

No.14/31/2020-OIDB

Dated:08/07/2021

INVITATION OF BIDS

Oil Industry Development Board (OIDB) invites bids from reputed and financially sound agencies having experience & expertise in providing operation and maintenance services of Electrical Installation, Sub Station ,DG set Operation, , Lift, Fire Fighting & wet riser system , water supply pumps & water softening Plant, STP ,HVAC plant installed, at OIDB Bhawan, Sector-73, Noida, as per the following schedule:		
Sl. No.	Item	Description
1.	Scope of Work	Providing complete services for Electrical Installation, Sub Station ,DG set Operation, , Lift, Fire Fighting & wet riser system , water supply pumps & water softening Plant, STP ,HVAC plant installed, at OIDB Bhawan as per Schedule of work attached.
2	Type of bid (on line)	Two bid system: 1) Technical Bid 2) Price Bid as per Schedule of Rates (SOR) Both the bids to be submitted separately online on Central Public Procurement Portal – https://eprocure.gov.in/eprocure/app OIDB Website – www.oidb.gov.in
3	Availability of bid document	Central Public Procurement Portal – https://eprocure.gov.in/eprocure/app OIDB Website – www.oidb.gov.in
4	Submission of technical bid on	Central Public Procurement Portal – https://eprocure.gov.in
5	Earnest Money Deposit (EMD) to be submitted with the tender	Rs. 7.25 Lakh through NEFT/RTGS in favour of OIL INDUSTRY DEVELOPMENT BOARD A/C No. 11084240909 State Bank of India, Main Branch, Parliament Street, New Delhi. IFSC: SBIN0000691
6	Submission of "Bid Security Declaration with tender	That if bidder withdraw or modify their bids during period of validity etc., they will be suspended for the time specified in the tender documents
7	Tender Upload Date and time	08/07/2021 and 3:00 PM
8	Date and time for submission of queries	14/07/2021 and 3:00 PM
9	Date and time of Pre-bid meeting	14/07/2021 and 3:00 PM

प्रधान कार्यालय :-
ओ.आई.डी.बी. भवन, 'सी' ब्लॉक, तीसरी मंजिल,
प्लॉट नं. 2, सैक्टर - 73, नौएडा-201301, उ.प्र.
फोन : 91-120-2594602, 603, 604 फैक्स : 91-120-2594630
वेबसाईट : www.oidb.gov.in

पंजीकृत कार्यालय :-
301, वर्ल्ड ट्रेड सेंटर, तीसरी मंजिल, बाबर रोड, नई दिल्ली - 110 001
फोन : 91-11-23413540

Main Office :-
OIDB Bhawan, 'C' Block, 3rd Floor
Plot No. 2, Sector - 73, Noida-201301, Uttar Pradesh
Phone : 91-120-2594602, 603, 604 Fax : 91-120-2594630
Website : www.oidb.gov.in

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301, World Trade Centre, 3rd Floor, Babar Road, New Delhi - 110 001
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कृपया हिन्दी में पत्राचार करें।

10	Last date and time for online submission of Bids	19/07/2021 and 2:00 PM
11	Date and time of opening of technical bids	Technical Bid: 3:00 PM on Dated-19/07/2021 Price Bid: Opening time and date shall be intimated to technically qualified bidders.
12	Performance Guarantee to be submitted only by the Successful Bidder	5% of the Contract value to be submitted within 10 days from letter of Award (LOA). Bidders should ensure that the Performance Bank Guarantee should be valid for a period extending to three months beyond the expiry of the contract.
13	Estimated cost put to tender	Rs.3,05,86,241.00 + GST @18% = 3,60,91,764
14	Contract period	Two years
2	PREQUALIFICATION CRITERIA (PQC)	
2.1	Bidder should have all required valid Licences.	
2.2	Bidder should have valid PAN, PF, ESI, GST and labour registration.	
2.3	Bidder should have Registered/branch office in Delhi/NCR Region.	
2.4	Bidder should have experience of similar work from CPSUs/State PSUs/Central or State Govt./Semi Govt.	
2.5	Experience of having successfully completed similar services in CPSUs/State PSU/Central or State Govt./Semi Govt. during last 5 years ending last day of month previous to the one in which bids are invited should be of value either of the following:	
2.5.1	(i) Three similar completed works costing not less than the amount equal to 40% of the estimated cost i.e. Rs. 3,60,91,764 Lakh. OR (ii) Two similar completed works costing not less than the amount equal to 50% of the estimated cost i.e. Rs 3,60,91,764 Lakh. OR (iii) One similar completed work costing not less than the amount equal to 80% of estimated cost i.e. Rs 3,60,91,764 Lakh.	
2.6	Similar work means experience in providing services for operation and maintenance of for Electrical Installation, Sub Station ,DG set Operation, , Lift, Fire Fighting & wet riser system , water supply pumps & water softening Plant, STP ,HVAC System.	
2.7	Bidder should have an average annual financial turnover of at least 30% of estimated cost in similar work during the last 3 financial years, ending 31 st March, 2021, i.e. Rs 3,60,91,764 Lakh	

	For proof of Annual Turnover any of the following documents/photocopy must be furnished: (i) Certificate issued by a practicing Chartered/Cost Accountant Firm, with Membership number (UDIN) certifying the Annual Turnover and nature of business. (ii) Audited Balance Sheet and Profit & Loss Account.
2.8	Offer of bidder under liquidation and/or net worth going negative will not be considered. A declaration/undertaking to this effect shall be submitted mandatorily by the bidder.
2.9	Bidder should not be on holiday list/black listed by OADB or any of Govt./PSU. A declaration/undertaking to this effect shall be submitted mandatorily by the bidder.
2.10	Documentary proof in respect to prequalification criteria 2.1 to 2.9 to be submitted with technical bid.
2A	Evaluation of Bids
2A.1	The technical bids will be first opened and bidders satisfying all the pre qualifying criteria as mentioned in terms and conditions will only be qualified.
2A.2	The financial bid of technically qualified bids will only be opened and the lowest bidder will be declared as successful bidder.
2A.3	The gross total cost considering all items in SOR will be considered for comparing the financial bids.
	Annexure I
3.	GENERAL TERMS & CONDITIONS
3.1	Tender document should be uploaded with covering letter having index in which information of attached documents be given serial number wise like name of the document with page number etc. Proper page numbering should be done for all documents uploaded on Central Public Procurement Portal https://eprocure.gov.in/eprocure/app
3.2	All uploaded pages of the tender document should be signed by the authorized signatory with stamp of the bidding firm as token of having accepted all the terms and conditions of the tender. Person signing the bid or other documents attached with tender must clearly write his/her name and also specify the designation.
3.3	Incomplete bid and/or bid without covering letter and/or without serial numbered pages and/or without signature & stamp of authorized signatory may be disqualified.
3.4	Proper numbering should be done of all pages of the Tender Document along with supporting documents.
3.5	OADB reserves the right to annul the process of tendering at any time without assigning any reason. OADB reserves the right to reject any or all the tenders without assigning any reason. OADB also reserves the right to change any condition of the tender before submission of the bids. The same will also be uploaded on OADB's website and CPP Portal.
3.6	Bidder must acquaint himself/herself of the site and conditions prevalent of all the system/plant at their own cost and convenience. No complaint will be entertained on this account later to the submission and acceptance of bids.
3.7	Consortium/Joint Venture bids shall not be accepted.



3.8	In case of composite works comprising of other types of works in addition to the qualifying work stated above, then the value of such qualifying work out of the total value of completed composite work shall be considered for the purpose of evaluation.
3.9	Bidder shall furnish documentary evidence i.e. copy of work orders including Schedule of Rates (SOR), completion certificate, complete annual audited financial year statements including balance sheets, profit & loss accounts statements and all other schedules, self-certification of being not under liquidation, court receivership or similar proceedings, etc. in the first instance itself, in support of their fulfilling the Bidder's Qualification Criteria. OADB reserve the right to complete the evaluation based on the details furnished without seeking any additional information.
3.10	Corrigenda/Addenda, if any, shall also be available on the referred web sites.
3.11	No sub-contraction & splitting of work is allowed. Total work shall be awarded to one agency only. However, tie up through MOU with OEM's for the benefit of OADB shall be allowed.
3.12	Bidder's authorized representative(s), shall attend the pre bid meeting on the prescribed day at the given venue. During the pre-bid meeting, all the technical and commercial issues shall be discussed and concluded to ensure that the bid received subsequent to pre bid meeting shall be without any deviations to terms and conditions. Hence, bidders shall treat the pre-bid meeting as utmost important and depute competent & senior person. However, in case any bidder does not attend the pre-bid meeting, it shall be understood that bidder has a clear understanding of the scope & terms and conditions of the bidding document and does not have any comments/deviations to the requirements of the bidding document.
3.13	Validity of bid should be 90 days from the date of opening of Technical Bid. Bids with validity less than days shall not be considered.
3.14	Submission of "Bid Security Declaration" with tender that if bidder withdraw or modify their bids during period of validity etc., they will be suspended for the time specified in the tender documents
3.15	Successful bidder shall become contractor hence the term bidder and contractor as appearing in this tender document shall denote same person before and after the award of contract respectively. The expression "bidder" shall mean the "contractor" wherever appearing for the purpose of the contract.
3.16	Successful bidder shall execute an agreement with the OADB within fifteen days from the date of issue of LOA on a non-judicial stamp paper of appropriate value (Rs.100/-). The cost of non-judicial stamp paper shall be borne by the Bidder.
3.17	Successful bidder shall furnish Composite Performance Bank Guarantee within twenty one days (21) from the date of issue of LOA as per attached form made in favour of OADB for an amount equal to 5% of the contract value. Performance Bank Guarantee shall remain valid for a period of 2 months beyond the date of completion of all contractual obligations.



	of 2 months beyond the date of completion of all contractual obligations.
3.18	OIDB may terminate the contract if it discovers subsequently that the bidder had engaged in corrupt fraudulent practices or any act of misrepresentation in competing for the contract.
3.19	In case, the information/document furnished by the contractor forming basis of evaluation of its bid is found to be false/fake/forged after the award of the contract, OIBD shall have the right to terminate the contract and get the remaining works executed by a third party at the risk & Cost of the Bidder and without any prejudice to other rights available to OIBD under the contract such as forfeiture of the performance bank guarantee, withholding of payment, etc. The agency shall be put on the negative/holiday list of OIBD debarring the bidder from future business with OIBD.
3.20	OIBD reserves the right to change any condition of the tender before opening of bids. OIBD also reserves the right to reject any or all the tenders without assigning any reason.
3.21	Successful bidder shall become contractor hence the term bidder and contractor as appearing in this tender document shall denote same person before and after the award of contract respectively. The expression "bidder" shall mean the "contractor" wherever appearing for the purpose of the contract.
3.22	The price bid will be opened only of those who will be found technically qualified.
3.23	Work will be awarded to L1 Bidder. In case of tie, The L-1 (Bidders) shall be asked to submit discount separately in sealed cover and job shall be awarded to bidder offering highest discount. In case of further tie the job shall be awarded to bidder having higher average turnover for last 3 financial years ending on 31/03/2020.
3.24	Contractor shall be bound to execute such additional items which can be termed as logical, essential and necessary (even though not listed in schedule of work) for the effective execution of the work in totality, rates for such items of work shall be rationally analysed/derived and would be binding on the contractor. Extra items may be executed not more than 25% of contract value if required.
4	BRIEF SCOPE OF WORK
5	PERIOD OF CONTRACT
5.1	Contract shall be for a period of two years from the date of issue of Letter of Award and extendable by one more year on same term and condition
6	HANDING OVER AND TAKING OVER
6.1	On Completion/termination of contract the site/plant/equipment will be taken over by the OIBD/incoming contractor in good/working condition. Cost for any deficiencies will be booked to the bidder.

PREFACE

The Conditions of Contract shall be read in conjunction with respective provisions specified in several sections of this Bidding Document. In case of irreconcilable conflicts, the provisions under clause no 2.1 herein of Conditions of Contract shall prevail.

	Table of Contents
1	DEFINITIONS
2	CONTRACT
3	CONFIDENTIALITY AND CONFIDENTIAL INFORMATION
4	COMPLIANCE WITH APPLICABLE LAWS
5	GENERAL OBLIGATIONS OF BIDDER
6	OWNER'S OBLIGATIONS
7	BIDDER'S PERSONNEL
8	CONTRACT PERIOD
9	PENALTY
10	TAXES AND DUTIES
11	PAYMENT TERMS
12	FORCE MAJEURE
13	INDEMNITY
14	LIMITATION OF LIABILITY
15	TERMINATION
16	GOVERNING LAW AND JURISDICTION
17	MOBILIZATION
18	OTHER IMPORTANT TERMS AND CONDITIONS

APPENDIXES:

I	PROFORMA FOR CONTRACT AGREEMENT
II	PROFORMA FOR CPBG



1	DEFINITIONS
	In the Contract, capitalized words and expression defined by way of inclusion in “parenthesis”, shall have the meaning so ascribed thereto. Further, in the Contract, unless repugnant to the context thereof, the following words and expressions used in these Conditions of Contract and elsewhere in the Contract, shall have the meanings assigned to them hereunder:
1.1	“Affected Party” shall have the meaning ascribed to it in Clause 16.2.
1.2	“Applicable Laws” means all laws in force and effect, including Tax laws but excluding direct Tax laws (which includes income tax, corporate tax, profession tax and wealth tax), as of the Base Date and which may be promulgated or brought into force and effect hereinafter including any revisions, amendments or re-enactments including without limitation regulations, rules and notifications made there under and judgments, decrees, injunctions, writs, orders and notifications issued by any court or Authority, as may be in force and effect during the subsistence of the Contract and applicable to either Party, their obligations or this Contract from time to time.
1.3	“Authority” means the Government of India, any state government or any local authority or any department, instrumentality or agency thereof or any corporation (to the extent acting in a legislative, judicial or administrative capacity and not as a contracting party with OWNER or commission under the direct or indirect control of such central, state or local government or any political sub-division thereof or any court, tribunal or judicial body within India.
1.4	"Bid" means the Bidder's signed offer for the Works and all other documents submitted along with the Bid.
1.5	“Bidding Documents” mean the Notice Inviting Bids/ Letter Inviting Bids, the instruction to bidders (including annexure), form of bid (including appendices), the Contract Agreement, the Conditions of Contract, the Specifications and all other reports, surveys, drawings and documents including amendments, if any, provided to the Bidder by OWNER.
1.6	“Completion" shall mean the successful provision of all materials and inputs and the successful completion and conclusion of all activities and tests required to complete the Works in accordance with the Contract.
1.7	“Contract” means the agreement between OWNER and the Bidder for execution of the Works and includes the Contract Agreement, the Conditions of Contract, the other Bidding Documents, the Specifications, the Price Schedule, and such further documents which are listed in the Contract Agreement and/or Conditions of Contract and includes any amendment thereto made in accordance with the provisions hereof.
1.8	“Contract Agreement” means the agreement entered into between OWNER and the Bidder



	along with the Price Schedule and other annexure and includes any amendments thereto made in accordance with the provisions thereof.
1.9	“Contract Performance Bank Guarantee/Security Deposit” means a duly executed, irrevocable, unconditional on demand bank guarantee / Bank Draft / Pay Order that is to be procured and maintained by the Bidder to secure the due and proper performance of the Contract.
1.10	“Contract Price” means the total price payable to the Bidder for performing the Works based on the rates and breakdown of prices provided by the Bidder in the Price Schedule, subject to such additions thereto and deductions there from as may be made under the Contract and as adjusted by the actual quantities, if applicable, of the items mentioned in the Price Schedule utilized in the execution of the Works.
1.11	OWNER shall mean Oil Industry Development Board.
1.12	“Engineer-in-Charge” means the Person designated by OWNER to act as the Officer- in-Charge / Manager (Estate) for the purposes of this Contract and notified in writing to the Bidder.
1.13	“Letter of Award/ Acceptance” means the Letter of Award / Acceptance issued by OWNER to the Bidder, awarding the Works to the Bidder.
1.14	“Running Bill” means the fully supported invoice delivered to OWNER by the Bidder at the times set out in the Payment Schedule, containing all the requisite information and complying with all the requirements set out in the contract.
1.15	“Site” means the land, location, right of way and/or places provided by OWNER where the Works are to be executed and to which Plant and Goods and Materials are to be delivered and any other place as may be specifically designated in the Contract as forming part of the Site or designated as such by the Engineer-in-Charge.
1.16	“Specifications” means all general and technical specifications and directions attached to and forming a part of the Bidding Documents which describe the purpose, scope, design and technical criteria of the Works including, the method and manner of performing the Works, the quality and quantity of the Works to be performed and the materials to be supplied under the Contract and includes all modifications or amendments made thereto by OWNER.
1.17	“Contract Period” means the period specified in the Contract Agreement or the Conditions of Contract for performing the Works.
1.18	“Week” means a period of any consecutive seven days.
1.19	“Working Day” means a day other than a Sunday or a public holiday on which OWNER is open for business.



2.	CONTRACT
	The documents forming the Contract are to be taken as mutually explanatory of one another. If there is an ambiguity or discrepancy in the documents, the Engineer-in-Charge shall issue necessary clarifications or instructions to the Bidder, and the order of precedence of the documents shall be as follows:
a	Contract Agreement
b	Letter of Award/Acceptance
c	Scope of Work/Job Specifications/Technical Specifications
d	Conditions of Contract
e	Other Terms and Conditions
3.	CONFIDENTIALITY AND CONFIDENTIAL INFORMATION
3.1	Both Parties shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out obligations under it or to comply with Applicable Laws. Bidder shall not publish, permit to be published, or disclose any particulars of the Works in any trade or technical paper or elsewhere without prior consent of OWNER.
4.	COMPLIANCE WITH APPLICABLE LAWS
4.1	The Bidder shall, in performing the Contract, comply with all Applicable Laws.
4.2	Without prejudice to the foregoing, the Bidder shall be responsible for bearing all registration and statutory inspection fees payable under any Applicable Laws in respect of the Works executed or completed pursuant to the Contract. If the Bidder defaults in complying with the Applicable Laws, the Bidder shall, at its own risk and Cost, bear any and all additional fees, fines, penalties or charges. However, OWNER shall make reasonable efforts to assist the Bidder in rectifying any such default under Applicable Laws upon the Bidder's specific request, including any specific request to issue letters to the relevant Authorities on behalf of the Bidder.
4.3	The Bidder shall not be absolved from any of its obligations under Applicable Laws or the Contract or claim any additional amount from OWNER due to its ignorance of any Applicable Law.
5	GENERAL OBLIGATIONS OF BIDDER
5.1	Bidder shall obtain and maintain all permits, licenses and approvals required for the execution of the Works as per Applicable Laws.
5.2	All Equipment provided by the bidder at site for execution of the Works shall not be removed without the consent, in writing, of OIIB.
5.3	OWNER shall not at any time be liable for the loss or damage to any of the Bidder's



	Equipment or materials brought on Site by the Bidder for execution of the Works.
5.4	The Bidder shall throughout the execution of the Works take full responsibility for the adequacy, stability, safety and security of the, Bidder's Equipment, persons deployed at site, comply with the Safety Code, all relevant safety regulations. In so far as the Bidder is in occupation or otherwise is using areas of the Site, the Bidder shall keep the Site and the Works in an orderly state appropriate for the avoidance of injury or accident to all persons on and in the vicinity of the Site and shall keep OWNER indemnified against all costs, charges, losses and damages that may be suffered by OWNER in any manner whatsoever as a result of any injury or accident to any person on or in the vicinity of the Site in connection with the execution of the Works;
6.	OWNER'S OBLIGATIONS
	Following facilities shall be provided by OWNER to Service provider's staff working at site free of cost:
6.1	Office space
6.2	Lockable storage space for keeping tools, consumable & personal belongings of the personnel.
6.3	Telephone to key personnel.
6.4	Water as well as electricity shall be provided free of cost to the Bidder for the execution of the works.
7	BIDDER'S PERSONNEL
7.1	Employee(s) engaged/deputed for the subject job by the Bidder shall maintain punctuality and discipline. If any employee(s) engaged by the Bidder is found to be undisciplined, misbehaving with OWNER's authorized representatives and/or officer/staff under the influence of any intoxicant, OWNER may ask the Bidder to replace such Employee(s) and the Bidder shall then forthwith comply with such instruction. The Bidder shall ensure that its employee(s) refrain from smoking or carrying any inflammable substances etc., inside the office premises of OWNER, while on duty with OWNER.
7.2	The Bidder shall make itself aware of all labour regulations and their impact on the cost and build up the same in the Contract Price. During the Contract Validity Period no extra amount in this regard shall be payable to the Bidder, for any reason whatsoever.
7.3	In the event of default being made in the payment of any money in respect of wages of any person employed by the Bidder and for carrying out of the Contract and if a claim thereof is filed in the office of the labour Authorities and proof thereof is furnished to the satisfaction

	of the labour Authorities, OWNER may, failing payment of the said money by the Bidder, as the case may be, make payment of such claim on behalf of the Bidder, to the said labour Authorities and any sums so paid shall be recoverable by OWNER from the Bidder. If the Bidder fails to pay any amount required to be paid to OWNER as aforesaid, within 7 (seven) days of its demand, OWNER shall be entitled to recover the amount from any moneys due or accruing to the Bidder under the Contract.
7.4	The establishment of the Bidder shall be duly registered under the Employees' Provident Fund and Miscellaneous Provisions Act, 1952 and the Employees' State Insurance Act, 1948 and the Bidder shall duly and timely pay its/their employees to the Authorities prescribed under the said Acts and any schemes framed thereunder in respect of all staff employed by it for the execution of the contract. Copies of challans/receipt of such payments along with the list showing persons employed together with emoluments paid for the purpose of provident fund deductions shall be submitted with Invoice/RA Bill.
7.5	The Bidder shall at his own cost and initiative take out and maintain at all times until the close out of the Contract, insurance policies in respect of workmen engaged by him for providing services under this Contract, in order to keep himself as well OWNER fully indemnified from and against all claims whatsoever including but not limited to those arising out of the provisions contained in the Workmen's Compensation Act, 1923. If the Bidder fail to take insurance as mentioned above, OWNER shall be entitled (but without any obligation to do so) to take such insurance at the cost and expense of the Bidder and without prejudice to any other rights or remedies of OWNER in this behalf, to deduct the sum(s) incurred thereof from any amounts due to the Bidder.
8	CONTRACT PERIOD
8.1	Period of contract is two (2) years from the date of issue of Letter of Award (LOA).
9.	Penalty
9.1	<p>The Bidder shall deploy competent, skilled and trained personnel to perform services under this contract. All personnel of the Bidder shall carry proper identity cards and shall be dressed in uniform, which should be neat and clean. The staff shall maintain discipline and conform to office etiquette.</p> <p>The Bidder should ensure to maintain the manpower as indicated in the Bidding Document, and also arrange a pool of standby staff/supervisor. In case any staff /supervisor found absent from duty, the reliever of equal status shall be provided by the Bidder from existing pool of staff.</p> <p>In case of any failure in deployment of manpower, in providing satisfactory services, non-availability of material, non-performance etc. penalty shall be applied in line with the provisions mentioned elsewhere in the Bidding Document.</p>
10.	TAXES AND DUTIES



10.1	All the Taxes and duties including GST payable in India whether under Central, State or Local laws applicable in India shall form part of the Contract Price. The Bidder shall bear all the Taxes, duties, levies on the supply of Goods and Material and on performance of the services, under Central, State or Local laws applicable in India as well as those leviable outside India including Goods & Service Tax payable in India.
10.2	Contract Price shall include all taxes & duties, levies including GST. The Bidder shall be fully and exclusively responsible for the payments (and liable for all consequences in the event of default) of Cess, VAT, GST, any and all taxes, now or hereafter imposed, increased or modified from time to time in respect of the above job and all contributions and taxes for un-employment compensation, insurance and amenities now or hereafter imposed by any law of the Government/local bodies which are imposed with respect to or covered by the wages, salaries or other compensation paid to the persons employed by the bidder. OWNER shall have no liability whatsoever concerning the employees/labourers of the Bidder. The bidder shall keep OWNER indemnified against all losses or damage or liability arising out of or imposed in the course of employees. Corporate Tax Liability if any shall be to Bidder's account.
11.	PAYMENT TERMS
11.1	Contractor shall submit the bill in duplicate along with the attendance sheet, wage sheet, an undertaking that they have complied all the statutory obligations, EPF Challan, ESI challan, GST etc. Payment of the contractor's running bill shall be released after satisfactory performance of the job within 30 days of submission of bill.
11.2	In the event of any query, objection, delay or dispute with regard to any bill or a part thereof, the contractor shall not be entitled to any interest for late payment.
11.3	Payment of bills will be made through Electronic Funds Transfer (NEFT)/RTGS. For this contractor shall submit bank details and a crossed cheque. Bank charges will be to contractor's account.
11.4	Income tax deduction shall be made from all payments as per provisions of Income Tax Act, 1961 as applicable from time to time. Contractor will indicate PAN and GST registration number on the bills.
11.5	Release of Final Bill and Security Deposit The contractor shall submit the documentary proof of following for settlement of final bill and Security Deposit:
11.5.1	Paid due wages to all his employees engaged on the job for the whole period of contract.



11.5.2	Deposited the contributions of PF with the concerned authorities for the whole period of contract and issued individual PF statements for the preceding financial year end.
11.5.3	Deposited the contributions of ESI with the concerned authorities for the whole period of contract.
11.5.4	Indemnity bond on non-judicial stamp paper of appropriate value, indemnifying OIIB against any dues that may occur to his employees.
11.5.5	Documentary proof of submission of GST for the whole period of contract.
11.5.6	Submit No Claim Certificate.
12	FORCE MAJEURE
12.1	Neither party will be liable for any claim on account of any loss, damage, or compensation whatsoever, arising out of any failure to carry out the terms of this contract, where such failure is cause due to force majeure conditions like war, rebellion, mutiny, civil commotion, fire, riots, earthquake, drought, flood crop failure, or act of God or due to any restraint or regulation of the State or Central Government or a local authority. A notice of such occurrence is to be given to the other party in writing within 10 days from the date of occurrence of the force majeure condition, furnishing therewith documentary evidence supporting the invoking of the force majeure and will inform other party of the period for which the force majeure condition continued with documentary evidence thereof this effect.
13.	INDEMNITY
13.1	The Bidder shall indemnify and hold harmless OWNER, the Engineer-in-Charge, their advisors, representatives and employees from and against all actions, suits, proceedings, claims, damages, losses, expenses and demands of every nature and description, by reasons of any breach of the provisions of the Contract by the Bidder or any act or omissions of the Bidder, its representative or its employees, agents, and sub-bidders in the execution of the Works, including any professional services provided by the Bidder.
13.2	The bidder shall also indemnify and hold OWNER from and against all claims and proceedings on account of infringements of patents, rights, design, trademark etc.
13.3	All sums payable by way of compensation under these conditions shall be considered reasonable compensation payable to OWNER with reference to the actual loss or damage sustained by OWNER. The decision of the Engineer-in- Charge as to compensation claimed shall be final and binding.
14	LIMITATION OF LIABILITY
14.1	The aggregate total liability of the Bidder to OWNER under the Contract shall not exceed the total Contract Price, except that this Clause shall not limit the liability of the Bidder



	for following:
A	In the event of breach of any Applicable Law;
B	In the event of fraud, willful misconduct or illegal or unlawful acts, or gross negligence of the Bidder or any person acting on behalf of the Bidder; or
C	In the event of acts or omissions of the Bidder which are contrary to the most elementary rules of diligence which a conscientious Bidder would have followed in similar circumstances; or
D	In the event of any claim or loss or damage arising out of infringement of Intellectual Property; or
E	For any damage to any third party, including death or injury of any third party caused by the Bidder or any person or firm acting on behalf of the Bidder in executing the Works.
F	Neither Party shall be liable to the other Party for any kind of indirect or consequential loss or damage including, loss of use, loss of profit, loss of production or business interruption which is connected with any claim arising under the Contract.
15	TERMINATION
15.1	Either party shall have the right to terminate this CONTRACT on account of Force Majeure, as set forth in Clause 12.
15.2	In the event the CONTRACTOR at any time during the term of this Agreement becomes insolvent or make a voluntary assignment of its assets for the benefit of creditors or adjudged bankrupt, then the OIBD shall, by a notice in writing have the right to terminate this CONTRACT and the CONTRACTOR's right and privileges hereunder shall stand terminated forthwith.
15.3	If the OIBD considers that the performance of the contractor is unsatisfactory or not upto the expected standard, the OIBD shall notify the contractor in writing and specify in detail the cause of such dissatisfaction. the OIBD shall have the option to terminate this Agreement by giving one month notice in writing to the CONTRACTOR, if CONTRACTOR fails to comply with the requisitions contained in the said written notice issued by OIBD. At this stage (i) OIBD reserves the right to complete the work and/or arrange for other entities to do so at the risk and cost of the bidder (ii) call upon the whole or such portion of the Performance Bank Guarantee amount as OIBD may consider fit.
15.4	Notwithstanding any provisions herein the contrary, the CONTRACT may be terminated at any time by the OIBD on giving one month notice to the Contractor due to any reason not covered under the above Clause 15.1 to 15.3 and in the event of such termination the OIBD shall not be liable to pay any cost of damage to the Contractor except the payment for services as per the Contract upto the date of termination.



15.5	In the event of termination of CONTRACT, OIDB will issue Notice of Termination of the contract with date and event after which the contract will be terminated. The contract shall then stand terminated and the Contractor shall demobilize their personnel and material.
15.6	CONSEQUENCIES OF TERMINATION
15.6.1	In all cases of termination herein set forth, the obligation of the OIDB to pay shall be limited to the period up to the date of termination. Notwithstanding the termination of this Agreement, the parties shall continue to be bound by the provisions of this Agreement that reasonably require some action or forbearance after such termination.
15.6.2	In case of termination of CONTRACT herein set forth except under Clause 15.1 and 15.4 following actions shall be taken against the Contractor: OIDB shall conduct an inquiry against the Contractor and consequent to the conclusion of the inquiry, if it is found that the fault is on the part of the Contractor, then they shall be put on holiday for a period of two years from the date the order for putting the contractor on holiday is issued.
16.	GOVERNING LAW AND JURISDICTION
16.1	The Contract shall be governed by and construed in accordance with the laws of India and the courts at Delhi shall have exclusive jurisdiction over all Disputes arising under or in connection with the Contract.
17.	Mobilization
17.1	Bidder has to mobilize resources immediately on receipt of Letter of Acceptance (LOA). No mobilization advance and secured advance shall be paid to the bidder.
18.	Other Important Terms and Conditions
18.1	The bidder whose tender is accepted shall have to obtain labour license from appropriate authority, as applicable for employment of unskilled/skilled manpower for contract services. The bidder shall comply with all labour laws/statutory regulations applicable or which might become applicable to the Government with regards to performance of the work including but not limited to the Minimum wages act, contract labour act, payment of bonus act, etc from time to time and take such steps as may be deemed necessary in this regards. In addition, bidder shall provide insurance cover to all his personnel.
18.2	OIDB shall have no liability, whatsoever in respect of workers to be deployed by the bidder for execution the contract, bidder will be held fully responsible for any consequences as a result of such dispute.
18.3	The bidder shall be fully responsible for payment of wages, or any other benefits under



	various labour laws / acts applicable to and / or the personnel employed by him. In case the bidder fails to discharge any of his legal obligations and liability, OIBD shall deduct from monthly bills and or security deposit and discharge the liability on behalf of the bidder as principal employer. The bidder shall make payment of wages latest by 7th of each month.
18.4	The bidder shall be solely responsible for all payment and other benefits to workers under any of the existing labour laws or which might become payable through modification of existing labour legislation or orders of the government or any other new law in this regard. OIBD shall have no liability, whatsoever in this regard.
18.5	The bidder shall not lease / transfer / sublet / appoint sub bidder for the services. If the bidder does so, the contract shall stand terminated and the security deposit shall be forfeited.
18.6	The bidder shall nominate a supervisor, who will coordinate with Engineer-in- Charge, who shall be available throughout on all working days of OIBD as well as on Saturday and holidays.
18.7	No other person except the bidder's personnel shall be allowed to enter the premises and the bidder will not entertain outsiders to extend any services beyond OIBD premises. No visitors, guests or contract labour shall be permitted to do unnecessary telephone calls inside the premises.
18.8	Bidder's personnel shall be polite, courteous and well behaved.
18.9	Bidder's personnel shall not mix up or establish close contacts with OIBD employees and do any undue favour or any private work other than their normal duties during the specified working hours.
18.10	Bidder's personnel, accepting any tips from OIBD employees, shall be removed from the OIBD's premises and not allowed to work from the date of such an incident.
18.11	Bidder's personnel shall not disturb OIBD employees and/or use abusive language while dealing with them. If any such incident is reported, the bidder shall be held fully responsible for its consequences. The bidder shall be liable to take action against its erring personnel.
18.12	Bidder's personnel shall have to wear uniform provided by the bidder and display properly Identity Card provided by their company at all times while in OIBD premises.
18.13	Bidder's personnel shall not enter into any unlawful activity, within OIBD premises and should have good moral. Bidder's personnel shall not indulge in any unlawful activities, nuisance and noise including demonstrations, slogans shouting and or any other acts which hamper peaceful working of the premises.
18.14	The bidder shall apply for Police verification of its personnel and verify the character and antecedent of the personnel to be employed by him and shall furnish a certificate to this



	effect at the beginning of the contract and whenever there is any change in the employment status.
18.15	Bidder shall submit particulars of workers to OIBD for issue of entry passes to each and every worker deployed for regulating their entry in OIBD premises. Workers shall also be liable to physical search and other security checks at any time by OIBD's security staff. Bidder's workers shall fulfil all obligations and system set by OIBD in regard to security, attendance systems etc.
18.16	Bidder shall have his personnel examined and medically checked prior to their deployment and submit their fitness certificates. Any person found medically unfit shall not be deployed. In case any person deployed by bidder is observed medically unfit such person shall be removed from duty.
18.17	Bidder shall maintain full particulars of workers deployed including their residential addresses and photographs and furnish the same as and when required by OIBD.
18.18	All safety / security provisions laid down by OIBD are to be followed strictly by the bidder and its personnel
18.19	Bidder shall submit, but not limited to the following documents to the Engineer-in-Charge at the beginning of the contract and subsequently whenever there is a change of status:
a	Labour License
b	Insurance Cover for workers employed
c	Photocopy of ESI cards valid for ESI dispensaries in respect of workers employed
d	Temporary as well as permanent residential address of the workers employed along with a recent passport size photograph.
e	Bonus Act Compliance
18.19.1	Bidder shall be required to submit bill every month for the services rendered and payment made thereof enclosing therewith copy of bank statement showing names of the deployed staff as a proof of monthly wages paid, photocopy of challans in respect of contributions made to ESI and PF authorities, self certified copy of attendance for the concerned month and an undertaking that all the statutory compliances has been complied. The bidder shall strictly adhere to the statutory regulations viz. Minimum Wages Act, PF Act, ESI, Insurance and other regulations covering labour contract.
18.19.2	It is necessary that the bidder shall obtain once in every 6 months, PF and ESI statements from the PF and ESI authorities, in respect of each and every worker(s) engaged by the agency / bidder during the contractual period and submit the same to Engineer-in-Charge for verification and records.



18.20	The bidder shall be solely responsible for any and all such payments to his personnel that might become applicable under any law, agreement during the currency of the contract. The bidder shall submit to the Owner the details of payments of statutory benefits like bonus, leave and relief etc. to its personnel from time to time.
18.21	OIDB will in no way be liable to pay to the bidder any claims whatsoever other than the monthly bills.
18.22	Bidder shall be solely responsible for any damages and / or loss sustained by OIDB as a result of theft, pilferage, carelessness, negligence, willful act and unlawful activities of his workers. OIDB shall recover entire cost of providing replacement for any such items.
18.23	The bidder shall indemnify OIDB against all losses / damages and / or liability arising out of or during the course of his employing person or out of his relations with his own personnel.
18.24	The bidder shall be directly responsible for any / all disputes arising between him and his personnel and keep OIDB indemnified against all such losses, damages and claims arising thereof.
18.25	The bidder shall be responsible for and pay the expenses for providing medical treatment to their personnel who may suffer any bodily injury / loss of life during the course of their contractual obligations as a result of any accident within the OIDB premises. Owner will stand indemnified against any claim/damage/compensation.
18.26	The Bidder shall not deploy the employee of the Owner at site. The Owner shall not be under any obligation to provide empanelment to any of the personnel of the Bidder after the expiry of the contract.
18.27	No person below the age of 18 years shall be employed by the bidder for the job.
18.28	The bidder shall be entitled to get reimbursement on the increase in minimum wages and consequential benefits as and when declared by the Delhi Government subject to submission of proof that the increased wages has been disbursed by the agency to its employees.
18.29	The bidder shall quote the rates considering the following items.
a	Salary of Highly Skilled , skilled, semi skilled and unskilled ,
b	ESI Payment
c	PF Payment
d	Bonus Payment (per month per person as per Gazette Notification dated 3-4-2018)
e	Uniform, Shoes & face mask (good quality washable).



	Bidder shall provide minimum two sets each of summer and winter uniform to its personnel at its own cost.	
f	Laundry Charge for the Uniforms	
g	Insurance	
18.30	Following T & P shall be provided by the bidder at site:	
	Tong Tester , Test Lamp	
	Gloves	
	First Aid Box	
	Crimping Tool Kit	
	Meggar (5 KV HT and 500 volt LT)	
	Spanner Set	
	Screw Driver set	
	Allen Keys set	
	Earth Tester	
	Blower	
	Hammer, Drill Machine & Spade	
	Aluminium Ladder 6ft., 10ft., 12ft.	
	Multi meter	
	Plier	
	Nose Plier	
	Every wireman/operator should have pliers, screw driver of different size, tester & test lamp for day to day maintenance work.	
	Before start of contract these T&P materials must be kept in a lockable box, if same is not available at site recovery for the same @ Rs. 200/- per day shall be deduct from the contractor bill maximum upto Rs. 2000/- per month.	
18.31	Deduction, penalties/recoveries in payment to contractor due to deficiency in services or non-compliance of contractual provisions.	
i	Staff not working with proper and clean uniform	Rs.100/- per day per person
ii	Unsatisfactory and substandard maintenance	Rs.1000/- per day
iii	Non-availability of staff deployed as indicated in scope of work of NIT	Rs. 100/- per day for Unskilled Rs.150/- per day for Semiskilled Rs.200/- per day for Skilled Rs.250/- per day for High skilled
iv	Non-availability of required consumables for daily maintenance use	Will be purchased by OIDB from local market and cost recovery will be made from contractor's bill. If such incident



		occurs more than two times in a month a penalty of Rs.1000/- per day will be imposed.
vi	Non disbursement of wages to its employees latest by 7th day of every month	Rs.1000/- per day
vii	Non-compliance of any other contractual conditions	1% of the monthly payable amount per day subject to the maximum of 10%
viii (vii)	For repeated complaints of unsatisfactory performance of contract	Entire security deposit may be forfeited by the OIBD. In addition OIBD shall have the right to terminate the contract without assigning any reason.

1


BID SECURITY FORM

No.....

Date.....

To

The Secretary (hereinafter called “ The Owner)
Oil Industry Development Board
OIDB Bhawan
Sector-73
Noida-201301

Whereas M/s.....(Hereinafter called “the bidder”) has submitted its bid dated.....for the work Maintenance of E&M Sevices including Sewage Treatment Plant at OIDB Bhawan Complex Plot No. 2 , Sector- 73 NOIDA services vide Tender No.....dated.....KNOW ALL MEN by these presents that WE of having our registered office at (hereinafter called ‘the Bank) are bound unto The Owner in the sum of Rs. (Rs,in words) for which payment will and truly to be made of the owner , the Bank bind itself, its successors and assigns by these present.

THE CONDITIONS of the obligations are:

If the Bidder withdraws his bid during the period of bid validity specified by the Bidder on the Bid form.

OR

If the Bidder, having been notified of the acceptance of his bid by the Owner, during the period of bid validity, fails or refuses to execute the Contract, if required;

OR

fails or refuses to furnish the Performance Security, in accordance with the instructions to Bidders.

OR

fails or refuses to perform their duties fully or partially to the satisfaction of the Owner.



We undertake to pay the Owner up to the above amount upon receipt of its first written demand, without the purchaser having to substantiate its demand, provided that in its demand the Owner will not justify the demand of the amount claimed by it is due to it owing to the occurrence of any one or both of the conditions, specifying the occurred condition or conditions.

This guarantee will remain in force as specified inof the Bid document up to 90 days and including thirty (30) days after the period of bid validity and any demand in respect thereof should reach the Bank not later than the specified date/dates.

Signature of Witness	Signature of the Bank
Name of Witness	Seal & Full address of Branch Tel No. of Branch
Address of Witness	Email address of Branch



CONTRACT AGREEMENT FORM

CONTRACT AGREEMENT NO.....

DATED-----

THIS AGREEMENT is made on between Secretary, Oil Industry Development Board (hereinafter referred to as "Client" which expression unless excluded or repugnant to the context be deemed to include his successors and assigns) and whose principal place of office is at OI DB Bhawan, Sector 73, NOIDA of the One Part,

AND

M/S.....having its registered office at..... (Hereinafter referred to as "the Bidder") which expression shall unless excluded by or repugnant to the context be deemed to include his successors, heirs, executors, administrators, representatives and assigns) of the other part for providing housekeeping, horticulture and Operation and CAMC of Sewage Treatment Plant (STP) services to Client.

NOW THIS AGREEMENT WITNESSTH as follows:

I. WHEREAS the Client invited bids through open tender, vide Notice Inviting Tender datedfor availing Maintenance of E&M Sevices including Sewage Treatment Plant at OI DB Bhawan Complex Plot No. 2 , Sector- 73 NOIDA at its office under Tender No.//

II. AND WHEREAS the Bidder submitted his bid vide..... in accordance with the procedure mentioned along with the bid documents and represented therein that it fulfills all the requirements and has resources and competence to provide the requisite services to the Client.

III AND WHEREAS the Client has selected M/s.....as the successful bidder ("the Bidder") pursuant to the bidding process and negotiation of contract prices, awarded the Letter of Award (LoA) No., to the Bidder on for a total sum of [Rupees Only].

IV. AND WHEREAS the Client desires that Maintenance of E&M Sevices including Sewage Treatment Plant at OI DB Bhawan Complex Plot No. 2 , Sector- 73 NOIDA (as defined in the Bidding Document) be provided, performed, executed and completed by the Bidder, and wishes to appoint the Bidder for carrying out such services.

V. AND WHEREAS the Bidder acknowledges that the Client shall enter into contracts with other bidders/parties for the housekeeping services of its premises in



cases the Bidder falls into breach of the terms and conditions as stipulated in the Tender Document and shall waive its claim whatsoever in this regard.

VI. AND WHEREAS the terms and conditions of this Contract have been fully negotiated between the Client and the Bidder as parties of competent capacity and equal standing.

VII. AND WHEREAS the Bidder has fully read, understood and shall abide by all the terms and conditions as stipulated in the Tender Documents for Maintenance of E&M Services including Sewage Treatment Plant at OI DB Bhawan Complex Plot No. 2 , Sector- 73 NOIDA in the Client's premises, failing which the Contract is liable to be terminated at any time, without assigning any reasons by the Client.

VIII. AND WHEREAS the Bidder shall be responsible for payment of Service Tax with Central Excise and Taxation Department. The documentary proof of the same must be submitted within one month of payment of particular bill for the amount of Service Tax Charged in the said bill

VIII. AND WHEREAS the Client and the Bidder agree as follows:

1. In this Agreement (including the recitals) capitalized words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this

a. Agreement. This Agreement shall prevail over all other Contract documents.

a) The Letter of Award (LOA) issued by the Client.

b) The complete Bid, as submitted by the Bidder.

c) The Addenda, if any, issued by the Client.

d) Any other documents forming part of this Contract Agreement till date. (Performance Bank Guarantee, Bank Guarantee)

e) Charges – Schedule annexed to this Article of Agreement

f) Supplementary Agreements executed from time to time.

3 Any changes/modifications/amendments required to be incorporated in the Contract Agreement at a later stage shall be discussed and mutually agreed by both the parties and such supplementary agreements shall be binding on both the parties and shall form the part of this contract agreement.

4. This Contract shall be governed by and construed in accordance with the laws of India. Each Party hereby submits to the jurisdiction as set out in the Dispute Resolution Procedure in the Conditions of Contract.

VII. IN WITNESS HEREOF the parties hereto have caused this Agreement to be executed in accordance with the laws of India on the day, month and year indicated above.



Signed on behalf of the Bidder
Oil Industry Development Board

Signed on Behalf of

(Authorized Signatory)

(Authorized Signatory)

A handwritten signature in blue ink, appearing to be 'A. Singh', is located at the bottom center of the page.

PERFORMANCE BANK GUARANTEE (FORM)

(To be executed on non-Judicial stamped paper of an appropriate value)

Date :

Bank Guarantee No:

Amount of Guarantee:.....

Guarantee Period: From to.....

Guarantee Expiry Date :

Last date of Lodgement:

WHEREAS Oil Industry Development Board having its office at OI DB Bhawan, Plot No.2, Sector 73, NOIDA (hereinafter referred to as "The Owner" which expression shall unless repugnant to the context includes their legal representatives, successors and assigns) has executed a binding to the contract on [Please insert date of acceptance of the letter of Award (LOA)]

("Contract") with [insert name of the Successful Bidder].....(hereinafter referred to as the "Bidder" which expression shall unless repugnant to the context include its legal representatives, successors and permitted assigns) for the performance, execution and providing services for Maintenance of E&M Services including Sewage Treatment Plant at OI DB Bhawan Complex Plot No. 2 , Sector- 73 NOIDA" shall have the meaning ascribed to it in the Contract] based on the terms & conditions set out in the Tender Documents number [insert reference number of the Tender Documents] dated [insert date of issue of Tender Documents].....and various other documents forming part thereof.

AND WHEREAS one of the conditions of the Contract is that the Bidder shall furnish to the Owner a Bank Guarantee from a scheduled bank in India having a branch at New Delhi for an amount equal to 10% (ten percent) of the total Contract Sum (the amount guaranteed under this bank guarantee shall hereinafter be referred to as the "Guaranteed Amount") against due and faithful performance of the Contract including the performance bank guarantee obligation and other obligations of the Bidder for the supplies made and the services being provided and executed by under the Contract. This bank guarantee shall be valid from the date hereof upto sixty days after the expiry of the Contract Period.

AND WHEREAS the Bidder has approached [insert the name of the scheduled bank] (here in after referred to as the "Bank") having its registered office at [insert the address].....and at the request of the Bidder and in consideration of the promises made by the Bidder, the Bank has agreed to give such guarantee as hereunder:-



- i. The Bank hereby undertakes to pay under this guarantee, the Guaranteed Amount claimed by the Owner without any further proof or conditions and without demur, reservation, contest, recourse or protest and without any enquiry or notification to the Bidder merely on a demand raised by the Owner stating that the amount claimed is due to the Owner under the Contract. Any such demand made on the Bank by the Owner shall be conclusive as regards the amount due and payable by the Bank under this bank guarantee and the Bank shall pay without any deductions or set-offs or counterclaims whatsoever, the total sum claimed by the Owner in such Demand. The Owner shall have the right to make an unlimited number of Demands under this bank guarantee provided that the aggregate of all sums paid to the Owner by the Bank under this bank guarantee shall not exceed the Guaranteed Amount. In each case of demand, resulting to change of PBG values, the Owner shall surrender the current PBG to the bank for amendment in price.
- ii. However, the Bank's liability under this bank guarantee shall be restricted to an amount not exceeding [figure of Guaranteed Amount to be inserted here] only.
- iii. The Owner will have the full liberty without reference to the Bank and without affecting the bank guarantee to postpone for any time or from time to time the exercise of any powers and rights conferred on the Owner under the Contract and to enforce or to forbear endorsing any powers or rights or by reasons of time being given to the bidder which under law relating the Surety would but for the provisions have the effect of releasing the surety.
- iv. The rights of the Owner to recover the Guaranteed Amount from the Bank in the manner aforesaid will not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the Bidder and / or that any dispute(s) are pending before any office, tribunal or court in respect of such Guaranteed Amount and/ or the Contract.
- v. The guarantee herein contained shall not be affected by the liquidation or winding up, dissolution, change of constitution or insolvency of the Bidder but shall in all respects and for all purposes be binding and operative until payment of all money due to the Owner in respect of such liability or liabilities is affected.
- vi. This bank guarantee shall be governed by and construed in accordance with the laws of the Republic of India and the parties to this bank guarantee hereby submit to the jurisdiction of the Courts of New Delhi for the purposes of settling any disputes or differences which may arise out of or in connection with this bank guarantee and for the purposes of enforcement under this bank guarantee.
- vii. All capitalized words used but not defined herein shall have the meanings assigned to them under the Contract.
- viii. Unless a Demand under this bank guarantee is filed against the Bank within six (6) months from the date of expiry of this bank guarantee all the rights of the Owner under



this bank guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities hereunder.

ix. We have the power to issue this bank guarantee in your favour under Memorandum and Article of Association and the Undersigned has full power to do so under the Power of Attorney dated [date of power of attorney to be inserted] granted to him by the Bank.

Date: Bank

Corporate Seal of the Bank
By its constituted Attorney



ANNEXURE-II

SPECIAL TERMS AND CONDITIONS FOR INTERNAL & EXTERNAL ELECTRICAL INSTALLATION and SUB STATION

SH-I (INTERNAL & EXTERNAL ELECTRICAL INSTALLATION and SUB STATION)

1. Complete Internal & External Electrical works of OI DB Bhawan Complex i.e. (G+3)-Tower –B,C,D , (G+9)- Tower –A Complete with Basements having Light points , Fan points , Exhaust Fan Points , Power Points , Ceiling Fans , Exhaust Fans ,Pedestal Fans ,Cabin Fans, Street Light Fittings , Distribution L.T.Panels ,UPS SDBs , Light & Power SDBs and different type of other luminaire fittings inside as well as outside open.
2. 1600 KVA 11 KV/0.433 Volt Oil Filled Transformer -2 Nos.
3. 800 Amp. 11KV HT VCB - 4 Nos.
4. 11 KV By pass Panel - 1 No.
5. IDMT Relays with 2 Over Current , 2 Earth Fault -2 Nos.
6. 800 to 2500 Ampere ACB 3/4 Pole – 18 Nos.
7. APFC Panel 200KVAR- 4 Nos.
8. L.T.Bus Ducts-Lot
9. Main AVR

A. Qualification of deputed Manpower & Recovery in case of Absent.

- (i) Electrical Supervisor – Having good knowledge of Control Wiring ,ITI/Diploma in Electrical Engg. With minimum 5 years experience.
- (ii) Wireman/ Electrician – Electrician/skilled Staff Should have passed ITI in relevant trade or have valid electrical license from competent authority with minimum 3 year experience in similar work.
- (iii) Helper - Physically strong/Mentally fit, minimum 5th Pass.

B. In case of any staff found absence from duty, the recovery will be made at the following rates from the contractor bill .

- (i) Electrical Supervisor – @ Rs. 250/- per day/ shift.
- (ii) Wireman/ Electrician – @ Rs. 200/- per day/ shift.
- (iii) Helper – @ Rs. 100/- per day/ shift.

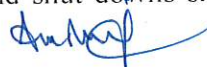
Terms & Conditions

1. All the cleaning material i.e. soap, duster etc. shall be arranged by the contractor at his own cost for cleaning of Electrical Installation & fans, switch gear, DB, Main control panel, Sub Station Equipments etc. If cleaning of installation is not found satisfactory at any time, a recovery of Rs. 200/- per occasion noticed per Sub Head shall be made from the bill of contractor.
2. The contractor shall take immediate action to attend any complaint assigned to him by OI DB officials / other departments in the campus by phone /verbal instruction .

In all cases attend the complaints in the specified duration as mentioned below: -



- a) Urgent nature complaint such as electricity not being available due to internal Fault shall be attended within 2 hour, otherwise a recovery of Rs. 200/- per complaint shall be made from the contractor's bill
 - b) Emergent nature complaint such as leakage of current / fire hazard due to short circuit shall be attended within 1 hour, otherwise a recovery of Rs. 500/- per complaint shall be made from the contractor's bill.
 - c) Minor complaints will be attended within 8 hours.
 - d) Major complaints i.e. new work requiring materials will be attended within 7 days or as decided by Engineer-in-charge.
3. Satisfactory level as determined by the feedback taken verbally through various user Department shall be more than 90 % otherwise recovery @ Rs. 1000/- per month shall be made from the contractor bill.
 4. Mobile phone shall be provided for minimum 1 No. Wire-man and Supervisor for operation staff to receive the complaints. The contractor shall furnish name & contact number of the persons, who should be contacted during emergency, otherwise a recovery of Rs. 200/- per shift shall be made from the contractor bill.
 5. The scope of work includes attending day-to-day complaints, repairs/maintenance of all electrical installation & fittings provided by OADB, rectifying defect and making functional.
 6. Whenever required proper UG Cable joint shall be provided (In any case temporary / Loop joint is not allowed).
 7. The sundry materials like insulation tape, greasing / oiling of ceiling / exhaust fan, screws, nut & bolts, detergent for cleaning, dhoti, cotton waste, split pin, quarter pin etc. are to be arranged by the contractor for which nothing extra will be paid.
 8. The material shall be used by the contractor at site as per list of approved make attached.
 9. Follow all safety procedure during maintenance activities. (See IS Code No. 5216 (Pt. 1 & 2) 1982 or safety procedure mentioned in CPWD Specifications for EI works (Pt.-I – Internal 2013) for more details)
 10. Only Authorized persons should be permitted to handle electrical equipment. Names of Authorized persons should be displayed in the main MV panel room (Rule 3 of IE Rules) when maintenance activities are performed, another person should accompany the one carrying out the tasks.
 11. ON LINE maintenance should not be undertaken in sub-stations. It must be ensured that supply lines concerned are isolated and proved isolated, considering also any likely back feeding. Caution boards should be displayed while so as to avoid accidental switching on.
 12. Supplement this schedule with recommendations of manufacturers of the respective equipments. Proper record of every maintenance activity must be kept as per this Schedule of maintenance. Result of all tests must be also recorded therein. However, if there is any repair or replacement done, the same should be recorded in the History Book.
 13. Logging of instruments Instruments may be logged daily, only in attended substations. In the case of unattended substations, logging should be done every month or at shorter intervals as feasible. As far as possible logging may be done in peak loading time, so as to monitor the pattern of loading. Periods of power cuts and shut downs should be indicated in attached



substations. Logging is needed for voltage (HV/MV/battery), current (HV, MV/battery), power (MD), temperature (max.) of oil, ambient temperature and pf (and frequency meter is already installed). Load on each outgoing feeder may be checked by clip on ammeter, once in 3 or 4 months, preferable during peak seasons, so that redistribution, if any needed among the feeders could be further examined and effected.

14. Inspection of equipments rooms and equipments. Clean up equipment rooms; remove cobwebs, birds "nests etc., if any. Check that the ventilators are clear exhaust fans and fans are operational. The approach to equipment rooms, and yards in outdoor installations should be clear. Wipe out dirt/ dust from external surfaces of equipments. CAUTION: Never attempt to clean equipments with exposed (bare) bushing, with supply ON. Periodicity of cleaning such equipment may be increased to once a month or longer as felt in order, so as to avoid frequent switching operations.
15. Observe for any abnormal noise, vibration, smell (usually due to overheating), excess temperature etc. if so, investigate the reason immediately. Radiators of transformers, LT busbar chamber, and LT SFU/ FSUs and main LT cables (near terminations) may be touched externally to feel any undue heating. Apart from smell, the shine of PVC may reduce due to local heating. Compound may expand and come out of cable boxes due to local heating in compound filled cable terminators (usually old installations). Arcing contacts and main contacts should then be similarly examined. Do not use abrasive paper to clean the contacts, if there is any residue/ pitting. Check the architects to be intact, clean and without any obstructions. Mechanical linkages should be lubricated, wherever required. Test for free movements of all operations.
16. In the case of electrically operated breakers, meggar test the motor/ solenoid and check for their free movement. Lubricate as necessary In the case of outdoor gang operated switch, free operation of the switch (and proper alignment of all the 3 phases) should be checked. Check that the HRC fuses are in position, and that safety interlock (with the front cover) is operational. Connections at bus bars, bus ducts and switchgear (including control wiring) should be checked. Tighten as required. Clean the supports and look for any possibilities of tracking on surface. Relays should be tested and setting checked. Relay coil insulation should be checked with LT meggar. Plug opening/ hole (if any) in switchboards, effectively. Meggar test the panel, and check the interior to be free from any foreign matter (like cotton waste/ flint, dislodged nuts/ washers/ cut tapes etc.) before energizing again.
17. Check of safety items & others Check of safety items (insulating mat, caution boards, danger boards, first aid kit, fire protection items, Resuscitator (where provided), first aid chart etc. Check also whether telephone numbers of officers, supply agency (licensee), fire brigade and hospital are displayed on a painted board in MV panel room. Check that the correct schematic diagram of distribution is displayed in MV panel room. Test the earth resistance of each electrode (Preferrably during summer); and also the integrity of earth connections. Where the substation building is single storied, inspect the roof and roof drain before monsoon, so as to avoid water stagnation. Check the cable ducts to be free from extraneous items (rubbish/ water) and that duct covers are intact.



- 18 Transformer oil testing for BDV, moisture, flash point, etc. once in 12 months from NABL approved laboratory and carry out oil filtration if required as per test report.
- 19 Quarterly inspection & cleaning of bus duct, bus bars and all cable connections for Abnormality & hot spot detection, rectification and check Insulation Resistance value.
- 20 Attending to breakdown & troubleshooting effectively, without delay, and in a manner to prevent recurrence in future. Attend to all complaints relating to electrical faults, repair and rectification work .Maintain complaint register.
- 21 Annual checking, testing ,and Preventive Maintenance/servicing by Authorized Service Center/ Expert Agency of all circuit breakers and protection relays.
- 22 Yearly check of earth resistance of all the earth pits and maintain the value with in permissible limits.
- 23 Half yearly check of Insulation resistance, for all installation of electrical panels, transformers, AVR system, HT < substation, capacitor panels, and other electrical Panels.
- 24 Complete overhauling of motors, pump set, etc. as per manufacture guideline
- 25 The contractor should be carried out the all Maintenance works(Preventive maintenance, Breakdown maintenance/Reactive maintenance and predictive maintenance.) as per manufacture guidelines.
- 26 Inspection, cleaning and maintenance of transformer, AVR, HT< panel, breakers, capacitor panel, UPS, Battery and its charger, motors, pump.



ANNEXURE -III

SPECIAL TERMS AND CONDITIONS FOR OPERATION OF DG SET WORK

SUB-HEAD-II (DG SET) - INVENTORY

Capacities & No. of DG Sets: - 4 Nos. as detailed below

- (i) 1010 KVA - 3 Nos. MTU make
- (ii) 500 KVA - 1 No. VOLVO Pentamake
- (ii) L.T.Panel and Synchronising Panel of D.G. Sets

A. Qualification of deputed Manpower & Recovery in case of Absent.

- (i) DG Operator - should have ITI passed with 2 years experience of similar work or shall have valid electrical license from competent authority or trade/competency certificate or ITI in relevant trade.
- (ii) Helper:- Physically strong/Mentally fit, minimum 5th Pass.

B. In case of any staff found absence from duty, the recovery will be made at the following rates from the contractor bill.

- a) DG Operator :- @ Rs.200 per day / shift.
- b) Helper : - @ Rs.100/- per day/ shift.

Terms & Conditions

1. The contractor will have to maintain all the installation/ equipments as stated proper working condition. The service are to be provided on all working days i/c Sunday and all holidays.
2. The contractor will have to depute additional skilled labour to attend a fault beyond the competency of the staff deployed for which nothing extra shall be paid.
3. The contractor will have to maintain attendance and all the checks and faults with date and time of all equipments at site and the firm has to arrange the log book and attendance register within their quoted rates, which will be checked by the Engineer – in-charge & superior officers.
4. The Minor material such as soap, duster, broom, old dhoti, cotton waste, fuse wire, PVC tape, Grease, M. oil, test lamp, torch etc. shall be arranged by the contractor with in their quoted rates.
5. All the installation/ equipments shall be maintained by the firm in neat and clean condition within their quoted rates. Major repairing not covered in the scope of work.
6. Any damage done to the existing equipment/ system/ panels during maintenance shall be made good by the contractor free of cost failing which the same shall be made good by the department at risk and cost of the contractor.
7. In case of minor repairs/ replace required such as nut bolt, fuse wire, connecting wire, distilled water, petroleum jelly, thimbles , battery terminals etc. the contractor shall arrange the same within quoted rate.
8. Contractor shall make arrangement of one No. mobile phone in the sub station for the central control room for smooth functioning of the maintenance system the mobilephone shall be handed over to the manpower of another shift or the same number shall be available for round the clock and all the days. The mobile number shall be communicated to the department by the agency.
9. No contractor or his staff shall be allowed to use or shall be stay in DG set room and as such other place at site after duty hours.
10. In case of electrical supply failure the contractor or his worker available on duty shall record in brief, action taken in this regard with supply agency.

11. In case of any problem arises in D.G. Set/ Synchronising control circuit , contractor has to arrange the Engineer/ Micro processor Engineer/ any other assistance required as and when and as per need of site has to provide free of cost for which nothing extra will be paid.
12. In inventory in the schedule is for just to have an idea of quantum of work. However this may differ from time to time contractor has to make sure that all the equipments related to these services are to be maintained in perfect condition.

Daily Routine Checks:-

- i) Cleaning of DG Set Room/installed area: Wipe out dirt from external surface of installation and control panels.
- ii) Check the levels of diesel, lubricant oil, and water level in radiator. Fill / top up as necessary.
- iii) Inspect the installation for leakage of diesel oil, engine (lub.) oil, and coolant in the respective systems.
- iv) Check that the selector in control panel is in AUTO mode.
- v) Record the reading of voltage of supply and engine battery voltage.
- vi) Run each DG Sets for a period of 5-10 minutes daily for testing and entries of these tests shall be recorded in log books of each DG Sets.

Weekly Checks:-

- i) Check the automatic starting of engine by switching of the main supply to the AMF panel. Run the set on load for 15 minutes. Observe for any abnormality of noise, vibration, bearing surface heating (whether warm), engine pick up, voltage level and frequency.
- ii) Check the level of electrolyte in the battery of the engine. Top up with distilled water if necessary. Charge the battery at the earliest, if it is required.
- iii) Check whether all panels lamps, fuses & instruments are healthy in the control panel.

Monthly Checks:-

- i) Checks engine radiator for air restriction, if any. Check the conditions of drive belts, hose and radiator cap. Clean the battery terminals and apply grease to prevent corrosion. Check specific gravity of the electrolyte.
- ii) Check the exhaust system for leakage, corrosion and vibration. Observed the condition of exhaust smoke; whether too dark or too light.
- iii) Check that there is no restrictions to air flow in air cleaner.
- iv) Check that oil heater is functional.
- v) Check coupling with alternator for any sign of fatigue.

Six Monthly Checks: (for DG Set)

- i) Inspect the electrical control panel , synchronizing panel and starters to see that all power/control contacts are clean all terminations, including control cables. Tighten as required.
- ii) Inspect all cable end terminations, including control cables, Tighten as required.
- iii) Check all safety control and alarms in the set supply system.
- iv) Check and change filters of diesel oil, engine (lub) oil, coolant and air cleaner element of the Engine after checking total hours of operation as per manufacture's recommendation. Drain and change the cooling water.
- v) Check the belt tension. Tighten if required.

Annual Checks:

- i. Inspect the fuel tank for any sedimentation. Clean up.
- ii. Replace the engine oil as per hours of operation and recommendation of the manufacturer, oil will be provided by the contractor.
- iii. Check shaft alignment and condition of anti-vibration mountings, in case any abnormal noise or vibration is observed.

- iv. Blow through radiator core in a direction opposite to the normal flow of air (Reserve Flushing) conduct Megger test on all cabling, mains and control wiring motors, and earth test, (Earth test is to be done in summer).

EXCLUSION:- The following works are excluded from the scope of this Sub-Head of work of this contract.

1. Overhauling and major repair to DG sets.
2. The diesel oil for running the DG Sets shall be arranged and supplied by the department at site store free of cost, which will be filled in service tank by the agency free of charge.
3. The Consumption statement of HSD oil shall be prepared monthly by the contractor in the prescribed Performa as per detail below & shall be submitted to Engineer-in-charge, that would be a part of contractor bill. Period of statement to

S.N.	Last balance of HSD Oil in Fuel Tank	Poured HSD Oil in Fuel Tank drg this period	Total	Balance of HSD Oil in Fuel Tank at the end of this statement	Total HSD Oil consumed drg this period	Total run of DG Set for this period	Consumption	Remarks
	A	B	A+B=C	D	C-D=E	F	E÷F	



ANNEXURE -IV

SPECIAL TERMS AND CONDITIONS FOR OPERATION OF LIFT WORK

SUB-HEAD-III (Runing Maintenance of Lifts) –

- i. 20 passenger 1360 Kg capacity lift of Thyssen make having speed of 2.5 m/sec., 12 stops – 4 Nos. installed in (G+9)- Tower-A.
 - ii. 20 passenger 1360 Kg capacity lift of Thyssen make having speed of 1.5 m/sec., 6 stops – 2 Nos. installed in (G+3)- Tower-B,C,D.
 - iii. 1000 Kg capacity Service lift of Thyssen make having speed of 0.5 m/sec, 2 Nos. installed in (G+3)- Tower-B,C,D & (G+9)- Tower-A.
- A. The contractor shall depute staff with minimum qualification and experience as detailed hereunder:-
- (i) Skilled Electrical Staff (Lift Operator – Lift operator must be conversant with the safety devices relating to lifts and having at least 5 years experience/ITI in any trade for operation of lifts. The candidates will be subject to a trade test to judge their ability to:
 - (a) Drive the lift up and down the full course and stop at any required floor.
 - (b) Operate the emergency switch.
 - (c) Operate the alarm bell.
 - (d) Operate the lift switches.
 - (ii) Lift Khallasi:- Physically strong/Mentally fit, minimum 5th Pass.
- B. **In case of any staff found absence from duty, the recovery will be made at the following rates from the contractor bill.**
- (a) Lift Operator - @ Rs. 200 per day / shift
 - (b) Lift Khallasi – @ Rs. 100/- per day/ shift.

Terms and Conditions and Scope of Work (Operation of Lift)

The following activities are intended to be covered under this contract:-

- i) Operation of lifts as specified in SOR, or as directed by the Engineer-in-Charge or his authorized representatives.
- ii) Maintenance of log book for each lift.
- iii) Firm shall depute/provide reliever skilled/un-skilled staff as per requirement at site within the scope of work as per prevailing labour laws. Nothing shall be paid on this account.
- iv) Switching off the lights of break down lift from lift machine room and placement of OUT OF ORDER board / placed at the entrance of lift.
- v) Lodging of break down complaint (telephonically) with the lift comprehensive maintenance agency and recording the complaint no. and time of complaint in the log book.
- vi) Recording of time of repair of break down lift and getting the certificate from the Mechanic / Engineer of company that the lift is fit for operation.
- vii) Daily cleaning of lift cars, lift facia and machine rooms.
- viii) Upkeepment of locks and keys of lift machine rooms, keys of lift landing doors.
- ix) Restricting the transportation of inflammable materials like gas cylinders etc. in the lift.
- x) Performing the following daily checks on each lift :-

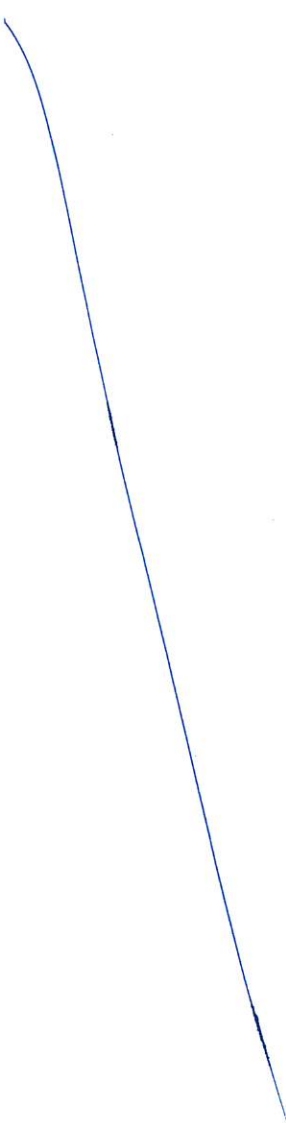
Landing Locks :-

- (i) Movement of car with gate open.
- (ii) Try to open the gate when car is not landing.



Car gate switch:-

- (i) Movement of car with gate open.
- (ii) Open the gate while car is moving.
- (iii) Door operation safety (on automatic doors)
- (iv) Functioning of emergency stop button, call bell, car lights, landing lights and landing call buttons.



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ANNEXURE –V

**SPECIAL TERMS AND CONDITIONS FOR SH-IV (Fire Fighting & Wet riser System ,
Drinking Water Pumps , Drain Pumps , Water softener)**

INVENTORY

SI. NO.	Description/specification	Qty.	Make
1	Fire hydrants/Hydrant valve	57/57	
2	Hose reel	43	
3	RRL hose pipe, 63mm dia, 15m long	172	
4	Branch nozzle	41	
5	Rubber pipe 36M with nozzle	43	Padmini
6	Brass ball valve, 25mm	48	Zoloto
7	Butterfly valve 50/80/100/200 mm	6/9/4/8	
8	Sprinkler	4990	
9	Fire extinguisher		
9.1	Carbon Di-Oxide type, 4.5kg	54	
9.2	ABC type, 5Kg	49	
9.3	Water Co2, 9Kg	43	
9.4	ABC type, 10Kg	43	
10	Flow switch	20	
11	Fireman's axe	33	
12	Pressure gauges/Pressure switch	12/5	
13	Air release valve	7	
14	Hose cabinet 1500x 900mm	33	
15	Hose cabinet 750x600x300	24	
16	NRVs		
16.1	65mm	12	Advance
16.2	80mm	2	Audco
16.3	100mm	2	Audco
16.4	200mm	4	Audco
17	Service water pump & motor	3	Grundfos make
18	Water softening plant (Large)	1	Ion Exchange
19	Water Softening plant (small)	1	Ion Exchange
20	Air vessel	2	
21	Diesel Engine pump 2280LPM	1	Kirloskar
22	Main hydrant pump & motor 2280LPM	2	Kirloskar
23	Water body pumps	10	Kirloskar
24	Jockey pump & motor 280LPM	2	Kirloskar
25	Electrical panel	16	
26	Hydro pneumatic system	1	
27	Softening plant pump & motor	3	Grundfos
28	Sump pump	12	
29	Fire water Underground tank	2x1,00,000 L	

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30	Fire water overhead tank	1x20,000 L	
31	Raw water pump & motor	2 Nos	Grundfos
32	Chemical dosing pump & motor	1 No.	Milton
33	Water Softening Plant	2 Nos.	
<p>Firewater pump Type-100-36/125-401150-46,90KW,171M3/hr.Kirloskarmake – 2 Nos. Jockey water pump Type - CPHM-32136, 10.8 M3/hr, 15KW, Kirloskar make - 2 Nos. Service water pump Type CRCM, 420 LPM, 7.5KW, vertical pump, Grundfos make - 3 Nos Water softening pump 2.2KW, 240LPM, mono block pump, Kirloskar make - 2 nos Water softening plant 4 KW vertical pump CRCM type Grundfos make - 2 nos. Plumbing water pump range varying between 2.2 Kw to 15 Kw, Kirloskar make - 10 nos Dosing pump V-series Millon Roy make 0.25KW - 1 no. One No. engine-pump set Kirloskar engine Type R1040/R1080 Note: Inventory as mentioned above is indicative only. It may vary on actual check of the system.</p>			

Note:-The Inventory given above is for just to have an idea of quantum of work. However this may differ from time to time due to renovation. Hence, the agency shall be liable to do all the work as per scope of this tender as per actual quantity installed in the above Buildings/Blocks.

A) Qualification of deputed Manpower

- i) Fire Pump Operator should have 10th passed with 2 years experience of similar work or shall have valid electrical license from competent authority or trade/competency certificate or ITI in relevant trade.
- ii) Fire Supervisor Should have passed Diploma in Fire Engg. with minimum 2 year experience in similar work. He is wholly responsible for Fire Fighting System.
- iii) Helper: - Physically strong/Mentally fit, minimum 5th Pass.

B) In case of any staff found absence from duty, the recovery will be made at the following rates from the contractor bill.

- (a) Fire Supervisor - @ Rs. 250 per day / shift.
- (b) Fire Pump Operator - @ Rs. 200 per day / shift
- (c) Helper - @ Rs. 100 per day / shift.

Terms and Condition

- 1 The contractor will have to depute the appropriate electrical licensed staff and experienced physically fit .
2. The contractor will have to depute additional skilled labour to attend a fault beyond the competency of the staff deployed for which nothing extra shall be paid.
3. Contractor would be bound to execute such additional items which can be termed as logical, essential and necessary (even though not listed in schedule of work) for the effective execution of the work in totality, rates for such items of works shall be rationally analysed/ derived and would be binding on the contractor.
4. The contractor will have to maintain attendance and all the checks and faults with date and time of all equipments at site and the firm has to arrange the log book and attendance register within their quoted rates, which will be checked by the Engineer –in-charge at site .
5. The Minor material such as soap, duster, broom, old dhoti, cotton waste, fuse wire, PVC tape, Grease, M. oil, test lamp, torch etc. shall be arranged by the contractor with in their quoted rates.

6. All the installation/ equipments shall be maintained by the firm in neat and clean condition within their quoted rates. Work or wherever necessary so as to arising accidents. He shall also indemnify CPWD against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian law and Regulations for any accidents occurring due to any cause. The department shall not be responsible for any accidents occurred or damaged incurred or claims arising there from during the execution of work. The contractor shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the contractor due to the above provisions thereof.
7. Shift timings can be changed as per the requirement at site and decision of the Engineer-in-charge.
8. Contractor shall make arrangement of one mobile phone in the Fire fighting Pump Room for smooth functioning of the maintenance system.
9. No contractor or his staff shall be allowed to use or shall be stay in Fire fighting Pump Room and as such other place at site after duty hours.
10. In case of electrical supply failure the contractor or his worker available on duty shall record in brief.
11. The contractor shall submit duty roaster in duplicate within one week from the date of start of work and thereafter two days before the close of every month if staff is changed.
12. In inventory in the schedule is for just to have an idea of quantum of work. However this may differ from time to time contractor has to make sure that all the equipments related to these services are to be maintained in perfect condition.
13. If any additional / alteration in the installed inventory is found / made after award of work then contractor shall be bound to maintain in the same within the quoted rates under same scope of work and term and conditions.

Maintenance Schedule For FIRE Fighting System and Wet riser system , Water Softening Plant

1. Twice a week :-

- a. Check the complete system inventory such as pumps, valves, fire fighting fitting at every outlet and carrying out the diagnostic tests on the main control panel & general health of the system.
- b. Check the pipe line, joints/flanges, pumps sleeves for leakage and cleaning the panels etc. from the exterior with a damp cloth.
- c. Check the operability of motor, pumps at least by running for 5 minutes and recording of parameters such as voltage, current, pressure, oil pressure etc. as observed and checking battery condition and ensuring its appropriate charging.
- d. Check the availability of water in the pump in case of fire fighting system and checking the system availability on mains as well as on batteries.
- e. Check and maintenance of appropriate pressure in the pipe line in case of fire fighting and whether on mains failure system is automatically switched over to stand by supply.
- f. Check the Water Softening Plant and salt and its charging and workability.

2. Fortnightly Checks: -

- a. Checking / air blanking of installations.
- b. Checking of nuts and bolts and tight if necessary.
- c. Checking of lugs, thimbles, terminal blocks of electric motors, switches, starters and control accessories for their appropriate condition and indications, take remedial steps if required and checking of distilled water level in the batteries and top up if necessary.



- d. Checking of pump's coupling for appropriate alignment and rectify if necessary.
- e. Checking the battery terminal conditions, clean them with brush and apply petroleum jelly and cleaning battery chamber with blower.
- f. Checking of gland packing and add more packing, if required.
- g. ~~Checking the Water Softening Plant and tightening the connections, salt and its and workability.~~

3. Monthly Checks: -

- a. Run the pumps set at least 10 minutes and check the operation for vibration, excessive heating, noise and alignment.
- b. Check the functioning of all the valves and accessories by actual opening and closing them.

4. Half yearly Check: -

- a. Apply grease and avoid over greasing.
- b. Checking of gland packing.
- c. Checking of for play in bearing, replace if necessary.
- d. Checking of accuracy of relay operation.

5. Yearly Checks: -

- 1. Checking all ammeters voltmeters pressure gauges and other indicating instruments.

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Annexure VI

Comprehensive Maintenance of Different Pump Sets & Associated Accessories.

This Comprehensive Maintenance covers Following:-

1. Supplying and replacement of defective parts of following –

- (i) Service water pump Type CRCM, 420 LPM, 7.5KW, vertical pump, Grundfos make - 3 Nos.
 - (ii) Water softening pump 2.2KW, 240 LPM, mono block pump, Kirloskar make - 2 Nos.
 - (iii) Water softening plant 4 KW vertical pump CRCM type Grundfos make - 2 Nos.
 - (iv) Water body pump range varying between 2.2 Kw to 15 Kw, Kirloskar make - 10 Nos.
 - (v) Dosing pump V-series Millon Roy make 0.25KW - 1 No.
 - (vi) Water inlet supply pump 2HP- 1 No.
 - (vii) Sump Pump 12 Nos.
2. Supplying and replacement of defective parts of LT panel, Starter panel and their associated accessories.
 3. Servicing of all Pump motor sets as mentioned above at serial no. 1
 4. Servicing of control valves of all Pipe lines of water supply.
 5. Supplying and charging of Salt in Water Softening Plant regularly.
 6. Supplying and replacement of Carbon in Water Softening Plant.
 7. Replacement of Media in Water Softening Plant is not included in comprehensive maintenance.
 8. Rewinding of burnt motors of capacities mentioned in serial no.1 above.
 9. All Electrical and Mechanical parts of Pump Motor such as Mechanical Seal, Fan Blades, Nut Bolts, Bearings, Shaft, Impellar, O-Ring, Key , Copper rewinding wire, Terminal plates, Push buttons, Indicating Lamps, MCCB, Contactors etc. are covered in this contract.
 10. Anti-rusting cleaner, Grease, Machine Oil, Gland dori, Battery terminals are also covered in this contract.

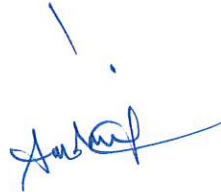
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Annexure VII

Comprehensive Maintenance of Fire Fighting System

This comprehensive maintenance covers following:-

1. **Supplying and Replacement of defective parts of following –**
 - (i) Main Hydrant Pump- Motor 2280 LPM, 90 KW - Kirloskar make – 2Nos.
 - (ii) Jockey Pump- Motor 2800 LPM, 15 KW - Kirloskar make – 2Nos.
 - (iii) LT Panel with accessories
2. Supplying and replacement of defective parts of LT panel, Starter panel and their associated accessories.
3. Servicing of all Pump motor sets as mentioned above at serial no. 1
4. Servicing of control valves of all Pipe lines of Fire Fighting System.
5. All Electrical and Mechanical parts of Pump Motor such as Mechanical Seal, Fan Blades, Nut Bolts, Bearings, Shaft, Impellar, O-Ring, Key, Copper rewinding wire, Terminal plates, Push buttons, Indicating Lamps, MCCB, Contactors etc. are covered in this contract.
6. Anti-rusting cleaner, Grease, Machine Oil, Gland dori, Battery terminals are also covered in this contract.
7. Rewinding of burnt motors of capacities mentioned in serial no. 1 above.



ANNEXURE -VIII

SPECIAL TERMS AND CONDITIONS FOR SH-V (Operation and Comprehensive Maintenance of Sewage Treatment Plant of Capacity 50 cu. mt. per day)

Inventory

Sewage Treatment Plant of Capacity 50 cu. mt. per day Thermax make – 1 No.
Electrical Control Panel – 1 No.
S T P Tank – 2 Nos.
Dosing Pump 0.25 KW – 2 Nos.

A) Qualification of deputed Manpower.

- i) **STP Operator** :- should have 10th passed with 2 years experience of similar work or shall have valid electrical license from competent authority or trade/competency certificate or ITI in relevant trade.
- ii) **STP Supervisor** :- should have ITI with 3 years experience of similar work or shall have valid electrical license from competent authority or trade/competency certificate or Diploma Engg.

B) In case of any staff found absence from duty, the recovery will be made at the following rates from the contractor bill.

- a) STP operator/ Skilled Staff - @ Rs. 200 per day / shift.
- b) STP Supervisor :- @ 250/- per day/ shift.

Terms and Condition

1. The Agency has to operate and maintain Sewage Treatment Plant by providing 3 Nos. operator in shifts and 1 No. Supervisor in General Shift .
2. The Agency is fully responsible for Full processing of waste water from Segregation of waste up of stacking of the waste sludge product.
3. The Agency is fully responsible to make sure that the site and machine is properly maintained and cleaned.
4. The Agency has to provide all the consumables item like duster, jute bags, grease, mobil oil and all other required material for effective operation.
5. Agency has to maintain a Log Book for daily entry.
6. All the cleaning material i.e. soap, duster etc. shall be arranged by the contractor at his own cost.
7. The contractor has to provide all safety equipment such as gloves, mask, spectacles & Electrical safety equipments etc as required.
8. The contractor shall maintain “attendance register” in support of the attendance of staff and the same shall be got periodically checked from Engineer- in – charge .On termination of the contract this shall be the property of department.
9. Water of STP will got be tested by the contractor fortnightly from Pollution Control Board , NOIDA for which no payment will be made by department.



Annexure IX

Comprehensive Maintenance of Sewage Treatment Plant of Capacity 50 cu. mt. per day

This Comprehensive Maintenance covers following :-

1. Supply and replacement of Flower media, Activated carbon filter, U.V lamp with body etc.
2. Rewinding of burnt motor, Air blower Motor, Feed pump motor, Sump pump motor etc
3. Servicing of various motor, Air blower Motor, Feed pump motor, Sump pump motor etc.
4. Supply and refreshment of Blower Oil, Stone Media, Filter Press Cloth, Sodium Hypo Chlorite & Tube Pack Media.
5. Cleaning of STP Tank -2 numbers installed at G+9 & G+3 Block.
6. Supplying & replacement of all defective parts of Pump, Motor and Electrical Panel.



Annexure X

SH- VI (Running Maintenance of 4x300TR HVAC Plant and other misc. AC units)

Heating Ventilation Air Conditioning (HVAC)

Inventory

Sl. No.	Description	Qty.
1	Screw York compressor/Chiller Unit, Johnson Control USA, Model YR-WC-WC-T3-5-55C, Capacity 300TR	3+1
2	Primary chilled water pump Unit, Mather & Platt/ABB make, DN-125/260, 720 USGPM, 12.5 HP	3+1
3	Condenser water pump Unit, Mather & Platt/ABB make, , DN-125/320, 900 USGPM, 30 HP	3+1
4	Secondary chilled water pump Unit, Starnorm-150-330, Model No. 4030, Armstrong/Elgi make, 1100 USGPM, 40 HP	2+1
5	Paharpur Cooling Tower 7KF, Model 6031, Capacity 360TR	3+1
6	SAVEAIR make Air Handling Unit complete with electrical panel and VFD of various capacity ranging from 5TR to 45 TR and Circulation rate 2500 to 24,000 CFM	34
7	Pressurised Expansion Tank 400 MM, Armstrong	1
8	Pot strainer condenser water 450 MM, Emerald	1
9	Pot strainer chilled water 400 MM, Emerald	1
10	Air separator 400 MM, Emerald	1



11	Ductable Split AC 17TR, Carrier	3+2
12	Ductable Split AC 11TR, Carrier	1+1
13	Ductable Split AC 8.5TR, Carrier	2
14	Ductable Split AC 5.5TR, Carrier	1
15	Air Conditioner 4.5TR	4
16	High Wall Split AC 2T, Carrier	1
17	High Wall Split AC 1.5T, Voltas	2
18	PAC UNITS for Server Room, 22TR, STULZ make	6
19	FCUs 2.0/2.5 TR	3
20	Air Handling Unit, SAVEAIR (Circulation rate up to 24,000 CFM)	42
21	Fan Section Toilet Exhaust SAVEAIR 1500 CFM	2
22	Fan Section Toilet Exhaust SAVEAIR 5000 CFM	2
23	Fan Section Toilet Exhaust SAVEAIR 4000 CFM	2
24	Fan Section STP Fresh/Exhaust Air SAVEAIR 10000 CFM	2
25	Centrifugal DIDW Fans, Nicotra, 52000CFM	6
26	Centrifugal DIDW Fans, Nicotra, 57000CFM	3
27	Tube Axial Fans, Nicotra, up to 58000CFM	20
28	Propeller Fans, Marathan make, 600 MM DIA	7
29	Propeller Fans, Marathan make, 450 MM DIA	6
30	In-line Fans, KRUGER make, 50-250 CFM	5
31	In-line Fans, KRUGER make, 250-500 CFM	4
32	In-line Fans, KRUGER make, 800-1000 CFM	1
33	Airwashers Unit, Roots Cooling, 15000 CFM	1
34	Airwashers Unit, Roots Cooling, 50000 CFM	2
35	Airwashers Unit, Savair make, 12000 CFM	1
36	Scrubber Unit, Savair make, 14000 CFM	1
37	Variable Air Volume Boxes, Belimo make, Various Capacity	295
38	Main MCC Panel, ADLEC make, Various Capacity	2
39	AHU Panels, ADLEC make, Various Capacity	42
40	Axial & DIDW Fans Panels, ADLEC make, Various Capacity	29
41	Air Washer/Scrubber Panels, ADLEC	5
42	Server Room Panels, ADLEC make, Various Capacity	6
43	Make up pump unit	2

NB: Inventory mentioned above is indicative only. It may vary on actual check of the system.

A) Qualification of deputed Manpower

- i) A.C. Operator should have 10th passed with 2 years experience of similar work & shall have valid electrical license from competent authority or trade/competency certificate or ITI in relevant trade.
- ii) A.C. Supervisor Should have passed Diploma in Electrical/ Mechanical/ A.C. & Refrigeration Engg. with minimum 2 year experience in similar work or ITI with 5 years experience in Air Conditioning
- iii) Helper: - Physically strong/Mentally fit, minimum 5th Pass.

B) In case of any staff found absence from duty, the recovery will be made at the following rates from the contractor bill.

- (a) A.C. Supervisor - @ Rs. 250 per day / shift.
- (b) A.C. Operator - @ Rs. 200 per day / shift


(c) Helper - @ Rs. 100 per day / shift.

Terms and Condition

1. Proper start-up, smooth running, shut down including emergency stop and start, change over in line with manufacture's operating & maintenance instructions and other related activities.
2. Contractor will ensure uninterrupted availability of HVAC services covering entire OADB Complex and all users. Contractor will maintain HVAC temperature at 23°C plus/minus 1°C and humidity less than 60% for continuous operation. This will include central heating system and allied ancillaries etc. to maintain a comfortable temperature at 23°C plus/minus 1°C and humidity less than 60% during winter season.



3. Contractor will attend to complaint/breakdown and fixing on same day and within working hours. In case of emergency/high workload, contractor will depute additional engineers & technicians at own cost to clear all the breakdowns and to maintain a near 100% uptime.
4. Maintenance services will include repair and/or replacement of existing equipment & their parts.
5. In addition to above work activities, contractor will attend to breakdowns maintenance, preventive maintenance work & overhauling of machines promptly as per technical requirement/as per manufacture guidelines. Contractor will provide additional manpower, if required for this purpose at own cost.
6. Operation & maintenance services will also include all relevant activities and works not specifically stated but which are required to be carried out for uninterrupted availability of HVAC and allied packages.
7. Contractor will maintain printed log book for records of operation & maintenance works to be carried out. Printed log book shall be arranged by contractor at own cost. Contractor will also maintain a printed log book indicating date-wise temperature in all floors of OADB Bhawan on daily basis. Printed log book in this respect will also be arranged by the contractor at own cost.
8. Checking of equipment, machinery and related instrument etc. for satisfactory performance, proper functioning, lubrication, refrigerant quality & quantity, leakages, abnormal vibration and sound level etc., to maintain good health and to obtain designed performance from equipment, machinery & related instruments.
9. Adequate air distribution including adjustment of fresh air quantity for maintaining of DBT & WBT quality of conditioned air for comfort. This shall include upkeep of AHUs delivery duct & grill, monitoring door & windows etc. to provide proper flow of cold air and to prevent reverse effect of air conditioning.
10. Monitor and maintain chilled water and condenser water circuits including operation of pumps, cooling towers, control of leakage/spillage, maintenance of water level in tanks, cleaning of pump, water quality by exercising periodic blow-down, treating with recommended chemical to keep the cycle of concentration low and to limit the scale formation in tubes.
11. Operation and maintenance work of all HVAC equipment's shall be carried out as per best engineering practices & manufacture's instruction with the help of technical & suitably trained staff.
12. **Routine check-up:**
 - I. Cleaning of filters of air handling unit.
 - II. Cleaning of cooling coil of air handling unit.
 - III. Cleaning of strainers of cooling water.
 - IV. Cleaning of equipment and AHU rooms.
 - V. Tightening of belts, alignment of belt pulleys and pump couplings.
 - VI. Cleaning of water line pot strainers.
 - VII. Cleaning of cooling water nozzles.
 - VIII. Checking and tightening pump glands & water valves. Replace glands if required.



- IX. Checking, cleaning & upkeep of temperature indicator, pressure indicator, volt meter, ampere meter & other equipment of VFD's, screw compressor, etc.
- X. Any other works not mentioned above but required to keep HVAC, AHUs and other allied equipment in good working condition.

Monthly check up:

- i. Cleaning of cooling tower and make up watertank.
- ii. Checking the condition of cooling tower fills & rectification if required.
- iii. Cleaning of cooling coils, etc.
- iv. Cleaning of oil filter for compressor.
- v. Cleaning of liquid line strainers.
- vi. Checking and tightening of foundation bolts of equipment.
- vii. Checking the correctness and calibration of all safety and automatic controls.
- viii. Charging of additional refrigerant, as per OEM norms.
- ix. Cleaning of diffuser/grills of nearby area.
- x. Cleaning of surrounding areas of all the cooling towers.
- xi. Cleaning/washing of both the electrostatic scale preventer.
- xii. Cleaning of condenser tubes.
- xiii. Any other works not mentioned above but required to keep HVAC, AHUs and other allied equipment in good working condition.

Seasonal check up

- i. Changing compressor oil as per testing reports.
- ii. Checking the unloaded assemblies.
- iii. Checking oil pump.
- iv. Checking bearing clearance.
- v. Checking screw compressor for leakage.
- vi. Decaling condenser tubes, evaporator tubes, etc. If needed replacement of condenser tubes.
- vii. Cleaning, checking and applying grease to bearings. If necessary, replacement of bearings.
- viii. Replacing gland packing of pumps and water line valves.
- ix. Cleaning of cooling tower tank. Replacement of cooling tower fills as per technical requirement. If it is required to replace all, the same will be taken up accordingly.
- x. Cleaning of drip trays or air handling unit.
- xi. Maintenance of VFDs. Repair/replacement if needed.
- xii. Depending on the condition of air filters for AHUs, regular cleaning would be carried out and these would be replaced if the conditions so desire.
- xiii. Any other seasonal check-up works not mentioned above but required to keep HVAC, AHUs and other allied equipment in good working condition.

13. The operation and maintenance requirements will also include all relevant activities and works not specifically stated above but are required for smooth operation of HVAC and other allied equipment.



14. Operational requirement in brief includes plant start up, plant change over, plant shutdown, routine inspection, record keeping, checking and adjusting the air distribution system as per best engineering practices & standards specified by the manufacturer.

15. Contractor will keep close interaction with OIDB. Contractor will apprise OIDB of day to day activities and will seek operational needs of the day other than scheduled.

16. Contractor will provide refrigerant gas to meet the gas topping up requirement/charging of chiller plants. The refrigerant gas shall be arranged by contractor at own cost. On expiry of contract, it shall be ensured that all the four chiller plants remain charged fully with refrigerant gas.

17. Contractor will provide & keep all necessary standard tools and special tools, tackles, equipment like halide torch, vacuum pump, vacuum cleaner, charging unit, descaling pump, complete tools boxes/kits, etc. for attending Mechanical, Electrical and instrumentation related operation & maintenance work of the HVAC plant & allied equipment. Contractor will also provide refrigerant gas at own cost.

18. **OPERATING INSPECTIONS FOR CHILLER MACHINE:**

By following a regular inspection using the display readings of the Microcomputer Control Centre, and maintenance procedure, the operator will avoid serious operating difficulty. The following list of inspections and procedures should be used as a guide.

19. **Daily**

1. Check Opti View™ Control Centre displays.
2. If the compressor is in operation, check the bearing oil pressure on the SYSTEM Screen. Also check the oil level in the oil reservoir. Operating oil level should be within operating range of the oil indicator. Drain or add oil if necessary.
3. Check entering and leaving condenser water pressure and temperatures for comparison with job design conditions. Condenser water temperatures can be checked on the SYSTEM Screen.
4. Check the entering and leaving chilled liquid temperatures and evaporator pressure for comparison with job design conditions on the SYSTEM Screen.
5. Check the condenser saturation temperature (based upon condenser pressure sensed by the condenser transducer) on the SYSTEM Screen.
6. Check the compressor discharge temperature on the SYSTEM Screen. During normal operation discharge temperature should not exceed 220°F (104°C).
7. Check the compressor motor current on the SYSTEM Screen.
8. Check for any signs of dirty or fouled condenser tubes. (The temperature difference between water leaving condenser and saturated condensing temperature should not exceed the difference recorded for a new unit by more than 4°F (2.2°C)).

20. **Weekly**

1. Check the refrigerant charge. (See Checking the Refrigerant Charge During Unit Shutdown)

21. **Monthly**

1. Check refrigerant level, leak test with electronic leak detector. If abnormal, trace rectify as necessary, inform department in writing on the rectification.
2. Inspection level and condition of oil, if abnormal, trace fault and rectify as necessary. Inform department in writing on the rectification.
3. Check the liquid line sight glasses for proper flow.
4. Check all operating pressure and temperature.
5. Inspect and adjust, if required, all operating safety controls.
6. Check capacity control, adjust if necessary.
7. Lubricate vane/linkage/bearing.
8. Visually inspect machine and associated components, and listen for unusual sound or noise for evidence of unusual conditions.
9. Check lock bolts and chiller spring mount.
10. Review daily opening log maintained by department operating personnel.
11. Providing writing report to Department, outlining services carried out, adjustment made, rectification carried out and if the deficiency is of a major nature, arrange with department for shut-down to rectify equipment.

22. **Quarterly**

1. Perform chemical analysis of oil.

23. **Semi-Annually (or more often as required)**

1. Change and inspect compressor oil filter element.
2. Oil return system.
 - a. Change dehydrator.
 - b. Check nozzle of educator for foreign particles.
3. Check controls and safety cut-outs.

24. **Annually (more often if necessary)**

1. Drain and replace the oil in the compressor oil sump.
2. Evaporator and Condenser.
 - a. Inspect and clean water strainers.



b. Inspect and clean tubes as required.

c. Inspect endsheets.

3. Compressor Drive Motor (Refer to motor manufacturers maintenance and service instruction supplied with unit)

a. Clean air passages and windings per manufacturer's instructions.

b. Meg motor windings.

c. Lubricate per motor manufacturer recommendations.

4. Inspect and service electrical components as necessary.

5. Perform refrigerant analysis.

6. perform all function for monthly check.

7. Check all flanges for tightness

8. Change oil in oil sump

9. Replace filter

10. Check oil temperature control.

11. Check motor terminals.

12. Check connections in starter.

13. Please note that oil filter gasket replacement shall be deemed to be included in the contract.

14. Check motor earthing, megger motor and connection wiring on each leg.

15. Check starter contacts, arc shield, transformer.

16. Check dashpot oil, clean dashpot and replace oil when necessary.

17. test and calibrate overload setting.

18. Inspect, calibrate and adjust to original specification all gauges, safety and operating controls including low temperature and high-pressure cut-out, oil pressure switch, load limit relay and electrical interlocks.

19. For water cooled condenser system, inspect condenser tubes for fouling. If fouling exceeds original specifications, the contractor shall carry out cleaning of the tubes at his own expense.



25.

Water Pumps:

Monthly Inspection

1. Inspect all waterpumps
2. Check all seals, glands and pipelines for leaks and rectify as necessary.
3. Re-pack and adjust pump glands as necessary.
4. Check the pump bearings and lubricate with oil or grease as necessary.
5. Check the alignment and condition of all rubber couplings between pumps and drive motors and rectify as necessary.
6. Check all bolts and nuts for tightness and tighten as necessary.

Annual Inspection Prior to expiry of warranty period

1. Perform all function for monthly checks.
2. Check motor earthing, megger Motor and connection wiring on each leg.
3. Tighten motor terminals.
4. Check starter contracts.
5. Test and calibrate overload setting.

Expansion Tank

Annual Inspection

Inspect expansion tank, Drain, Clean and Flush out tanks as necessary.

26.

Air Handling Unit and Fan Coil Units

Monthly Inspection

1. Inspect all air handling, fan coil units.
2. Check all air filters and clean or change filters as necessary.
3. Check all water coil, seals and pipelines for leaks and rectify as necessary.
4. Check and re-calibrate modulating valves and controls. Adjust and rectify as necessary to ensure compliance to the original specifications.
5. Purge air from all water coils.



6. Check all fan bearings and lubricate with grease as necessary.
7. Check the tension of all belt drives and adjust as necessary.
8. Check and clean all the condensate pans, trays and drains.
9. Check measure and re-calibrate all sensor if necessary.
10. Check, clean and service smoke detectors. Carry out a system test to ensure that the smoke detector will trip the AHU's.
11. Check spring vibration isolations for abnormal vibration. Rectify if necessary.
12. Coil to be cleaned by (a) spray of high-pressure clean water (not exceeding 30 psi) (b) with chemical spray, if necessary.

Annual Inspection

1. Perform all functions for monthly checks.
2. Tighten motor terminals.
3. Check starter contracts.
4. Test and calibrate overload settings.

27. **Air cooled packaged units and precision-computer air-condition equipment**

Monthly check

1. Check condenser fan motor load amperage.
2. Check shafts and bearings. Lubricate with grease as necessary.
3. Check fan and motor mounting brackets.
4. Check the tension of all belt drives and adjust as necessary.
5. Check for refrigerant leaks with electronic leak detector.
6. Check electrical terminals contactors operation and connections for tightness.
7. Check compressor motor current.

Annual Inspection

Perform all functions listed in the monthly checks.

Air Distribution System



Monthly and Annual Inspection

1. Check operation of all modulating and fixed dampers controlling air flow through unit. Lubricate all damper bearing and linkages as necessary.
2. Carry out space temperature checks on air-conditioned areas with thermo hydrograph. Balance air flow as necessary to compliance with requirements of original specifications. These checks include the calibration of sensors, thermostat, etc.
3. Check noise level of discharged air from diffusers.

28. **Ventilation**

Monthly Check and Annual Inspection

1. Check adjust as necessary the air flow of all fans is in compliance with the original specifications.
2. Check the tension of all belt drives and adjust as necessary.
3. Check and lubricate all fan bearings.
4. Tighten motor terminals.
5. Check starter contacts.
6. Test and calibrate overload settings.
7. A system check shall be carried out for all Mechanical ventilation (MV), Pressurization and Exhaust system to verify the performance of the systems.

29. **Switch Board**

Monthly and Annual Inspection

1. Clean and adjust all switch gear, contactors, relays, and associated electrical equipment at intervals not exceeding six months.
2. Check and prove operation of thermal over load and protection devices.
3. Check and ensure tightness of all equipment fast endings and cable terminals with in switch boards.
4. Vacuum clean all switch board cubicles.

30. **Piping System**

Monthly and Annual Inspection

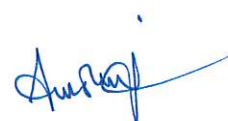


1. Check all piping system for leaks and repair these where they have occurred.
2. Check for damaged & deterioration of insulation or sheathings. Rectify as necessary.

31. **Consumable materials**

1. All oil and greases required for lubrication of compressor, fan bearings, motor bearings, pivots and other moving parts.
2. All refrigerant required for topping up. Refrigerant loss if due to manufacturing defect or due to negligence shall be made good by the contractor.
3. All consumable filter elements/rolls.
4. All chemicals for the correct chemical treatment of the cooling tower and chilled water system.
5. All carbon brushes required to replace worn brushes in electric motor.
6. All electric contact points required to replace worn electric contact points in switchgears, motor starter gears, electronic control gears and electric relays.
7. All electric fuses required to replace blown fuses.

32. Spare parts required for HVAC plant will be procured by contractor from OEM of the chiller machine/ equipment's or the sources to be approved by OIIB at contractor's own cost.
33. While carrying out the work utmost care would be taken by contractor to ensure that property of the OIIB is not be damaged. In case of damages, the same shall be replaced/rectified by contractor at own cost.
34. In case electric motor/VFDs are burnt and compressor seized or is damaged due to any reason, contractor will make good the losses either by repair or by replacement as the case may be at own cost.
35. Contractor will necessary action during power failure/power restoration/fire/emergency. The instruction given by officer-in charge or his authorized representative will be final and binding on the contractor.
36. OIIB shall supply water and electricity of available quality and quantity free of cost. Power supply is drawn from Paschimanchal Vidyut Vitran Nigam Ltd.(PVVNL) of UP state. Consistency and quality of power cannot be ensured by OIIB.
37. Standby equipment is installed for Chiller, Cooling Tower, Primary, Secondary & Condenser water circulation pump. Additional electricity consumed on account of operation of standby equipment in addition to main equipment shall be billed to the contractor.



MAINTENANCE REQUIREMENTS FOR YORK YK CHILLERS

Sl. No.	PROCEDURE	Dail y	Week ly	Mont hly	Year ly	Other
1	Record operation condition (on applicable Log Form)	X				
2	Check oil levels	X				
3	Check refrigerant levels		X			
4	Check oil return system operation			X		
5	Check operation of motor starter			X		
6	Check sump heater and thermostat operation			X		
7	Check three phase voltage and current balance			X		

[Handwritten Signature]

8	Verify proper operation/setting/calibration of safety controls			X		
9	Verify condenser and evaporator water flows			X		
10	Leak check and repair leaks as needed			X		
11	Check and tighten all electrical connections				X	
12	Megohm motor winding				X	
13	Lubricate motor	Refer to motor manufacture's recommendation				

Checklist for HVAC System.

Date					
Time					
Hour meter Reading					
O.A. temperature Dry Bulb/ Wet Bulb					
Compressor	Oil level				
	Oil Pressure				
	Oil Temperature				
	Oil Pump Motor Speed (If applicable)				
	Discharge Temperature				
	PRV % Open				
Motor	volt				
	Amps				
Evaporator	Refrigerant	Suction Pressure			
		Corresponding Temperature			
		Small Temperature Difference			
	Liquid	Supply Temperature			

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		Supply Pressure			
		Return Temperature			
		Return Pressure			
		Flow Rate- GPM (if equipped)			
Condenser	Refrigerant	Discharge Pressure			
		Corresponding Temperature			
		Subcooler Liquid Temperature			
		Small Temperature Difference			
		Refrigerant Level			
	Liquid	Supply Temperature			
		Supply Pressure			
		Return Temperature			
		Return Pressure			
		Flow Rate- GPM (if equipped)			

Checklist for Preventive Maintenance of AHU			
Name of Equipment		Air Handling Unit	
Location			
SI. NO.	Checks	Date	
1	Check the AHU For any air leakage through joint & door etc.	Monthly	
2	Check the AHU for Water Leakage from drain pan & clean the drain pan.		
3	Check the blower bearing. Plummer block, in case any sound then rectifies		
4	Check the nut Bolts for all foundation, if found loose than tighten it.		
5	Check the pulley, belts conditions.		
6	Check the Dx. Controller connections of AHU		
7	Clean the strainer		
8	Check the flexible canvass connections in the ducting for any wear and tear in case any damage then replaces it.		
9	Check & clean Air filters.		
10	Check & Clean the cooling/ heating coil fins from outside		
11	Check the blower impeller from inside.		
12	Check all parameters are under limit.		
13	Check Incoming and returning cooling water temperature		
14	Check the motor vibration, in case any vibration than rectified.		
15	Check the motor lubrication, cleaning, high temperature, loose belts, unusual noise etc.		
16	Check connections & clean Electrical Panel in case any loose connection than tightness		
17	Check fire damper system		

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Annexure XI

Comprehensive Maintenance of Fire Fighting System

This comprehensive maintenance covers following:-

1. Supplying and Replacement of defective parts of following –

1	Primary chilled water pump Unit, Mather & Platt/ABB make, DN-125/260, 720 USGPM, 12.5 HP	3+1
2	Condenser water pump Unit, Mather & Platt/ABB make, , DN-125/320, 900 USGPM, 30 HP	3+1
3	Secondary chilled water pump Unit, Starnorm-150-330, Model No. 4030, Armstrong/Elgi make, 1100 USGPM, 40 HP	2+1
4	Paharpur Cooling Tower 7KF, Model 6031, Capacity 360TR	3+1
5	SAVEAIR make Air Handling Unit complete with electrical panel and VFD of various capacity ranging from 5TR to 45 TR and Circulation rate 2500 to 24,000 CFM	34
6	Pressurised Expansion Tank 400 MM, Armstrong	1
7	Air separator 400 MM, Emerald	1



8	PAC UNITS for Server Room, 22TR, STULZ make	6
9	FCUs 2.0/2.5 TR	3
10	Fan Section Toilet Exhaust SAVEAIR 1500 CFM	2
11	Fan Section Toilet Exhaust SAVEAIR 5000 CFM	2
12	Fan Section Toilet Exhaust SAVEAIR 4000 CFM	2
13	Fan Section STP Fresh/Exhaust Air SAVEAIR 10000 CFM	2
14	Centrifugal DIDW Fans, Nicotra, 52000CFM	6
15	Centrifugal DIDW Fans, Nicotra, 57000CFM	3
16	Tube Axial Fans, Nicotra, up to 58000CFM	20
17	Propeller Fans, Marathan make, 600 MM DIA	7
18	Propeller Fans, Marathan make, 450 MM DIA	6
19	In-line Fans, KRUGER make, 50-250 CFM	5
20	In-line Fans, KRUGER make, 250-500 CFM	4
21	In-line Fans, KRUGER make, 800-1000 CFM	1
22	Airwashers Unit, Roots Cooling, 15000 CFM	1
23	Airwashers Unit, Roots Cooling, 50000 CFM	2
24	Airwashers Unit, Savair make, 12000 CFM	1
25	Scrubber Unit, Savair make, 14000 CFM	1
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27	Main MCC Panel, ADLEC make, Various Capacity	2
28	AHU Panels, ADLEC make, Various Capacity	42
29	Axial & DIDW Fans Panels, ADLEC make, Various Capacity	29
30	Air Washer/Scrubber Panels, ADLEC	5
31	Server Room Panels, ADLEC make, Various Capacity	6
32	Make up pump unit	2

2. Supplying and replacement of defective parts of LT panel, Starter panel and their associated accessories.
3. Servicing of all Pump motor sets as mentioned above at serial no. 1
4. Servicing of control valves of all Pipe lines of A.C. System.
5. All Electrical and Mechanical parts of Pump Motor such as Mechanical Seal, Fan Blades, Nut Bolts, Bearings, Shaft, Impellar, O-Ring, Key ,Gear Box of cooling tower, Hubs of cooling tower, Copper rewinding wire, Terminal plates, Push buttons, Indicating Lamps, MCCB, Contactors etc. are covered in this contract.
6. Anti-rusting cleaner, Grease, Machine Oil, Gland dori, Battery terminals are also covered in this contract.
7. Rewinding of burnt motors of capacities mentioned in serial no.1 above.
8. Top up of refrigerant in chilling machine of 4x300 TR.
9. Descaling of condenser- 4 Nos. 300TR.
10. This does not includes supplying and replacement of fills of cooling tower.



SCHEDULE OF RATE / WORK

Name of Work : Maintenance of E & M Services including Sewage Treatment Plant at OI DB Bhawan Complex Plot no - 2 , Sector- 73 NOIDA (U.P.)

S.No	Description of Item	Quantity		Rate	Unit	Amount
	SH - I (Maintenance of Internal & External Electrical Installation , Runing Maintenance of Sub Station at OI DB Bhawan Complex)					
1	Maintenance and upkeepment of all internal electrical installations , Runing , operation and routine maintenance of Electric sub station with 2 Nos. 1600 KVA , 11 KV/0.415 KV transformers , HT & LT switchgears and other related equipments in the following places/Blocks at OI DB Bhawan Complex , Plot no - 2 , Sector- 73 Noida on all working days including Sundays and Holidays (in shifts as per requirement of site) complete by providing following experienced/trained/qualified minimum staff including attending the routine maintenance and routine faults of sub station, Electrical Installtion , daily complaints etc. as per Terms & Condition Annexure-I & Annexure -II attached. (Firm shall follow duty chart)					
	(G+3) -Tower -B,C,D , (G+9) -Tower-A and Basement B-1, 2					
	(a) Electrical Supervisor having good knowledge of control wiring in General Shift only (Highly Skilled)	1	No. for		Per Person	
		24	Months		per	
	(b) Wireman/Electrician (Skilled Staff)	3	Nos. for		Per Person	
		24	Months		per	
	(c) Helper (Unskilled)	3	Nos. for		Per Person	
		24	Months		per	
	Total of SH-I					
	SH-II (Runing Maintenance of DG Sets)					
2	Operation and Routine maintenance on monthly basis at following places/Blocks at OI DB Bhawan Complex Plot no - 2 , Sector- 73 Noida on all working days including Sundays and Holidays (in shifts as per requirement of site) complete by providing following experienced/trained/qualified minimum staff for operation of various capacities of DG Sets with AMF Panel and emergency panel, bypass panel as per following i/c attending the routine maintenance and minor faults etc. as per Terms & Conditions Annexure-I & Annexure -III attached. (Firm shall follow duty chart)					
	B- 2 Basement					
	Capacities & No. of DG Sets: - 4 Nos. (3x1010 KVA, 1x500 KVA)					
	(a) DG Set operator(Skilled staff)	3	Nos. for		Per Person	
		24	Months		per	
	b) Helper (Unskilled Staff)	3	Nos. for		Per Person	
		24	Months		per	
	Total of SH-II					

	SH-III (Runing Maintenance of Lifts)				
3	Operation and Routine maintenance on monthly basis at following places/Blocks at OI DB Bhawan Complex Plot no - 2 , Sector- 73 Noida on all working days (6 days in a week in shifts as per requirement of site) complete by providing following experienced/trained/ qualified minimum staff for operation of various capacities of Passengers/ Service Lifts as per following i/c cleaning and sweeping of lift cars, lift fascia ,Lift Machine Rooms , Ropes and cleaning of lift shaft pits i/c attending the minor maintenance and routine faults as per Terms & Conditions Annexure-I & Annexure -IV attached. (Firm shall follow duty chart)				
	(G+3) -Tower -B,C,D and (G+9) -Tower-A				
	Capacities &No. of Lifts - 8 Nos. (6 Nos. Passengers , 2 Nos Service Lifts)				
	(a) Lift Operator (Skilled Staff)	6	Nos. for		Per Person per
		24	Months		
	(b) Lift Khallasi (UnSkilled Staff)(For sweeping , cleaning the Lifts , Lift Pits ,Lift Machine Rooms and Ropes etc.)	1	No. for		Per Person per
		24	Months		
	Total of SH-III				
	SH-IV (Fire Fighting & Wet riser System , Water Pumps , Drain Pumps , Water softener)				
4	Operation & Routine Maintenance Of Fire Fighting and wet riser system , Water Supply pumps , Drain Pumps , Water Body Pumps with all accessories water softening Plant installed in OI DB Bhawan Complex Plot no - 2 , Sector- 73 Noida round the clock (i.e. in three shift) on all days i/c Saturday , Sunday & holidays as per the equipement details given in attached Annexure i/c watch & ward, cleaning of all fire fighting installation,all water tanks related to Fire Fighting, Raw water, softener tank ,other related equipments and accessories , supplying and replacement of glasses of various Enclosures/ cabinets whenever they are found broken , gland dori of Pumps and providing consumable materials etc. by providing following experienced/trained/qualified minimum staff for operation and upkeeping Fire fighting and wet riser system as per following i/c attending the minor maintenance and routine faults etc. as per Terms & Conditions Annexure-I & Annexure - V attached. (Firm shall follow duty chart)				
	(G+3) -Tower -B,C,D and (G+9) -Tower-A				
	Location :- Main Pump House Basement				
	(a) Fire Supervisor - Highly Skilled Staff in General Shift	1	No. for		Per Person
		24	Months		
	(b) Fire Pump Operator/ Pump Operator Skilled Staff	3	Nos. for		Per Person per
		24	Months		
	(c) Helper /Unskilled Staff	3	Nos. for		Per Person per
		24	Months		

5	Comprehensive Annual Maintenance contract for different capacities and make pump sets, water softening plant with their associated electrical panels, control valves complete with rewinding, servicing, replacement of all types of electrical and mechanical parts/spares as & when reqd. for smooth running of pumps, supplying and charging of salt in water softening plant regularly as per requirement during the contract period as per inventory/details of pumps and other accessories attached as Annexure-VI -1 Job	1	Job for		Per Job per month
		24	Months		
6	Comprehensive Annual maintenance contract for various capacities Fire fighting pump sets with their associated electrical panels, control valves complete with rewinding, servicing, replacement of all types of electrical and mechanical parts/spares as & when reqd. for smooth running of pumps during the contract period etc. complete as reqd. as per inventory/details of pumps and other accessories attached as Annexure-VII -1 Job	1	Job for		Per Job per month
		24	Months		
7	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes i/c dismantling of old wornout, defective valves etc. complete as reqd.				
	a) 50 mm dia butterfly valve	4	Nos.		Each
	b) 65 mm dia butterfly valve	4	Nos.		Each
	b) 80 mm dia butterfly valve	2	Nos.		Each
	c) 100 mm dia butterfly valve	3	Nos.		Each
	d) 150mm dia butterfly valve	6	Nos.		Each
8	Supplying and fixing following sizes and types of of PN 1.6 rating CI NRV in the existing Suction/Delivery pipe lines complete with supplying and fixing ruber gasket, nut bolts conforming to IS: 5312 i/c dismantling the existing defective valve testing & commissioning etc. as required.				
	a) 65 mm dia NRV PN 1.6 rating	4	Nos.		Each
	b) 150 mm dia NRV PN 1.6 rating	2	Nos.		Each
9	Supplying and fixing following sizes and types of of PN 1.6 rating CI double flanged sluice valve in the existing Suction/Delivery pipe lines complete with supplying and fixing ruber gasket, nut bolts conforming to IS: 780 i/c dismantling the existing defective valve testing & commissioning etc. as required.				
	a) 80 mm dia double flanged sluice valve	1	Nos.		Each
	b) 100 mm dia double flanged sluice valve	1	Nos.		Each
	c) 150 mm dia double flanged sluice valve	2	Nos.		Each
10	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) i/c dismantling the existing making good the same complete etc as required				
	a) Stainless Steel (Grade 304)	10	Sets		Set
11	Providing laying, testing & commissioning of 'C' class heavy duty MS Pipe conforming to IS 3589/IS1239 i/c fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. on the wall / ceiling with suitable clamp / support frame and painting with two or more coat of synthetic enamel paint of required shade including welding, of following sizes i/c dismantling the existing making good the same complete etc as required				
	a) 50 mm. Dia 'C' Class MS Pipe	50	Metre		Metre
	b) 65mm. Dia 'C' Class MS Pipe	50	Metre		Metre
	c) 80 mm. Dia 'C' Class MS Pipe	30	Metre		Metre

12	Providing laying, testing & commissioning of 'C' class heavy duty MS Pipe conforming to IS 1239/3589 i/c fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. in ground including welding, excavation & providing cement concrete blocks as supports, anticorrosive treatment with coaltar/asphalt tape as per IS 10221, refilling the trench etc. of following sizes i/c dismantling the existing making good the same complete etc as required					
	a) 200 mm. Dia (Wall thickness - 6.3 mm)	12	Metre		Metre	
	b) 150 mm. Dia 'C' Class MS Pipe	30	Metre		Metre	
Total of SH-IV						
SH-V (Operation and Comprehensive Maintenance of Sewage Treatment Plant of Capacity 50 cu. mt. per day)						
13	Operation & routine Maintenance of 50 Cubic metre per day Capacity Sewage Treatment Plant on monthly basis at following places/Blocks at OIDB Bhawan Complex Plot no - 2 , Sector- 73 Noida on all working days including Sundays and Holidays complete by providing following experienced/trained/qualified minimum staff etc as reqd. as per Terms & Conditions Annexure-I & Annexure -VIII attached. (Firm shall follow duty chart)					
Location : B- 2 Basement						
	(a) STP Supervisor - Highly Skilled Staff in General Shift	1	No. for		Per	
		24	Months		Person	
	(b) STP Operator Skilled Staff	3	Nos. for		Per	
		24	Months		Person per	
14	Comprehensive Annual Maintenance contract of 50 cubic metre per day capacity Sewage Treatment Plant installed at OIDB Bhawan Complex Plot no - 2 , Sector- 73 Noida consisting of Bar Screen Chamber ,Oil and Grease Trap , Equalisation Tank, Feed pumps , FAB Reactor ,Tube settler ,Dual media Filter , Activated Carbon Filter , Ultra Violet Purifier ,Sludge Holding Tank, Filter press ,Air Blowers, Dosing Tank and Feed pumps etc.complete sets with their associated electrical panels, control valves complete with rewinding of motors if burnt, servicing, replacement of all types of electrical and mechanical parts/spares as & when reqd. for smooth running of pumps / STP, keeping healthy every time & in working condition including supplying and replacement of blower oil , media ,activated carbon , stone media , filter press cloth, sodium hyochlorite, tube pack media U.V.lamp & its body during the contract period as per standard schedule and requirement etc. complete as required.as per inventory/details of pumps and other accessories attached as Annexure-V -1 Job	1	Job for		Per	
		24	Months		Job per month	
Total of SH-V						

	SH-VI (Running Maintenance of 4 x 300TR HVAC Plant and other misc.AC.units i/c Comprehensive contract of low side equipments)				
15	Operation & Routine Maintenance of 4 X 300TR Water cooled screw type HVAC Plant with associated A.H.U 's complete with all mountings and accessories i. e. cooling towers , condenser pumps , primary and secondary chiller pumps , distribution / electrical control panels , heaters , ventilation system , Axle Fans , Ductable Split A.C. Capacity 5.5 to 17TR =10 Nos., High Wall Split A.C.=3 Nos., PAC units 22TR=6 Nos.,4.5 TR A.C. , Toilet Exhaust Fans and other items as per attached Annexure installed in OIDB Bhawan Complex, Plot no - 2 , Sector- 73 Noida round the clock (i.e. in three shift) on all days i/c Saturday , Sunday & holidays i/c watch & ward, cleaning of all HVAC installation, equipment and accessories as mentioned in attached annexure and providing consumable materials etc. by providing following experienced/trained/qualified minimum staff for operation and upkeeping HVAC system as per following i/c attending the minor maintenance and routine faults etc. complete etc. as required as per Terms & Conditions Annexure-I & Annexure-IV attached. (Firm shall				
	(G+3) -Tower -B,C,D , (G+9) -Tower-A and Basement B-1, 2				
	(a) A.C. Supervisor (in general shift daily Excluding sundays & holidays)	1	No. for		Per Person
		24	Months		per
	(b) A.C. Operator (Skilled)	3	Nos. for		Per Person
		24	Months		per
	(c) Helper(unskilled)	3	Nos. for		Per Person
		24	Months		per
16	Comprehensive Annual maintenance contract of low side A.C.System such as various capacities Chiller pump-motor sets , Condensor pump-motor sets, Cooling tower motors , gear boxes , Hubs, AHU motor , with their associated electrical panels & their accessories, control valves complete with rewinding, servicing , replacement of all types of electrical and mechanical parts/spares as & when reqd. for smooth running of low side A.C. system as mentioned in item including top up of refrigerant whenever required in chilling machine of capacity 4x300 TR during the contract period , descaling of 4 nos 300TR Condenser etc. complete as reqd. as per inventory/details of pumps and other accessories attached as Annexure-VI -1 Job	1	Job for		Per Job
		24	Months		per month
Total of SH-VI					

SH-VII : Servicing of Sub Station						
17	Cleaning, decarbonising and demoisurising the highly carbonised 11KV, HT panel board due to flash occurred, cleanig its enclosure, bus bars, fixed shutter, front and rear spout grid by opening the bus bar & CT's chamber, removing the carbon with CTC/CRC-2-26 and thinner, checking, cleaning & decarbonising the bus bar, fixed contacts of swithgear with CTC/CRC & tightening of contacts & joints of bus bars i/c replacing the old burnt HT taping & HT compound, tightening of cable end terminations, replacement of burnt/heated thimbles, nut bolts etc. wherever reqd. testing etc complete as reqd.(once in a year=2 job)	4	Jobs		Per Job	
18	High Voltage testing of 11KV HT Panal Board /cable (of size 3X300 / 2X270 sqmm) by injecting High Voltage with the help of suitable HV testing Kit for ensuring the healthiness of cable.(once in a year=2 job)	4	Jobs		Per Job	
19	Servicing of 11KV, 630/ 800Amp, 350MVA, 50Hz, 3phase, horizontal draw out and horizontal isolation type All make vacuum circuit breaker (VCB) complete with removal from the HT panel board, dismantling / opening the required parts for servicing, checking, cleaning, testing & rectification of defects if any, setting right of main contacts, moving contacts, tripping and closing mechanism, oiling, greasing, assembling etc. complete as reqd.(once in a year=4 job)	8	Jobs		Per Job	
20	Servicing of upto 2500 Amp rating, 415/500 Volts, withdrawable type, 3 phase, 4 wire, 50 Hz, AC supply, L&T U-Power make Air Circuit Breaker complete with removal from the panel board, opening/dismantling the required part, servicing, checking, cleaning and reassembling the same complete as reqd.(once in a year=18 Job)	36	Job		Per Job	
21	Testing & calibration of All make IDMT relay set having 2Nos. O/C & 1No E/F element by secondary injection method,cleaning the contacts, resetting with required accuracy complete with checking and set right the wiring etc complete as reqd.(once in a year=8 job)	16	Jobs		Per Job	
22	Testing of the complete system of HT panel for checking the actual working of the CTs, their wiring, connected IDMT relay, shunt trip system, breaker's tripping system and for any loose connection by primary injection method in all three phases and at each plug setting at actual time multiplier at site with suitable testing equipment i/c rectify the diffect in control wiring etc if any, complete as required.(once in a year=2 job)	4	Jobs		Per Job	
23	Cleaning & checking of bus trunking arrangement of rating 1000/2000A, 3Phase, 4wire, 50Hz, AC supply system i/c tightening of all joints, PVC taping etc wherever reqd. by opening of all the duct cover i/c removal of carbon, pdg the missing nut/bolts/screws and refixing the covers at their original position etc. complete as reqd.(once in a year=100 mtr)	200	Mtr		per metre	
Total of SH-VII						

Abstract Of Cost	
Total of SH-I (Maintenance of Internal & External Electrical Installation , Runing Maintenance of Sub Station)	
Total of SH-II (Runing Maintenance of DG Sets)	
Total of SH-III (Runing Maintenance of Lifts)	
Total of SH-IV (Fire Fighting & Wet riser System , Water Pumps , Drain Pumps , Water softener)	
Total of SH-V (Operation and Comrehensive Mintenance of Sewage Treatement Plant of Capacity 50 cu. mt. per day)	
Total of SH-VI (Runing Maintenance of 4 x 300TR HVAC Plant and other misc.AC.units i/c Comrehensive contract of low side equipments)	
Total of SH-VII (Servicing of Sub Station)	
Total Rs.	
GST @ 18 %	
Gross Total	
Say Rs.	