISSUE OF CONTRACT/ PURCHASE ORDER: After the successful bidder has been notified that his bid has been accepted, DAFFPL will send to such bidder a detailed contract/purchase order & within 15 days of receipt of the detailed purchase order, the bidder shall sign and return to the owner the duplicate copy of the order as a token of their acknowledgement.
43. Vigil Mechanism: DAFFPL has developed the Vigil Mechanism to deal with references/ grievances, if any, that may be received from bidders who participated / intends to participate in the tender. The details of the same are available on our website www.daffpl.in.
44. VERIFICATION BY OWNER: All statements submitted by bidder regarding experience, manpower availability, equipment and machinery availability etc., are subject to verification by the owner either before placement of order or after placement of order. If any data submitted by the bidder at the bid stage is found to be incorrect, the offer is liable to be rejected, or the



contract/order is liable to be terminated.

45. TEST & PERFORMANCE CERTIFICATES: Bidder shall furnish Material test and Performance Certificates for the materials along with the challans and invoice.
46. Construction power, water, loading and boarding, Site Storage with watch and ward, receipt, unloading, shifting material to store and internal shifting to site shall be included in Vendor's scope.
47. The unit rates quoted to arrive at a total price shall be firm and inclusive of all duties, levies, transit insurance, transportation etc. No separate payment shall be made for site mobilization / demobilization, insurance etc.
48. The Schedule of Rates should be read with all other sections of the tender documents.
49. The tenderer shall be deemed to have studied the specifications and the details of work to be done within the time schedule. and to have acquainted with the conditions prevailing at site. **Site visit is strongly recommended.**
50. All supply and work shall be in line with tender specifications, drawings and instructions of the Engineer-in-Charge.
51. The rate quoted shall be inclusive of all work as mentioned in the scope of work or anywhere else in the tender documents.
52. In case of any rework/rectification/resupply due to faulty workmanship or any defects occur, or modifications are required no extra claims for such works/supply shall be entertained.



CHAPTER 3: SCOPE & PERFORMANCE OF WORK

1. SCOPE OF WORK:

- a) Scope includes design, supply, installation, testing & commission of 440V emergency panel with allied works as per specifications and as detailed in the Annexure-A or anywhere else in the tender document.
- b) Scope includes designing, assembling, testing, inspection, packing & supply in line with specifications as mentioned in this document or anywhere else in tender documents including loading & unloading at site and shifting to desired location.
- c) The vendor shall carry out the excavation work carefully to avoid damaging any utilities. Only manual excavation shall be permitted.
- d) The works shall be carried out as per available drawings and as per direction of EIC.
- e) The contractor must carefully perform the work to avoid damaging any existing utilities.
- f) The work has to be carried out inside the operational area of highly critical installation. The vendor has to ensure proper PPE & utmost safety while execution of works.
- g) The vendor shall carry out the excavation work carefully to avoid damaging any utilities.
- h) In case of any damage while any activity is being undertaken, the vendor shall undertake repairs at their own risk & cost. In case the vendor is unable to undertake the required repairs as per the requirement of EIC, the owner will undertake these works and recover the amount from the vendor as it deems fit.
- i) The cost of shifting/loading/unloading of any material/equipment or any other item as required for completion of works, shall be borne by the contractor. No extra payment shall be made on these regards.
- j) Payment shall be made as per BOQ on measurement basis only. No extra material (if any) shall be taken by DAFFPL.
- k) The quantities shown against the various items are only indicative of the quantum of work and it may vary to any extent. Billing/payment will be made according to payment terms. Vendor to make measurements at site before dispatching any material.
- l) The offer/quoted amount should also include all other elements like Custom Duties (if any), Insurance charges, approval charges, testing charges, transportation, and commissioning charges at site for door



delivered price of equipment at DAFFPL Fuel Farm, New Delhi in India.

- m) The Contractor shall take due care while disposing of such waste materials and ensure that any rules/ regulations laid down by Municipal Corporation or any other statutory body are not violated.

2. EXECUTION OF WORKS:

- a. All the work shall be executed in strict conformity with the provisions of the contract documents and with such explanatory detailed drawings, specifications, and instructions as may be. The contractor shall be responsible for ensuring that works throughout are executed in the most substantial, proper and workman like manner with the quality of material and workmanship in strict accordance with the specifications following all safety requirements and to the entire satisfaction of the DAFFPL/EIC.
- b. Wherever it is mentioned in the specifications that the Contractor shall perform certain work or provide certain facilities/materials, it is understood that the contractor shall do, so at his cost unless otherwise specified.
- c. The materials, design and workmanship shall satisfy the relevant Indian Standards, the Job specification contained herein, and codes referred to. Where the job specification stipulates requirements in addition to those contained in the standards codes and specifications, these additional requirements shall also be satisfied.

3. MATERIALS TO BE SUPPLIED BY CONTRACTOR:

- a. The contractor shall procure and provide the whole of the materials required to complete the job including tools, tackles and equipment etc. The materials procured by the contractor shall be approved by DAFFPL/EIC and be of approved/specified quality.
- b. All materials procured/used should meet the specifications given in the tender document. The Engineer-in-Charge may, at his discretion, ask for samples and test certificates for any batch of any material. Before procuring, the contractor should get the approval of the Engineer-in-Charge for any material to be used for the work.
- c. The manufacturer's certificate shall be submitted for all materials supplied by the contractor. If, however, in the opinion of the Engineer-in-Charge any tests are required to be conducted on the materials supplied by the contractor, these will be arranged by the contractor promptly at his own cost.

4. INSPECTION OF WORK:

- a. The Engineer-in-Charge/owner will have full power and authority to inspect the works/materials at any time wherever in progress either on the Site or at the contractor's premises / workshop, firm or corporation. Where materials are being supplied/procured, the contractor shall afford or procure for the Engineer-in-Charge every facility and assistance to carry out Inspection of



such materials, in case required. The contractor shall at all times during the usual working hours and at all other times for which reasonable notice of the intention of the Engineer in-Charge or his representative to visit the works have been given to the contractor, either himself be present to receive order and instructions or post a responsible agent duly accredited in writing for the purpose. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself. The contractor shall give not less than seven days, notice in writing to the Engineer-in-Charge before covering up or placing any work beyond reach of inspection and measurement in order that the same may be inspected and measured. In the event of breach of the above the same shall be uncovered at the contractor's expense carrying out such measurement or inspection.

- b. No materials shall be dispatched by the contractor before obtaining the approval of Engineer-in-Charge/Owner in writing.

5. ASSISTANCE TO THE ENGINEERS:

The contractor shall make available to the Engineer-in-Charge/Owner, free of cost necessary instruments and assistance in checking of works/inspection.

6. TESTS FOR QUALITY OF WORKS:

All workmanship shall be of the respective kinds described in the contract documents and in accordance with the instructions of the Engineer-in-Charge and shall be subjected from time to time to such tests at the contractor's cost as the Engineer-in-Charge may direct at place of manufacture or fabrication or on the site or at all or any such places. The contractor shall provide assistance, instruments, labour and materials as are normally required for examining, measuring and testing any workmanship as may be selected and required by the Engineer-in-Charge/Owner.

7. ACTION AND COMPENSATION IN THE CASE OF BAD WORK:

If it shall appear to the Engineer-in-Charge that any work has been executed with unsound, imperfect or unskilled workmanship or with materials of any inferior description, or that any materials or articles provided by the contractor for the execution of the work are unsound or of a quality inferior to that contracted for, or otherwise not in accordance with the contract, the contractor shall on demand in writing from the Engineer-in-Charge or his authorized representative, specifying the work, materials or articles complained of, notwithstanding that the same have been inadvertently passed, certified and paid for forthwith shall rectify or remove and reconstruct the works specified and provide other proper and suitable materials or articles at his own charge and cost, and in the event of failure to do so within a period to be specified by the Engineer-in-Charge in his



demand aforesaid, the contractor shall be liable to pay compensation at the rate of 0.5% of the estimated cost of the whole work, for every week limited to a maximum of 10% of the estimated cost of the whole work, while his failure to do so shall continue and in the case of any such failure the Engineer-in-Charge may on expiry of notice period rectify or remove and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expenses of the contractors in all respects. The decision of the Engineer-in-Charge as to any question arising under this clause shall be final and conclusive.

8. SUSPENSION OF WORKS:

The contractor shall, if ordered in writing by the Engineer-in-Charge or his representative, temporarily suspend the works or any part thereof for such period and such time as so ordered and shall not, after receiving such written order, proceed with the work therein ordered to be suspended, until he shall have received a written order to proceed therewith. The contractor shall not be entitled to claim/ compensation for any loss or damage sustained by him by reason of temporary suspension of the works aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of the works as aforesaid will be granted to the contractor, should he apply for the same, provided that suspension was not consequent to any default or failure on the part of the contractor.

9. OWNER MAY DO PART OF WORK:

Upon failure of the contractor to comply with any instructions given in accordance with the provisions of the contract, the owner has the alternative right, instead of assuming charge for entire work to place additional labour force, tools, equipments and materials on such parts of the work, as the owner may designate or also engage another contractor to carry out the work. In such cases, the owner shall deduct from the amount which otherwise might become due to the contractor, the cost of such work and materials with ten percent added to cover all departmental charges and should the total amount thereof exceed the amount due to the contractor, the contractor shall pay the difference to the owner.



CHAPTER 4: GENERAL TERMS & CONDITIONS

1. General:

The materials and workmanship shall satisfy the relevant Indian Standards, the job specifications contained herein & codes referred to. Where the job specifications stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.

In the absence of any standard / specification / codes of practice for detailed specifications covering any part of the work covered in this tender document, the instruction / direction of consultant/engineer will be binding on the contractor.

Wherever it is stated in this tender document that a particular supply is to be affected or that a particular work is to be carried out, it shall be understood that the same shall be affected / carried out by the contractor at his cost, unless a different intention is specifically and expressly stated herein or otherwise explicit from the context.

2. DAFFPL reserves the right to accept any tender as a whole and reject any or all tenders without assigning any reason. DAFFPL also reserves the right to allow public enterprises (Central/State) Price / purchase /contract / service preference as admissible under the Indian Government Policy.

3. PERIOD OF LIABILITY FROM THE DATE OF COMPLETION OF WORK:

- a) Materials & Works shall be guaranteed against manufacturing defects, materials, workmanship, design and any other reason for a period of 12 months from the date of completion of all works at DAFFPL Site.
- b) Warranty for replacement of material / accessories should be provided free of charges at our premises.
- c) The above guarantee/warranty will be without prejudice to the certificate of inspection or material receipt note issued by us in respect of the materials.
- d) All the materials, including components and subcontracted items, should be guaranteed by the vendor within the warranty period mentioned above. In the event of any defect in the material, the vendor will replace / repair the material at DAFFPL concerned location at vendor risk and cost on due notice.
- e) Alternatively, DAFFPL reserves the right to have the material repaired/replaced at the locations concerned, at the vendor's risk, cost and responsibility, in case, vendor does not replace / repair the material.
- f) The Vendor shall provide similar warrantee on the parts, components, fittings, accessories etc. so repaired and / or replaced.



- g) Vendor shall guarantee that the performance of the EQUIPMENT supplied under the CONTRACT shall be strictly in conformity with the specifications and shall perform the duties specified under the CONTRACT.
- h) During the entire warranty period as above, the bidder shall attend to breakdowns within a period of 72 hours. The scope of the vendor shall include the spares, tools & tackles etc. visit of service personnel and other traveling/boarding expenses replacement of defective parts free of cost, if any.
- i) RISK PURCHASE CLAUSE: We reserve the right to curtail or cancel the order either in full or part thereof if you fail to comply with the delivery schedule and other terms & conditions of the order. DAFFPL also reserves the right to procure same or similar materials/equipment and carry out the works through other sources at vendor's/contractor's entire risk, cost and consequences.
- j) Any damage that may lie undiscovered at the time of issue of completion certificate, connected in any way with the equipment or materials supplied by him or in the workmanship shall be rectified or replaced by the contractor at his own expense as deemed necessary by the Engineer-in-Charge or in default, the Engineer-in-Charge may cause the same made good by other workmen and deduct expenses (for which the certificate of Engineer-in-Charge shall be final) from any sums that may be then or at any time thereafter, become due to the contractor or from his security deposit. Effects prior to taking over: If at any time, before the work is taken over, the Engineer-in-Charge shall
- Decide that any work done, or materials used by the contractor, or any sub-contractor is defective or not in accordance with the contract or that the works or any portion thereof are defective or do not fulfill the requirements of contract (all such matters being herein after called 'Defects' in this clause) and
 - As soon as reasonably practicable, notice given to the contractor in writing of the said decisions specifying particulars of the defects alleged to exist or to have occurred, then the contractor shall at his own expenses and with all speed make good the defects so specified. In the case contractor shall fail to do so, the Owner may take, at the cost of the contractor, such steps as may in all circumstances, be reasonable to make good such defects. The expenditure, so incurred by the Owner shall be recovered from the amount due to the contractor. The decision of the Engineer-in-Charge with regard to the amount be recovered from the contractor will be final and binding on the contractor. As soon as the works have been completed in accordance with the contract and have passed the tests on completion, the Engineer-in-Charge shall issue a certificate (hereinafter called completion certificate) in which he shall certify the



date on which the work have been so completed and have passed the said tests and the Owner shall be deemed to have taken over the works on the date so certified. If the works have been divided into various groups in the contract, the Owner shall be entitled to take over any group or groups before the other or others and thereupon the Engineer-in-Charge shall issue a completion certificate which will however, be for such group or groups as taken over only.

- k) Defects after taking over: In order that the contractor could obtain a completion certificate, he shall make good with all possible speed, any defect arising from the defective materials supplied by the Contractor or workmanship or any act of omission of the contract that may have been noticed or developed after the works or group of the works has been taken over. The period allowed for carrying out such work will be normally one month. If any defect is not remedied within a reasonable time, the Owner may proceed to do the work at the contractor's risk and expense and deduct from the final bill / SD (Or PGB) such amount as may be decided by the Owner. If by reason of any default on the part of the contractor a completion certificate has not been issued in respect of every portion of the work within one month after the date fixed by the contract for the completion of the works, the Owner shall be at his liberty to use the works or any portion thereof in respect of which a completion certificate has been issued provided that the works or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completing these works for the issue of completion certificate.
- l) The Security Deposit/retention money deducted / furnished shall be retained for the period of liability as given in clause above. This Retention amount or Bank Guarantee furnished against Security Deposit/retention money shall be released only on expiry of the period of liability and also based on the certification of the Engineer-in-charge that no defect/damage has been reported / observed during the stipulated period of liability for the contract.

4. Construction/Execution Program:

A detailed bar chart/Gantt Chart showing various activities shall be prepared and submitted by the successful bidder before undertaking the execution of works without which the bidder may not be allowed to undertake the execution of works.

The supply/work shall be executed strictly as per the agreed time schedule. The period of completion shall include the time required for mobilization, execution, testing, inspection as well as rectification, if any & completion in all respects to the entire satisfaction of the owner.

Monthly/weekly construction/execution programme shall be made by the



contractor. The contractor shall adhere to these targets/programme by deploying adequate personnel and construction tools and tackles. He shall also supply all materials in his scope of supply in time to achieve the targets set out in the weekly and the monthly programme.

The contractor shall submit a report daily/weekly (As decided by EIC/Owner) progress of the work done on previous day along with status of/on labour and equipment deployed for each category of work without which the EIC/Owner reserves the right to stop the execution of works.

In case of any delay in handover of any facility/site to the contractor by the Fuel Farm Operator/DAFFPL, or any other hinderance beyond the contractor's scope/control (as approved by EIC) the delay period shall be added to the delivery/work completion period of this contract.

Hinderance register/record has to be maintained by the contractor duly approved/counter signed by EIC on the day/time of hinderance. The price reduction/liquidated damages shall be calculated on the basis of scheduled completion & actual data from hinderance register/record. The decision of EIC shall be binding on the contractor & non-negotiable.

5. Construction Water and Power:

- a) The contractor has to make the necessary arrangements for metering and further distribution for water & power both required for job at no extra cost to DAFFPL. All arrangements/materials shall be as per electrical rules/standards/Approved makes & instructions of EIC.
- b) Electricity can be provided by DAFFPL @ Rs. 21.00 per unit plus tax at a point. The contractor has to then accordingly arrange for required metering and cabling (without any joint) from that point.
- c) The DAFFPL shall not take any guarantee for the supply of water & electricity and will not relieve the contractor of his responsibility in making his own arrangement and for the timely completion of the various works as stipulated.

6. Safety Rules and Regulations:

- a) All Safety rules and regulations as applicable at the fuel farm or as directed by the Owner/Fuel Farm operator have to be followed by the contractor without fail. If any damage occurs due to negligence of safety, the contractor will be held responsible for the same.
- b) The contractor is required to take necessary care to protect the existing nearby structure while carrying out his scope of work. Any damage caused to other property shall be rectified at his own cost.



7. Tests and Inspection:

The contractor shall carry out the various tests as enumerated in the technical specifications of this tender document and the technical documents that will be furnished to him during the performance of the work. No separate payment shall be made.

The contractor shall carry out at his cost all the tests either on the field or through external Institutions / laboratories, concerning the execution of the work and supply of materials by the contractor.

Any work not conforming to the execution drawings, specifications or codes shall be rejected forthwith and the contractor shall carry out the rectification at its own cost. Results of all inspections & tests shall be recorded in the inspection reports, test reports, etc., which will be approved by the Engineer-in-charge. These reports shall form part of the completion documents.

Inspection & Acceptance of works shall not relieve the contractor from any of his responsibilities under this contract.

8. Site Cleaning:

The contractor shall take care to clean the working site from time to time for easy access to work site and for safety. The working site should be always kept clear to the entire satisfaction of DAFFPL.

Before handing over any work to the owner, the contractor in addition to other formalities to be observed as detailed in the document shall clear the site to the entire satisfaction of DAFFPL.

The contractor shall arrange to dispose of debris and any other waste product created while carrying out the work, outside DAFFPL Fuel Farm premises. The Contractor shall take due care while disposing of such waste materials and ensure that any rules/ regulations laid down by Municipal Corporation or any other statutory body are not violated. The Contractor shall be responsible and answerable to any complaint arising out of improper disposal of waste material. The quoted rate shall involve the cost of same and no extra payment shall be made towards this account.

In case of failure to do so by the Contractor, the Corporation shall have the right to get the site cleared at the risk and cost of the Contractor.

9. **Site Restriction:**

The job must be done in an area which is inside the premises of DAFFPL Fuel Facility. Successful bidder will have to follow all the security norms and



procedures for entry and exit to the facility. The job timings will have to change as per the permissions obtained from the Operation Dept. All the entry procedures for labours / machinery / raw materials as per the rules of the DAFFPL/fuel farm will have to be followed by the vendor. Contractor shall visit the site and ensure familiarity with the working condition / limitations at the site. Also, the entire works are to be carried out in an operating Location. The contractor may have to follow the timings of the facility and must work under restricted conditions. The normal working hours of the facility is 0930 Hrs to 1800 Hrs on Monday to Saturday except holidays. Working beyond above normal working hours /holidays /Sundays are to be with prior permission of Engineer in charge and relevant facility officers. Contractor is required to plan his work within the normal working hours and days and accordingly he has to mobilize the resources to complete the job within the scheduled time. However, all efforts will be made by DAFFPL to give extended working time beyond normal working time in order to help the contractor for early completion of the job. No additional payment / charges shall be payable for such works. Not getting permission for working on holidays/ Sundays or beyond normal working hours will not be considered as reason for delay in work. The contractor and his personnel have to obey all the rules and regulations of the plant. Trained and experienced supervisors/ engineers are required to be present at the work spot always.

Also, work may get delayed due to operational requirements. Any extra claims on account of the same will not be entertained. Fire Screen as required to be installed to completely seal the area under work.

The tenderer must visit the site of the tender and familiarize himself with location, operating / working conditions as well as any other local factors which could influence the working before quoting for the job. His quote should take care of any such restrictions, conditions etc. and any claim afterwards will not be entertained. **It is suggested that the bidders must visit the site in order to have a better idea of site conditions and factors.** It is strongly urged that the contractor visits DAFFPL fuel farm and examines the condition of the site.

10. The delivery period/work completion as mentioned in NIT is inclusive of all the lead time for procurement of raw materials, inspection / testing, packing or any other activity whatsoever required to be accomplished to complete the work in all respect.

The work is required to be done in a working/operating location, the party has to get necessary Hot/cold work permits from the concerned officer in



plant/fuel farm as per OISD standards and all workmen should be provided with necessary PPE (safety helmet, safety belts, safety shoes, electrical gloves etc.) and other standard safety equipment as may be required. Contractors strictly follow the safety norms of fuel farm. Any delay on account of non-adherence to safety norms, rules and regulations of the plant as well as obtaining work permits from the plant shall not be accounted for the delay in completion of the job.

11. Receipt & storage of material at Site: Contractor is required to make his own arrangement for unloading and storage of materials at site. The contractor is required to inform us prior to dispatch of materials and his representative is required to be available for receipt and unloading of materials at site.
12. For carrying out the jobs inside the fuel farm the vendor must arrange for associated tools, tackles, manpower, machinery of his own and no extra payment will be made to vendor on account of the same.
13. All electrical works shall be carried out by qualified workers under supervision of class-A/valid electrical license holder.
14. For arranging the electricity vendor to note that only Acoustic Proof, box type DG sets will be allowed inside the depot premises. The vendor also note that proper earthing system as per IS 3043 (LATEST) has to be provided by the vendor for DG set and no extra payment will be done for the same. There should be two nos. earthing system connected in a grid at a location as instructed by DAFFPL site in-charge.
15. Coordination with other Agencies:

Work shall be carried out in such a manner that the work of other agencies operating at the site is not hampered due to any action of the contractor. Proper coordination with other agencies will be the responsibility of the contractor. In case of any dispute, the decision of the Engineer-in-charge shall be final and binding on the contractor.
16. The contractor shall cooperate with other contractors for smooth execution of project related works. Along with the works covered under this contract other works shall be carried out simultaneously by other Contractors. The Contractor shall extend full co-operation to the other Contractors and the works shall be carried out in such a way as not to affect the progress of the project. Any damage caused to other works shall be rectified by the contractor at their entire risk and cost.



17. BID PRICES:

- a) Prices shall be furnished strictly in the Price Bid format of the tender document.
- b) Bidder should quote their lowest and best offered price. Prices so quoted will remain firm till satisfactory completion of order. The price will not be subjected to escalation for any reason whatsoever.
- c) Bidders quoted prices shall be deemed to include entire Specification of items and all obligations and responsibilities to be carried out / executed by the Bidder as per terms of the tender document. It is clearly understood by the Vendor that it is for the Vendor to ascertain and assess the applicable Acts/ Regulations/ Laws etc., entirely of their own. It is also for the Vendor to ascertain and assess the applicability of taxes, duties, levies etc. In case of any difference of opinion between Vendor's proposal and interpretation by any tax/assessing (or similar) authorities, on the rate or terms and conditions related to taxes and duties etc., owner's liability shall be strictly as per terms/provisions of the contract based on tender document and Vendors offer.
- d) No other charges accept those mentioned in the tender document will be payable to the vendor.

18. Materials are required to be dispatched by the vendor to the locations, on freight paid DOOR- DELIVERY CONSIGNEE COPY ATTACHED basis along with copies of Inspection release note & internal test certificates & other documents as mentioned elsewhere in this tender document.

19. Bidder shall quote considering the cost of all approvals, insurances and other applicable charges; nothing shall be paid/reimbursed additionally on any account.

20. Goods & Services Tax (GST): -The tenderer should have valid Goods & Service Tax registration. Tenderer should enclose the copy of the registration (GST) /copy of acknowledgement along with the tender. The Parties without valid Goods & Service Tax number need not quote. As per Section 171 of CGST/SGST Act, "Any reduction in rate of tax on any supply of goods or services or the benefit of input tax credit shall be passed on to the recipient by way of commensurate reduction in prices.

21. TAXES & DUTIES:

- a) Bidder(s) quoted prices shall be exclusive of all taxes, duties, cess, levies etc.,
- b) The invoice should clearly mention that applicable Excise Duty, Education Cess or any other taxes, cess charged & paid / payable on quoted item to enable the owner to claim MODVAT / GST / Input credit.
- c) The statutory variation in Excise duty, Education Cess and Sales



tax/VAT/GST/GST on finished goods and introduction of new tax, from bid due date till the contractual completion period shall be to owner account against submission of the documentary evidence. However, any increase in the rate of these taxes and duties beyond the contractual delivery period shall be to Seller account. Any decrease in the rate of these taxes and duties shall be passed on to the owner. Any additional excise duty due to an increase in turnover would be to seller account.

- d) It is for the Bidder to assess and ascertain the rate of excise duty, education Cess, any other Cess and sales tax/VAT/GST etc. applicable on quoted items. It is clearly understood that Owner will not have any additional liability towards charges of Excise Duty, Education Cess, GST and Sales Tax/VAT/GST which is based on Bidders wrong assessment / interpretation of applicability of such Excise Duty and/or education cess and / or Sales Tax/VAT/GST etc.
- e) Successful bidder shall carry out its obligations towards services at site as mentioned in technical specifications without any extra charges.
- f) Octroi/Entry tax, if any, in the any state of India shall be directly paid by the vendor, if applicable.
- g) DAFFPL shall not be liable, in case the tax authorities assess the tax elements in a different way on account of any reason, whatsoever.
- h) Taxes and duties other than those specified in this document, if any, shall be included in the quoted prices and no separate reimbursement shall be made by DAFFPL.

22. Income Tax / Corporate Tax:

- a) As regards Income Tax, Surcharge on Income Tax or any other Corporate Tax payable by the Bidder for reason of the contract awarded, and / or on their expatriate personal, the Owner shall not bear any Tax liability whatsoever, irrespective of the mode of construction of contract / order. The Bidder shall be liable and responsible for payment of such tax, if attracted under the provision of Indian Income Tax Act.
- b) Bidder may note that if any tax is deductible at source as per Indian Income Tax Law, the same will be deducted before releasing any payment to the Bidder and a TDS (Tax deducted at source) certificate will be furnished to the Bidder.
- c) Bidder may note that where the responsibility to deduct TDS under section 194Q of Income Tax Act is on DAFFPL, bidder shall not collect any TCS under section 206C(1H) of the Income Tax Act from DAFFPL.**
- d) Accordingly, Bidder shall have the responsibility to check and include such provisions of taxes in the prices.
- e) In the event of a delay in delivery/work completion due to reasons attributable to Bidder, any new or additional taxes or duties levied by Statutory authorities during this period shall be borne by the Bidder.



23. INSURANCE

- a) Bidder shall carry and maintain any and all statutory insurance(s) required under Indian Laws and Regulations, including Workmen compensation Act/ESI/Third party liabilities etc. and insurances for their personnel engaged in performance of the work at their own cost. DAFFPL reserves the right to seek these documents at any time.
- b) The vendor shall arrange transit Insurance for door delivery of equipment's to DAFFPL Fuel Farm, New Delhi for delivery.
- c) The complete unit is to be fully insured by the bidder against loss, damage, and third-party risks till the material/equipment/works under construction is delivered/handed over to DAFFPL. DAFFPL reserves the right to seek these documents at any time.
- d) All goods supplied under the contract shall be fully insured by the vendor against loss or damage incidental to manufacture or acquisition, transportation, storage, delivery and erection. The vendor is advised to take comprehensive insurance for the value of CAPEX amount to the above effect without any cost implication to DAFFPL. DAFFPL won't be responsible for any theft, damage or loss of equipment/s during the pendency of the project.
- e) The CONTRACTOR shall be at all times indemnify and keep indemnified the OWNER and its officers, servants and agents from and against all third party claims whatsoever (including but not limited to property loss and damage, personal accident, injury or death of or to property or person of any sub-contractor and/or the servants or agents of the CONTRACTOR or any other contractor(s) and any sub-contractor and/or of the Owner), and the CONTRACTOR shall at his own cost and initiative at all times up to the successful conclusion of the "PERIOD OF LIABILITY FROM THE DATE OF COMPLETION OF WORK" hereof take out and maintain insurance policies in respect of all insurable liabilities under this clause, including but not limited to third party insurance and liabilities under the Motor Vehicles Act, 1988; Workmen's Compensation Act, 1923; Fatal Accidents Act, 1855; Personal Injuries (Compensation) Insurance Act, 1963, Emergency Risk Insurance Act, and/or other Industrial Legislation from time to time in force in India

24. INSPECTION:

- a) Material shall be inspected by the owner or its representative. Charges other than third party inspection is entirely vendor responsibility and in no way should affect the completion schedule.
- b) OWNER may, at its own expense, witness any test or inspection. In order to enable the OWNER to witness the tests/inspections OWNER will advise the bidder in advance whether it intends to be present at any of the inspections.
- c) Even if the inspection and tests are fully carried out, the Vendor shall not be absolved from its responsibilities to ensure that the Material(s), raw materials,



components and other inputs are supplied strictly to conform and comply with all the requirements of the Contract at all stages, whether during manufacture and fabrication, or at the time of Delivery as on arrival at site and after its commissioning or start up and during the defect liability period. The inspections and tests are merely intended to prima-facie satisfy OWNER that the Material(s) and the parts and components comply with the requirements of the Contract. The Vendor's responsibility shall also not be anyway reduced or discharged because OWNER or OWNER's representative(s) or Inspector(s) shall have examined, commented on the Vendor's drawings or specifications or shall have witnessed the tests or required any chemical or physical or other tests or shall have stamped or approved or certified any Material(s).

- d) Although material approved by the Inspector(s), if on testing and inspection after receipt of the Material(s) at the location, any Material(s) are found not to be in strict conformity with the contractual requirements or specifications, OWNER shall have the right to reject the same and hold the Vendor liable for non-performance of the Contract.

25. TEST & PERFORMANCE CERTIFICATES: Bidder shall furnish Material test and Performance Certificates for the materials along with the challans and invoice.

26. The term "FORCE MAJEURE" as employed in this contract shall mean wars (declared or undeclared) or revolutions, civil wars, tidal waves, fires, major floods, earthquakes, epidemics, quarantine restrictions and freight embargoes and transporter's strikes affecting the country as a whole.

27. Only in the event of causes of Force Majeure occurring within the contractual delivery/work completion period and if they impede the performance of contract, the delivery/work completion dates shall be extended on receipt of application from the bidder/Owner without imposition of penalty. Only those causes which depend on natural calamities, civil wars, fire and national strikes which have duration of more than seven consecutive calendar days are considered the causes of force Majeure. The decision of Owner shall be final and binding on vendor.

28. Repeat Order: DAFFPL reserves the right to place repeat order up to the order quantity within One Year from the date of original order on mutual agreement basis.

29. Any reference to the Govt. Acts /Regulations etc. in the Bid Document is only indicative, and it is entirely for the bidder to ascertain the applicable Acts/Regulations & ensure compliance.



30. **RECOVERY OF SUMS DUE:** Whenever, any claim against bidder for payment of a sum of money arises out of or under the contract or in any other form, the owner shall be entitled to recover such sums from any sum then due or when at any time thereafter may become due from the vendor under this or any other form and should this sum be not sufficient to cover the recoverable amount of claim(s), the vendor shall pay to DAFFPL on demand the balance remaining due.
31. **PATENTS & ROYALTIES:** The vendor shall fully indemnify owner and users of materials specified herein/supplied at all times, against any action, claim or demand, costs and expenses, arising from or incurred by reasons of any infringement or alleged infringement of any patent, registered design, trademark or name, copy right or any other protected rights in respect of any materials supplied or any arrangement, system or method of using, fixing or working used by the vendor. In the event of any claim or demand being made or action sought against Owner in respect of any of the aforesaid matter, the vendor shall be notified thereof immediately and the vendor shall at his/its own expense with (if necessary) the assistance of Owner (whose all expense shall be reimbursed by the vendor) conduct all negotiations for the settlement of the same and/or litigation which may arise thereof.
32. **LIABILITY CLAUSE:** In case where it is necessary for employees or representatives of the Vendor to go upon the premises of owner, vendor agrees to assume the responsibility for the proper conduct of such employees/representatives while on said premises and to comply with all applicable Workmen s Compensation Law and other applicable Government Regulations and Ordinances and all plant rules and regulations particularly in regard to safety precautions and fire hazards. If this order requires vendor to furnish labour at site, such vendors workmen or employees shall under NO circumstances be deemed to be in owner's employment and vendor shall hold himself responsible for any claim or claims which they or their heirs, dependent or personal representatives, may have or make, for damages or compensation for anything done or committed to be done, in the course of carrying out the work covered by the purchase order, whether arising at owner s premises or elsewhere and agrees to indemnify the owner against any such claims, if made against the owner and all costs of proceedings, suit or actions which owner may incur or sustain in respect of the same.
33. **COMPLIANCE OF REGULATIONS:** Vendor warrants that all goods/Materials covered by this order have been produced, sold, dispatched, delivered and furnished in strict compliance with all applicable laws, regulations, labour agreement, working conditions and technical codes and statutory



requirements as applicable from time to time. The vendor shall ensure compliance with the above and shall indemnify owner against any actions, damages, costs and expenses of any failure to comply as aforesaid.

34. **REJECTION, REMOVAL OF REJECTED GOODS AND REPLACEMENT:** In case the testing and inspection at any stage by inspectors reveal that the equipment, materials and workmanship do not comply with specification and requirements, the same shall be removed by the vendor at his/its own expense and risk, within the time allowed by the owner/purchaser. The Purchaser shall be at liberty to dispose off such rejected goods in such manner as he may think appropriate, in the event the vendor fails to remove the rejected goods within the period as aforesaid. All expenses incurred by the Purchaser for such disposal shall be to the account of the vendor. The freight paid by the purchaser, if any, on the inward journey of the rejected materials shall be reimbursed by the vendor to the purchaser before the rejected materials are removed by the vendor. The vendor will have to proceed with the replacement of the Equipments without claiming any extra payment if so required by the purchaser. The time taken for replacement in such event will not be added to the contractual delivery period.
35. **NON-WAIVER:** Failure of the Owner to insist upon any of the terms or conditions incorporated in the Purchase Order or failure or delay to exercise any rights or remedies herein, or by law or failure to properly notify Vendor in the event of breach, or the acceptance of or payment of any goods hereunder or approval of design shall not release the Vendor and shall not be deemed a waiver of any right of the Owner to insist upon the strict performance thereof or of any of its or their rights or remedies as to any such goods regardless of when such goods are shipped, received or accepted nor shall any purported oral modification or revision of the order by DAFFPL act as waiver of the terms hereof. Any waiver to be effective must be in writing. Any lone incident of waiver of the any condition of this agreement by DAFFPL shall not be considered as a continuous waiver or waiver for other condition by DAFFPL.
36. **NEW & UNUSED MATERIAL:** All the material supplied/used by the vendor shall be branded new, unused and of recent manufacture.
37. **CANCELLATION:**
- a) DAFFPL reserves the right to cancel the contract/purchase order or any part thereof through a written notice to the vendor if –
 - i. The vendor fails to comply with the terms of this purchase order/contract.
 - ii. The vendor becomes bankrupt or goes into liquidation.



- iii. The vendor fails to deliver the goods on time and/or replace the rejected goods promptly.
 - iv. The vendor makes a general assignment for the benefit of creditors.
 - v. A receiver is appointed for any of the property owned by the vendor.
 - vi. Any other conditions where owner's commercial interest get affected.
- b) Upon receipt of the said cancellation notice, the vendor shall discontinue all work on the purchase order matters connected with it. DAFFPL in that event will be entitled to procure the requirements in the open market and recover excess payment over the vendor's agreed price if any, from the vendor and also reserving to itself the right to forfeit the security deposit if any, made by the vendor against the contract. The vendor is aware that the said goods are required by DAFFPL for the ultimate purpose of materials production and that non-delivery may cause loss of production and consequently loss of profit to DAFFPL. In this event of DAFFPL exercising the option to claim damages for non-delivery other than by way of difference between the market price and the contract price, the vendor shall pay to DAFFPL, fair compensation to be agreed upon between DAFFPL and the vendor. The provision of this clause shall not prejudice the right of DAFFPL from invoking the provisions of the price reduction clause mentioned aforesaid.

38. ANTI –COMPETITIVE AGREEMENTS/ABUSE OF DOMINANT POSITION: The Competition Act, 2002 as amended by the Competition (Amendment) Act, 2007 (the Act), prohibits anti- competitive laws and aims at fostering competition and at protecting Indian markets against anti- competitive practices by enterprises. The Act prohibits anti- competitive agreements, abuse of dominant position by enterprises, and regulates combinations (consisting of acquisition, acquiring of control and M&A) wherever such agreements, abuse or combination causes, or is likely to cause, appreciable adverse effect on competition in markets in India. DAFFPL reserves the right to approach the Competition Commission established under the Act of Parliament and file information relating to anti-competitive agreements and abuse of the dominant position. If such a situation arises, then Vendors are bound by the decision of the Competitive Commission and also subject to penalty and other provisions of the Competition Act.

39. ASSIGNMENT: The Vendor can/does not have any right to assign his rights and obligations under these general purchase conditions without the prior written approval of DAFFPL.

40. GOVERNING LAW: These General Purchase Conditions shall be governed by the Laws of India.

41. AMENDMENT: Any amendment to these General Purchase Conditions can



be made only in writing and with the mutual consent of the parties to these conditions.

42. The following expressions used in these terms and conditions and in the purchase/work order shall have the meaning indicated against each of these:

- a) **OWNER**, Client, Purchaser, buyer means DAFFPL
- b) **ENGINEER-IN-CHARGE**, Either Representative of owner/DAFFPL or PMC appointed by DAFFPL
- c) **VENDOR**, Tenderer, Bidder, Contractor, Seller, Supplier, manufacturer stated anywhere in the tender document carry the same meaning: It means the person, firm or the Company/Corporation to bidding and shall include its successors and assigns.
- d) **INSPECTOR/TPIA**: Person/agency deputed by Owner for carrying out inspection, checking/testing of items ordered and for certifying the items conforming to the purchase order specifications.
- e) **GOODS/MATERIALS**: means any of the articles, materials, machinery, equipment's, supplies, drawing, data and other property and all services including but not limited to design, delivery, installation, inspection, testing and commissioning specified or required to complete the order.
- f) **SITE/LOCATION**: means any Site where DAFFPL desires to receive materials anywhere in India as mentioned in tender.
- g) **CONTRACT**, Order or Purchase Order/CALL-OFF means the agreement for supply of goods/ materials for required quantity between Owner and Vendor, for a fixed time on mutually agreed terms and conditions.
- h) The term MR means Material Requisition containing technical requirements and scope of work (technical), GPC means General Purchase Conditions containing commercial terms & conditions, PO means Purchase order issued after award of contract incorporating agreed deviations in MR, ATC means Agreed Terms & Conditions, RFQ means Request for Quotation.
- i) For the purpose of the contract, the trade terms FOB, CFR and CIF, DAP shall have the meanings as assigned to them by INCOTERMS 2010 published by ICC, Paris.

43. REFERENCE FOR DOCUMENTATION:

After finalization of Contract/Work/Purchase Order: The number and date of Contract/Work/Purchase Order must appear on all correspondence, drawings, invoices, dispatch advice, (including shipping documents if applicable) packing list and on any documents or papers connected with this order.

44. ARBITRATION

- a) **GOVERNING LAWS**: The laws of Union of India shall govern all matters



concerning the tender. Any issue arising related to the tender, or the selection process shall be adjudged by the courts in Delhi alone.

- b) Any 'dispute or difference of any nature whatsoever, any claim, cross-claim, counterclaim or set off of the Owner against the Consultant or regarding any right, liability, act, omission or account of any of the parties hereto arising out of or in relation to this agreement shall be referred to the Sole Arbitration of the nominated Director of the Owner or of some Officer of the Owner who may be nominated by the nominated Director. The consultant will not be entitled to raise any objection to any such arbitrator on the ground that the arbitrator is an officer of the Owner or that he has dealt with the matters to which the contract relates or that in the course of his duties as an Officer of the Owner, he had expressed view on all or any other matters in dispute or difference. In the event of the arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason, the nominated Director as aforesaid at the time of such transfer, vacation of office or inability to act may in the discretion of the nominated Director designate another person to act as arbitrator in accordance with the terms of the agreement to the end and intent that the original Arbitrator shall be entitled to continue the arbitration proceedings notwithstanding his transfer or vacation of office as an officer of the Owner if the nominated Director does not designate another person to act as arbitrator on such transfer, vacation of office or inability of original arbitrator. Such person shall be entitled to proceed with the reference from the point at which it was left by his predecessor. It is also the term of this contract that no person other than the nominated Director of the Owner or a person nominated by such nominated Director as aforesaid shall act as arbitrator hereunder. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to the agreement subject to the provisions of the Arbitration & Conciliation Act, 1996 or any statutory modification or reenactment thereof and the rules made there under for the time being in force shall apply to the arbitration proceedings under this clause.
- c) The arbitrator shall have the power to order and direct either of the parties to abide by, observe and perform all such directions as the arbitrator may think fit having regard to the matters in difference i.e. dispute, before him. The arbitrator shall have all summary powers and may take such evidence oral and/or documentary, as the arbitrator in his absolute discretion thinks fit and shall be entitled to exercise all powers under the Indian Arbitration & Conciliation Act 1996 including admission of any affidavit as evidence concerning the matter in difference i.e. dispute before him.
- d) The parties against whom the arbitration proceedings have been initiated, that is to say, the Respondents in the proceeding, shall be entitled to prefer a cross claim, counter claim or set off before the Arbitrator in respect of any matter in issue arising out of or in relation to the Agreement without seeking a



formal reference of arbitration to the nominated Director/officer for such counter-claim, or set off and the Arbitrator shall be entitled to consider and deal with the same as if the matters arising therefore has been referred to him originally and deemed to form part of the reference made by the nominated Director/officer.

- e) The arbitrator shall be at liberty to appoint, if necessary, any accountant or engineering or other technical person to assist him, and to act by the opinion so taken.
- f) The arbitrator shall have the power to make one or more awards whether interim or otherwise in respect of the dispute and difference and in particular will be entitled to make separate awards in respect of claims of cross claims of the parties.
- g) The arbitrator shall be entitled to direct any one of parties to pay the costs to the other party in such a manner and to such an extent as the arbitrator may in his discretion determine and shall also be entitled to require one or both the parties to deposit funds in such proportion to meet the arbitrator's expenses whenever called upon to do so.
- h) The parties hereby agree that the courts in the city of Delhi alone shall have jurisdiction to entertain any application or other proceedings in respect of anything arising under this agreement and any award or awards made by the Sole Arbitration hereunder shall be filed (if so required) in the concerned courts in the city of Delhi only.



Annexure-A

1. Scope of Work & Technical Specifications

A. Scope of Work

This document specifies the minimum acceptable requirements set by the Purchaser for design, engineering, procurement, fabrication, assembly, inspection, transportation, loading, unloading, delivery, testing, commissioning of 440V LT Panel (Emergency Panel) along with all required material (such as FRLS cables, jointing kits, cable end termination kits, glands, bus duct material, earthing material etc.) & consumables with allied electrical, mechanical & civil works complete for Fuel Farm of DAFFPL, IGI Airport, New Delhi.

Scope of work includes the supply of all materials, consumables and carrying out all activities (electrical, mechanical & civil) for 440V LT Panel (Emergency Panel). Laying, shifting, connection/termination of all power, control, signal, communication new & existing cables, reconnection of existing bus bars/bus duct, power, control & signals cables as applicable and connection to existing earthing system.

Contractor shall be responsible for the compliance of OISD norms, safety norms and other Indian norms during execution of the job.

The contractor shall arrange temporary power requirements for the job work, Cranes, transportation of material or any other requirement shall be fulfilled by contractor.

All civil work including any civil dismantling, wall breaking, concrete chipping, reconstruction/construction of required civil & mechanical structure, painting, grouting etc. complete in and outside electrical substation (LT Panel Room, VFD Room, Transformer Room etc.) for commissioning of emergency of panel including bus duct work, all cabling related works, cable trench construction works etc. All civil works including excavation in all types of soil & concrete up to 0.9 m depth and of desired width, back filling, supply & laying of sand & bricks below and above of cable/pipes in which will be laid under the ground, road crossing, pipe/hume pipe laying, PCC work, RCC work, clamping by metallic clamps etc.) for laying all types of cables is responsibility & scope of bidder/contractor.



Scope also includes:

- Design, supply, installation, testing & commissioning of new LT Electrical Panel (Emergency Panel).
- Supply, installation, testing & commissioning of FRLS armoured cables which includes cable laying, back pulling and laying/reinstallation, jointing, termination/re-termination, connection opening and connection/reconnection to panels/feeders with the required length of cables of various sizes.
- Supply and Installation of cable markers and identification tags, GI saddles, saddle bars and associated accessories.
- Supply and installation of cable glands (flameproof, double compression type), Lugs, jointing kits, termination kits, hardware items, etc.
- Existing bus ducts extension and termination to new LT panel including all required material and works (Electrical, Mechanical & Civil): Supply, installation, extension, modification, testing & commissioning of existing bus ducts from both sources to new LT panel including connection/termination/reconnection and termination at/to Emergency Panel including wall breaking, wall reconstruction, painting, metallic supporting etc. and all required materials, consumables, works etc. shall be in the scope of bidder.
- Supply and installation of fire sealing compound is to be used at cable cellar / gland plate area so that fire in cellar is not extended to panel room area and vice versa.
- Supply and installation of earthing material such as earth strip, all accessories etc., for earthing of equipment/panels, hook-up to the existing fuel farm earth grid as per instruction of EIC and OISD norms.
- Construction of cable trench (includes supply of all required materials and works) including crossing and merging into existing trenches.
- Modification in DG Panel: Design, supply, installation, testing & commissioning of all required materials, consumables and to carry out all required works for modification in existing DG panel in order to provide power supply (02 Nos) to new LT Panel (Emergency Panel).
- Supply of consumable items like welding rods, electrode, Teflon tape, electrical tapes, lugs, ferrules with proper identification of tags.
- Submission of as built drawings & SLD in both pdf & CAD format along with hard copies (02 Sets) is in contractor scope.
- Any other equipment/services which are not explicitly mentioned above or in the price bid but deemed necessary for the successful operation of



the system complete in all respects shall be in contractor's scope.

Contractor shall carry out the tests on cables, panels etc. whenever required/instructed by EIC without any limitations or condition.

The scope of work also includes supply of any other material to complete the work in all respects. The completion work includes all the items and related work including testing, in pre-commissioning, commissioning and trial runs. It is Contractor's responsibility to execute the job in all respect as per the detailed drawings / specifications / instructions by the EIC / Owner.

Documents are to be submitted immediately after the date of award of contract.

- Quality assurance plan, time schedule (weekly & monthly) with start and completion date for each activity of electrical installation work, procurement plan, Gantt Chart.
- Samples / technical details of equipment / materials to be supplied by the Contractor.
- Detailed Site organization chart showing the information of the personnel to be proposed to deploy at site along with their detailed biodata.
- Copy of valid electrical Contractor's license for the area / State of the Project.

B. Specifications

LT Switchgear Panel:

This specification covers design, fabrication (after approval of drawing from owner), transportation, loading, unloading, dismantling of existing panel, shifting of panel (if required), assembling, wiring, testing, packing, forwarding, delivery at site, installations and testing of 440V LT Panel including accessories complete in all respect. The Panel should be type tested for their rated withstand capacities as per IEC 61439-1&2. All accessories required for normal operation of panels are deemed to be considered as a part of the contractor's scope of supply. It is not the intent to specify completely herein, all details of design and construction of the LT Panel. However, the LT Panel shall conform in all respects to high standard of engineering, design, testing and workmanship.



Construction: The panel shall be fabricated out of CRCA sheet steel of minimum 2 mm thick for framework so as to meet impact strength requirement of IK08 and IP55 or better as per IEC 61439 & IEC 62262. Wherever necessary, such sheet steel members shall be stiffened by angle iron frame work. All the elements of LT panels (frames, cubicles, doors etc.,) shall undergo seven tank surface treatments. Panels shall be painted by powder coating of approved shade / color (process with two coats of zinc chromate primer and two coats of powder painting). The painting should be done to get a smooth, scratch free and corrosion resistance surface.

General construction shall employ the principle of compartmentalization and segregation for each circuit for required separation form. Unless otherwise approved, incomers and bus section panels or sections shall be separate and independent and shall not be mixed with feeders sections. Each section of the rear accessible type panel / board shall have hinged access doors at the rear. Operating levers, handle etc. of highest units shall not be at a height more than 1.8 m, and that of the lowest unit shall not be less than 300 mm above finished floor level as per IEC 61439. Multi-tier mounting of feeders housing MCCBs is permissible. The general arrangement for multi-tier construction shall be such that the horizontal tiers formed present a pleasing and aesthetic look. The general arrangement shall get approved before fabrication. There shall be separate gland plate for each cable entry so that there will not be dislocation of already wired circuit when new feeders are added. The construction shall include necessary cable supports for clamping the cable in the cable alley or in rear cable chamber. The vermin proofing shall be such that the vermin cannot enter from one compartment to another/bus bar chambers. Neoprene gaskets shall be used for all doors, covers and openings.

All retaining catches, screws and bolts for doors and covers shall be cadmium/chromium plated. Screws and bolts shall be captive. Gaskets shall be provided properly on covers, doors and joints of all LT Panels. The LT panels shall be of bolted construction (no welded construction). Each vertical section shall be equipped with Anti- condensation space heaters with thermostat which is to be located in the cable alley. **There shall be minimum one spare outgoing compartment having provision for future expansions/works/connections.**

Bus Bars: The main buses & connections shall be of high conductivity aluminum alloy as per IS: 5082 sized for specific current rating with maximum temperature limited to 85 degree C (i.e. 35 degree C rise over 50 degree C ambient). Bus bars shall be designed for a maximum current density of 0.8A/sq mm.



The bus bars should be designed considering the existing arrangement. The bus bars shall be insulated with heat shrink PVC sleeves with color coding. The clearances between bus bars shall be adequate enough in view of short circuit capacity as per relevant IS/ IEC.

Digital Multifunction Meter (DMFM): This specification is for LT, 3 Phase 4 wire panel mounted Digital Multi-Functional Meters of accuracy class 1.0 with RS 485 based Serial Communication with MODBUS RTU protocol for easy integration with SCADA.

Multifunction digital panel meters shall be provided for accurate and reliable measurement of electrical quantities (I, V, Hz, p.f., KW, KWh, KVA, KVAR, etc.) for SCADA. It has to be a large multi-line backlit LCD panel which enables four parameters to be displayed at the same time. An expansion module can be fitted for enhanced functionality (pulse input/output).

Accuracy:

Class of accuracy of meter will be as per IEC62052-11 and IEC62053-22. Accuracy class: 1.0 (same accuracy for active and reactive power).

Starting current:

The meter will start registering energy at 0.4 % of basic current (I_b). The meter will have a built in "Real Time Clock" with an accuracy of ± 3 minutes per year or better.

Burden: Aux- 5VA, Current Circuit-0.2VA, Voltage Circuit- 0.2VA.

Electrical:

Connection type (Aux. supply): Common product for HT3/ HT4/ LT-4 application. Wiring configuration: Common product for 3 P-3 W and 3 P-4 W application Voltage range: Measurement voltage range 50 to 550 VAC (phase to phase) and 28.86 to 300 VAC P-N Aux power supply range: 80 to 300 VAC/DC Current range Available: 5A Main frequency: 50/60 Hz with -20% to +40%

Value Added Features: RS485 Port: Meter will be provided with RS485 MODBUS port.

Load Survey: 60 days for 6 parameters @ 15 min integration period.

Required Features: 1. Large four-line seven-digit display with quadrant. 2. Configurable display units for Energy & Power 3. Magnitude of each harmonic distortion for voltage and current up to 31st harmonic shall be displayed either in soft or at meter end. 4. Measurement selection (star or delta/ 3P4W or 3P3W) 5. True root-mean squared (RMS) metering 6. Calibration LED for accuracy test on site 7. Wide-range auxiliary power supply, suitable for high-voltage or low-voltage installations 8. Maximum



demand recording 9. Scroll-lock and 'Favorites Page' display customization 10. Expansion capability via add on hot pluggable modules for pulse inputs/outputs, and analogue outputs 11. Password protection for setup mode 12. Vendor executing the said work shall provide Register address of various parameters for modbus mapping.

Accessories: The panels shall be provided with TNC, fuses (wherever required), MCBs, RCCBs and LED type indication lamps for R, Y, B phases. Indication shall be provided for all feeders. All lamps shall be protected by proper control MCBs & Fuse Links.

All control wiring shall be carried out with multi core cable Fire Retardant PVC wires of size min. 2.5 sq.mm or Higher (as per panel OEM). Wiring for C.T. circuits it shall be 2.5 sq. mm or higher. Wiring shall be bunched and routed through cable alleys. Wiring shall be properly numbered with ferrules. All control circuits shall be suitable protected for short circuits with independent MCBs.

Earthing: All components, frame etc. shall be properly earthed. Two nos. of earth bus shall be extended throughout the length of the LT panels. Minimum size of earth bus shall be 50x6 mm for GI or 30x10 mm for copper. The short circuit withstand capacity shall be as per IS. Suitable arrangements shall be provided at each end of horizontal earth bus for bolting. All ACB Cradles & doors are earthed properly with respective sizes.

Standards: The LT panels shall conform to the latest revisions of relevant Indian and International Standard some of which are listed below. Copies of Type Test certificates shall be produced in this regard.

IEC 61439: Part 1 & 2 - Low voltage switchgear and control gear assemblies

IEC 61641 - Internal Arc-fault withstand

IS 2705: 1992 - Current Transformers

IEC 60947 - Low-voltage switchgear and control gear

IS 8623: 1993 - Specification For L.V. Switchgear & Control gear Assemblies.

Tests & Test Reports: The type test certificate with respect to Ingres of protection from a govt. approved lab shall be produced.

At factory routine test such as HV/LV test, IR before and after HV/LV test, Primary/Secondary injection test, dimensional checks etc. shall be performed.

Type Test such as Temperature-rise limits, Dielectric properties, short-circuit strength (Resistance), Effectiveness of the Protective circuit,



Degree of protection, Clearance of Creepage distances, Mechanical operation check, Strength of materials & parts etc. should have been performed.

Inspection: The panel shall be offered for inspection before dispatch. Routine tests as per Indian Standard will be carried out at the time of inspection. The bidder shall arrange all the test equipments in this regard.

Operating Manuals: The supplier shall submit operating manuals for all components including items such as ACB, Relay and other equipment provided by the bidder. These manuals shall be in English. They should include the ACB operating instructions. Context sensitivity shall be used to go directly to the appropriate place in the manual.

As-Built Documents and Drawings: The supplier shall submit as built documents including applicable drawings. All deliverable documents and drawings shall be revised by the supplier to reflect the as- built ACB components including the entire Relay. Any errors in or modifications to LT panel resulting from its factory and/or site acceptance test shall be incorporated. Within this same context, all previously submitted documents that are changed because of engineering changes, contract changes, errors, or omissions shall be resubmitted.

AIR CIRCUIT BREAKERS (ACBs)

Constructional Features: The Circuit Breaker cradle shall be designed and constructed to permit smooth withdrawal and insertion. The movement shall be free of jerks, easy to operate. Mechanical latches shall be provided to identify the isolated, test & service position of breaker to prevent over racking. Automatically operated shutters shall be provided to screen live cluster contacts when the breaker is withdrawn from the cubicle. Sliding connections, including those for the auxiliary contacts and control wiring shall also be of the self-aligning type. The fixed portion of the sliding connections shall have easy access for maintenance purposes.

Operating Mechanism: The draw out mechanism shall be part of the fixed frame to reduce the weight of withdrawable part. Further, each position (service, test and isolated) shall be acknowledged by the operator before racking in / moving to the next position. The operating handle and mechanical trip push button shall be attached in front of and integral with the Circuit Breaker. The Circuit Breaker shall have the following three distinct and separate positions which shall be indicated on the face of the panel. The breaker shall get latched in each of three positions namely Service, Test and Isolated, operator to de latch before racking in/out to other position:



1. "Service" -- Both main and secondary isolating contacts closed.
2. "Test" -- Main isolating contacts open and secondary isolating contacts closed.
3. "Isolated" -- Both main and secondary isolating contacts open.

Hence there shall be 3 distinct locking positions on the ACB for all 3 conditions as above.

There must be provision for storing the racking handle (when not in use) within the ACB CIRCUIT BREAKER INTERLOCKS.

Sequence type strain free interlocks shall be provided to ensure the following:

1. It shall not be possible for the breaker to be withdrawn from the cubicle when in the "ON" position. To achieve this, suitable mechanism shall be provided to lock the Breaker in the tripped position before the breaker is isolated.
2. It shall not be possible for the Breaker to be switched "ON" until it is either in the fully inserted position or, for testing purposes, it is in the fully isolated position.
3. It shall not be possible for the Circuit Breaker to be racked in unless it is in the OFF position.
4. Inbuilt Mechanical & Electrical anti-pumping relay feature shall be incorporated in the ACB.

It should be possible to know the control voltage ratings for all electrical accessories without opening the panel door and should be click fit type to reduce maintenance shut-down time.

Circuit Breaker Auxiliaries: The Circuit Breaker shall have in built minimum 4 NO/NC free auxiliary contacts. These contacts shall be approachable from the front for connecting all external wiring from the front. They shall close before the main contacts when the Circuit Breaker is racked in and vice versa when the Circuit Breaker is Drawn Out of the cubicle.

The closing release, shunt trip release and under voltage release (where specified) shall be provided and secured on a metal plate with continuity to external earth in all circumstances. It shall be possible to connect all control and auxiliary wiring from the front of the circuit breaker.

Protection Release: The Air Circuit Breakers shall have microprocessor release. There shall be separate LED indications on the protection release for trips on LSING. The release should be able to communicate on MODBUS RTU protocol using RS485 port & it should be possible to configure protection setting from remote through communication (2-



way communicable). In a true 2-way communicable release all settings should be thru GUI navigation keys not thru BCD switches and through communication.

Release should be compatible with SCADA system. On-Line change of settings should be possible.

Earthing: The frame of the Circuit Breaker shall be positively earthed when the Circuit Breaker is racked into the cubicle. There shall be provision for connection of panel earth at clearly marked locations on the metal frame of the cubicle. Inspection and Testing Inspections and tests shall be performed to ensure ACB compliance with these Technical Specifications. Responsibility for conducting the inspections and tests shall rest with the supplier. The owner's representatives shall participate in the ACB inspections and shall witness the testing as described.

Following tests report shall be provided in addition to others specified in the IS/IEC: Combined sequence test report Dimensional and visual check Mechanical operation test and checking of interlocks Dielectric test on main and control circuits. Internal Arc withstand test. Make/Break test. Short Time Current test. At the IITs discretion, IIT representatives will witness such testing. This may include requesting the supplier to perform tests on ACB selected at random from each batch of ACB that the supplier deems ready to be delivered to site. Should any such test prove unsatisfactory, the IIT reserves the right to have further tests conducted and for delivery not to take place until a mutually agreed course of action has been reached. Relevant Standards IEC/IS 60947-2 - General Switchgears IEC-60947-1/IES-60068-2-6/27 - Shock and Vibration Protection IEC 60529 - Degrees of Protection provided by Enclosures (IP Code) Wherever IEC standards are indicated, suitable equivalent IS standards may be considered.

MOULDED CASE CIRCUIT BREAKERS (MCCBs)

Moulded case circuit breakers shall comply with the latest Indian Standards and IEC standards. MCCB's shall be designed for circuit protection of 440 V, three phase four wire AC distribution system. They shall be designed for use in panel boards as main breakers and for protection of feeder circuits and connecting equipment as per IS 13947 / IEC-947.

All MCCB's shall be provided with integrated static trip releases for overload, short circuit and earth fault with multiple characteristic curves and adjustable setting for each characteristic to ensure proper coordination with overload, short circuit and earth fault protection provided on upstream and downstream.



Each MCCB shall have a facility for padlocking in the "OFF" position. MCCB shall have front operating extended door operating handle. Potential free auxiliary contacts suitable for integration with SCADA shall be provided for MCCB's status indication (ON, OFF & TRIP).

C. List of Approved Makes

S. No.	Description	Approved/Recommended Makes
1	Air Circuit Breakers	L&T / ABB
2	MCB, ELCB, ELCB, Isolator, RCCB	Hager / HPL / Indo Asian / Havells / Schneider Electric / Legrand / Hager / L&T / ABB / Siemens
3	FRLS Electrical Cables, FRLS Wires	Polycab / Finolex / Gemscab / KEI / Havells / Avocab
4	Moulded Case Circuit Breaker (MCCB) Thermal Release/ Microprocessor Based (Ics=Icu=100%)	Schneider Electric / Siemens / L&T / Legrand / ABB / C&S
5	Potential Transformer/ Current Transformer	Automatic Electric/ Gilbert & Maxwell/ Matrix/ Precise/ L&T/ Kappa /Ashmor / Indcoil
6	Digital Multifunction Meter	L&T / Landis+Gyr / Secure / Schneider / Siemens / HPL / Enercon / Conzerv / Rishabh / Trinity/ El measure
7	LT Jointing Kit/ Termination	Raychem / Cab Seal / 3M
8	Double Compression Cable Glands	Comet/ Cosmos/ Dowells/ Gripwell / Jainson
9	Cable Lugs	Comet / Dowells (Biller India)/ Hax Brass (Copper Alloy India) / Jainson / Action
10	PVC/ UPVC Pipe and Fittings	Astral/ Supreme/ Ashirwad/



		Finolex/ Ajay Flow Guard/ Prince/ SFMC (ISI mark)
11	Push Buttons / Indicating lamps	L&T / SIEMENS / Teknik / Raas
12	Protective Relays	CSPC / Alstom / ABB / GE
13	Timers	L&T / SIEMENS / C&S / BCH
14	Terminals	Elmex / Connectwell
15	Paint	Berger/Asian

Note: **Items whose make are not mentioned in the approved make list will be as per direction of EIC.**

2. Environmental Conditions

2.1 Location

The site is located at Shahbad Mohammadpur adjoining Indira Gandhi International Airport, New Delhi. The site is approachable by road.

2.2 Topography

The whole Site is levelled surface, with a nominal gradual slope.

2.3 Environmental Design Parameters

Elevation above M. S. L. : 237 meters. Above Sea level

Metrological data (Based on climatological data of Delhi)

a) Ambient temperature

(max.) : (+) 48.4°C

(min.) : (-) 2.2°C

b) Relative humidity, % : Max: 100%; Min 25%

c) Rainfall intensity : 20-30mm in one hr intensity in Delhi

d) Design Wind speed : 47 m/s

e) Area Classification : Non Hazardous – Admin. & Pump House
: Hazardous –Tank Farm & Product Pump House



- f) Earthquake Zone : Zone IV (as per IS:1893)
- g) Site Access : By Road, By Rail, By Air (Nearest Airport-Delhi)
- h) Unit Installed : Outdoor / Indoor

3. Safety Regulation for the Temporary Electrical Installation Activity at Site

It will be the responsibility of the Contractor to provide and maintain any temporary electrical installation he may intend to execute with due regard of safety at site.

All switchgears, cabling, wiring, equipment, installations, etc. shall comply in all respects with the latest statutory requirements and safety provisions, i.e. as per The Indian Electricity Act, The Indian Electricity Rule, Guidelines laid down in respective Indian Standards, National Electricity Codes.

The Contractor shall ensure that all his equipment and electrical wiring, etc. for any construction activity is installed, modified, maintained by a licensed Electrician / Supervisor. A test certificate shall be produced to the Owner / their Representative for his approval before charging the electrical system.

At all the times, the above regulations shall be followed by the Contractor, failing which the Owner has a right to disconnect the power supply without any prior notice to the Contractor. No claim shall be entertained for such dis-connection by the Owner / their representative. Power supply will be reconnected only after production of fresh certificate from authorized electrical supervisor.

The Owner is not liable for any loss or damage to the Contractor's equipment as a result of variation in voltage, frequency or any interruption in power supply or other loss to the Contractor arising there from.

The Contractor shall ensure that the electrical equipment installed by him are such that the average power factor does not fall below 0.90 at his supply point. In case power factor falls below 0.90 in any month, he



will reimburse to the Owner at the panel rate determined by the Owner for all units consumed during that month.

The Contractor will have to provide and install his own light and power meters which will be governed as per the rules laid down by the respective power supply authority. The meters shall be sealed by the Owner / their representative.

In case of damage of any of the Owner's / other Contractor's equipment on account of fault, intentional or unintentional on the part of the Contractor, the Owner reserves the right to recover the cost of such damage from the Contractor's bill. Cost of any repair or maintenance at the Owner's / other Contractor's end due to any fault in the Contractor's installation shall be to Contractor's account at the rate decided by the Owner / their representative.

The Contractor should strictly follow the guidelines mentioned as below:

All panel boards, cabling, wiring, motors, lighting, hoisting equipment and other dangerous installations should be provided with efficient safeguards and protections. Adequate precautions should be taken to reduce / minimize the risk of any hazard or accident.

All the Switchgears, Protective devices should be sized properly to feed the required load as well as to provide the perfect over current, short circuit and earth leakage protection. All the power and lighting distribution feeders shall be provided with either earth leakage relay (ELR) or with earth leakage circuit breaker (ELCB) with maximum leakage sensitivity of 100mA.

All the cables and wires laid shall be mechanically protected and shall be laid in a manner to avoid any accidental hazard. The cables and wires shall have damage and puncture free insulation, and conductor size should be properly selected to feed the required load current without causing any damage to the switches and cable insulation. There should not be any loose, unprotected joints (by means of PVC tape, connector strips, etc.) on the cables / wires.

All the panel boards and power switch sockets should be of metal-clad type and weatherproof type (if located outside) and shall be installed at



a min. height of 1.5 mtrs. from the floor level. The doors of all the panel boards, switches, and plug sockets should be always kept in closed conditions to avoid any accidental access to the live terminals.

Power sockets should have interlock facility in such a manner that the insertion or removal of plug cannot be possible when switch is 'ON' condition.

4. General Specifications for Electrical Materials for Electrical Installation Work

4.1 General

- All materials covered in these specifications shall be of heavy-duty rigid type, neat in appearance and suitable for the specified purpose.
- The materials shall be of standard and reputed make and shall conform to the requirements/approval of (as applicable):
 - Fire Insurance Association.
 - Indian Electricity Rules & Relevant Indian Standard Codes
 - Electrical Inspector
 - Owner and Engineer-in-charge.
- Routine and type test certificates and technical literature shall be furnished for all items.
- Relevant drawings and technical data, where applicable, shall be furnished to Owner for his approval, before supply of the items.

4.2 Power, Lighting and Control Cables

4.2.1 General

- All conductors shall be either copper or aluminum stranded and as specified on the drawings. Sizes and types specified on the drawings/BOQ shall not be changed without prior approval of the Engineer-in-charge.
- Ends of cables shall be properly sealed to prevent ingress of moisture.
- Wherever specified as half core in multi core cables, the half core shall be a neutral conductor having reduced section in relation to the main conductor size.
- The insulation of conductors in the multi core cables shall be color-coded



to facilitate identification. The colors shall be red, yellow and blue for phases, black for neutral and green for earthing.

- All single core copper or aluminum cables shall preferably have stranded conductors unless otherwise specified.
- The insulation shall be suitable for operation at an ambient temperature of 50 Degree C with a maximum conductor temperature of 90 Degree C without any harmful effects.

4.2.2 Specifications

- 1100 Volts multi-core armoured cables with FRLS PVC/XLPE insulation and extruded PVC inner and extruded FRLS outer sheath shall conform to I.S.S 1554 (for PVC) and I.S.S. 7098 (for XLPE).
- 660 Volts single core unarmoured wires and cables with PVC / XLPE insulation shall conform to I.S.S.694.

4.2.3 Multi Core Power Cables

Multi core power cables shall be of 1100 Volts grade, PVC/XLPE insulated and extruded PVC inner and extruded FRLS outer sheath and armoured type, of make as approved by Owner. During the installation vendor to install proper Cable dressing with material like Nylon cable ties & Al cable clamping/tag requirements and it is applicable to all types of cables.

4.2.4 Wires and Cables

Single conductor wires for lighting shall be of minimum FRLS 2.5 sq. mm. Copper as indicated in applicable drawings/BOQ.

All wires for lighting and power plug points shall be 660 Volts / 1100 Volts multi stranded, flexible, FRLS PVC/XLPE insulated unarmoured type of make as approved by Owner.

Single core for power receptacles shall be of minimum 4 sq. mm. Copper unless otherwise indicated on applicable drawings/BOQ. Flexible PVC FRLS cable required for hand lamp.

4.2.5 Multi Core Control Cables



- Multi core control cable shall be 660 / 1100 Volts PVC/XLPE insulated and extruded PVC inner and extruded FRLS PVC outer sheath armoured type of make as approved by Owner / Consultant.
- Each core shall be of 2.5 sq mm. Copper as indicated in applicable drawings.
- The size and number of cores shall be as indicated in the drawings.
- Flexible wires
- Minimum sizes of flexible stranded wires shall be of 2.5sq.mm, copper conductor.
- Voltage grade of the flexible wires shall be not less than 660 Volts.
- Insulation shall be of XLPE and outer sheath FRLS unless otherwise specified in the drawings.

4.3 Conduits

4.3.1 General

- All Conduits shall be of heavy duty FRLS PVC type. (Wherever required) The conduits shall be of make as approved by Owner / EIC. In all hazardous areas FRLS cable to be used.
- All conduits shall have a smooth interior, free from burrs and sharp edges.
- The sizes of the conduits shall be as indicated in the applicable drawings.
- Flexible conduits shall be steel reinforced PVC type and of make as approved by Owner / EIC.

4.3.2 Specifications

- All rigid PVC conduits shall conform to I.S. Specifications 9537.
- All flexible conduits shall conform to I.S.3480

4.4 Conduit Fittings

- All conduit fittings shall have a smooth interior free from burrs and sharp edges.
- All conduit fittings shall be of heavy-duty PVC type as specified in the schedule of quantities.
- Each conduit fitting shall have a gasket and screwed on rigid cover for hazardous areas. The gasket shall be of neoprene make. Gaskets need not be provided for conduit fittings for non-hazardous area conduit fittings.



4.5 Cable Gland and Cable Termination Accessories

- All cable glands shall be of brass metal and screwed type and double compression type for indoor /outdoor application.
- Cable glands for Hazardous area shall be of flame proof, double compression type.
- All cable sockets for cable termination shall be of tinned copper only.
- Cable identification tags shall be of 6 mm thick Aluminum flat of suitable size with neatly engraved marking. Cable tags with wire for tagging.
- Cable trays shall be FRP/G.I. Perforated/M.S. painted site fabricated Ladder type as indicated on the drawings/as EIC instructions.

4.6 Hardware and Structural Steel

- All hardware and structural steel being used for the various installations, Cable trays, supports, frames, etc. shall be as per relevant I.S. The sizes of the sockets shall be as per the approved drawings/as per EIC instructions.
- All nuts, bolts, washers, spring washers, etc. shall be of SS and shall be SS316 only.

4.6.1 Fasteners Grade S/S 316

- Stainless steel M8 Hexagonal machined bolt, suitably sized to accommodate 3 full threads protruding from the nylock nut when tight.
- M8 Stainless steel nyloc nut.
- Stainless steel square flat washers to suit fastener
- provided for conduit fittings for non- hazardous area conduit fittings.

4.7 Cable Trays

4.7.1 Scope of Work

- This specification covers general and technical requirements for installation of cable tray
- Any deviation from the specification must be stated clearly in the proposal. In the absence of such a statement, it will be considered that the requirements of specification are met without any deviation.
- Installation shall be in accordance with equipment manufacturer's



instructions, and with recognized industry practices to ensure that cable tray equipment comply with requirements of NEMA VE-2 for general cable tray installations and cable tray. The following specifications, standards, codes of practices, and documents referred to therein.

4.7.2 Technical Standard Specifications

- ANSI/NFP 70 – National Electrical code
- NEMA FG-1 – 2002 _ Nonmetallic cable tray systems
- NEMA VE-2-2002 – Cable Tray Installation Guidelines

4.7.3 General Requirements

- The contractor shall co-ordinate cable tray work with other mechanical/electrical work as necessary, to properly integrate installation of cable tray work with others.
- He shall provide sufficient space encompassing cable trays to permit access for installing and maintaining cables.
- Cable tray fitting supports shall be located such that they meet the strength requirements of straight sections and offsets. Installed cable supports and fixtures shall be as per the manufacturer's guidelines and in conjunction with these documents.
- Where conflict exists between various specifications, standards and codes of practice the most stringent requirement shall apply. All such conflicts shall be brought to the attention of the client's representative. The client's representative shall make the final decision on all matters of a technical nature.
- The types of trays shall be dependent on the type of cables ran, segregation route and quantity, in all cases the size of each tray selected shall allow for 20% additional cable space for future use.

4.7.4 Loading Capacities

- Cable trays shall meet NEMA class designation: 8C.
- Cable trays shall be capable of carrying a uniformly distributed load of 95kg/m on a 3m maximum support span with a safety factor of 1.5 when supporting a continuous beam installation and tested per NEMA VE-1 section 5.2.



- The supplier shall ensure that the de-rating factor due to site maximum temperatures shall not have an effect on the load carrying properties of the cable tray and shall take cognisance of Table .1

Temperature in degrees Celsius	Percent of strength
24	100
38	90
51	78
65	68
80	60
93	52

4.7.5 Technical Requirements

- The technical requirements of the installation shall be broken down into the following groups and explained in detail, these methods have to be followed rigidly.
- Type of trays to be used
- Supports and spacing
- Installation methods
- Accessories

4.7.6 Supports and Spacing

- All offsets / bends irrespective of format or orientation shall be fully supported with additional support brackets as per the manufacturer's recommendation.
- In general support must be located such that the coupling plates are at 25% of the span. For example, if the support span is 3m, the 25% point is 750mm from the support. In a continuous beam configuration, the bending moment in the tray side rail is minimal at points located approximately 25% of the span from each tray support. Thus there will be minimum stress on the coupling plates if the joint is located at 25% of the span. In the case of bends and other fittings, the supports should be within 610mm of each fitting extremity.



4.7.7 Cable Ladder and U Type Channel

- Cable ladders shall be supported not more than 1.5m in all orientations. Offset bends, fixings, splices etc. shall be covered in accessories.

4.7.8 Permissible Cable Tray Installations

- Horizontal installations with cable tray orientation 180 degrees (flat) shall only be permissible under suspended floors, trenches and or under RCC roofs such as but not limited to substations, fixing method described in 4.11.15.
- All plant outdoor mounted trays shall be mounted at 0 degrees in relation to the ground (on their edge), no exception to this point will be accepted with exception to under structures. This is to prevent additional load from spilled products. In all other areas horizontal orientation is permissible.
- Modifications either cutting or drilling holes, when this is done the cable tray shall be treated with the recommended "paint on resin" to protect the tray from ingress.
- Cable trays shall be complete in every aspect; cables shall not run from one tray to another unsupported.
- Once the cable trays are installed, they shall be inspected by the clients representative and signed off as fit for purposes, if defect free. Any defects shall have to be rectified and re-inspected by the client. Once the installation is found satisfactory only then shall cable installations take place.
- Cables ran in the cable trays shall be straight and uniform, crossing, twisting over shall not be accepted.

4.7.9 Securing Cables

- Cables shall be individually secured using stainless steel cable ties at every 1 meter.



4.7.10 Accessories

Cable tray and channel off set accessories available and used where required

Offsets and Bends

- 45degree horizontal bends
- 45degree vertical internal / external bends
- 90degree horizontal bends
- 90degree vertical internal / external bends
- 90degree TEE
- Vertical TEE (U type only)
- 90degree equal / unequal TEE
- Cross equal / unequal
- Straight reducer
- Concentric reducer
- LH/RH reducer

NOTE - All cable bends / offsets shall be sized in accordance to the largest cable minimum bending radius on a given tray.

4.7.11 Connectors /Splices for Cable Tray and Channel

- Horizontal hinge
- Vertical hinge
- Coupler/splice plate x 2 per joint 4 in total
- Divider strip

4.7.12 Roof Hangers / Supports

- Spacing shall comply with point 5.11.7 above.
- Roof hangers shall be manufactured from suitably sized angle iron. Over and above the designed bracket at least one additional area shall be fabricated into the design for future use.
- The area between rungs shall not be less than 300 mm.
- The unit shall be corrosion protected.
- In all cases where welding takes place the area shall be swept blasted and corrosionprotected.



4.7.13 Trench Mounted Trays

- Spacing shall comply with point 5.11.7 above.
- 90degree brackets shall be manufactured from suitably sized steel corrosion protected.
- The brackets would be cast into the trench wall.

4.7.14 Floor supports vertical / cable Trestle

- Spacing shall comply with point 5.11.7 above.
- Shall be manufactured from angle iron and weld assembled. All assemblies shall be standard in size and allow for one complete additional tray run. The height between horizontal members shall not be less than 300 mm. The assemblies shall be corrosion protected.
- In all cases where welding takes place the area shall be swept blasted and corrosionprotected.

4.7.15 Plant Equipment Installations

Cable tray orientation shall be installed as per point 4.7.8 and shall be fixed at intervals 1.5m, irrespective whether it is cable ladder or channel. The fixing brackets used shall be "Z" (Fig.1 & 2) clamp, hooked onto the tray and bolted to the support.

4.7.16 Cable Ladder

The brackets used shall be "Z" clamp (Fig.1) fixed to both tray and bolted to the support,manufactured from stainless steel, grade 316.

4.8 Installation Horizontal Overhead/ Wall Mounted Cable Tray Supports

In general, all supports are suspended in substations, the cable tray supports shall be fitted vertically hanging and shall follow the guidelines as laid out in this document in above sections. In trench installations the 90degree brackets would be cast into the wall after the brackets being corrosion protected. Once this primary Installation is complete the trays would be installed and coupling plates fitted. The position of the splice



must conform to item mentioned above with no exceptions.

At every splice two splice plates would be used, one internal one external. The splice plates would then be fastened with stainless steel fasteners. Bolt and square flat washer assembly would be pushed through from the inside of the tray to the outside, thereafter a square washer and nylock nut would be fitted to the bolt threaded section outside of the tray, three full threads shall protrude from the nut after final tightening.

The tray would be fastened using its respective Z brackets to the supports using stainless steel fasteners, Hex bolt, flat washers and nylock nuts.

Where structural members are only available, then suitable brackets would have to be fabricated to accommodate as described above. When any welding is required the area after installation shall be shot blasted and corrosion protected back to specification P001 before cable installation using the prescribed steps, therein.

4.8.1 Plant Installations

- In all cases the trays shall run horizontally.
- The structural supports shall be drilled to accommodate the fixing brackets and securely fixed using appropriately sized bolts, at least three threads shall protrude from the nylock nut. Once all brackets are fitted then the cable trays shall be mounted.
- They shall be fixed "Z" brackets at every support.
- Once this primary installation is complete the trays would be installed and coupling plates fitted. The position of the splice must conform to item mentioned above with no exceptions.
- At every splice two splice plates would be used, one internal one external. The splice plates would then be fastened with stainless steel fasteners, Bolt and square flat washer pushed through from the inside of the tray to the outside, thereafter a square washer and nylock nut would be fitted to the bolt threaded section outside of the tray, three full threads shall protrude from the nut after final tightening.
- The tray would be fastened using its respective Z brackets to the supports using stainless steel fasteners, Hex bolt, flat washers and nylock



nuts.

5. Electrical Installation Standards and Specifications

5.1 General

5.1.1 Scope of Work

The scope of work shall include the furnishing of all labour, materials, appliances, superintendence and services required to construct and install a complete and operable electrical system as herein specified and covered by the accompanying drawings. The items of work include, but are not limited to, the following:

- Complete electrical power covering LT Switchgear, cabling, bus ducting and other equipment including all outside cables/conduits, wiring and incidentals as required.
- Supply and installing complete earthing system/material and test thereof.
- Installing and connecting motor starters where specified.
- Complete cables/conduit and wiring system including supply of plugs and sockets as required.
- Materials or appliances, general purpose / weatherproof / flameproof as required, forming part of the electrical system and necessary for its operation, though not specifically mentioned, shall also be furnished and installed without additional charges.

5.1.2 Personnel

All work shall be performed by Contractor under the direct supervision of a qualified person appointed by him and regularly engaged in the installation of electrical equipment. The Contractor shall place in charge of the work at all the times during the construction. A qualified and experienced electrical engineer who shall be responsible for keeping liaison and co-ordination between Employer's personnel and his own men at site. Anyone not deemed capable by the Owner shall be replaced immediately upon such advice.

5.1.2 Tools and Testing Equipment

The work shall be performed using tools and testing equipment designed and



approved for the purpose.

The following tools and testing equipment are recommended for carrying out the electrical installation work. The electrical Contractor shall bring tools and equipment which may be necessary to carry out / complete the work, in addition to the tools and equipment suggested hereunder, if asked for by Engineer-in-Charge.

- 5000 volts constant pressure type motorised insulation tester (megger)
- 1000 volts constant pressure type insulation tester (megger)
- 500 volts constant pressure type insulation tester (megger)
- Universal Earth Tester
- Hipot Tester
- Welding Sets
- Cutting Tools
- Derricks, if required
- Jacks
- Electric Blower
- Drilling Machines (different sizes)
- Grinding Machine
- Cable Crimping Tool
- Relay testing kit
- Tong Tester
- Portable Voltmeter
- Pipe bending machine
- Phase sequence indicator
- Portable test lamps with prongs
- Tachometer (0-3000 r.p.m.)
- Constant pressure type continuity tester
- Wiremen kits
- Fitter's tools
- Vices
- Die sets with difference dies
- Ladders (different sizes)
- Cable laying tools

5.1.3 Materials and Equipment

The materials and equipment to be installed as indicated on the electrical drawings and materials and equipment specifications, shall conform to the applicable codes and specifications. The materials and equipment wherever specified and / or indicated as supplied by others shall be installed by the



Contractor as recommended and advised by the manufacturers of such equipment. Care shall be taken in handling the materials to properly protect them from damage during transport and installation. All electrical materials supplied by the Contractor shall be new, unless agreed otherwise in writing by Engineer-in- Charge. The Contractor shall obtain the approval of Engineer-in-Charge for all the materials to be used by him prior to installing them. Equipment damaged by the Contractor in the course of handling, installation or test shall be replaced or repaired by him without any additional charges and subject to the approval of the Owner / engineer-in-charge.

5.1.4 Codes and Specifications

All materials and equipment shall be installed in accordance with the latest Indian Electrical Codes and Standards. Installation shall be approved by the Chief Electrical Inspector. It will be the Contractor's responsibility to obtain the approval of the electrical installation work from all Statutory Authorities.

5.1.5 Cutting, Patching and Excavation

The Contractor shall do all excavation and cutting required for the installation work and shall be responsible for any damage that may be caused to the work of others. He shall, where possible, keep the excavation, cutting and patching to a minimum. If the electrical Contractor fails to perform his work in the proper manner or at proper time and due to this, additional excavation, cutting and patching is required, the Contractor shall do such additional cutting and patching without any extra cost to employer.

5.1.6 System of Working

The work shall be carried out in a systematic way in proper sequence and order. Priorities of work shall be fixed by the Engineer-in-Charge at site. All these priorities shall be strictly adhered to. Until the particular part of the work is approved or certified complete by the Engineer-in-Charge at site; the Contractor shall not take up the consequent work connected with the part work completed but uncertified as completed.

5.1.7 Protection

The Contractor shall furnish and place proper guards for prevention of accidents. He shall provide and maintain any other necessary constructions



required to ensure safety of life and property involved in his work.

5.2 L.T. Switchgear

- Inspect the switchgear thoroughly and check during unpacking that all the items stated in the packing list are included and no damage has occurred to any part including all instruments, relays, etc. It is particularly important to be thorough in inspecting the moving mechanism parts as well as items of insulating material of the breakers.
- If the switchgear/panel is supplied in sections, assembly of the same will be of electrical Contractor's responsibility. Relays and instruments, if received separately, will also be installed by the electrical Contractor.
- During installation, the L.T. circuit breakers and the operating mechanism must be in the open position. The closing springs should not be charged.
- The circuit breakers are required to fit their foundations without any discrepancies. All deviations must be adjusted with shims or spacers in order to avoid any stress.
- Installation of all parts should be carried out as per the instruction's manual supplied by the manufacturer.
- Lubricate the circuit breaker gears and other sliding surfaces, shaft, etc. with lubricating oil.
- The spring-closing mechanism must not be subject to any distortion. The springs should not be altered without consulting with the manufacturer.

5.3 L.T. Switchboard

- These shall be installed with utmost care as per the recommendations of the manufacturer and the drawings. The electrical Contractor shall be responsible to replace or repair any part, free of cost, if it gets damaged during the installation or due to mishandling of equipment.
- All connections shall be made as per vendor's drawings and before commissioning, overload and relay settings shall be adjusted as directed by the equipment supplier / Engineer-in-Charge.
- If any switch bends is supplied in sections, assembly of the same will be the electrical Contractor's responsibility. Relays and instruments, if received separately, will be installed and connected by the electrical Contractor.
- Installation of all switchgear shall conform to IS - 10118.
- After the installation, assembly and connection, the tightness of all connections shall be checked. All panels and modules shall be cleaned by blower before energizing.



5.3 Wires and cables

5.3.1 General

- Installation of wires and cables shall be in accordance with I.S. 732. All wires/cables shall run from box to box without splices. Sharp bends shall be avoided. They shall be pulled in or laid in such a manner that the insulation is not damaged at the time of installation or in service. Care shall be exercised to ensure avoidance of any moisture in terminations. The wire / cable being laid shall be in one length, and straight joints shall be avoided as far as possible.
- Insulation shall be removed for making terminations in such a manner that the conductor is not damaged. Conductors shall be clean and free from burrs.
- The current carrying ability of the terminations shall be equal to or greater than the wire / cable being terminated, without dependence on the solder. The termination shall be mechanically secure, without dependence on the crimping. Solder and soldering flux, if used, shall be non-corrosive and of a make approved by the cable or wire manufacturer.
- Minimum wire size shall be 2.5 sq. mm. copper. Above 10 sq. mm. size, all wires shall be stranded. All wire and cable runs under (1) poured concrete or roadbeds and (2) passing through walls shall be in (i) RCC pipes and (ii) conduit sleeves respectively.
- No wire or cable shall be run through any equipment foundation unless specifically indicated in the drawings or directed in writing by Engineer-in-Charge. Cables shall be kept at least 300 mm away from steam or other hot lines. Where closer than this, asbestos barrier shall be used between pipes and cables. The armoring of all armoured cables shall be electrically continuous from Switchgear to equipment and shall be terminated by an appropriate gland fitting and grounded at both ends. Minimum bending radius shall be 12 to 15 times the outside diameter of the cables as recommended by the cable manufacturer.
- The color code of wires shall be same throughout the installations and shall be approved by the Engineer-in-Charge. (Where more than one neutral is carried in the same conduit, the neutral conductors shall be identified.)
- Where color coding is not practicable or possible, the above scheme shall be achieved by the use of color bands provided by the electrical Contractor.



- No oil, grease or compound other than powdered soap stone shall be used to facilitate the pulling of wires. Buried cables shall be installed with sufficient slack in the trench along the cable length.
- The electrical Contractor shall arrange all cables and wires in neat formations along the wall or in suitable cable trays as shown and indicated in the drawings, including supply and installation of all supporting steel work like angles, channels, etc. and painting of the same.

5.3.1 415 / 240V System

- Wires drawn in conduit will be unarmoured. Cables laid in trays or buried in the ground shall be armoured.
- The number of cables / wires and conduit sizes indicated for the various circuits (control, alarm and signal) were decided for a general scheme of wiring. The actual number of wires installed for each circuit and the required size of conduit shall, however, be as required to accomplish the specified results as required by the manufacturer of the said control equipment.
- Wires connected to the same phase and for the required neutral only can be grouped in one conduit, for lighting installation.
- No single core wire alone shall run in any conduit unless clearly shown in the drawings.
- This part of the specifications cover the responsibility of selecting the proper branch circuit designation in the panel boards and to install the branch circuit wiring in accordance with the phasing sequence as shown on the drawings, so that the loads are balanced across all the phases as closely as possible and to cause minimum unbalance in the panel board neutral wires. If any changes are to be made, approval of the Engineer-in-Charge is essential.
- No wire shall be pulled until the complete conduit is installed. No splices or joints shall be permitted in either feeders or branches except at the outlet of accessible junction boxes.
- Termination of wires and cables at main boards, M.C.Cs lighting / power panels, fixtures, etc. is to be done preferably with solderless tinned copper terminal lugs duly crimped and using petroleum jelly at all connections. Special permission shall be taken from the Engineer-in-charge for termination with soldering method.



5.3.1 Buried Cables

- Only armoured cables shall be buried directly in the ground. Trench for L.T. cables and other lower voltage cables shall be minimum 600 mm deep or as specified in the drawings. Where both H.T. and L.T. cables follow the same route, one trench may be used. In that case, the higher voltage cables shall be installed at 900 mm and then the trench shall be filled to 600 mm with sand and pebbles, and the low voltage cables shall be then installed. High voltage cables shall be spaced at a minimum of 75 mm on centers.
- When it is necessary to pull the cable into the trench, rollers or a greased wooden trough should be used to reduce friction. A series of sleeves may be necessary to guide the cable around corners. Care should be exercised to avoid contact with sharp stones and other heavy objects in the trench. A two-inch layer of sand or clean earth shall be placed at the bottom of trench to avoid sharp objects coming in contact with the cables.
- After the cables are installed, cover the cables with 150 mm of rock-free earth or sand, place a layer of bricks or concrete tiles over that and backfill to grade. Concrete markers shall be placed at each bend and at an approximately 15 meters' intervals along straight runs to show the location of the cables. These markers shall extend above the grade by 25 mm.
- Cables shall be laid with slight slack in the trench to allow for the settlement of earth.
- After confirming with the Engineer-in-Charge, necessary loops shall be made at the locations indicated by him.
- Concrete-lined cable trenches for cables inside buildings, if shown on the drawings, shall be provided by others.

5.4 Conduit

- All conduits shall be heavy duty, PVC as specified in the schedule of quantities. Minimum size shall be 19 mm unless specifically stated otherwise. Conduits and fitting shall be cleaned to remove sludge, dirt or trash from the inside, prior to installation.
- The conduits shall be securely fastened by means of straps and hangers designed for the purpose. Conduit runs on walls, columns or partitions shall



be secured with hot dip galvanized C-Clamps or saddles and back spacers. These straps and hangers shall be fastened at each 400 mm length. Where supported on masonry walls, the conduit shall be spaced at a minimum of 6 mm from the wall using galvanized mild steel spacers. Conduit half straps (C-Clamps) attached to masonry or concrete walls, floors screw anchors or lead anchors. A maximum of four 90° bends only shall be used from pull point to pull point. The maximum distance between pull points shall be 90 meters but this shall be reduced by 15 meters for each 90° bend. Screws used for fixing C-Clamps on spacers shall be of brass only. Special permission shall be taken from the Engineer-in-Charge for using hot dip galvanized screws.

- All conduit bends shall be made with conduit benders designed for the purpose. Bends shall not be less than 6 times the nominal size of the conduit. They shall be free from creeps and flattening. In general, exposed conduit runs shall be in straight lines parallel to or 90° to the building or pipe racks in which they are running. Each conduit run shall be completed before the wire or cable is pulled in. Whenever conduit enters outlet boxes, panels, pull boxes, switches or conduit fittings, an offset shall be formed on the conduit as close to the fittings as possible.
- In no case shall conduits be fastened to other pipes or installed in such a manner as to obstruct the ready removal of pipes for repair or replacement.
- All conduit openings shall be capped with steel / PVC caps (conduit plugs) during or immediately after installation. Before wires are drawn into conduits, the conduits shall be thoroughly cleaned by use of a swab or blown out with compressed air.
- All outdoor conduit fittings shall be provided with neoprene gaskets.
- Conduit installation should conform to I.S. 732.
- In concealed conduit system, grooving in the wall shall be neatly carried out by electrically driven cutter only and be of ample dimensions to permit the conduits to be fixed in the manner desired. Chases in the wall shall be done before the plaster work is done by civil section, and after laying of conduit in wall, the chased portion should be filled in by electrical Contractor with suitable material and to the satisfaction of the Engineer-in-Charge.
- Fixing of conduit pipes in chase should be done by means of staples or saddles not more than 400 mm apart.
- Suitable inspection boxes shall be provided to permit periodical inspection



and to facilitate removal of wires when necessary.

- Positions of lighting panels, switches, sockets etc. shown in drawings shall be adhered to. If desired by the Engineer-in-Charge, the positions of these shall be changed without any extra cost.
- The heights for switches and receptacles are as indicated on the respective drawings / standard notes.
- All conduit drops from ceiling to the wall must be nearly in the center of the wall. Conduit drops going out of the wall will have to be made good by the Contractor at his cost without damaging / weakening the building structure.

5.5 Earthing

5.5.1 General

- Earthing work shall be carried out in accordance with IS 3043 – Code of practice for Earthing.
- All electrical equipment shall be earthed as per detail on applicable drawings/standards.
- All metal vessels, process pipelines, tanks, buildings and other metal structures that may receive lightning stroke or develop a static charge shall be earthed, as per details on applicable drawings.
- All equipment to be earthed shall be cleaned down to bare metal before attaching the ground wire.
- Neutral conductors shall not be used for equipment earthing.
- All earthing connections shall be carried out in an approved manner and with specified materials. Typical methods of earthing as per standard drawings, will be adopted for the earthing, as indicated in the applicable drawings.
- The entire plant shall be earthed by a series of ground loops. The loops will be effectively earthed by means of earthed electrodes.
- All earth connections shall be applied bitumen compound if welded with the system earthing grid / equipment. However, welding should be avoided as far as possible.
- Sizes of the earth wires shall be as shown in the applicable standard drawings.
- Copper strips if used shall be tinned at the joints.
- Armouring of cables shall be earthed at both ends through suitable cable



glands.

- Earthing wires and cables shall be terminated on the earth bus with solderless cable sockets with silicon bronze / G.I. bolts.
- Each earthing wire shall be in one length from the equipment to the earth bus.
- Pipe electrodes in earth pit as per standard drawing shall be provided unless otherwise indicated in the relevant drawings. The earthing electrode and pits shall be in accordance with IS: 3043.
- The earth pit center shall be at a minimum of 2.5 meters distance from the nearest building. Distance of not less than 3 meters shall be maintained between centers of two earth pits.
- The neutrals of transformers shall be connected to separate earth electrodes.
- Specialized Earthing shall be provided to the sensitive equipment by means of dedicated Cu. earthing pits, Cu. earthing conductor and Cu. earth bus bar mounted on the insulators.
- Test links are required for testing of earth pit.

5.5.1 240 V Equipment

- All 240 V equipment shall be earthed with minimum one number of 1.5sqmm flexible, stranded copper wire unless stated otherwise on the relevant drawing.
- For lighting circuits in conduits, one number 1.5sqmm flexible, stranded copper wire shall run inside the conduit for earthing.
- Fluorescent fixtures and all other fixtures provided with earthing terminals shall be earthed by 1.5sqmm flexible copper wire.
- Switch and single-phase lighting receptacle housings shall be earthed with 1.5sqmm flexible, stranded copper wire. The earthing wire shall be connected to the earthing screw on the switch or receptacles by a solder less cable socket duly crimped.
- All street lighting poles shall be earthed as indicated in the drawings.

5.5.2 415 V Equipment

All 415 V equipment shall be earthed by 2 independent paths to earth through earth wires. The earthing conductors shall be of the sizes as specified on the drawings and be of G.I., aluminum or bare copper where buried. Outside the building, a minimum of 350 mm of cover shall be provided.

- All motor frames, hoist rails, pipe racks, etc. shall be effectively earthed, as



shown on the applicable drawing.

- Earth strip extending above the floor shall be protected from mechanical injury by running it through GI pipe sleeve to at least 300 mm height.
- The entire conduit system, supports, cabinets, transformers, motor control centers and equipment shall be effectively earthed as shown on the drawings and in accordance with the latest Indian Codes.
- All three phase receptacles shall be earthed with 8 SWG G.I. wire or as specified in the drawing.

5.5.3 Connection

The Earthing system connections shall generally cover the following:

All the Earthing system connections shall generally cover the following:

- Equipment earthing for personnel safety
- System neutral earthing
- Static and lightning protection

The following shall be earthed:

- System neutral
- Current and potential transformer secondary neutral
- Metallic non-current carrying parts of all electrical apparatus such as transformers, HV / MV and LV switchgears, bus ducts, motors, neutral earthing resistors, capacitors, UPS, battery charger panels, welding receptacles, power sockets, lighting / power panels, distribution boards, control stations, lighting fixtures, etc.
- Steel structures / columns, rail loading platforms, etc.
- Cable trays and racks, lighting masts and poles.
- Cable shields and armour.

6. Inspection and Field Tests of Electrical Installations

The work to be performed under these guidelines cover the quality assurance plan for the inspection and testing of electrical installations.

6.1 General Requirements

The electrical Contractor shall furnish necessary meters, instruments, temporary wiring and labour to perform all required tests, adjustments and



wiring of all equipment installed and/ or connected under the contract including electrical equipment supplied by others, if any, to determine proper polarity, phasing, freedom from grounds and shorts and the proper operation of the equipment, meters, relays, etc. All testing instruments shall be calibrated and certified for accuracy by competent authority.

Inspection and testing shall be carried out to ensure that all equipment and materials have been installed as required and as per the relevant International Standard Specifications and Codes, Local Rules and Regulations, requirements of Fire Insurance, Chief Electrical Inspector and any other authorities having jurisdiction. The installation must pass all inspection and will be subject to the approval of the Engineer-in-charge and the concerned local authorities.

Before the electrical facilities are placed in operation, the Contractor shall make suitable tests to establish to the satisfaction of the Engineer-in-charge that all equipment, devices and wiring have been correctly installed, are in satisfactory condition and will operate as intended.

All tests shall be performed by or under the direct supervision of men qualified for carrying out inspection and testing.

Engineer-in-charge reserves the right to witness all tests, and he shall be informed in this regard two weeks before the tests are to take place. Engineer-in-charge reserves the right to approve the test results before circuits or equipment will be energised for the first time.

If motors record low insulation resistance, then they must be dried to obtain the required insulation resistance values. Approval of the drying methods shall be obtained from Engineer-in-charge before applying heat.

All results of the tests shall be recorded on prescribed test data sheets. All tests described herein shall be recorded on forms provided or agreed upon by Engineer-in-charge. Test reports shall include, for each test, the date of performance and name of the person in charge of the test.

Before starting the tests, a visual inspection of the material / equipment is to be made to determine that all components are installed as per drawings and in a neat and workman-like manner and that, in general, the equipment is



ready for testing.

In case of fault, the Contractor shall isolate the fault and shall take necessary steps to eliminate the fault to the satisfaction of Engineer-in-charge. All defects through faulty workmanship of Contractor or of equipment and material supplied by him shall be corrected or replaced at his own expense.

Before commencement of any test, all equipment shall be thoroughly cleaned by blower and checked for proper and rigid connection of termination, fixing of foundation bolts, etc.

Contractor shall submit all formats for tests to be conducted on each equipment/system in accordance with these specifications for approval to the Engineer-in-charge / Consultant before entering the test readings.

6.2 Test Procedures

6.2.1 Medium Voltage Switchgear

Before switchgear is energised, the insulation resistance of each bus shall be measured from phase to phase and from phase to earth. Measurements shall be repeated with circuit breakers in operating position and contacts open. Each test shall be held until constant reading is obtained. Minimum time shall be ten seconds. Minimum megger reading shall be 10 Mega ohms.

Before switchgear is energized, the insulation resistance of all D.C. control circuits shall be measured from phase to earth. Minimum acceptable value shall be 1 Mega ohm.

Each adjustable protective relay shall be set, calibrated and tested by using a cycle counter, load box, ammeter and voltmeter as required or by using a suitable relay test set having good wave form. Settings, calibration points and test points shall be in accordance with values given for the approved relay settings for the job.

Test all current transformer secondary circuits by applying current (thru secondary injection test) to transformer secondary windings and verifying that relay(s) and/or meter(s) operate properly.



Test all the relevant circuit breakers for proper interlocking operation. The sequence of interlocking is as indicated on single line diagram.

Test the operation of tie breakers / bus couplers.

The following tests shall be performed on all circuit breakers before they are operated:

- Contact alignment shall be checked and adjusted where necessary in accordance with manufacturer's instructions.
- Each circuit breaker shall be drawn out of its cubicle and shall be closed manually, and then its insulation resistance shall be measured from phase to phase and from phase to earth.
- All adjustable direct acting trip devices shall be set using values given in the approved relay settings for the job.
- Before switchgear is energized, the following tests shall be performed on each circuit breaker in its 'test' position:
 - Close and trip circuit breaker from its control switch, push button or operating handle.
 - Test operation of circuit breaker latch and check switch, where provided.
 - Test proper operation of lockout device in the closing circuit, where provided, by simulating conditions, which would cause a lockout to occur.
 - Trip breaker by manual operation or by applying current or voltage to each of its associated protective relays.
 - All automatic control operations and interlocks shall be tested for correct operation.

After completion of tests, all test results shall be recorded in standard format approved by Engineer-in-charge, witnessing site engineer and Contractor's representative.

All test reports shall indicate the details of the instruments used for test with date and time of test.

After commissioning of the equipment, all measuring and indicating instruments to be checked properly for operation. Any improper operation of these indicating lamps / instruments shall be corrected by checking fuse / connections, polarity, etc. If still these are found to be not in working condition, the supplier should report the same to the Engineer-in-charge for suitable action for replacement.



6.2.2 RTCC, Motor Control Centre

Before energizing, the insulation resistance of each bus shall be measured from phase to phase and from phase to earth with disconnecting devices. Repeat measurements with devices closed but with contactors open. Minimum acceptable value shall be 10 Mega ohms.

Contact alignment of each contactor shall be checked and adjusted where necessary in accordance with manufacturer's instructions.

Before energizing, the insulation resistance on both the "line side" and "load side" of each contactor shall be measured separately from phase to phase and from phase to earth. Minimum acceptable value shall be 10 Mega ohms.

Set each adjustable relay and direct acting trip device in accordance with values given in the approved relay setting record.

Each contactor shall be closed and tripped from its control switch and/or push-button station to test proper operation.

6.2.3 Other Distribution Boards

Before energizing, the insulation resistance of each bus shall be measured from phase to phase and from phase to earth with circuit breakers / isolating switch open. Measurements shall be repeated with circuit breakers / isolating switch closed.

The distribution boards shall be checked for rigid mounting, earthing connections, proper rating and size of components, interlocking and overload settings.

6.2.4 L. T. Cable

- A megger test and or hipot test shall be made for continuity and proper end-to-end connection and correct termination after installation, on all feeder cables including motor feeder cables.
- Record test data between phase to phase and phase to earth.
- The test voltage, duration of test and test procedure shall be in accordance with IS: 4288.



6.2.5 Wiring

- Before energizing, the insulation resistance of every circuit shall be measured from phase to phase, from phase to neutral and phase to earth.
- The insulation resistance of the circuits noted below shall be measured as follows:
 - Motor feeders: with motors disconnected, measure insulation resistance from load side of circuit breakers or contactors.
 - Motor control circuits: With push buttons and over current devices connected, measure insulation resistance from phase to earth.
 - Lighting feeders: Measure insulation resistance with circuit breakers or switch-fuse units on panel boards connected but with lighting branch circuit breakers or switches open.
 - Lighting branch circuits: Measure insulation resistance after all lamp holders, receptacles, fixtures, etc. are connected but before fixing of lamps.
- Where splices or terminations are required in circuits rated above 600 Volts, measure insulation resistance of each length of cable before splicing and/or terminating. Repeat measurements, after splices and/or terminations are complete.
- Measure the insulation resistance of buried cable circuits before cable trenches are backfilled. Repeat measurements after backfilling.
- Test light intensity of each room by light intensity meter at working height and record the same.
- All receptacles shall be tested for correct phase sequence and by test lamp for operation of switch and continuity of earthing.

6.2.6 Alarms

All electrical alarms shall be tested for proper operation by causing alarm to sound under simulated abnormal conditions.

6.2.7 Earthing

Earthing shall be carried out as per IS Code of Practice: 3043 and as per instruction of EIC.

6.2.7.1 Specifications

- Check that earthing system is installed/connected.



- Check that all connections are tight and connections are protected from mechanical injury.

6.2.7.2 Testing

- The resistance to ground shall be measured at the following locations:
 - The resistance of the system/neutral earthing should be maintained preferably at less than 1 Ohm.
 - At each earthing point provided for lightning protection, the earth resistance shall preferably not exceed 1 Ohm.
 - At any one point of each system used to provide earthing to electrical equipment enclosures, resistance shall not preferably exceed 1 Ohm.
- Measurements shall be done before connection is made between the earth and the object to be earthed.

7. General notes for power and earthing

All dimensions are in millimeters, unless otherwise mentioned.

- For cable sizes and details of circuit numbers, refer to respective Electrical single line diagrams of fuel farm/bill of quantities.
- All L.T. Power and control cables shall be 1.1 KV grade, aluminum / copper stranded conductor, PVC/ XLPE insulated, Extruded PVC inner sheathed and extruded FRLS PVC outer sheathed, flat / round wire armoured.
- Wherever cables cross roads or drains, cables shall be laid in stranded RCC pipes. The RCC pipes shall be sealed by electrical Contractor with jute, felt, etc. in an approved manner after laying of cables.
- Cable trench shall be sealed with water-proofing compound at the entry to the building after laying of all cables by electrical Contractor.
- Cables shall be laid in G.I. pipe sleeves wherever they cross walls, beams, etc.
- Cables running along walls, beam, column, etc. shall be installed with G.I. spacers and saddles at an interval of 400 mm. Cables on trays shall be clamped with common saddles.
- Wherever cables are to be embedded directly in the floor, they shall be embedded with their top at least 40 mm below finished floor level.
- Minimum bending radius for cables shall be as below:

1.1 KV grade single core cable	15 times d
1.1 KV PVC/XLPE arm. Multi core cable	12 times d



11 KV XLPE cable

15 times d

- Cables buried in the ground shall have slight slack to allow for settling of the earth.
- For cables buried in ground, cable route markers shall be provided on the surface of the ground along the cable route at every 15 Mtrs. Interval, at every bend and where change of level takes place.
- All cables shall be provided with suitable aluminum tag, indicating circuit description and size of cable at both the ends and also at every bend.
- Pipe sleeves provided in fire walls, including spare sleeves, shall be sealed by electrical Contractor with bitumen-based cold-setting compound.
- The main earthing strip outside the building shall be laid at a minimum depth of 350 mm below finished grade level.
- No earthing strips for system / equipment earthing shall be connected to the earthing strip provided for lightning protection system.
- Test points shall be provided in lightning down conductor on insulator mounted on column / wall at 1500 mm above finished grade level.
- All earthing joints and connections shall be carried out as per enclosed standards with duplicate conductors for systems of 415 V, 3 phase & above and single conductors for 240V, 1 phase system.
- Isolators, plug receptacles, starters, push button stations, distribution boards, etc. shall be installed with their bottom side at 1200 mm above finished floor level.
- Location of isolators, starters, push button stations, etc. shall be finally checked in the field by electrical Contractor to ensure ease of removal and maintenance of motors and other equipment.
- Push button stations located in out-door areas shall be provided with M.S. canopy duly painted with primer and finishing coats.
- Main earth grid, all switchgear panels, isolators, push button stations, motors, equipment, vessels, etc. shall be earthed with wire / strip as per following list for G.I. conductor and for copper conductor, as applicable connected to the nearest earth bus.
 - Main Earth Grid Conductor 75 x 6 mm GI. Strip
 - For PCCs 75 x 6 mm GI. Strip
 - For MCCs, MPDB, MLDB, APFCRs 50 x 6 mm GI. Strip
 - For LDBs, Process equipments 25 x 6 mm GI. Strip
 - For Neutral earthing 50 x 6 mm G.I. Strip
 - For Lighting Panels, Power DBs 25 x 3 mm GI. Strip
 - For Push Button Stations 4.0 sq. mm Cu. FRLS wire
 - For 1-Phase Power Sockets 4.0 sq. mm Cu. FRLS wire



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

- For Storage Tanks, Vessels, etc. 25 x 6 mm G.I. Strip

All the equipment (i.e. three phase equipment, storage vessels) shall have two earthing connections. Al. earth bus bar shall be used for connecting copper earthing wires using tinned copper lugs of suitable sizes. Bus bar shall be installed near the equipment on wall structures.



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ANNEXURE I – DEVIATION SHEET

Bidder shall list all the deviations in the following given format only. The Deviation sheet should be submitted along with technical bid.

EXCEPTION AND DEVIATIONS STATEMENT				
S.NO.	PAGE NO. OF TENDER	CLAUSE NO.	SUBJECT	DEVIATIONS
	DOCUMENT			

In case no deviation sheet is submitted along with technical bid, it would be concluded that bidder has accepted all specifications, terms and conditions.

Sign & Stamp of Bidder



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ANNEXURE II – DECLARATION SHEET

Date:

DECLARATION

We, M/s _____, hereby unconditionally, accept all terms & conditions of TENDER NO.: DAFFPL/FF/2025-26/04 including Scope of job, quantities, completion period, terms & condition without any deviations.

Sign & Stamp of Bidder

Note: In case of deviations (whether technical or commercial) the above declaration should not be submitted, and the deviations should be mentioned separately on bidder's letter head with the heading "DEVIATION SHEET". In absence of "DEVIATION SHEET", it would be concluded that bidder has submitted his offer as per tender specifications, terms & conditions. Corrections in tender booklet will not be accepted.

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

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ANNEXURE-III

PROFORMA OF BANK GUARANTEE (EARNEST MONEY DEPOSIT)

(On Non-Judicial Stamp paper for appropriate value)

BANK GUARANTEE NO.:

BANK GUARANTEE AMOUNT:

CLAIM:

(Till 120 days from date of submission of Proposal)

TENDER NO. /DATE:

JOB DESCRIPTION/

LOCATION:

Tender Security No. [*]

Name and Address of the Beneficiary: Delhi Aviation Fuel Facility (Private) Limited
Aviation Fuelling Station, Shahabad Mohammadpur, IGI Airport, New Delhi – 110 061, India

We [*name and address of the issuing bank*] have been informed that [*Name of the Interested party*] (hereinafter called the “Interested Party”) is submitting a proposal for the Award of the Works in response to a Request for Proposal (“RFP”) by Delhi Aviation Fuel Facility (P.) Ltd. (“DAFFPL” or ‘Beneficiary’) for [*Insert description of work*] (“Works”). The conditions of the RFP, which are set out in a documents entitled Request for Proposal dated [*Please insert*] require its offer to be supported by a Tender Security.

At the request of the Interested Party, we hereby irrevocably undertake to pay you without demur, the Beneficiary, any sum or sums not exceeding Rs. _____ [*Please insert*].

Upon receipt by us of your demand in writing and your written statement (in the demand) stating that:

- 1) The Interested Party has, without written consent of DAFFPL, withdrawn its offer after the latest time specified for its submission and before the expiry of its period of validity;
or

Sign & Stamp of Bidder



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- 2) The Interested Party has refused to accept the correction of errors in nits offer in accordance with the instructions to Interested parties contained in the RFP; or
- 3) DAFFPL entered in to the contract with the Interested party but the Interested party has failed to deliver the **COMPOSITE BANK GUARANTEE (SECURITY DEPOSIT & PERFORMANCE)** in compliance with the Contract conditions; or
- 4) The Interested Party has failed to enter into the Contract within 30 (Thirty) days of being required to do so by the Tender Officer.

Any demand for payment must contain your signature(s). The demand must be received by us at this office on or before the expiry of the earliest of the following dates, when this security guarantee shall expire and shall be returned to us:

- a) Date of issue of letter communicating to the Interested Party that it has not qualified for the contract or the Proposal submitted by the Interested Party is unsuccessful or the TENDER is withdrawn and/or cancelled by the Beneficiary; or
- b) 7 (seven) days after the date of delivery of an acceptable performance bond complying with the Contract conditions and execution of the Contract after the award of the works to the Interested Party; or
- c) 120 (One hundred twenty) days from the last date of submission of Proposal in accordance with the TENDER.

Date:

Signature:

Designation:

Name of the Branch

Sign & Stamp of Bidder



ANNEXURE-IV

PROFORMA OF COMPOSITE BANK GUARANTEE (SECURITY DEPOSIT & PERFORMANCE)

(On Non-Judicial paper of Rs. 100/-value)

To,

DAFFPL

Dear Sirs,

M/shave taken tender for the workfor DAFFPL,.

The tender Conditions of Contract provide that the Contractor shall pay a sum of Rs. (Rupees) as security deposit & performance guarantee in the form therein mentioned. The form of payment of security deposit & performance guarantee includes guarantee executed by Scheduled Bank at New Delhi, undertaking full responsibility to indemnify DAFFPL, in case of default. The said party have approached us at and their request and in consideration of the premises we having our office at have agreed to give such guarantees as hereinafter mentioned.

1. We -----hereby undertake and agree with you that if default shall be made by M/s. -----in performing any of the terms and conditions of the tender or in payment of any money payable to Daffpl. We shall on demand pay to you, without demur, protest or requiring you to seek recourse to M/s _____, in such matter as to you may direct the said amount of Rupees -----only or such portion thereof not exceeding the said sum as you may from time to time require.
2. You will have the full liberty without reference to us and without effecting this guarantee, postpones for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said -----and to enforce or to forbear from endorsing any powers of rights or by reason of time being given to the said -----which under law relating to the sureties would but for provision have the effect of releasing us.
3. Your right to recover the said sum of Rs. ----- (Rupees - -----) from us in manner aforesaid will not be affected or suspended by reason of the fact that any dispute or disputes have

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

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- been raised by the said M/s. -----and/or that any dispute or disputes are pending before any officer, tribunal or court.
4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or change of constitution or insolvency of the said -----but shall in all respect and for all purposes be binding operative units payment of all money due to you in respect of such liabilities is paid.
 5. Our liability under this guarantee is restricted to Rupees -----our guarantee shall remain in force until -----unless a suit or action to enforce a claim under Guarantee is filed against us within six months from -----(which is date of expiry of guarantee) all our rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under.
 6. NOT WITHSTANDING anything hereinbefore contained our liability under this Bank Guarantee is restricted to Rupees -----(Rupees -----).This Bank Guarantee shall be valid up to -----and we are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before -----.
 7. This guarantee is to be returned to us within fifteen (15) days from the date it ceases to be in force. If the guarantee is not returned to us within the date of aforementioned it shall be automatically cancelled.
 8. We have power to issue this guarantee in your favour under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney dated -----granted to him by the Bank.

Yours faithfully

-----Bank
By its Constituted Attorney
Signature of a person duly
Authorized to sign on behalf of the bank

Sign & Stamp of Bidder



ANNEXURE- V

Form of Letter of Undertaking

[On the letterhead of the Interested Party]

Letter of Undertaking

Date:

Delhi Aviation Fuel Facility (Private) Limited
Aviation Fuelling Station, Shahabad Mohammadpur,
IGI Airport, New Delhi – 110 061, India

Re:

The undersigned Interested Party acknowledges that the TENDER issued is confidential and personal to the undersigned Interested Party and hereby undertakes and agrees as follows:

1. “**Confidential Information**” means the TENDER and everything contained therein, all documentation, data, particulars of the Works and technical or commercial information made by (or on behalf of) Delhi Aviation Fuel Facility (Private) Limited or obtained directly or indirectly from Delhi Aviation Fuel Facility (Private) Limited or its representatives by the undersigned Interested Party or which is generated by the undersigned Interested Party or any information or data that the undersigned Interested Party receives or has access to, as a result of the TENDER, as being confidential information of Delhi Aviation Fuel Facility (Private) Limited, provided that such term does not include information that (a) was publicly known or otherwise known to undersigned Interested Party prior to the time of such disclosure, (b) subsequently becomes publicly known through no act or omission by undersigned Interested Party or any person acting on its behalf.

2. The undersigned Interested Party shall maintain the confidentiality of Confidential Information in accordance with procedures adopted by the undersigned Interested Party in good faith to protect confidential information of third parties delivered to it, provided that the undersigned Interested Party may deliver or disclose Confidential Information to its authorized representatives who agree to hold confidential the Confidential Information substantially in accordance with the terms of this Undertaking.

3. The undersigned Interested Party shall not at any time whatsoever:

(i) Disclose, in whole or in part, any Confidential Information received directly or indirectly from the Delhi Aviation Fuel Facility (P) Limited to any third party.

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

(ii) Reproduce, publish, transmit, translate, modify, compile or otherwise transfer the Confidential Information.

4. In case the Proposal of the undersigned Interested Party is not accepted and immediately upon the acceptance of the Proposal of any of the other Interested Party, the undersigned Interested Party, shall:

(i) Return all Confidential Information including without limitation, all originals, copies, reproductions and summaries of Confidential Information; and

(ii) Destroy all copies of Confidential Information in its possession, power or control, which are present on magnetic media, optical disk or other storage device, in a manner that ensures that the Confidential Information is rendered unrecoverable.

5. The undersigned Interested Party shall certify to Delhi Aviation Fuel Facility (Private) Limited that it has returned or destroyed such Confidential Information to the Delhi Aviation Fuel (Private) Limited within two (2) days of such a request being made by Delhi Aviation Fuel (Private) Limited.

Name of Interested Party's

Signature of Authorized Representative

Sign & Stamp of Bidder



ANNEXURE VI

DECLARATION to be submitted along with Technical Bid

TENDER NO : DAFFPL/FF/2025-26/04

(M/s. _____) hereby declare / undertake that;

1. We have not been banned or delisted by IOCL/BPCL/DIAL or any government or quasi Government agencies or Public Sector Undertakings.
2. I/We have not tampered or modified the subject tender document in any manner and before uploading, same has been cross-checked with documents hosted on your e-portal. In case, if same is found to be tampered/modified, I/We understand that my/our tender will be summarily rejected, and EMD/SD may be forfeited, and I am/We are liable to be banned from doing business with and/or prosecuted.
3. I/We, hereby confirm that if any discrepancy observed in the submitted tender even at a future date, I/We will abide by all the terms and conditions as per all the documents hosted including Addendums/Changes/Corrigendum, on your e-portal related with subject tender. I/We further assure that we agree to all the decisions confirmed in Pre- Bid Conference of the subject tender.

Stamp & Signature of the bidder

NOTE: If a bidder has been banned by IOCL/BPCL/DIAL or any Government or quasi Government agencies or PSUs, this fact must be clearly stated with details. If this declaration is not given along with the technical bid, the tender will be rejected as non-responsive.

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

ANNEXURE VII

DECLARATION to be submitted along with Technical Bid

TENDER NO : DAFFPL/FF/2025-26/04

(M/s. _____) hereby declare that they shall be at all times indemnify and keep indemnified the OWNER and its officers, servants and agents from and against all third party claims whatsoever (including but not limited to property loss and damage, personal accident, injury or death of or to property or person of any sub-contractor and/or the servants or agents of the CONTRACTOR or any other contractor(s) and any sub-contractor and/or of the Owner), and the CONTRACTOR shall at his own cost and initiative at all times up to successful conclusion of the "PERIOD OF LIABILITY FROM THE DATE OF COMPLETION OF WORK"

(M/s. _____) also undertake that they shall carry and maintain any and all statutory insurance(s) required under Indian Laws and Regulations, including Workmen compensation Act/ESI/Third party liabilities etc. and insurances for their personnel engaged in performance of the work at their own cost.

Stamp & Signature of the bidder

Sign & Stamp of Bidder



Annexure VIII

UNDERTAKING BY THE TENDERER(S)

NAME OF WORK : SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF EMERGENCY PANEL WITH ALLIED WORKS AT DAFFPL

TENDER NO : DAFFPL/FF/2025-26/04

We confirm that we have quoted the rates in the tender considering Inter-alia the:

1. **Tender Document(s)**
2. **Additional Document(s) (if any)**
3. **Site Conditions**
4. **BOQ Document (Price Bid Format)**
5. **Corrigendum/Addendum (if any)**
6. **Prebid Meeting Minutes (if any)**

We

(Name of the Tenderer) hereby certify that we have fully read and thoroughly understood the tender requirements and accept all terms and conditions of the tender including all corrigendum/addendum issued, if any. Our offer is in confirmation to all the terms and conditions of the tender including all corrigendum/addendum, if any and minutes of the pre-bid meeting. In the event our offer is found acceptable, and contract is awarded to us, the complete tender document shall be considered for constitution of Contract Agreement.

Signature (With Stamp) of the Bidder:

Date:

Name of Signatory:

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

Annexure IX

PROFORMA FOR DECLARATION ON NCLT/NCLAT/DRT/DRAT/COURT RECEIVERSHIP/LIQUIDATION

TENDER NO : DAFFPL/FF/2025-26/04

Bidder Name:

I / We hereby declare that I / We / M/s. _____ declare that:

- (i) I / We am / are not undergoing insolvency resolution process or liquidation or bankruptcy proceeding as on date.

OR

- (ii) I / We am / are undergoing insolvency resolution process or liquidation or bankruptcy proceeding as on date as per details mentioned below (Attached detail with technical bid)

Note: Strike out whichever is Not Applicable

It is understood that if this declaration is found to be false, DAFFPL shall have the right to reject my / our bid and forfeit the EMD. If the bid has resulted in a contract, the contract will be liable for termination without prejudice to any other right or remedy (including blacklisting or holidaylisting) available to DAFFPL.

Signature (With Stamp) of the Bidder:

Date:

Name of Signatory:

Sign & Stamp of Bidder



ANNEXURE X

STATEMENT OF CREDENTIALS

(A)

1. NAME AND CORRESPONDENCE ADDRESS OF THE TENDERER

PERMANENT ADDRESS OF THE TENDERER

2. TELEPHONE NO. _____

MOBILE NO. _____

3. NAME OF CONTACT PERSON(s): _____

4. NAME OF THE AUTHORISED SIGNATORY: _____

5. E Mail ID: _____

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

(B) TYPE OF BUSINESS ENTITY:

1. YEAR OF ESTABLISHMENT OF THE FIRM: _____

2. SOLE PROPRIETORSHIP: - _____

(Give Name of the Proprietor)

OR

3. PARTNERSHIP FIRM?

(Give names of the Partners and enclose scan copy of Partnership deed)

1. _____

2. _____

3. _____

4. _____

OR

4. PRIVATE OR PUBLIC LIMITED COMPANY?

(Attach list of Directors and copy of Certificate of Incorporation as defined in "Other Mandatory Documents")

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

- (C) **Details of Completed Purchase Orders of minimum value as per Pre-qualification criteria (PQC/BQC) during last SEVEN years as specified in PQC/BQC of the tender.**

Sl. No	Particulars	1	2	3
a	Party's Name to whom supplied, Clear Postal Address, Telephone/Fax Nos and E-Mail Address.			
b	<u>Purchase Order Details-</u>			
	PO Reference No.			
	PO Date			
	PO Value (Rs. in Lakhs)			
c	Quantity & place of supply			
d	Scheduled time of completion as per PO			
e	Date of commencement of supply			
f	Date of completion of supply			
g	Completion certificate reference and date			

Note: a. Tenderer should furnish copy of the above-referred orders (as defined under PQC documents) and

b. Enclose a separate statement if space is not sufficient.

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

(D) **Annual Turnover (as per Audited Balance Sheet) in following last THREE financial years**

SL No.	Financial Year	Value (Rs. In Lakhs)
1	2022-2023	
2	2023-2024	
3	2024-2025	

Note : Tenderer should furnish copy of audited accounts as proof of turnover (as defined under tender documents).

(E) **INCOME TAX DETAILS:**

i. Income Tax Returns Filed:

ASSESSMENT YEAR	DATE	ACKNOWLEDGEMENT NO
2022-2023		
2023-2024		
2024-2025		

Note: Tenderer should furnish copy of the Income Tax Return filed.

ii. Income Tax Assessment Orders for following three financial years:

ASSESSMENT YEAR	ASSESSMENT ORDER & DATE	REMARKS
2022-2023		
2023-2024		
2024-2025		

Copies of Income Tax assessment orders / return filed / acknowledgement order for the three years as indicated above.

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

(F) GST Registration Details:

GST Registration no	
---------------------	--

Note: Tenderer should furnish copies of above Tax Registration Certificates.

(G) Mode of EMD (Online EMD or BG):

i. If paid Online:

AMOUNT	Rs.
(RTGS/NEFT/NET BANKING)	
Transaction Detail	

ii. If Bank Guarantee submitted (following details to be given) :

Name of the Issuing Bank and Branch Address	Bank Guarantee No and Date	BG Amount Rs.	Date of issuance	Valid Upto

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

(H) Production Capacity Details: (in case of manufacturer)

S. N	Item	Factory/ Location	Installed/ Capacity	Already Committed Capacity (For current Purchase orders in hand)	Spare Capacity, If Any	Capacity Committed to DAFFPL against this tender
			A	B	C=A-B	

Factory License and Address Details:

(J) In case the bidder is not a manufacturer, the bidder should submit an undertaking on Letter Head that the bidder is capable of supplying the material / equipment as per tender requirement.

(K) Pan Card Details

Relation of Pan Holder to Tenderer

(PROP./PARTNER/COMPANY ETC.)

(Tenderer is required to upload copy of PAN card as detailed in "Other Mandatory documents")

(L) Details of Documents uploaded along with Tender documents in technical bid and confirmation required to be furnished by tenderer.

Sign & Stamp of Bidder



DELHI AVIATION FUEL FACILITY PRIVATE LIMITED

Tender No.: DAFFPL/FF/2025-26/04

PAYMENT TO VENDORS THROUGH ELECTRONIC MODE

Tenderers are requested to submit their Consent Letter as per the format given below along with the enclosures as required:

Dated:

To,
M/s DAFFPL.

Dear Sir,

With reference to your advice, we hereby agree to accept the payment of our bills through "RTGS/NEFT/Electronic Mode". The desired bank account details are given below:

1.	Name of Beneficiary	
2.	Name of the Beneficiary's Bank	
3.	Address of the Beneficiary's Bank Branch	
4.	Contact details of Branch with STD Code	
5.	Beneficiary's Bank Account No. (as per cheque copy)	
6.	Beneficiary's Account Type (SB/CC/CA)	
7.	Beneficiary's Bank IFSC Code (11 Digit)	
8.	Mobile No of Beneficiary (One Number only)	
9.	E-Mail Id of Beneficiary (One Mail Id only)	

A blank cancelled cheque leaf relating to the above bank account is enclosed for verifying the accuracy of the bank account details.

I hereby declare that the particulars given above are correct and complete.

(Signature of Account Holder)

Seal of the Vendor

Encl: Cancelled Cheque

Sign & Stamp of Bidder