No. 334/T1/16/KSFDC Dt.18 /02/2016

TENDER

**FOR**

**REPLACEMENT OF EXISTING OIL CIRCUIT BREAKER**

**OF**

**KALABHAVAN THEATRE**

**AT**

**TRIVANDRUM**

TENDER FOR REPLACEMENT OF EXISTING

OCB

Owner : The Managing Director,

 Kerala State Film Development Corporation

ChalachithraKalabhavan

Vazhuthacaud

Thiruvananthapuram

EMD : RS.6800/-

Cost of Tender form : Rs.525/-

Time of completion : Three weeks for supply of materials one week for shutdown work

Date of receipt of tender : 04.03.2016 at 3.00 P.M.

Date of opening of tender : 04.03.2016 at 3.30 P.M.

Issued to : --------------------------------------

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**1. T E N D E R N O T I C E**

1. NOTICE INVITING TENDER
	1. Sealed tenders are invited for registered "A" Class Electrical Contractor by The Managing Director. Kerala State Film Development Corporation, Chalachithra Kalabhavan, and Vazhuthacaud Thiruvananthapuram-14 (hereinafter referred to as the `OWNER’ for the Replacement of existing OCB of Kalabhavan theatre, Vazhuthacaud, Trivandrum
	2. Tenders are to be submitted in the tender from which can be had from the office of KSFDC at Trivandrum on payment of Rs.525/- Tender form also can be downloaded from our website www.ksfdc.in in which case cost of tender form has to be enclosed by way of DD for Rs.525 favouring of KSFDC payable at Thiruvananthapuram, without which tender will be rejected.
	3. Tenders shall be accompanied by EMD for Rs.6800/- by way of DD favoring KSFDC payable at Thiruvananthapuram, without which tender will be rejected.
	4. Sealed tenders should be addressed to The Managing Director. Kerala State Film Development Corporation, ChalachithraKalabhavan, Vazhuthacaud, Thiruvananthapuram-14 super scribed with TENDER FOR THE REPLACEMENT OF EXISTING ocb AT KALABHAVAN tHEATRE, Trivandrum,and sent so as to reach them not later than 3 P.M on 29.02.16
	5. The owner reserves the right to reject all or any of the tenders and to accept in whole or part of any of the tenders without assigning any reason for so doing.
	6. The successful tenders will be required to sign an agreement in a form approved by the Owner for the fulfillment of the contract. Both the written acceptance of the tender by the Owner will constitute a binding agreement between the Owner and the person so tendering whether such formal contract is or is not subsequently entered into.

1.5 a) Income-tax and works contract tax at the rate prevailing at the time of payment will be deducted from each running bill and final bill.

1. All statutory payments in connection with the employment of the workmen for this work will be borne by the contractor.

1.6 PERIOD OF VALIDITY

The tender shall remain valid for acceptance for a period of 90 days from the date of opening of the tenders.

* 1. INSPECTION OF SITE

Every tenderer is expected to inspect the site of the proposed work and acquaint himself with the site conditions, approaches etc. before quoting his rates. No claim whatsoever should be entertained later on the plea of any difficulties involved in the execution of work, which was or was not foreseen by the tenderer.

* 1. ALL INCLUSIVE RATES

The contractor’s rate must be firm and include the cost of all materials, transportation of material to the site, all taxes such as VAT, service tax, Excise and Octroi etc. and the fixing or placing in position for which the item of work is intended to be operated. The rates quoted by the Contractor shall be firm throughout the contract period and there shall be no upward revision of the rates quoted by the contractor for any reason whatsoever. It should be clearly understood that any claims for extra Sales Tax, Excise duty, Service Tax Construction tax or any additional tax etc. shall not be entertained in any case whatsoever once tenders are opened.

**2. GENERAL TERMS AND CONDITIONS**

* 1. For this contract and subsequent contract, unless inconsistent with or otherwise indicated by the context, the following terms shall have he meaning defined here under:-
		1. `The Owner’ shall mean The Managing Director , Kerala State Film Development Corporation , ChalachithraKalabhavan , Vazhuthacaud Thiruvananthapuram , or his duly authorized representative to deal with matters regarding this work on his behalf.
		2. `Tenderer` shall mean person, firm or corporation who has submitted a tender against invitation to tender and shall include his legal representative, successors and assigners.
		3. `Contractor` shall mean person, individual or firm or company whose tender with or without later amendments has been accepted and to whom a letter of intent/work order has been issued.
		4. `Contract` shall mean and include the tender notice/invitation to tender, the tender and all pertaining documents, the letter of intent, the purchase order, the correspondence exchanged after receipt of tenders and before issue of the letter of intent, the drawings, technical specifications and standard relating to the contract work and the formed agreement executed by the successful tenderer/vendor with the purchaser.
		5. `Work/works` means and include all the work specified or set forth and required if any by the specification, drawings and other documents which form part of this contract or to be implied thereof or incidental thereof to be hereafter or required in such further explanatory instructions, drawings etc., as shall from time to time during the progress of the work be given by the consultant.
	2. GENERAL CONDITIONS OF CONTRACT

The following general conditions of the contract shall be read in conjunction with the Special Conditions of the contract. The following clauses shall be considered as extent and not limitations of the obligations of the contractor.

* + 1. Tenderer should quote both in figures as well as in words the rates and amount tendered by him for each item in such a way that interpolation is not possible. All corrections and alterations in the entries of tender papers will be signed in full by the tenderer with the date. The tenderer shall sign at the right hand bottom of each page of the tender document.
		2. The tenderer should submit a statement along with his tender giving details of the tenderer`s previous experience of similar work of comparable nature, also the type and size of the organization owned by him.
		3. Tenders which are incomplete in any respect are liable to be rejected.

i) The successful tenderer shall within seven days from the date of letter of intent deposit 5% awarded contract value as security deposit by DD favouring of KSFDC Ltd payable at Trivandrum for the fulfillment of the contract.

ii) EMD of the successful tenderer can be converted into security for the work and balance amount need only be deposited for security deposit. If the contractor fails to execute the work as specified or if he abandons the work, the security deposit shall be forfeited.

 The security deposit will be refunded to the contractor after the expiring of the defect liability period from the date of completion of the work.

iii)RETENTION MONEY

Retention Money at the rate of 10% of the value of the work done for each running bill will be deducted from first and following part bills until such time as the cumulative total amount of the such deductions (herein referred to as Retention Money) from part bill plus the sum of security deposit shall be limited to 10% of the total value of contract as per agreement. Half of the Retention money which is held as additional security will be released at the discretion of the Managing Director after successful completion of the work after obtaining a guarantee for the work for the entire period of Defect liability period in writing from the contractor. The maximum period for retaining retention money is the total Defect liability period from the date of completion of the work provided that if such time there shall remain to be executed by the contractor any works ordered during such period pursuant to the relevant clauses, the owner shall be entitled to withhold the payment until the completion of such work or so much of the balance amount as shall in the opinion of the Engineers represent the cost of the works so remaining to be executed.

EMD, security deposit and Retention money will not bear any interest whatsover.

iv)Income tax, sales tax, KCWW fund, ESI contribution etc. at the rte prevailing at the time of payment will be deducted from each running bill and final bill.

v) All statutory payment in connection with employment of workmen for this work will be borne by the contractor. The contractor is the employer of all the workers engaged for this work and should therefore take all required registrations and pay premiums correctly to labour welfare funds constituted by the Union Government and Government of Kerala from time to time.

vi) Sales tax on work (work contract tax) shall be deducted at 3% of the gross payment at present for contractors having KGST registration. For those contractors without KGST registration the deduction for work contract tax shall be as per KGST registration. Any tax omitted to be deducted in any part bill shall be deducted in the subsequent bills/final bill.

* + 1. INSPECTION AND TESTING

Owner/authorized representative shall have all powers to inspect any portion of the equipment, examine the materials and workmanship of the contractor’s work at the site or any other place.

* + 1. MATERIALS, TOOLS AND PLANT

All materials required for the execution of the works other than those mentioned in the Special Conditions shall be supplied by the Contractor. Materials so supplied shall have the approval of the Consultant before using on the works. All the rejected materials shall be removed at once from the site of work at the Contractor’s own cost.

* + 1. Tollages etc

The contractor shall pay all tollages and other royalties, rent and other payments or compensation, if any for getting all the materials required for the works.

* + 1. Supplying requisite agency with necessary equipments for setting out and of facilitate checking of accuracy as and when necessary should be the contractors responsibility and no extra cost will be paid for that.
		2. Temporary fences, shelters, watchman, danger signals and such other precautions as are necessary for the protection of materials and to protect the public and properties of public as well will include in the rates quoted by the contractor.
		3. The work site should be always kept clean of unwanted materials, rubbish etc., and all necessary safety precautions should be taken by the contractor as safety rules.
		4. The final clearing will include dismantling and removing all the temporary structures put up by the contractor from the premises and cleaning off the area of work so as to make it neat and tidy to the full satisfaction of the Owner.
		5. REJECTION OF DEFECTIVE EQUIPMENT & MATERIALS

If the equipment or any portion of materials thereof before it is taken over, is found to be defective or fails to fulfill the extent of the requirements, the contractor on receipt of a written notice from the Owner, shall forthwith make good the defective materials within the stipulated period mentioned in the written notice or replace the equipment at no extra cost. Any damage caused during the transit testing etc. shall be made good by the Contractor without any extra charges.

* + 1. MAINTENANCE

For a period of twelve months commencing immediately after taking over of the work by the “Owner” Contractors liability shall be to replace the defective parts, rectify/reconstruct the defective work that may develop of his own construction or those of his sub contractors approved by the “Owner” arising solely from faulty materials or workmanship.

If it is necessary for the Contractor to rectify/reconstruct any defective portions of the work under the contract, the provision of this condition shall apply to the portions of work so replaced or renewed until the expiration of three months from the date of such replacement or renewal until the end of the above mentioned period of twelve months, whichever may be later. If any defects be not remedied within a reasonable time the “Owner” may proceed to do the work at Contractor’s risk and expense, but without prejudice to any other rights which the “Owner” may have against the contractor in respect of such defects.

* + 1. DEFECTS LIABILITY PERIOD

Any defect developed within `Defect Liability Period` of twelve months will have to be rectified by the contractor at their own cost and in case the defects are not rectified by the contractor, consultant/”Owner” or their representative shall get the work done at the risk and cost of the contractor.

* + 1. Work Treated as complete
	1. The site is clear from all materials, site shed, etc. and the consultant is satisfied with the job done by the Contractor.
	2. The contractor has submitted the reconciliation statement regarding the stores received from the “Owner” and all the surplus and salvaged materials are returned to the stores
	3. All equipment, tools, plant taken from the “Owner” has been returned by the contractor.
	4. Any other material, taken on loan/transfer from other agency has been returned by the contractor.
	5. All power and water supply connections taken for the execution of the works have been disconnected by the contractor.
	6. Rectifications of any damage done by the contractor to the work executed have been satisfactorily done by the contractor.
	7. The works shall not be considered as complete until the consultant has certified in writing that they have been virtually completed and the Defects Liability Period shall commence from the date of such certificate.
		1. BY LAWS

The contractor shall comply with by-laws and regulation of local and statutory authorities having jurisdiction over the work and shall be responsible for payment of all fees and other charges and the giving and receiving of all necessary notices and the Owner shall be kept informed of the said compliances with by-laws, payment made, notices issued and received.

* + 1. COMPLETION TIME

The work covered by the contractor shall be executed in accordance with the drawings within 1 month from the date of award of work or along with the civil work which ever is the earlier. As this is a co-ordination work with civil contract, all efforts must be made for smooth progress of work.

* + 1. EXTENSION OF TIME

If the contractor shall desire extension of time for completion of the work on the grounds of his having been unavoidably hindered in its execution or on any other grounds, he shall apply in writing to the Owner.

* + 1. QUANTITIES

 The quantities set out in the bill of quantities are the estimated quantities of the work and are approximate. They are not to be taken as the actual and correct quantities of the works to be executed by the contractor in fulfillment of his obligations under the contract. On award of work the contractor of his own has to estimate the actual quantities of work and to communicate to the owner. No extra cost shall be paid for any variation in quantities.

* + 1. MEASUREMENT AND BILLING

Wherever mode of measurement is specified, the measurement will be taken at site as per the latest IS code of practice for measurement. The contractor or his representative shall accompany the consultant/”Owner” or their representative in taking measurements and shall agree to the measurements taken on spot. All necessary tapes shall be of steel and shall be supplied by the Contractor. The contractor shall then present his bill based upon the agreed and recorded measurements and as per the directions of the Consultant. If the contractor fails to accompany the Consultant/”Owner” for measurements, then he shall be bound by the measurements taken by the Consultant/”Owner”.

The contractor shall raise bills once a month or for a minimum payment of 25% of contract amount.

Payment towards all interim bills will be made by the “Owner” within a time limit of 30days of presentation by the Contractor.

Period of final measurement shall be one month from the time of completion of the project.

* + 1. POWER TO MAKE ALTERATIONS

The Owner shall have the power to make in writing any alterations, omissions, additions or substitutions for original specifications, drawings, designs, patterns and instructions that may appear to him necessary or advisable during the progress of the work and the contractor shall be bound to carry out the work in accordance with the instructions which may be given to him by the Owner or his representative. On submission of electrical scheme to the Electrical Inspectorate it is bound to have some changes in the panels, cables rating etc.

Such alterations, omissions, additions, substitutions shall not invalidate the contract. Any altered additional or substituted work which the contractor may be required to do in the manner specified above as part of the work shall be carried out by the contractor on the same conditions in all respect on which the main works was agreed to be done and at the rates derived according to clause 2.2.21

* + 1. EXTRA ITEMS

Extra items may be classified as additional, substituted, or altered items, depending on their relation or otherwise to the original item or items of work.

Rates for authorities extra items, additional, altered or substituted work as may be ordered shall be determined by the Consultant/”Owner” as follows:

* + 1. In the case of all extra items whether additional, altered or substituted, if accepted rates for identical items provided for in the contract, such rates shall be applicable.
		2. In the case of all extra items whether altered or substituted, for which similar items exist in the contract, the rates shall be derived from the original item by appropriate adjustment of cost of affected components. The percentage excess or deduction of the contract rate for the original item with reference to the estimated rate shall be applied in deriving the rates for such items.
		3. In the case of extra items, whether altered or substituted, for which similar items do not exist in the contract, the rates shall be arrived at on the basis of provision of standard date Book and schedule of rates 1992 of Public Works Department of Kerala by adding profit of 10% and applying the contractor’s quoted percentage above or below.
		4. In the case of extra items, whether additional altered or substituted, for which the rates cannot be derived from similar items in the contract, and only partly from similar items in the contract, and only partly from the public work departmental rates, the rates for such part of parts of items as are not covered in the schedule of rates shall be determined by the Consultant/`Owner’ on the basis of the prevailing market rates giving due consideration to the analysis of the rate furnished by the Contractor with supporting documents, including contractor’s profit. This shall be added on to the P.W.D Departmental rate 1992 revised as on 1/7/96 (including contractor’s profit). For the other part of the items the rates can be derived from the schedule of rates of P.W.D.

e. In the case of extra item whether additional, altered, substituted, for which the rates cannot be derived either from similar item of work in the contract or from the departmental schedule of rates, the contractor shall within 14 days of the receipt of order to carry out the said extra item of work, communicate to the consultant the rate which he proposes to claim for the item, supported by analysis of the rate claimed and the `Owner’/Consultant shall within one month thereafter, determine the rate on the basis or the market rate giving due consideration to the rate claimed by the contractor.

**3. SPECIAL CONDITIONS**

* 1. Time is the essence of the contract. Time of completion allowed is 1 week
	2. Tender shall be opened on 04.03.2016 at 3.30 PM
	3. The letter of intent shall be issued soon followed by the formal work order.
	4. Only first quality materials shall be allowed for the work. The samples of all materials shall be got approved by the consultant before supplying for the work.
	5. Contractor has to prepare all necessary drawings and submit to the Kerala State Electricity Board and Kerala State Electrical Inspectorate for clearance within 2 days of award of work. Owner shall give basic drawings of all installation. Necessary follow up action shall be taken by the Contractor to obtain the clearance from the Electrical Inspectorate and Electricity Board.
	6. On completing the installation the completion certificate shall be issued to the Kerala State Electrical Inspectorate for approval. The observations/comments issued by the electrical Inspector have to be rectified at no extra cost.
	7. Owner, shall pay all statutory fee for the above works. All other cost shall be included in the offer.
	8. The test certificate of all equipment has to be submitted to Owner on completion of work.
	9. The payment shall be made as under:-
1. 70% of the value of goods supplied/work executed at site, shall be made immediately after supply of materials/work executed at site.
2. 15% of the value of goods supplied/work executed at site, shall be made immediately after completing and commissioning the equipments/work executed.
3. 10% after rectification of defects, energizing the complete system to the full satisfaction of Owner.
4. Balance 5% after a defect liability period of 12months.
	1. The rates quoted by the contractor shall include cost of all materials, conveyance, labour supervision thereof, hire of all tools and implements, incidental charges and all that is required for the complete work.
	2. The contractor is expected to visit the site and study the probable routes of transportation of material to the site before quoting.

3.12 All the items of the work are to be executed as per relevant IS specifications.

3.13 The Contractor has to agree and strictly abide to all the conditions stipulated in the tender and any offer with deviation or request for deviation is liable to be rejected.

3.14 The guarantee shall be 12 months from the date of handing over the installation duly energized.

3.15 The contractor has to prepare a time schedule for the complete work in detail and submit to Owner in triplicate within 10 days from the day of letter of intent. This shall be modified to suit the civil construction work.

4. **PARTICULAR SPECIFICATION**

4.1 SCOPE:-

 The scope of work covers supply and installation USS, cables as indicated in the schedule and earthing as per standards. All necessary clearance shall be obtained from authorities and service connection obtained to the satisfaction of the owner.

* 1. GENERAL

 Work shall be carried out in accordance with specification local rules. Indian Standard Code of Practice No.IS:732-1963. Definition of terms shall be as in the I.E. Rules.

* 1. HT CABLES – 11KV GRADE

4.3.1 INSTALLATION

 Cables shall be laid in the routes marked in the drawings. Where the route is not marked, the contractor shall mark it out on the drawings and also on the site and obtain the approval of the Architect/Consultant before laying the cable. Procurement of cables shall be on the basis of actual site measurements and the quantities shown on the schedule of work shall be regarded as a guide.

 Cables, rising indoors shall be laid on walls, ceiling inside shafts or trenches. Single cables laid shall be fixed directly to walls or ceiling. All supports shall be at not more than 500mm. Where numbers of cables are run, necessary perforated cable trays shall be provided wherever shown. Cables laid in built-up trenches shall be on steel supports. Plastic identification tags shall be provided at every 20mtr. Cables shall be bent to a radius not less than 15 times the overall diameter of the cable, or in accordance with the manufacturer’s recommendations whichever is higher.

 In case of direct buried cables, the cable route shall be parallel or perpendicular to roadways, walls, etc., Cables shall be laid in excavated, graded trenches over a sand cushion to provide protection against abrasion. Width of excavated trenches shall be as per drawings. The cable shall be provided with cable markers at every 20 meters.

 Cables shall be identified at and terminations indicating the feeder number and the Panel/Distribution board from where it is being laid.

4.3.2 TESTING

Cables shall be tested upto installation with a Megger and the following readings established.

* + - 1. Continuity on all phases
			2. Insulation resistance.
				1. between conductors
				2. all conductors and ground

 All the Tests shall be recorded

4.3.3 MODE OF MEASUREMENT

 Cables will be measured on the basis of unit length and shall include the following:-

1. Cables and clamps
2. Installation, commissioning and testing.
3. Cable route marker.

 Each cable joint will be measured as one unit for payment.

 The item shall include the following:-

1. Cable glands, lugs, bolts, nuts.
2. All jointing materials
3. Installations, testing and commissioning.
4. Earthing the gland.

 Cables buried under ground will be measured on the basis of unit length and paid for at unit rates and shall include:

1. Excavation to 1.2mtr/0.6mtr and back filling.
2. 6” sand cushioning below and above cable.
3. Protective bricks/tiles above the sand cushioning.
4. Fixing of cable route markers.
	1. UNITISED SUBSTATION

SPECIFICATION

 11KV, 350 MVA, 400A, 50Hz load break switch fuse unit having 2 nos CTs of ratio 10/5A , Cl-0.5, 15VA burden, 1no PT 11KV/110V, Cl-0.5, 100VA burden with shunt trip and earth switch and incoming suitable for 3 x 150sq.mm XLPE cable.

4.4.1 INSTALLATION

Check the position to be occupied by the unit as indicated in the relevant layout drawing.

The recommended minimum distance from the unit to the walls should be adhered to and the location of the switchgear should be free from dampness of humidity, excessive vibration and chemical fumes.

The installation charges shall include the cost of supply, fabrication and installation of all the necessary steel supports for the erection of the panel.

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4.4.2 FOUNDATION

Contractor shall supply the foundation details required. The rag-bolts shall be prepared and the floor toughened at the location of the supports, the units can be placed in position. Care shall be taken to ensure that unit occupies its correct position.

4.4.3 BUSBAR CONNECTIONS

 The contract surfaces of the busbars should be thoroughly cleaned on both sides with emery cloth and any burrs should be removed with a smooth file. The joints should be assembled as soon as possible.

 The busbars should be connected up on such a way as to be parallel to the line of the unit and suitable for extension where necessary. Busbar shall be bolted very securely and in correct alignment.

4.4.4 CABLE CONNECTIONS

Access to the cable box is obtained by removing the cover sheets at the back.

4.4.5 EARTHING

 The earth bar should be continuous and solidly connected to the station main earth.

4.4.6 TESTING AND COMMISSIONING

Before commissioning, the entire equipment must be thoroughly cleaned both internally and externally.

4.4.7 VOLTAGE TRANSFORMER

 All transformers are to be tested for ratio error and phase difference and high voltage tests in accordance with recommendation of B.S.3941 before leaving the works.

 The resistance to earth of primary and secondary windings when tested using a 1,000Volts megger should not fall below an absolute minimum of 500 and 10 megohms respectively.

In each case, the voltage must be obtained from A.C supply. D.C should not used as it is liable to set up abnormal electric stresses.

* 1. EARTHING
		1. SCOPE

The scope of work shall cover earthing stations, laying copper earthing strips.

* + 1. STANDARDS

The following standards and rules shall be applicable.

* 1. IS:3043 – 1987 Code of practice for earthing.
	2. Indian Electricity Act and Rules.

All codes and standards mean the latest, where not specified otherwise. The installation shall generally follow the Indian Standard code of practice or the British Standard codes of practice in the absence of Indian standards.

4.5.3 EQUIPMENT EARTHING

All apparatus and equipment transmitting or utilizing power shall be earthed in the following manner . Copper earth wires shall be used where copper wires are specified.

a. Armored cables shall be earthed by 2 distinct earth connections to the armoring at both the ends and the size of connection being same as for the metallic conduit.

b. 3 phase power panels shall have 2 distinct earth connections of the size co-related to the incoming cable size.

c. An equipmentearthing grid is to be established. All earth connections to all panels and equipment shall be connected to the nearest point of the earthing grid.

5. Submission of tender:

All the pages of the tender from shall be signed by the tenderer affixed with seal and submitted along with

i) Cost of tender form by DD/receipt for tender form cost

ii) EMD by way of DD

iii) Copy of A class contractor's license

RECOMMENDED MAKES OF MATERIALS

|  |  |  |
| --- | --- | --- |
| **No** | **ITEM DECRIPTION** | **RECOMMENDED MAKE** |
| 1 | LBSFU, CT, PT | Pentagon sitch ear Pvt. Ltd. Unipower transformers Pvt. Ltd S& S transforms & accessories Pvt. Ltd. KEL |
| 2 | TOD meter  | L&T ,HPL |
| 3 | LT/HT XLPE Cables. | NICCO, Gloster, Universal, Polycab, Torrent, RPG, KEI. |
| 4 | Cable gland (Heavy Duty) | COMEX / PRABHATH / DOWELS / JAINSON |
| 5 | Lugs | DOWELS / JAINSON |
| 6 | Cable Jointing Kit ( HT) | Denson, Rachem (Heat Shrinkable Type) |
| 7 | Cable Tray System | Legrand, OBO Bettermann. |

NOTE: The contractor can use any other make of material if approved by Consultant / Owner before finalizing the offer.

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| **KALABHAVAN TRIVANDRUM** |
| **SUPPLY AND INSTALLATION OF HT SFU AND CONNECTED WORKS** |
| **SCHEDULE** |
| **SL. No** | **DESCRIPTION** | **QTY** | **UNIT** | **RATE** | **AMOUNT** |
|   |  |   |   |   |   |
| 1 | Dismantling and removing of existing HT OCB, disconnecting the cables and earthing, clearing the site etc.. Complete | 1 | LS |   |   |
| 2 | Removing the existing trench slab and removing the cables. | 1 | LS |   |   |
| 3 | Supply and installation and testing of 11kV 350 MVA 400A LBSFU | 1 | Set |   |   |
| 4 | Supply, installation and testing of in door type CT/PT unit having 2nos.CT 15/5A, class of accuracy 0.5, 15VA burden, 1no.PT 11KV/110V, class 0.5 accuracy, 100VA burden, duly tested, terminals prewired from CT & PT for connecting TOD meter. | 1 | Set |   |   |
| 5 | Installation and testing of in door type CT/PT unit having 2nos.CT 15/5A, class of accuracy 0.5, 15VA burden, 1no.PT 11KV/110V, class 0.5 accuracy, 100VA burden, duly tested, terminals prewired from CT & PT for connecting TOD meter. (CT/ PT unit will be supplied by the owner) | 1 | LS |   |   |
| 6 | Supply, installation and testing of TOD meter for KSEB test terminals etc. all prewired, tested in the TMR section of KSEB and as per recommendations and fixing in the SFU panel as required. | 1 | Set |   |   |
| 7 | Removing the existing TOD meter and refixing in the out door cubicle in the USS including testing. | 1 | LS |   |   |
| 8 | Supply of 3x150 sq.mm Al. Conductor XLPE type PVC sheathed armoured 11 KV HT cable . | 10 | mtr |   |   |
| 9 | Laying of 3x150 sq.mm Al. Conductor XLPE type PVC sheathed armoured 11 KV HT cable to the existing trench/tray. | 10 | mtr |   |   |
| 10 | supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required : |   |   |   |   |
|   | Indoor type | 2 | no |   |   |
| 11 | Emergency push button for external trip (KSEI scope) | 1 | no |   |   |
| 12 | Supply and laying 2Cx2.5 sq .mm cable for push button  | 20 | mtr |   |   |
| 13 | making good of the floor after completion of work, including concrete, plastering etc as required | 1 | LS |   |   |
| 14 | Back filling the trench with available bricks and sand etc complete | 1 | LS |   |   |
|   | **Earthing** |   |   |   |   |
| 15 | Supply, fixing and give termination to following Cu strips and wires for effective earthing of neutral and equipment of the system. |   |   |   |   |
|   | 25x5mm Cu strip | 5 | mtr |   |   |
| 16 | Expenses for liaison work with the KSEI for getting approval, including paper work and inspection. | 1 | LS |   |   |
| 17 | Expenses for liaison work with the KSEB for refixing TOD meter. | 1 | LS |   |   |
|   | **Total** |   |   |   |   |
| 18 | Buy back amount for existing HT OCB & accessories. | 1 | LS |   |   |
|  | **Total** |  |  |  |  |