

M/s SMARTCHEM TECHNOLOGIES LTD. (STL/ Company)

Registered Office: –Sai Hira, Survey no. 93, Mundhwa, Pune – 411036, Maharashtra

Works at: PLOT K1, MIDC INDUSTRIAL AREA, TALOJA DIST : RAIGAD

ARC for Operation and Maintenance of 100KV GIS Substation

Tender Ref. 166/ 2021 Date: 09.09.2021

Technical bids are invited in Sealed Envelope with EMD. The sealed envelope shall be super scribed with Tender Reference Number, Name of Work & content in it and addressed to Mr. Rajesh Shankaratti , Smartchem Technologies Ltd. at Plot K – 1 MIDC Industrial Area, Taloja, 410 208, Dist. : RAIGAD

Stage I Bidding

- Sealed Envelop –I: General Terms and Conditions, Commercial Terms and Conditions Special Conditions and Scope of work (Excluding Price Bid).

Exceptions and deviations, which tendered may desire to stipulate. (Tenderers are advised to submit the Tender strictly on the terms and conditions of the contract and specifications contained in the Tender documents and not to stipulate any deviations. However, if deviations become unavoidable, then it may be stipulated. The Company/ STL reserve the right to reject such deviations or evaluate the Tenderers containing deviations having financial implication, by adding the cost for such deviations as may be determined by the Company/ STL).

Stage II Bidding

Tenderer will submit the price bid online through the platform provided by our E Platform system, STL Service Provider for online platform

Submission & opening of the Bid: The Bidders shall submit the duly filled in all the bid documents (Stage I) signing on each page & every component by the authorized signatory & send the documents in Purchase Department of the Company latest by 23.09.2021

All the above documents should be handed over to Mr Rajesh Shankaratti (Sr. Manager Purchase) Phone: 9975196665 representative of STL.

E Auction:

After submission of Stage I bid documents and online price bid E auction will be conducted. The E auction will be governed by the Business Rules for Auction as per enclosed pages in Stage I bidding.

Technically acceptable Tenderers against the tender can only participate in further process.

The Tenderers who do not fulfill all or any of the conditions laid down in the tender document are liable to be ignored at the sole discretion of STL. STL also reserves the right to reject any/all the offers without assigning any reason thereof.

In case of any Technical queries you may contact our Job Controller Shri Ramdas Jadhav/R J Mehta Phone No. : 022-50684125/50684401. For commercial queries you may contact Mr Rajesh Shankaratti Tel No 9975196665

Thanking you,

Yours faithfully,

For Smartchem Technologies Limited

Srikanta Behera

Authorized Signatory

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ANNEXURE I

1.0 GENERAL TERMS AND CONDITIONS:-

1. Earnest Money Deposit of Rs.1,00,000/- in the form of Bank demand draft will have to be submitted in favour of Smartchem Technologies Ltd payable at Mumbai drawn on public sector bank or reputed private sector bank along with tender document.. Tenders received without EMD will be disqualified. The Earnest Money Deposit will not carry any interest.
2. All pages of the tender form and questionnaire must be signed and sealed by Tenderers.
3. Tenderers have to submit details along with documentary evidences for the following:
 - 1] Registration/ Incorporation certificate as Proprietary/partnership firm/private ltd or Public ltd Company/ LLP.
 - 2] Registration certificate with PF organization for allotment of PF code number.
 - 3] Registration certificate under Goods And Service Tax (GST).
 - 4] Allotment letter under ESIC Act
 - 5] Registration certificate under Maharashtra Labor Welfare Board.
 - 6] Registration certificate for Professional Tax.
 - 7] Registration certificate under Maharashtra Labor Welfare Board.
 - 8] Registration certificate with Income Tax Dept for allotment of permanent income tax code number.
 - 9] Tenderers are advised to submit their bids strictly on the terms and conditions of the bid document and not to stipulate any deviation.
 - 10] ISO Certification holder: Name of certification: -----Validity : -----
(Attested Copy to be enclosed)
 - 11] Organization Chart: Executive -----, Technical Staff-----
(Attested Copy to be Enclosed giving the details)
 - 12] List of requisite machinery, tools & tackles, equipment. (Attested Copy to be enclosed)
 - 13] Audited annual Turnover: for last three Financial Years.
 - 14] List of similar jobs carried out in other company.
 - 15] Client List:

Special Note: The contractors who are registered with STL need not to submit the documents mentioned above.

4. STL reserves the right to accept or reject any or all tenders at its sole discretion without assigning any reason.

5. Late tender will not be accepted / received.

6. Canvassing in any connection with the tender in any form is strictly prohibited. Tenders submitted by party who resort to canvassing will be liable for rejection and forfeiture of EMD

7. In case of any unscheduled holiday falling on the prescribed closing or opening day of the tender, the next working day will be treated as scheduled for opening or closing day of the tender as the case may be. The Final concluding bid shall be valid for 6 months from date of auction and if any new requirement received shall be catered at same auction price.

8. The bidders are advised to read carefully all the terms and conditions of the tender document which will form part of the contract. Tenderer are advised to submit their bids strictly on the terms and conditions of the bid document and not to stipulate any deviation.

9. If the Tenderers give wrong information deliberately to create conditions for acceptance of the tender, the STL reserves the right to reject such tenders without assigning any reason.

10. Not more than one tender will be submitted by one Tenderer for the same work.

2.0. INSTRUCTIONS FOR SUBMISSION OF TENDER:

(i) The Tenderers are advised to visit the site of work to acquaint themselves as to the nature and location of the work, access to the site, the general & local conditions, particularly those bearing upon transportation, disposal, handling and storage of materials, availability of labour, water, electric power, physical conditions etc. and shall be included on such account while quoting for the tender.

(ii) Tenderers shall quote the tender in the prescribed format of the tender document. Tenders should be free from overwriting. All corrections should be duly attested by the Tenderer. Tenders should be signed by person/s that are legally authorized to sign on behalf of the person or firm or company tendering and in case of firm / company tender should bear its seal or stamp.

(iii) Tender format should contain columns for amount in Rupees (if any),

(iv) The Tenderers shall not stipulate any additional conditions. Any tender containing such conditions will be summarily rejected. Canvassing in connection with tenders is strictly prohibited. Tenders submitted by the Tenderers, who resort to canvassing, will be rejected outright.

(v) The work may be split up between two or more Contractors or accepted in part and not in entirety, if considered expedient at the sole discretion of STL Management.

(vi) Submission of a tender will be conclusive evidence to the fact that the Tenderer has fully satisfied himself as to the nature and scope of work to be done, procedures for issue or materials, conditions of contract,, local precautions to be ensured, security rules to be followed and all other factors affecting the performance of the contract and the cost thereof.

(vii) It will be obligatory on the part of Tenderer to sign the documents for all the component part on each and every page.

(viii) No Bidder is allowed to bid below the current minimum wages applicable.

3.0 AMENDMENT TO NIT (Notice Inviting Tender)

At any time prior to the deadline for submission of bids, STL or its nominee or its consultants may for any reason, whether at its own initiative or otherwise or in response to any clarification requested by a prospective Bidder, modify the NIT by amendment. The amendment will be notified in writing to all prospective Bidders who have received the NIT and the amendment will be binding on them. In order to afford prospective Bidders reasonable time to take the amendment into account in preparing their tenders, extension of time as may be reasonable, will be given for submission of tenders.

4.0 SUBMISSION OF TENDERS:

The Bidder shall bear all costs associated with the preparation and submission of Bid and neither the company nor its nominee nor its consultants will be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process. Any clarification required by prospective bidder shall be furnished in writing soon after its receipt so as to ensure submission of bid on or before bid closing date. Metric measurement system shall be applied, wherever it is applicable.

5.0 EARNEST MONEY DEPOSIT (EMD)

The amount of earnest money shall be deposited in the form of bank demand draft (drawn on reputed public sector bank or reputed private bank only). The EMD should be in the name of M/s. Smartchem Technologies Ltd. payable at Mumbai/ Panvel. The EMD will be forfeited in the event of the Contractor failing to commence the work within a 30 days period. The Earnest money deposited [E.M.D.] by the successful Tenderer's shall be Returned to the bidder after the commencement of the work and on receipt of bank guarantee towards security deposit if applicable. The tenders without E.M.D. shall be liable for rejection. If for any reason the bidder withdraws his bid at any time prior to expiry of the validity period or refuses to execute the work after issue of the letter of intent/Work Order, the amount of Earnest Money is liable to be forfeited. Earnest Money Deposit will not carry interest. E.M.D. of the unsuccessful participated bidders will be refunded with-in one month.

6.0 RIGHT OF ACCEPTANCE & REJECTION OF TENDER:

STL reserves the right to accept at their sole discretion any tender in whole or part or split the work among two or more Contractors or reject any or all Bids without assigning any reason thereof. No claim for compensation etc. whatsoever will be entertained by STL. If a Contractor whose past performance has not been found satisfactory in the opinion of STL, then STL reserves the right to refuse the tender documents or reject the

tender while opening or evaluating the tenders. The decision of STL regarding performance evaluation shall be final & binding on the Contractors.

7.0 VALIDITY OF BIDS:

Bids shall be valid for at least 60 days after the date of price bid opening prescribed by the STL. A bid valid for a shorter period may be rejected at the discretion of STL. In exceptional circumstances, STL may solicit the bidder's consent to an extension of the period of validity. The request and responses thereto shall be made in writing. The bids shall be suitably extended where it is necessary at the request of STL. Where bidder is unwillingly to extend the validity period, his bid shall be deemed to be invalid and the EMD would be returned to the bidder. No bidder shall be permitted to modify his bid, after commercial bids have been opened unless asked by STL due to change in specifications / scope or otherwise. . The Final concluding bid shall be valid for 6 months from date of auction and if any new requirement received shall be catered at same auction price.

8.0 Procedure for Auctioning

8.1 [a] Auction: STL will declare its **Opening Price (OP)**, which shall be displayed to all Tenderers during the start of the Auction. The Tenderer will be required to start bidding after announcement of Opening Price and decrement amount in case of Reverse Auction and Opening Price and Incremental amount in case of Dutch Auction. Opening Price displayed on screen is evaluated price to STL for all the items mentioned in price bid.

[b] Auction type will be Decided by DFPCL /STL Authority

[c] After the completion of Auction, the **Closing / Final Price (CP)** shall be available on auction screen.

8.2. During Auction, if no bid is received within the specified time, STL, at its sole discretion, may decide to reschedule / scrap the Auction process / proceed with conventional mode of tendering / or finalize the tender based on Prices Bid submitted in the envelope

8.3. Placement of order on the conclusion of EAuction shall be at the discretion of STL. Bids once made by Tenderer, cannot be cancelled or withdrawn. If bidder withdraws the bid then the EMD of the bidder will be forfeited.

8.4. It shall be the prerogative of STL to offer the Final / Closing Price of E Auction to the other bidders for matching in case STL decides to have more than one supplier.

9. STL'S decision for award of Contract shall be final and binding on all the Tenderers.

10. STL shall not have any liability to Tenderers for any interruption or delay in access to the site irrespective of the cause.

9.0. SUBMISSION OF TENDER:

The Bidder shall bear all costs associated with the preparation and submission of Bid and neither the company nor its nominee nor its consultants will be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process. Any clarification required by prospective bidder shall be furnished in writing soon after its receipt so as to ensure submission of bid on or before bid closing date. Metric measurement system shall be applied, wherever it is applicable

10.0. RIGHT OF ACCEPTANCE & REJECTION OF TENDER:

STL reserves the right to accept at their sole discretion any tender in whole or part or split the work among two or more Contractors or reject any or all Bids without assigning any reason thereof. No claim for compensation etc. whatsoever will be entertained by STL. If a Tenderer/ Contractor whose past performance has not been found satisfactory in the opinion of STL, then STL reserves the right to refuse the tender documents or reject the tender while opening or evaluating the tenders. The decision of STL regarding performance evaluation shall be final & binding on the Tenderer/ Contractors.

The following are Pre-qualification criteria to be submitted along with stage 1 Tender document.

- [a] Annual Turnover of minimum Rs 2 Cr including group companies.
- [b] Compliances of statutory requirement like registration under ESIC Act, PF Act, Service Tax, VAT, GST and other statutory compliance to operate/ do business in India.
- [c] Similar work completed during last five (5) years and details of similar ongoing works with value above Rs 50 lacs including group companies.
- [d] List of clients of the Company/Firms.
- [e] Details of manpower owned technical and staff submitted along with the tender.
- [f] List of requisite tools & tackles, equipment. (Attested Copy to be enclosed)

The tendered have to provide the supporting documents for above mentioned prequalification criteria.

Special Terms and Conditions:

SAFETY ASPECTS:

1.01 Contractor to provide safety appliances like dust masks, ear plugs, Full body harness, ladder, safety shoes, helmet, hand gloves, safety goggles, PPE, rain gears, Boiler suit/overall made up from cotton cloths etc. to their personnel working inside the Complex at his cost and should adhere to safety codes as given in General Conditions of the contract.

Penalty for violation of Safety norms: Rs 500 for first instance per person, in multiple for next similar violations.

1. The manpower shall be confirmed physically fit by Factory Medical Officer to carry out assigned job at STL work site. Contractor has to report with manpower to factory medical officer on very first day of his contract or his worker's first day of duty.
2. No young and Minor Child labour shall be allowed to enter and work at site of STL.
3. The Contractor shall ensure the safety training of their workman prior to start of the assignment/ job with the help of STL Supervisor and Safety Officer.
4. Electrical hand tools, welding machines deployed for the job shall be confirmed for the provision of ELCB proper earthing. The same shall be inspected by STL Safety Officer and Electrical department
5. Contractor shall deploy Safety Supervisor for the contracts valuing more than Rs. 1 Crore Per annum.
6. Contractor shall prepare Job Safety Analysis for daily activities and will get endorsed from STL Safety Manager. Hazard Identification and Risk assessment shall be done for each activity and accordingly Risk control measures shall be taken to control every risk. Every contract workman at site will be using Safety Helmet, Boiler suit and safety shoes compulsorily. Ear, Eye, Nose and Hand as well as body protection equipment will be used time to time to protect body from each activity.
7. Safety Work Permit will be issued by Contract Safety Officer, who will be inspecting all jobs for safety procedures to be followed.
8. Safety Training, First Aid Training, shall be imparted to all workers on first day and for five minutes every day at the start of the day.
9. No person shall work under the control of liquor, Chewing of Tobacco or smoking is strictly prohibited on site.
10. Housekeeping at site is essence of the contract. Site will be cleaned at start and end of the work every day by the Contractor.
11. Every electrical supply shall be taken through closed socket and ELCB, every electrical hand tool will be having proper earthing arrangement.

- 12 Contractor shall prepare Job Safety Analysis for daily activities and will get endorsed from STL Safety Manager. Hazard Identification and Risk assessment shall be done for each activity and accordingly Risk control measures shall be taken to control every risk. Every contract workman at site will be using Safety Helmet, Boiler suit and safety shoes compulsorily. Ear, Eye, Nose and Hand as well as body protection equipment will be used time to time to protect body from each activity.
- a) Safety Work Permit will be issued by Contract Safety Officer, who will be inspecting all jobs for safety procedures to be followed.
 - b) Safety Training, First Aid Training, shall be imparted to all workers on first day and for five minutes every day at the start of the day.
 - c) No person shall work under the control of liquor. Tobacco chewing or smoking is strictly prohibited at site.
 - d) Housekeeping at site is essence of the contract. Site will be done clean at start and end of the work everyday.
 - e) Every electrical supply shall be taken through closed socket and ELCB, every electrical handtool will be having proper earthing arrangement.

1.02. Safety Training

- 1) Contractor has to deploy experienced trained and skilled manpower for the job assigned.
- 2) Safety training will be given by STL Safety officer to all manpower reported on duty. Contractor's Safety Supervisor shall prepare job safety analysis with the help of the Maintenance Officer for the job to be carried out and the procedure which is going to be used for the job. On the basis of agreed procedure safety training will be given and adequacy of safety PPE's will be checked by Safety Officer.
- 3) Safety training certificate will be issued to all contractors' workers. Every contractor's workers will maintain safety certificate copy with him for the period of work inside the factory/ work site of STL. The certificate will be valid for a period of six months from date of issue. After the validity, contractor and contract worker has to revalidate the certificate by acquiring additional certificate training from the Company.
- 4) Worker shall be aware of First Aid and using First Aid equipment and emergency procedures and assembly point at site.

1.03. Accidental Reporting

- 1) Safety of the worker/s is essence of the contract.
- 2) Any unsafe condition noticed by the Contractor/Contract worker shall be notified to the STL Supervisor and Safety Officer on duty.
- 3) Any near miss, minor injury, First Aid or major injury shall be reported to OHC & Safety Officer in writing by the Contractor within 4 hours, with cause of the incident.
- 4) First Aid treatment shall be made available at OHC. Any more treatment advised by OHC /Factory medical officer shall be made available by Contractor at ESIC recognized hospital/specialized hospital. It is sole responsibility of Contractor to make available in

time the best treatment to its worker at his cost/insurance. STL shall not be responsible for the same.

1.04 Safety performance

- 1) Every contract shall be vetted for safety performance of previous contract and experience
- 2) Safety training to workers, proactive performance, availability of safety appliances, Attitude towards safety implementation, rewards to the worker/s will be evaluation parameters.

2. Labor law and Safety codes:

All the matters concerned with labour management shall be as per the prevailing Labour laws. Contractor will obtain labour license/s on arrival at site before commencement of the job. The first RA bill shall be released only on submission of the copy of labour license duly attested by STL Administration in the prescribed format. If labour license is not applicable, the Contractor shall obtain a confirmation to this effect from STL Administration.

Contractor will comply with all labour and other statutory laws applicable from time to time. All labour laws, such as Contract Labour (Regulation and Abolition) Act 1970 with Maharashtra and Central Rules, Employees State Insurance Act with Rules & Regulations, The Maharashtra Workmen's Minimum House Rent Allowance Act, 1983 with Rules 1990, The Payment of Bonus Act, 1965 with Rules 1975, Factories Act with Mah. Rules, The Employees Provident Funds and Miscellaneous Provisions Act, 1952, Minimum Wages Act 1948, Payment of Wages Act 1936, Maharashtra Labor Welfare Act, etc. and such other acts which are in force or which may come in force during the subsisting of the contract, should be adhered to by the Tenderer/ Contractor and such other rules/ regulations/ laws made applicable from time to time.

The Contractor shall be solely responsible for its employees. And always keep the STL Indemnified from all losses, actions, penalties etc arising out of this Tender/ Contract.

2.01 Deployment of Medically Fit Manpower:

For the due execution of this Contract, the Contractor shall deploy workers/supervisors who are at all times physically and mentally fit and are not disabled/handicapped and do not suffer from any chronic or contagious disease. It shall be the responsibility of the contractor to ensure that its Workers/Supervisors employed are medically fit. The Contractor shall give a written declaration as regards the fitness of the Workers/Supervisors employed at the time of applying for the Gate Pass. If any employee employed by the Contractor becomes or is declared medically unfit after the issuance of the Gate Pass, the STL shall revoke the Gate Pass.

Failure to comply with this stipulation shall entail penalty as may be decided by the management apart from refusing entry to such Workers/Supervisors of the contractor. The decision of the STL's Medical Officer in this regard shall be final.

2.02 MEDICAL EXAMINATION:

Contractor should ensure that all its Workers/Supervisors deployed at STL sites undergo pre employment fitness examination. The form No.33 (Prescribed under Rule 68T & 102) should be filled up for all its Workers/Supervisors deployed and should be submitted by Him/her to user department.

Contract Workers/Supervisors completing 12 months shall undergo annual medical examination. Such examination must include the following tests:-

- 1) Complete Physical Examination.
- 2) X-Ray chest PA view (Once in Pre-employment then once every three years)
- 3) Complete haemogram (T&D, Hb at minimum)
- 4) One urine examination using .Multistix.

All entries pertaining to the periodical examination must be made and maintained in form 32 (Bounded register) prescribed under Rule 68 T & 102.

Form No.32 must be maintained in bounded register & should be submitted to the OCCUPATIONAL HEALTH CENTER for records annually.

2.03 UNIFORM:

The contractor staff shall wear uniform, Boiler suite, Rainy wear (During monsoon) while working inside plant premises. They shall also wear badge/name plate while they are working at site. All labour laws/ regulations shall be strictly followed by contractor as per central/state govt. directives. Before executing the contract agreement, Contractor will ensure with STL P&A dept. that they are maintaining necessary records as required under labour laws.

Penalty for violation for Not wearing uniform/Boiler suit/Rainy Wear : Rs 500 for first instance per person, in multiple for next similar violations.

(A) Documents required at the time of issuance of gate passes :

Whenever the Contractor applies for gate passes to his worker/s to enter into STL premises, they have to apply on its letter head (Format with HR Department) along-with following documents. The application should be recommended by authorised User Dept.

1. Copy of Work Order issued by STL
2. Copy of Temporary or Regular ESIC Card of each worker (under ESIC Act) **or** Employees Compensation Policy (If contract worker drawing wages more than Rs.21,000/-, required authentic proof i.e. appointment letter or last month payslip) **or** Group Personal Accident Policy along-with list of employees who is covered under the said GPA.
3. In case more than 19 persons are to be engaged, contractor has to apply and obtain Labour License under Contract Labour (R&A) Act from the State Labour authorities.
4. Copy of Allotment letter under ESIC Act

5. Copy of Registration certificate with PF organization for allotment of PF code number along with PF annual return submitted with the concern PF Commissioner.
6. Copy of Registration certificate under Maharashtra Labor Welfare Board.
7. Copy of Registration certificate for professional Tax.
8. Copy of Register of workmen employed by contractor (Form XIII) – Rule 74
9. Copy of Employment Card (Form XIV) - Rule 76
10. Copy of Application for employment, appointment letter issued by contractor to his workers.
11. Copy of Insurance coverage covering STL, as work place, and for the number of persons to be deployed. The nature of work in the policy should be the same as per the work order issued by STL.
12. Medical Examination and fitness reports in respect of all the contract labours from the designated/specified medical officers.
13. If the job is subcontracted then no objection certificate from Contract Cell, STL regarding subcontracting the work, work order issued to subcontractor by the main contractor and all the documents mentioned at Sr. No.1 to 12 are also required in respect of the subcontractor. However the same will be with prior written consent of the STL only.

(B) Procedure to be followed by the contractors during the work period. Documents / Registers / Challans to be maintaining & photo copies of the same should be submitted to HR Department for verification on monthly basis on or before 28th of every month.

- 1) Wage disbursement: Minimum wages as notified by State Govt. from time to time are required to be paid to the workers.
- 2) Monthly wage to all contract labours as per their actual attendance to be paid on or before 7th Day of every month in presence of authorized person from STL. Wage slip will be issued to all Contract Labours while disbursement of wages.
- 3) PF is required to be deducted in respect of all the contract labors and deposited with PF authorities by 15th Day of the month and receipt of the same to be submitted with STL.
- 4) ESIC is required to be deducted in respect of all the contract labours and deposited with concern authorities by 21st day of the month and receipt of the same to be submitted with STL.
- 5) Labour Welfare Fund is required to be deducted in respect of all the contract labours and deposited with concern authorities for the wages of June & December of every year within stipulated time and receipt of the same to be submitted with STL.

6) Professional Tax is required to be deducted in respect of all the contract labours and deposited with concern authorities as per act and receipt of the same to be submitted with STL.

7) Following records under Contract Labour (R&A) Act & other acts will also be verified by Contract Labour Cell:

1. Wage Register in form XVII. (Under the C.L Act)
2. Muster Roll in Form XVI (under the C.L Act)
3. Register of deductions (under the C.L Act)
4. Register of Overtime (under the C.L Act)
5. Register of Fines (under the C.L Act)
6. Register of advances (under the C.L Act)
7. Bonus Register in Form C (under the Payment of Bonus Act)
8. Leave register in Form 20 (under the Factories Act)

(Photocopy of the same to be submitted as when required by STL)

8) Copy of all the work orders (first two pages only -applicable only if not submitted earlier) for which clearance certificate is sought for.

9) Copy of Monthly Wage Register.

10) Copy of monthly PF challan along with receipted copy of monthly PF returns i.e. Form 12A, Form 5 and Form 10.

11) Site wise breakup of PF: If contractor is working for various other companies then the site wise breakup of Monthly PF challan/returns.

12) Copy of Labour License (if not submitted earlier).

13) In case work period is February/March, then the receipted copy of Annual PF return for that year is required.

14) Inspection report of PF and Labour authority.

Contractor should certify that, he has complied all statutory compliances as per above said acts for that particular Month before raising wage bill. In case of Non compliance contractor will be penalized by holding 20 % of payable amount , same will be released after submitting the compliance doc to concerned authority. The Tenderer/ Contractor shall always keep STL indemnified from any risk/ liability/ penalty/ cases arising from non-compliance of the same.

(C) Housekeeping:-

Contractor shall do housekeeping and shall remove all unwanted materials from the work site immediately after completion of work. Housekeeping shall also be done in between

the work to keep the work area clean & tidy. 25% of bill value will be deducted if housekeeping is not done properly.

(D) ASSIGNMENT OR SUB-LETTING OF CONTRACT:

The Contractor shall not assign or sub-let the Contract or any part thereof or allow any person to become interested therein in any manner whatsoever without the previous consent in writing of STL. Any breach of this condition shall entitle STL to take such steps as may be necessary and also terminate Contract. Such termination shall also render the Contractor liable for payment to STL in respect of any loss or damage arising or ensuing from such cancellation. The permitted subletting or work by the Contractor shall not establish any contractual relationship between the sub-contractor and STL and shall not release the Contractor of any responsibility under the Contract.

(E) CONTRACTOR TO BE LIABLE FOR ALL THE TAXES ETC.-

The Contractor shall be liable to pay all the taxes payable as per the prevailing laws made applicable or might come in force from time to time by the concerned authority. STL shall not be responsible for the same.

(F) INDEMNITY -

Without prejudice to any other provisions in these conditions, the Contractor shall be bound to keep STL its Directors, representatives, employees fully indemnified against any action, claim or proceedings under the provisions of any rules, regulations, bye-laws, notifications, directions or order having the force of law.

The Contractor in contravention of such provisions etc., for the infringement or violation thereof in the course of the execution or completion of the work under the Contract and if, as a result of any such action, claim or proceedings, the Contractor or such representative of the Contractor, as the case may be, adjudged to be liable to any penalties or to pay any penalties or to pay any compensation, such liability, the Contractor and if, STL has to take-over the liability, STL shall deduct all amounts arising out of such liabilities from the Security Deposit of the Contractor or from any other amount due and payable by STL to the Contractor under this Contract or any other Contract and without prejudice to any other legal remedy available to STL

(G) CONTRACTOR TO COMPLY WITH ALL LAWS ETC. -

The contractor shall be responsible to ensure compliance with all Central and State Laws as well as the Rules, Regulations, Bye-laws and Orders of the Local Authorities and Statutory Bodies as may be in force from time to time. The Tenderer/ Vendor shall give to the statutory bodies, local authorities, police and other relevant authorities all such notices etc. as may be required by law and obtain all requisite Licenses and pay all fees, Duties, Taxes, charges etc. in connection therewith as may be livable on account of his operations involved under this Contract.

The Tenderer/ Vendor shall make good at his own cost any damage to the property of the Company or any other body, persons, local authorities etc due to or arising from operations involved under this Contract and the Company shall

have the right to recover the cost of damage from dues payable from the Bank Guarantee or Security Deposit of the Tenderer/ Vendor.

If STL's job-controller observes non-compliance by the Tendere/ Vendor in complying with provisions of labor statutes and specific Acts relevant to the Contract, STL shall retain double the value of the non-compliance amount taking into consideration interest, penalty and dues. In case STL is forced to pay the dues, along with interest and penalty, due to failure of the Tenderer/ Vendor, then STL shall be at liberty to recover such amount or any part thereof by deducting it from the Security Deposit or from any sum due by the STL to the Tenderer/ Vendor whether under this Contract or otherwise.

(H) CONFIDENTIALITY -

Both the parties during the continuance of this Agreement and 1 (one) year after termination of this Agreement, Vendor and/or his employees/ personnel shall keep all information, such as specifications, technical information, business data and other confidential information under this Agreement strictly confidential and shall not disclose it to any third party or Use it for other purpose than to perform its obligations under this Agreement. Tenderer/ Vendor and/or personnel may disclose the information to an employee of Vendor, or a government agency or other regulating authority

But only insofar as this is necessary either to carry out its duties under this Agreement or comply with any existing law, and under intimation to "Company". Where sub clause (b) applies Vendor and/or personnel shall ensure that the person who receives the information keeps it confidential and does not use it for any unauthorized purpose.

(I) RELATIONSHIP -

Each party understands that they are independent entities and this Agreement does not make it, its/ his employees, associates or agents, the legal representatives of the other party for any purpose whatsoever. Either party has express or implied right or authority to assume or to undertake any obligation in respect of and on behalf of or in the name of the other party or to bind the other party in any manner in respect of any transaction, except the present agreement.

(J) WAIVER -

The failure of either party to enforce at any time any of the provisions of this agreement shall not be considered to be a waiver of the right of such a party thereafter to enforce each and every provision.

(K) ENTIRE AGREEMENT -

This Agreement supersedes all oral and written representations and agreements between the parties, including, but not limited to any earlier agreement relating to the subject matter thereof and/or any other agreement between the parties in relation to the subject matter thereof.

(L) AMENDMENT -

The parties to this Agreement may add, delete, amend or alter all or any of the terms & conditions of this Agreement as mutually agreed from time to time and such modifications and changes shall not be effective until the same are in writing and duly signed by the authorized representatives of both the parties.

(M) Declaration of Tenderers/ Contractors Relation with STL Employee(s):

Should a Tenderers/ Contractors have a relation or in the case of a firm, one or more of its partners a relation or relations employed in STL or in case of company any of its official or relations employed in STL, the authority inviting tenders shall be informed in writing of the fact at the time of submission of the tender. If so, the name, designation, department and Employee Number of such employees be indicated failing which STL may in its sole discretion reject the tender or rescind the contract. If any ex-employee(s) of STL is/ are employed, with the Tenderers/ Contractors, name, designation, department and employee number of such employee(s) be indicated and if any ex-employee(s) of STL is/are employed after acceptance of tender, the said particulars shall also be intimated immediately in writing to STL from time to time. If the Tenderer/ Supplier fails to inform the same, STL shall at sole discretion may reject the tender.

(N) The Tenderer/ Contractor shall not be entitled to any claim including any cost, charges, TA/DA expenses or incidentals for the preparation and submission of this tender even if the Management may decide to withdraw the "NITT".

(O) Dispute not to hold up works:

The successful Tenderer(s) shall not stop the work in case of any dispute(s) unless further progress of work has been rendered impossible due to non-fulfillment of any reciprocal promise. Unilateral stoppage of work by the Tenderer shall be considered as a breach of contract and STL reserves the right to take such action as it may deem fit keeping its interest as paramount.

SCOPE OF WORK FOR OPERATION AND MAINTENANCE CONTRACT OF 100KV GIS SUBSTATION

THE OBJECTIVE OF OPERATION AND MAINTENANCE CONTRACT IS AS FOLLOW :

- Reduced Operation And Maintenance Cost By Providing Predictive Maintenance.
- Minimum Downtime By Schedule Preventive And Predictive Maintenance.
- High System Availability And Productivity.
- Competent, Experienced And Trained Resources availability
- Safety Of Person And Installation.
- Better Reliability Of System.

NUMBER OF MAINTENANCE CREW REQUIRE IS AS BELOW :

In General Shift : One Shift Incharge And One Maintenance Technician.

In Rotational Shift : One Shift Technician In Each shift (First, Second ,Third Shift)

MINIMUM QUALIFICATION AND EXPERIENCE FOR THE VARIOUS LEVELS SHALL BE AS FOLLOWS:

1) SITE -IN CHARGE :

- Engineer Having Degree In Electrical Engineering And Experience In Operation And Maintenance Of EHV Substation For Minimum 4-7 Years Experience With BE- Electrical Or Diploma In Electrical Engineering And Experience Of Operation And Maintenance Of EHV Substation For Minimum 6-9 Years.
- Site Shift Incharge Should Have PWD Supervisory License.
- Shall Be Responsible For Operation And Maintenance.

2) SHIFT TECHNICIAN :

- Engineer Having Diploma In Electrical Engineering And Experience Of Operation And Maintenance Of HV Substation For Minimum 2-4 Years Of Experience Or ITI In Electrical Trade With 4-6 Years Experience.
- Site Shift Technician Should Have PWD Supervisory License.

3) MAINTENANCE TECHNICIAN/LINEMEN :

- Technician Having ITI In Electrical Trade And Experience In Maintenance Of EHV Substation And Equipments For Minimum 4-5 Years.
- Site General Shift Technician Should Have PWD Supervisory License.

NOTE :

For Schedule/unscheduled Maintenance Additional Manpower As And When Required Shall Be Provided By Vendor Without Any Additional Cost To Smartchem Technologies Ltd Corporation Limited.

TECHNICAL SCOPE OF WORK AND INCLUSIONS :

THE SCOPE OF WORK IS DIVIDED IN FOUR PARTS DEFINED AS :

- 1) Operation Of 100 KV Gas Insulated Substation Bay Equipments, 22 KV Breakers, DC System, AC System, UPS System, HV Capacitor Banks, Fire Alarm System And AHU.
- 2) Day To Day, Need Base Maintenance Including Preventive Maintenance, Corrective Maintenance And Breakdown Maintenance Of All Equipments Of

100 KV GIS, 22 KV Panels With Breakers, DC System, UPS System, HV Capacitor Banks, Fire Alarm System And AHU.

3) Testing/Condition Monitoring Of All Equipments Will Be Performed As Per Annexure A.

4) Documentation And Reporting Of All Operation And Maintenance Activities On Day Today/Weekly/Monthly/Yearly Basis.

DETAILED SCOPE OF SUBSTATION OPERATION :

For 'Operation' Of 100 KV Gas Insulated Sub Station Following Activities Are Included In Scope Of Work :

1) Switching 'On' And 'Off' Of Power Supply On Any Or On A Number Of Feeder / Transformer/Buses With Or Without Isolator Operation, Altering / Interrupting Supply Structure / Network Of Sub-Stations In A Limited Way Or Partial Manner.

2) Operational Activities Concerning To Switchyard / Control Room Equipments:-

2a) Switchyard Equipments:- Transformers, Breakers, CTs, PTs, Isolators, Capacitors, Lightning Arrestors And Other Equipments.

2b) Control Room Equipments: Control And Relay Panels, OLTC Panels, Relays, Batteries, Battery Chargers, ACDB, DCDB Etc.

3) Operations To Be Carried Out In Total Supply Conditions.

4) Emergency Operations : Taking Action To Avoid Any Abnormal Condition Arising On Account Of Over Loading, Over Voltage, Under Frequency, Excessive Temperature Rise, Which May Result Into Partial Or Total Grid Failure.

5) Operating Work Of 100 KV Gas Insulated Sub-Station :

5a) Supervision Of Proper Functioning Of GIS In Service And Protective Relays. Recording Of Condition Of Equipment In Shift Duty Registers On Hourly Basis. Any Abnormality / Deviation Of Condition Of Substation Equipments Shall Be Intimated Immediately To The Maintenance In Charge For Remedial Actions.

5b) Recording Of Load Flow Data On Hourly Basis Such As:-

- Load In Feeders.
- Load On Transformers
- Voltage On 100 KV Side Of Switchyard
- Temperature Of The Transformer
- Temperature Of The Winding Of Transformer
- SF6 In The Circuit Breaker/Compartment Of GIS
- Battery Charger Current And Voltage
- Voltage / Specific Gravity Reading Of Pilot Cell Of Battery Sets

Once In A Day.

- Leakage Current / Surge Counter Monitoring Of L.A. – Once In A Day

- To Check Oil Level In Main/ OLTC Conservator Tank Of Power Transformer.

The Reading / Status Shall Be Recorded Hourly In The Log Sheet/Desktop Or Through Remote Energy Meter In The Prescribed Performa Given By Smartchem Technologies Ltd Corporation Ltd.

5c) Recording Of Bus Voltage And Remedial Measures To Maintain 100 KV Bus Voltages.

5d) Recording Of Pilot Cell Reading Such As Specific Gravity (S.G.) And Voltage Of Battery Sets In Each Shift For Maintaining The Condition Of The Battery. Also The Earth Leakage Current Is To Be Recorded In Each Shift On The Log Sheet Of The Battery Register / Log Sheet.

- 5e) Operation Of 100 KV GIS May Be Carried Out As Per The Standard Operating Manual.
- 6) Shift In Charge And Shift Operators Will Record Battery Voltage, Its Charging Current `DC Healthy Status Of Indicators / Lamps, Installed In The Panels And Hourly Reading Of The Ammeter/ Voltmeter, Frequency Etc Will Be Recorded In The Register As Well As in Computer In The Specified Manner. Complete Log Sheet/Logging Desktop Would Be Filled On Hourly Basis By The Supervisor Apart From Inspection Of The Switch Yard.
- 7) Performa/Format For The Log Sheet/Register to Be Provided as per instruction of Smartchem Technologies Ltd Corporation Ltd Of The Sub-Station.
- 8) Tripping Of Lines/Equipments And Its Restoration Shall Be Informed To MSETCL In Charge, Tripping Analysis To Be Done.
- 9) During Tripping Of Any Lines / Feeder / Equipment The Relays / Facias / Alarms Observed In CRPs Shall Be Noted Immediately And Carefully Before Resetting The Same And The Equipment Not To Be Charge Again Without Ensuring That The Relays / Facias To Be Not Indicating Any Heavy Fault / Damaged To Equipment. This Is To Be Informed Immediately To Engineer In-Charge Of Smartchem Technologies Ltd And Concern Authority. In Sort For Charging The Equipment/Lines It Is To Make Sure That No Fault Persist And There Is Relays / Facias Appeared Does Not Indicate Likely Hood Of Damaged To Equipment Or Chances To Damaged Equipment.
- 10) Load Shedding Activity Is To Be Carried Out As Per MSETCL's Instruction/STL Instruction.
- 11) Feeder Wise Load Shedding Timings Is To Be Recorded In Operation Manual.
- 12) Daily As Well As Monthly Substation Loss, Max. Voltage /Min. Voltage/ Max.Load/ Min.Load Etc. Is To Be Calculated And Recorded.
- 13) Defects Are To Be Recorded And To Be Inform To Maintenance In Charge.
- 14) Operation And Maintenance Of 22KV Capacitor Banks And Maintain Power Factor.

A. POWER TRANSFORMER

- 1) Checking Winding Temp Of Power Transformer Hourly.
- 2) Checking Oil Temp Hourly.
- 3) Checking Load Hourly.
- 4) Checking Voltage Hourly.
- 5) Checking Dehydrating Breather Daily.
- 6) Checking Oil Level In Bushings And Conservator Monthly.
- 7) Checking Cleaning Of Bushing And External Surface Of Tank Cooling Pipes Yearly.
- 8) Checking Of Oil Level In The Oil Seal Of Breather Monthly And Top Up If Necessary.
- 9) Checking Of Vent Pipe Diaphragm Yearly.
- 10) Checking Of Terminal Loose Connections If Any And Tightening The Same Yearly.
- 11) Checking For Any Oil Leaks Weekly.
- 12) Taking Current Reading During Peak Load Hours And Remedial Action Whenever Load Exceeds 80% Rated Capacity.
- 13) Noting Down Neutral Currents And Load Balancing In The Three Phase

Quarterly.

14) Measurement Of IR Values Yearly.

15) Testing Of Oil For Routine As Per IS 1866:2000 And DG Analysis As Per IS 10593:2000 Yearly.

16) Checking Of Lightning Arrestors Yearly.

17) Reading Of Discharge Counter And Leakage Current Of The Lightning Arrestors Daily.

18) Measurement Of Earth Resistance Checking Of Earth In System And Rectification If Required Yearly.

19) Oil Filtration As And When Required.

B. RELAYS AND ASSOCIATED CIRCUITRY:

1) Physical Check On All Wiring And Connections.

2) Check On All Fuses, Mcbs, Links, Test Switches And Earthing Terminals Etc.

3) Proper Earthing Of Relay Cases.

4) Polarity Of DC Supply.

5) Cleaning Of Relay Cases Or Racks For Dirt Etc.

6) Secondary Current And Voltage Injection Tests.

7) Checks For Correct Setting Of Relays.

8) Relay Testing Of Relays Including Directional Tests In Case Of Directional Relay.

9) Any Other Tests Based On Manufacturer Recommendation For Various Types Of Relays.

C. BATTERY AND DC SUPPLY SYSTEM :

1) Checking Battery Charger Voltage / Current Every Shift.

2) Checking Specific Gravity And Voltage Of Pilot Cell Daily.

3) Cleaning Of Battery Equipment Daily.

4) Checking Ventilation And Lighting System In Battery Room Daily.

5) Checking Intactness Of Containers Daily.

6) Checking Sulphation, Buckling Of Plates Daily.

7) Checking Corrosion Traces Daily.

8) Checking Electrolyte Temperature Daily.

9) Operation Of Rectifier Daily.

10) Checking Level Of Electrolyte And Leakages Weekly.

11) Checking Specific Gravity And Cell Voltage Weekly.

12) Checking Electrical Connections Weekly.

13) Petroleum Jelly Application Monthly.

14) Boost Charging Quarterly.

15) DC Distribution Board Terminal Connections Monthly.

16) Battery Charger Servicing Half Yearly.

(D) CHECK LIST FOR OPERATION :

Hourly Operations :

- Taking Readings/Data Logging Of All Meters Installed.

- Gas Pressures Of GIS Compartments.

- Oil And Winding Temperatures Of Transformers.

- Taking Readings Of Surge Arrestor Counters Of Lightning Arrestors.

- Checking Any Sparking Or Flash Over In The Substation.

- Taking Readings Of Battery Charger Voltages And Amp. Loading.

Daily Operations :

- Checking Of Cooling System Of Transformers. I.E. Running Of Fans And

Pumps Of Transformers

On Auto And Manual Mode.

- Checking Contacts Of Isolators Are In Proper Position Or Not.
- Checking Of Oil Levels Of All Bushings, Main And OLTC Conservator.
- Checking Of Gas Leakages If Any For Circuit Breakers.
- Checking Of Condition Of Silica Gel.
- Checking Of Voltage And Specific Gravity Of Pilot Cell Of Battery Set.
- Cleaning Of Premises, Battery Room, Control Relay Panels Etc.
- Maintaining Operation Log Books And Daily Check List.
- Issuing Line Clear/Work Permit To The Authorized Person As Per DF's Norms.
- Obey The Instructions Of LDC/MSETCL For Load Shedding.
- Percentage S/S Losses Is To Be Calculated And To Be Specified In Operation Log-Sheet And Register.

Weekly Operations :

- Checking Of Yard And Control Room Lighting.
- Checking Of Specific Gravity And Cell Voltage Of Battery Cell Of Battery Set.
- Watering To The Earth Pits If Necessary.

Monthly Operations :

- Checking Auto / Manual Operations Of OLTC.
- Check Earthing Points And Their Contact, Tighten Wherever Required.
- Preparation Of Monthly Checklist And Events Log For The Month.

Events Operations :

- Logging Auto / Manual Operations Of OLTC.
- Logging The Break Down Events With Relay Indications Etc.
- Logging Shut Down Events, Log Of Operations During Shut Down Period.
- Maintaining Visitors Registers Along With Their Comments And Details Of Their Visits.

E. OUTDOOR SURGE ARRESTERS :

- 1) Cleaning Of Insulator And External Inspection Yearly.
- 2) Checking Of Earth Connection Between Surge Arrester, Surge Monitor And Earth Yearly.
- 3) Checking Of Leakage Current (By Using Online Test Kit) Half Yearly.
- 4) Insulation Resistance Measurement Yearly.

F. SWITCH YARD EQUIPMENTS :

- Pre-monsoon inspection of all 100 KV lines equipment has to be completed under the supervision of the Smartchem Technologies Ltd.
- Approval for pre-arranged shut downs for the entire program shall be taken in minimum fifteen days advance in co ordination with Smartchem Technologies Ltd.
- All the outdoor yard insulators shall be cleaned with the cotton waste/marketing cloth. Operation of all equipment made clear through remote as well as local. I.R. value of all equipment. Earth resistance of all the pits, watering of the pits, cleaning, and picking/cutting of grass and vegetation growth in switch yard should be carried out from time to time. Regular cleaning of Switchyard shall be taken up by M/s Smartchem Technologies Ltd and no grass/vegetation growth shall be allowed throughout the contract

period.

- Checking of the yards, lighting and replacement of defective bulb, tube, etc. Vendor shall maintain yard lighting and Control-Room lighting properly. Material supply such as Bulb, Tube and other lighting fixtures etc. shall be in the scope of Smartchem Technologies Ltd.
- The detailed activities of maintenance schedule shall be submitted by the Vendor to Smartchem Technologies Ltd Corporation Ltd in line with Smartchem Technologies Ltd Corporation Ltd's guide lines on award of contract.
- The maintenance schedule shall be prepared for all equipment covered under the scope of this Contract and shall be got approved by Smartchem Technologies Ltd prior to commencement of work. All periodical maintenance registers/records shall be submitted to Smartchem Technologies Ltd Corporation Ltd with due certificates/observations. Contractor is responsible for comparing And analyzing test results with respect to previous record and action thereof to ensure performance of equipment.
- While working, all the standard engineering practices shall be followed in addition to the recommendations / guidelines given by the equipment manufacturer and relevant standard etc, same shall be submitted to Smartchem Technologies Ltd Corporation Ltd.

G. ANNUAL MAINTENANCE ACTIVITIES OF 100 KV GIS

- 1) Vendor GIS Expert Shall Visit Three Times In A Year. Number Of Visits Per Year Will Be 2(Two) Per Year Excluding First Year Schedule Of Activities For Entire Work To Be Covered During Each Visit.
- 2) Provision Of Additional 1 (One) Visit On Call Basis, In Case Of Breakdown Or In Case Of Planned Shut- Down, As Decided Smartchem Technologies Ltd.
- 3) All Required Tools And Tackles To Carry Out Maintenance Activities, Inspection And Testing Activities Will Be Provided By VENDOR As Per Annexure A Along With Required Test Kits.
- 4) Preparation And Submission Of Inspection/ Work Done Report For Each Equipment Under Scope, Along With The Recommended Remedial Action In Case Of Any Abnormality /Deviation Observed.

DETAILED MAINTENANCE SCOPE FOR 100 KV GIS (YEARLY WITH SHUT DOWN) :

- 1) Thorough cleaning of the GIS bays.
- 2) General visual check of the CB, Isolator and ES assembly for any damages. Check of the outer condition of the switchgear (cleanliness, paint work, damages, corrosion) by certified GIS engineer.
- 3) Record Counter reading before maintenance.
- 4) Check and Record SF6 gas Pressure and note ambient Temperature.
- 5) Checking of SF6 gas leakage from seals (check all sealing of flange and cover connections, sealing of rapture disk attachment, sealing of outgoing lines, extension pipes, sealing of density monitor attachments sealing of gaps and pocket holes, sealing of retaining brackets, cu rail attachment, compensators sealing of tie rods, sealing of dry housings) and joints.
- 6) Close / open operation of CB, Isolator and earth switch.
- 7) Check auxiliary switches for connection tightness, discoloration and functions like status, interlocks etc. checking of status of CB, Isolator and ES at local control cubicle and SCADA.
- 8) Operate the isolator and earthing switches open / close manually

with hand crank one by one and check for abnormal sound and smooth operation.

- 9) Check and clean mechanism and tightness.
- 10) Lubricate the component as per manual.
- 11) Check and tight terminals connection for discoloration and tightness.
- 12) Resolution of any problem observed during course of operation.
- 13) Record Counter reading after maintenance.
- 14) Check breaker emergency tripping by pulling emergency rod.
- 15) Relay and scheme check of Control cubicle.
- 16) Corrective actions to be taken for any abnormality.

OPERATION AND MAINTENANCE SCOPE OF WORK FOR 100 KV GAS INSULATED SUB STATION AND 22 KV PANELS WITH BREAKERS AT SMARTCHEM TECHNOLOGIES LTD

- 1) Complete Operation And Maintenance Of 100 KV GIS Of Smartchem Technologies Ltd Bays And Equipments (4 Nos. 100 KV Line Bays, 2 Nos. 100/22 KV Power Transformers, 100 KV Single Bus, 100 KV GIS MSETCL Cts And Pts, Station Auxiliary Transformer, LT Systems, 22 KV Breakers With Panels- Bus-13x, ACDB And DCDB, Lighting System, Lighting System, AHU, Fire Alarm Panel And Substation Control Room Lighting) For Minimum Three Years Within Premises Of Substation.
- 2) Operation, Periodic Condition Monitoring Of Equipments, Preventive Maintenance, Breakdown Maintenance, Failure Analysis Of Major Breakdown And Testing As Per Standard Practices And Procedures.
- 3) The Scope Shall Include Work Of Replacement Of All Equipment Excluding Power Trafo- GIS Panels, CRP. However Supply Of The Equipment/Spares Required For Replacement During Maintenance Shall Be Provided By Smartchem Technologies Ltd Corporation Ltd.
- 4) Consumable Items Like Cotton Waste, Lubricating Oil, Lugs, PVC Tapes, Taps For HT And LT, Silica Gel, Nut And Bolt With Washer, Routine Grease, Distilled Water Etc. As Required For Maintenance Shall Be Provided By Vendor.
- 5) Vendor Shall Maintain Records Of Operation And Maintenance Carried Out. The Program Of Periodical Testing And Maintenance Of The Equipment Shall Be Informed By Vendor To Smartchem Technologies Ltd In Advance In Order Tenable Smartchem Technologies Ltd To Send Their Representative If Smartchem Technologies Ltd Corporation Ltd So Desire Of Witnessing The Testing.
- 6) Vendor Shall Arrange Planned Shutdown Of The Substation Bay Equipments After Concurrence Of Smartchem Technologies Ltd Corporation Ltd As And When Required.
- 7) Vendor Will Make All Out Efforts To Achieve Committed Deliverables. Should There Be Any Need For Involvement / Help From The Manufacturers, Vendor Shall Organize For Their Help At No Extra Cost To Smartchem Technologies Ltd Corporation Ltd To Achieve The Committed Deliverables.
- 8) Maintenance Of Energy-Accounting /Monitoring Instruments And System, Which Are Installed By Smartchem Technologies Ltd Corporation Ltd And Testing Of Energy Meter If Required.

- 9) Infrared Thermography Scanning Shall Be Done By Vendor At Least Once In Three Month Apart From Need Basis And Report To Be Submitted To Smartchem Technologies Ltd Corporation Ltd.
- 10) Fault Diagnostic And Rectification Shall Be Done By Vendor.
- 11) Mobilization Of Manpower With Required Electrical; T and P's And Required Consumable Items (Except Transformer Oil, SF6 Gas, Special OEM Consumables) Shall Be In The Scope Of Vendor.
- 12) Earthing System Maintenance- Measurement Of Earthing Value For All Earth Pit And Other Equipments Shall Be Done By Vendor And Report For The Same Shall Be Submitted To Smartchem Technologies Ltd On Regular Interval.
- 13) Daily Visual Checking/ Maintenance/ Shutdown/ Observation On Abnormal Sound And Rectification Report Shall Be Submitted Smartchem Technologies Ltd On Regular Basis.
- 14) All Electrical/Other Testing Equipment And T And P's Shall Be Within The Scope Of Vendor Which Is Required For Effective Maintenance Of 100 KV Bays. Moreover, Expenses Towards Outsourced Service Like Calling Of OEM Experts Shall Be Borne By Smartchem Technologies Ltd If Required And Equipment Demands.
- 15) Housekeeping Of Switchyard Area, Control Room And Store Shall Be Covered By Smartchem Technologies Ltd Corporation Ltd.
- 16) Documentation And Reporting:-
- a. Check List : Vendor Will Prepare Check List Based On PM Activities And Will Fill And Maintain Checklist For All PM Activities Taken Up.
 - b. History Book/ Card : Vendor Will Keep And Update History Book/Card For All Equipments.
 - c. Prepare Work Procedure : Vendor Will Prepare The Work Procedure With The Help Of Smartchem Technologies Ltd Corporation Ltd For Every Type Of Jobs Being Taken Up At Site.
 - d. Reports : Vendor Will Submit Following Reports:
 - > Daily And Weekly Planning Sheet.
 - > Daily Final Planning Allotted With Manpower.
 - > Daily Log On Maintenance Activities - Status And Findings.
 - > Monthly Report - Detail And MIS Type With Analysis Such As Defect V/S PM, PM Noncompliance, And Work Order Attended, Repetitive Defects, Spares Consumed And Recommended.
 - > Failure Report For- Which Includes Failure Mechanism Analysis And Remedies Report Submission.
 - > Interpretation Of Condition Monitoring Data- Monthly Basis
 - > Quarterly EHS Site Evaluation By Business Unit EHS Officer And Project Manager.
 - > Root Cause Analysis Of Each Tripping And Submission To Smartchem Technologies Ltd.
 - > Monthly Tools And Ppes Inspection Reports.
- 17) Maintenance Of Acs And AHU Included In The Scope Of Work.
- 18) Maintenance Of Fire Extinguishers I.E Dry Chemical Powder, Mechanical Foam Type, CO2 Type Etc Along With Required Materials/Spares Refilling During OPERATION AND MAINTENANCE Period Is Excluded In The Scope Of Work..

ANNEXURE A

TESTING SCOPE FOR 100KV GAS INSULATED SWITCHGEARS AND POWER TRANSFORMERS

1) 100/22 KV Power Transformers :

- Insulation Resistance Measurement Six Monthly/Yearly With Shutdown.
- Tan Delta Testing And Capacitance Measurement Of Bushings And Main Windings Yearly With Shutdown.
- Measurement Of Winding Resistance At All Tap Positions Yearly With Shutdown.
- All Low Voltage Routine Testing (Short Circuit Testing, Open Circuit, Magnetic Balance, Charging Current) Yearly With Shut Down.
- Testing Of Bucholz Relay, Oil Surge Relay And PRV During Maintenance Yearly With Shut Down.
- Oil Testing In NABL Approved Lab Yearly Without Shut Down.

2) 100 KV GIS Circuit Breaker :

- Measurement Of Close And Open Timing Yearly With Shut Down.

3) 22 KV Vacuum Circuit Breaker With Lv Control Cubicle :

- Maintenance Of Mv Breaker As Per Oem Manual Yearly With Shut Down.
- Static Contact Resistance Measurement Of Breaker Main Contacts Yearly With Shut Down.
- Breaker Timing Measurement Yearly With Shut Down.
- Relay Testing Of Panel Yearly With Shut Down.

4) Outdoor Surge Arrestors/LAs :

- Insulation Resistance Measurement Yearly With Shut Down.
- Checking Of 3rd Harmonic Leakage Current(Online Test) Six Monthly Without Shut Down.

5) DC Batteries / Battery Charger :

- Measurement Of Specific Gravity And Voltage Of Cell And Solution Level Check(Applicable For Lead Acid Batteries Only) Daily Without Shut Down.
- Battery Impedance Testing Yearly Without Shut Down.
- Battery Charger Control Circuit Checking For Float/Boost Charger Yearly Without Shut Down.

6) Protection System :

- Testing Of All Relay And Control Panel Yearly With Shut Down.
- Testing Of Control And Relay Panel Scheme Yearly With Shut Down.

7) Thermal Imaging Of 100 KV Substation Quarterly Without Shut Down.

8) Checking Earth Pits Resistance Six Monthly With/Without Shut Down.

TESTING KITS WILL BE MADE AVAILABLE AT SITE :

- 1) High Voltage 05 KV Digital Insulation Tester: 01 No.
- 2) Digital Earth Resistance Measurement Kit: 01 No.
- 3) Good Quality Digital Multimeters (Rishabh Make): 02 Nos.
- 5) Good Quality Digital Current Clamp Meters (Rishabh Make): 02 Nos.
- 6) Good Quality Digital Live Line Voltage Detector (Motwane Make): 01

No.

7) SF6 Gas Leak Detector

TESTING KITS WILL BE SHIFTED TO SITE ON AS AND WHEN REQUIRED BASIS FROM OTHER LOCATION.

- 1) Three Phase Fully Automatic Secondary Current Injection Test Kit (Freja/Omicron Make)
- 2) Fully Automatic Capacitance and Tan Delta measurement Test Kit (Megger UK/Omicron/Eltel)
- 3) Thermography camera (Flir/Testo)
- 4) 3rd Harmonic leakage current measurement kit (SCOPE make)
- 5) Transformer Winding Resistance meter, Turns ratio Kit and Low voltage routine test kit
- 6) Circuit Breaker Timing Test Kit (SCOPE make)
- 7) Static Contact Resistance measurement Kit (Scope make)

ANNEXURE X (PPES AND TOOLS AND TACKLES) :

All Tools And Tackles Required For Carrying Out Day To Day Maintenance Activities Will Be In The Scope Of Vendor.

Activities Will Be In The Scope Of Vendor.

Following Are The Minimum PPEs And Tools-Tackles-To Be Arranged By Vendor During Contract Period At Site:

1. Cotton Hand Gloves For Each Worker.
2. Safety Helmet For Each Worker.
3. Safety Shoe For Each Worker.
4. Safety Goggles For Each Worker.
5. Full Body Double Anchor Lanyard -04 Nos.
6. Fall Arrester- 01 No.
7. Live Line Voltage Detector Suitable For 132 KV – 01 No.
8. 33 KV Insulated Hand Gloves- 2 Set
9. Medical Stretcher- 01 No.
10. Uniform To Each Personnel.
11. 01 No Blower And 01 No. Vacuum Cleaner
12. D-Spanner Set – Two Sets (4mm To 34mm Size)
13. Ring Spanner Set- Two Sets (4mm To 34mm Size)
14. Hacksaw Frame With Sufficient Number Of Blades
15. Crimping Tool (1.5sqmm To 6 Sq Mm) – 2 Numbers
16. Various Size Slings For Material Lifting
17. D Shackles – 2 Nos.
18. Pipe Spanner 18 Inches- 2 Nos.
19. Screw Driver Sets (08 Nos.) – 2 Sets
20. Insulated Pliers – 6 Nos.
21. Box Spanner Set – 2 Set
22. Temperature Gun- 01 No.
23. Slide Wrench 8"Size- 2 Nos.
24. Slide Wrench 12"Size- 2 Nos.
25. Torque Wrench- 01 No.
26. Drill Machine With Drill Bits – 1 Set
27. Allen Key Set 8mm – 2 Sets
28. Digital Multimeter – 03 Nos.
29. Tongue Tester- 02 Nos.
30. Tool Boxes-04 Nos.

31. Mobile Phones With SIM Card For Communication Purpose – 01 Nos.
32. First Aid Box With Required Medicines
33. Industrial Extension Boards- 04 Nos.
34. Laptop With Internet Connection For Our Site In Charge.
35. Earth Discharge Rods Suitable For 100 KV Switchyard

ANNEXURE Y (CONSUMABLES)

1. Petroleum Jelly
2. CRC Sprays/ Contact Cleaner Sprays
3. Carbon Remover Sprays
4. De Moist Sprays
5. M Seal
6. Teflon Tape
7. Epoxy Compound/ Silicon Sealant
8. Paint And Red Oxide For Touch Up
9. Cotton Tape
10. Cotton Waste/Muslin Cloth
11. Lugs Of Various Sizes
12. Grease
13. Lubricating Oil
14. Battery Solution
15. Battery Acid
16. Emery Papers
17. HRC Fuses Of Various Capacity
18. Insulation/Cotton/Ht-Lt Tapes

Miscellaneous points:

The system will be well maintained during the contract period.

The performance will be evaluated based on attached KPI

The bonus / penalty will be as per KPI

The crew has to work for other area as per instruction of engineer incharge of STL

Log sheet to be provided for monitoring of the substation / equipment

SOP/HIRA/IER to be prepared with engineer incharge and followed

LOTO system to be followed.

Leave replacement to be provided by Vendor

The crew must be trained for O<(>&<)>M of the system, relevant training

certificate to be provided to STL

LIST OF EXCLUSIONS

- Supply Of Consumables: Other Than That Mentioned In Annexure Y.
- Spares: Any Spares, Material, Other Than What Is Mentioned Specifically In This Offer Or Any Incidental Expenses Thereon.
- Hot Line Maintenance And Hot Line Washing Of 100 KV Outdoor Switchyard Equipments.
- Major Repairs To Any Equipment / System.
- Development Of Any Drawings / Documentation.
- Any Type Of Relay Co-Ordination Study And Settings.
- Any Work In A New Installation/Commissioning, Removal, Replacement Of Panels.
- Excavation / Backfilling And Any Kind Of Civil Works.
- Liaison With Electrical Inspector/Any Govt. Entity For Yearly Inspection Including Charges Of The Same, However Vendor will provi

deFull Assistant/Support In The Same With Closing Tech Punch Points.

- Supply Of Transformer Oil, SF6 Gas, Nitrogen Gas, Etc.
- Maintenance Of 100 KV Transmission Lines.
- Equipment Painting, Structure And Building Paintings.
- Disposal Of Hazardous And Non Hazardous Wastage

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SAFETY PRECAUTIONS

ALL THE SITE WORKERS AND STAFF HAS TO BE GO UNDER SAFETY TRAINING AND MEDICAL EXAMINATION

BEFORE GOING TO THE SITE.

EACH PERSON HAS TO FOLLOW STANDARD SAFETY PROCEDURES AND PRECAUTIONS DURING JOB.

EACH PERSON SHOULD BE COMPETENT IN ENSURING THE PROPER ISOLATION OF THE EQUIPMENT BEFORE STARTING THE WORK.

CONTRACTOR SHALL ENSURE THAT HIS PERSONNEL ARE FIT TO EXECUTE THE TASK ASSIGNED AND ARE NOT UNDER INFLUENCE OF ANY ALCOHOLIC LIQUOR.

CONTRACTOR SHALL PROVIDE ALL THE SAFETY EQUIPMENT TO PERSONNEL SUCH AS SAFETY HELMET, SAFETY SHOES, SAFETY GOGGLES, COTTON/PVC HAND GLOVES

WORKING HOURS

NORMAL GENERAL SHIFT WORKING HOURS WILL BE APPLICABLE TO CONTRACTOR. AS PER THE SITE CONDITIONS AND URGENCY OF THE JOB, CONTRACTOR SHOULD BE IN POSITION TO WORK BEYOND NORMAL WORKING HOURS AS PER THE INSTRUCTION OF DSTL ENGINEER.

Key Performance Indicators for Smartchem Technologies Ltd- 100 kV GIS and 22 KV AIS Panels

Sr. No.	Performance Description	Full Details	Penalty	Reward/Bonus
1	Response Time	The response time shall not be more than 45 minutes for breakdown jobs during working hours and not more than Two hours during other odd hours.	Rs 20000/event	No Reward
2	Economy	Vendor shall make all the efforts to minimize consumption of spares and consumables, efforts shall, where reasonable practical, be made for refurbishment of items/spares and reuse them. If Vendor make suggestions which is implementable and bring down the consumption of spares/consumables or results in bringing down the downtime of equipment an incentive but limited to the value of INR 15,000 per year will be paid.		15000/Year
3	Compliance with Preventive Maintenance Schedule	Vendor is expected to comply 100 % with PM schedule, In case compliance being less than 97 % a penalty of INR 5000 per PM , per cycle, Per month of delay will be levied, The above penalty is subject to vendor planning the PM job with material and safety documentation made available by Client. In event of the compliance being 98,99 and 100 % and annual reward of INR 2,000, 3,000 and 5,000 respectively will be paid. The PM compliance will be monitored on monthly basis however the reward is on annual basis.	Penalty of INR 5,000 per PM per cycle,per month of delay will be levied if it falls below 97%	In event of the compliance being 98,99 and 100 % then monthly reward of INR 2000, 3000 and 5000 respectively will be paid.
4	Substation Availability	Substation Availability on monthly basis should not below 99 % Formula for substation availability % sustainability Ability = $\frac{\text{Monthly Available Hrs} - \text{Non Available Hrs}}{\text{Total Monthly available hours}}$	1. Penalty will be applied below 99.40% 2.The penalty will be 2% for every 1% decrease and no monthly payment below 70% availability.	Above 99 % for every % increase in Availability there will be Reward of 0.5% of the Monthly Contract value on monthly basis.
5	Safety at Work	Vendor shall take all the necessary precautions to avoid any kind of major/minor/lost time injury , involving safety , health or environment , A Penalty of INR 1000 per minor incident and INR 25000 per major incident will be levied in case of violation of safety rules on the site	The penalty for major incident will be Rs 1 lakh	Reward of INR 10000 per year will be paid as a bonus if there are no Major/Minor incidents reported at site.

Commercial Terms and Conditions

1. Mobilization: Within 15 days from the date of receipt of PO/ email confirmation.
2. Payment Terms: Monthly one R.A (Running Bill) Bill within 45 days which is to be certified by our job coordinator.
3. Validity of the contract: 2 Year from the date of receipt of PO/LOI. The contract may be extended by another 6 months with the same rates if the quantities are not fully utilized. Even after extension of the contract if the quantities are still not fully utilized then the contract will be terminated by STL.
4. Taxes and Duties: Taxes and duties will be paid by STL as per government notifications
5. Security Deposit:: - 10% of basic order value will be retained by STL or equal amount of Bank Guarantee to be submitted by the contractor or will be deducted from Tenderers First 3 Monthly Bills against this contract and NO INTEREST will be payable by STL on the said this amount and it will be refunded to you only after expiry of the contract subject to deduction of any.

6. Force Majeure condition:

The term force Majeure as employed herein shall mean acts of God, War, Revolt, Terrorist Act , Accident , Fire, Flood and Acts and Regulations of respective Governments of the two parties. Upon occurrence of such cause and upon its termination, the party alleging that it has been rendered unable as aforesaid thereby, shall notify the other party in writing within 72 hours, the full particulars and satisfactory evidence support of his claim. Time for purpose of the relative obligations suspended by the force majeure shall then stand extended by the period of delay, which is directly caused by force majeure event.

7) Jurisdiction:

The Court at Panvel, Maharashtra shall have exclusive Jurisdiction to deal with and decide any legal matter whatsoever arising out of this Tender/ Purchase order or any agreement entered between the Vendor/ Supplier and Company.

8) Arbitration:

Any dispute, difference, claim or question of interpretation of any nature arising between the parties with regard to this Tender/ Purchase Order/ Work Order/ Agreement regarding the meaning, respective rights, claims, liabilities and obligations under this Tender/ Purchase Order/ Work Order/ Agreement, including any question regarding its existence, validity or termination which is not resolved by amicable settlement shall be settled by arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitration (ICA) or any enactment or amendment thereof. Award passed shall be final

and binding on both the parties. The venue of such arbitration proceedings shall be at Mumbai (India) and for interim relief under the Act, courts at Panvel shall have the exclusive jurisdiction over this Agreement.

9) Termination: A. The Contract/ Tender can be terminated by either party i.e. STL or the Contractor/ Tenderer, after giving three (3) month's notice to the other party. However, STL reserves the right to terminate the contract without giving any notice in case of the Contractor commits breach of any of the terms of the contract. STL's decision in such a situation shall be final and binding on the Contractor/ Tenderer without any objection or resistance.

B. On termination of the contract, the Contractor/ Tenderer will hand over all the equipment's/ furniture/ article etc. supplied by STL (if any) in good working condition back to STL except normal wear and tear.

C. If the successful bidder/ Contractor withdraws or the services provided by the successful bidder are not found satisfactory (say in a month or so) during the probationary period of three months from the date of taking over charge /Job contract, STL reserves the right to terminate the contract without giving any notice and initiate appropriate necessary action in the matter for making alternate arrangements. The Contractor shall continue till such time STL finds alternative arrangement.

In case it is found that any information furnished by the Tenderer/ Vendor/ Supplier is false or incorrect, the Company at its sole discretion may terminate the Contract/ Order without giving any notice. The Company shall reserve its right to seek appropriate damages from the Tenderer/ Vendor/ Supplier.

Any loss incurred by the Company in this respect will be on Suppliers/ vendor's account.

10) Job Controller – Mr. R J Mehta/ Ramdas Jadhav of STL shall be the job controller.

11) The rates quoted by the suppliers shall remain firm till the completion of contract period and also during extended period if any. No escalation on any other ground shall be allowed.

On Contractor's letterhead)

DETAILS OF BLACKLISTING / DISQUALIFICATION / FORFEITURE OF B.G. / S.D.

- 1) Whether your Firm/Company is blacklisted by STL or any other Public Sector / Govt. / Quasi-Govt Organisation / any other client : **Yes / No.** If yes please mention details.
- 2) Whether your Contract was terminated before expiry of Contract period or Security Deposit / E.M.D forfeited by our Company or any other Public Sector/Govt./Quasi Govt Organization / Any other client : **Yes / No.** If yes please mention details.
- 3) Whether Proprietor/Partner/Director (as applicable) has been prosecuted by any judicial court for any criminal breach of trust : **Yes / No.** If yes please mention details.

(Signature of the Contractor & Seal)

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(On Contractor's letterhead)

INFRASTRUCTURE / RESOURCES :

1. Total number of resources employed : _____
2. No. of branch offices : _____ (details of address, Telephone No., Fax No. etc.)
3. No. of Contracts engaged in Mumbai with Avg value of Contract:

(Signature of the Contractor & Seal)

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(On Contractor's letterhead)

GENERAL INFORMATION:

1. Name & address of the Tenderers Firm / Company : _____
2. Office Telephone No. : _____
3. Office Fax No. : _____
4. Year of Establishment : _____
5. Constitution of the Firm : Proprietorship/Partnership/Pvt. Ltd./ Pub Ltd. Co./Co-operative .
6. Name, Address of Partner / Directors : _____
7. Name of contact person : _____
8. Telephone no. of contact person: Office _____
Residence _____
Mobile _____
9. Name & Designation of Authorized Signatory : _____
10. Details of sister concerns
 - a) Name & Address:
 - b) Activities engaged in by Sister Concern:
 - c) Names, Addresses & Telephone Nos. of Proprietors/Directors/Partners of Sister concerns.

(Signature of the Contractor & Seal)