

पावर ट्रान्समिशन कारपोरेशन ऑफ उत्तराखण्ड लि०  
मुख्य अभियन्ता (परिचालन एवं अनुरक्षण) कार्यालय,  
गढवाल क्षेत्र, 26- सिविल लाईन्स, रूड़की  
ई-निविदा सूचना

एतदद्वारा, ई-निविदा सं० सी०ई०/जी०जैड०आर०-04/2020-21 के द्वारा 132के०वी० उपकेन्द्र श्रीनगर, सतपुली, सीमली एवं 132के०वी० पारेषण लाईनों का वार्षिक अनुरक्षण अनुबन्ध हेतु ई-निविदाएं आमन्त्रित की जाती हैं। ई-निविदा जमा करने की अन्तिम तिथि 15.10.2020 को समय 15.00 बजे तक हैं, जो दिनांक 16.10.2020 को 15.00 बजे खोली जायेगी। ई-निविदा से सम्बन्धित अन्य विस्तृत विवरण ई-निविदा वेबसाईट [www.uktenders.gov.in](http://www.uktenders.gov.in) (Tender ID: 2020\_PTCUX\_26151\_1) से प्राप्त, एवं ई-निविदा सूचना पिटकुल की वेबसाईट [www.ptcul.org](http://www.ptcul.org) पर देखी की जा सकती हैं। ई-निविदा सम्बन्धी जानकारी हेतु मोबाईल नं० +91-8899890000 से सम्पर्क करें।

मुख्य अभियन्ता (परि०एवं अनु०)

“राष्ट्र हित में बिजली बचायें”

**POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.  
OFFICE OF THE CHIEF ENGINEER (OPERATION & MAINTENANCE)  
GARHWAL ZONE, 26-CIVIL LINES, ROORKEE  
E-TENDER NOTICE**

On line, e-tenders against specification No. CE/GZR-04/2020-21 for Annual Maintenance Contract for 132KV Substation Srinagar, Satpuli, Simli and 132KV Transmission Lines are hereby invited. The last date & time of submission of bid is upto 15.00 Hrs. on 15.10.2020, which shall be opened on 16.10.2020 at 15.00 Hrs. Details of E-tender can be obtained from E-tender website [www.uktenders.gov.in](http://www.uktenders.gov.in) (Tender ID: 2020\_PTCUX\_26151\_1) and information of E-tender can be seen from PTCUL website [www.ptcul.org](http://www.ptcul.org). For any assistance on e-tendering, please contact on Mobile No. +91-8899890000.

CHIEF ENGINEER (O&M)

“SAVE ELECTRICITY IN THE INTEREST OF NATION”

**POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.**  
(A Govt. of Uttarakhand Enterprise)  
**CHIEF ENGINEER, OPERATION & MAINTENANCE**  
**GARHWAL ZONE, PTCUL**  
**26 - CIVIL LINES, ROORKEE - 247667**

E- Tender for “Annual Maintenance Contract for 132KV Substation Srinagar, Satpuli, Simli and 132KV Transmission lines”.

DOWNLOADED BY: -

M/s / Shri \_\_\_\_\_

Sr. No.	DESCRIPTION	
1.	Tender No.	CE/GZR-04/2020-21
2.	Name of Work	“Annual Maintenance Contract for 132KV Substation Srinagar, Satpuli, Simli and 132KV Transmission lines”.
3.	Completion Time	<b>01 Year</b>
4.	Route Length in Kms.	--
5.	Tender issuing office	Office of Chief Engineer (O&M) Garhwal Zone, Power Transmission Corporation of Uttarakhand Ltd. " 26-Civil Lines, Roorkee-247667
6.	Tender Fees	<b>Rs. 2,000+ 360.00 (GST@18%) =Rs. 2,360.00 (Non refundable)</b>
7.	EMD/Bid Security	<b>Rs. 76,000.00</b>
8.	Starting date of issue of Bid documents. The tender document is to be downloaded through website- <a href="http://www.uktenders.gov.in">www.uktenders.gov.in</a> against payment of tender fees as above. The non refundable tender fees as specified above should be sent along with the bids as specified in the bid documents.	15.09.2020
9.	Last date of Request of Bid Documents.	As per tender notice / corrigendum if any
10.	Last date of issue of Bid Documents.	As per tender notice / corrigendum if any
11.	Closing Date of receipt of Bid through E-tendering	As per tender notice / corrigendum if any
12.	Address & Place of Submission of Bid supporting documents.	Chief Engineer (O&M), Garhwal Zone, PTCUL, 26-Civil Lines Roorkee-247667.
13.	Date and Time of Opening of Technical Bid	As per tender notice / corrigendum if any
14.	Address & place of Technical bid(Part-1) opening	Chief Engineer (O&M), Garhwal Zone, PTCUL, 26-Civil Lines Roorkee-247667.
15.	Type of Tender	Short Term Domestic Competitive Bidding
16.	Validity of Bid	180 days after the date of opening of technical bid (Part-I)
17.	Contact & Telephone No. of the Tender issuing office	Phone No.:- 01332-272256 Fax No. : 01332-2722315
18.	E-mail address of the tender issuing office	ce_oandmg@ptcul.org chiefengineergarhwal@gmail.com

**CHIEF ENGINEER (O&M) GARHWAL ZONE, ROORKEE**

## **Pre Qualifying Criteria**

### **(A) Technical Qualifying Requirement**

1. The bidder should have successfully completed similar nature of work within last Seven (05) years as on the originally scheduled date of Bid opening.
2. The bidder shall have the experience of attending breakdown of broken conductors and damaged towers of 132 KV & above voltage level transmission lines in hilly terrain.
3. The bidder shall have the experience of attending switchyard breakdown of 132 KV & above voltage level transmission substations in hilly terrain.

### **(B) Financial Qualifying Requirement**

1. Minimum Average Annual Turnover:- The minimum average annual turnover for the preceding best three years (36 months) out of last five financial years should not be less than 44.68 Lacs (Balance sheet/Documentary proof for last five years should be enclosed). The balance sheet and all other financial documents attested/certified by CAs to substantiate fulfilment of FQR should be with UDIN.
2. Access to Finance : The bidder must demonstrate availability of access to finance for Rs. 8.94 Lacs at the time of bidding through a certificate duly certified by Chartered Accountants/auditor of company which shall not be more than one month old as capered to the date of submission of the bid.  
For Financial Qualification Criteria, lead partner of JV Firms should meet minimum 50% of Financial Qualification Requirement (FQR) and collectively meet total FQR. All partners of JV Firms should have the experience for activities of construction/manufacturing of items or equipments/supply of items or equipments or products, meant for transmission utilities only.
3. Experience of having successfully completed similar works during last 7 years lending last day of month previous to the one in which applications are invited should be either of the following;  
(a) Three similar completed works costing not less than the amount equal to Rs. 11.91 Lac.  
OR  
(b) Two similar completed works costing not less than the amount equal to Rs. 14.89 Lac.  
OR  
(c) One similar completed work costing not less than the amount equal to Rs. 23.83 Lac.
4. The bidder have to submit affidavit of all ongoing projects which are not completed and Net worth of the ongoing project which are not completed at the time of bidding. (Not completed project means project in Government, Government undertaking or Private sector also include the LOA/ Agreement which are allotted/ executed but work has not started at the time of bidding.
5. The bidder has to submit the latest Balance sheet and CA Certificate (along with the UDIN No.) for the Net Worth at the time of bidding.
6. Experience certificate should be issued by an officer not below the rank of Executive Engineer mentioning nature of work, Agreement No., Amount of work, Scheduled time of completion of work and Actual time of completion etc. Completion certificate from officer shall be enclosed by contractor.

### **(C) Additional Documents**

1. Copy of PAN No. of the firm/Company or PAN No. of all its partner's in case of partnership firm or PAN No. of the individual, in case of proprietorship.
2. The Tenderers should have submitted copy of Goods I& Service Tax (GST) Registration.
3. Employee Provident Fund (EPF) Registration Certificate.
4. RTGS/NEFT Details of the bidder is to be submitted.
5. Latest Solvency certificate not more than 3 months old issued by bank (20% of bid value) should be submitted..
6. The balance sheet and all other financial documents attested/certified by CA's to substantiate fulfilment of FQR should be with UDIN, failing which the tender will be summarily rejected without any further reference.

7. GST Registration/Issuing authority.
8. Details of Partners/Directors of the Firm/Company.
9. Experience record and details of other works pending/executed for various utilities.
10. Last year audited Accounts.
11. Valid "A" Class Electrical Contractor License.

**TECHNICAL SPECIFICATION FOR AMC OF 132 KV TRANSMISSION LINES UNDER O&M  
DIVISION, SRINAGAR (G).**

**Note :** *For the work “Assistance in carrying out miscellaneous routine maintenance works of 132 KV Transmission Lines under O&M Division, Srinagar” 1 No. operation signifies deployment of 2 highly skilled, 2 skilled and 2 semi-skilled manpower for a period of 8 hours.*

**SCOPE OF WORK: -**

This specification covers the Annual maintenance of following 132 KV Transmission Lines of O&M division Srinagar (G)

- a) 132 KV Rishikesh – Srinagar Line
- b) 132 KV Srinagar – Srinagar Line
- c) 132 KV Sriangar – Simli Line
- d) 132 KV Srinagar – Satpuli Line
- e) 132 KV Satpuli – Kotdwar Line

Annual maintenance of lines involving routine work like patrolling of line, Non Shut Down and Shut Down jobs & also attending the break downs of conductor & earth wire etc. as per following specifications-

**Note :** *Any Breakdown which shall be considered major breakdown by Engineer In-charge shall not be covered under AMC Contract.*

**ROUTINE WORKS :** - Ground patrolling of entire lines once in three months i.e. 4 patrolling cycle in a year (1/3<sup>rd</sup> of the line length on monthly basis or as per the instruction of Engineer in charge of the line under AMC)

**During patrolling the following works are to be attended.**

- a) Tower to Tower ground patrolling of entire line.
- b) Visual inspection of main conductor & its accessories, earth wire & its accessories, Jumpers and disc insulators etc.
- c) Inspection of foundation, revetment wall and tower members.
- d) Back filling/ removal of extra soil/debris from tower legs/base.
- e) Cutting and removing of wild plants, bushes/ bail and trees etc. from tower base.
- f) Lopping/chopping and cutting of tree branches/twig coming in right of way of line to maintain the minimum clearance.
- g) Detection and recording of shut down faults.
- h) Detection and recording the status of number, phase, danger plates, Vibration damper & Tack welding.
- i) Fixing of number, phase & danger plates where required.
- j) Preparation and submitting the patrolling report in specified format and also submit the photograph of every patrolled tower in soft copies.

**SHUT DOWN WORKS :-**

**1. Replacement of damaged/broken/puncture disc insulators**

Replacement of damaged/broken/puncture disc insulators of Single/ Double tension fitting complete work including shifting the material from store to site, balance material back to store, dismantling /lowering down of complete string and again hoisting.

**2. Replacement of minor snapped/damaged/defective/burnt conductor**

Replacement of minor snapped/damaged/defective/burnt conductor of single/double tension fitting by using new S.T.F./D.T.F./mid span joint/repair sleeves and conductor etc. complete work including shifting the material from store to site, balance material back to store, cutting of conductor, pressing of S.T.F., making of mid span joint, De-stringing & re-stringing of conductor of 132 KV line.

**3. Replacement of broken/defective earth wire or earth wire fittings**

Replacement of broken/defective earth wire or earth wire fittings by using new single tension fitting of earth wire, mid span joint and earth wire etc. complete work including shifting the material from store to site, balance material back to store, cutting of earth wire, pressing of S.T.F., making of mid span joint, De-stringing & re-stringing of earth wire of 132 KV lines.

**4. Replacement of damaged/burnt/defective jumper**

Replacement of damaged/burnt/defective jumper by using new jumper cones/PG clamps and conductor of 132 KV lines complete work including shifting the material from store to site, balance material back to store, cutting of conductor, pressing of jumper cone, disconnection & connection of jumper etc.

**5. Repairing cum tightening of defective/ Loose jumper**

Repairing cum tightening of defective / Loose Jumper by tightening of loose nut & Bolt of jumper cone or P.G clamp (Replaced the burnt or melted nut bolt or P.G clamp if required) of 132 KV Lines. Complete work including shifting the material from store to site, Balance material back to store disconnection & connection of jumper if required etc.

**BREAK-DOWN WORKS :-**

**1. Attending the break down of broken/snapped conductor**

To attend the breakdown of broken/snapped conductor in minimum possible time the following works has to be done:-

- i) Patrolling of line after tripping/declaration of line under breakdown immediately.
- ii) Shifting the material from store (Srinagar/Rishikesh) to breakdown site in minimum possible time including loading, unloading & head loading.
- iii) Replacement of old damage conductor by using new conductor complete work including cutting the conductor, pressing the new S.T.F., making of mid span joint, pressing of repair sleeves if required, disconnection of jumper, pressing of jumper cone, connection of jumper & restringing of conductor in minimum possible time at various location of above lines.

**2. Attending the break down of damaged/broken/puncture disc insulators**

To attend the breakdown of damaged/broken/puncture disc insulators in minimum possible time the following works has to be done:-

- i) Patrolling of line after tripping/declaration of line under breakdown immediately.
- ii) Shifting the material from store (Srinagar/Rishikesh) to breakdown site in minimum possible time including loading, unloading & head loading.
- iii) Replacement of damaged/broken/puncture disc insulators of Single/ Double tension fitting complete work including shifting the material from store to site, balance material back to store, dismantling /lowering down of complete string and again hoisting.

**3. Attending the break down of broken/snapped earth wire**

To attend the breakdown of broken/snapped earth wire in minimum possible time the following works has to be done:-

- i) Patrolling of line after tripping/declaration of line under breakdown immediately.
- ii) Shifting the material from store (Srinagar/Rishikesh) to breakdown site in minimum possible time including loading, unloading & head loading.
- iii) Replacement of old damage earth wire by using new earth wire complete work including cutting the earth wire, pressing the new S.T.F., making of mid span joint, pressing of jumper cone, disconnection of jumper, connection of jumper & restringing of conductor in minimum possible time at various location of above lines.

**4. Attending the break down of broken/snapped /burnt jumper**

To attend the breakdown of broken/snapped /burnt jumper in minimum possible time the following works has to be done:-

- i) Patrolling of line after tripping/declaration of line under breakdown immediately.
- ii) Shifting the material from store (Srinagar/Rishikesh) to breakdown site in minimum possible time including loading, unloading & head loading.
- iii) Replacement of old damage jumper by using new conductor, Jumper cone/PG clamps complete work including cutting the conductor, pressing the new jumper cones, disconnection of jumper and connection of jumper in minimum possible time at various location of above lines.

**5. Attending the breakdown of tree or tree branches which is fallen on the 132 KV line/ Tower / Jumper /Earth wire**

To attend the breakdown of tree or tree branches which is fallen on the 132 KV line/ Tower / Jumper /Earth wire in minimum possible time the following works has to be done.

- i) Patrolling of line after tripping/declaration of line under breakdown immediately.
- ii) Shifting the T&P (as axe, rope,saw etc ) required for removing the tree or tree branches from line /Tower/ Jumper/earth wire .
- iii) Remove the tree or tree branches from line /tower/jumper / earth wire by cutting or pulling (as applicable or possible) in minimum possible time at various location of above lines.

**Note:** 1. Attending the breakdown in both time day and night or as per decision of engineer in-charge or his authorised representative Subject to the site condition and natural calamity.

2. Any breakdown which shall be considered as major breakdown by Engineer In-charge shall not be cover under this AMC Contract.

3. As the AMC contract is mainly labour contract and contractor has to provide the labour therefore transport charges for cartage of T&P and material shall be paid by PTCUL however mobilization of labour as per requirement of PTCUL is in the scope of contractor.

**T&P :-**

All the T&P required for proper completion of above works shell be arranged by the contractor. Only compressor, cum-along clamp &heavy duty pulley block shell be provided by the PTCUL.

**METERIAL :-**

All the consumable item like conductor, earth wire, Single/double tension fittings, PG clamps, insulators, earthing lug, mid span joint, repair sleeves & vibration damper etc. shell be issued by the department as per actual requirement.

## **TECHNICAL SPECIFICATION FOR AMC OF 132 KV SUBSTATION SRINAGAR, SATPULI AND SIMLI**

**Note :** *For the work “Assistance in carrying out miscellaneous routine maintenance works of 132 KV Substation Srinagar, Satpuli and Simli” significance of 1 No. operation will be as following :-*

- a) For the work of Sl. No. 1 (Assistance in Daily Routine works at 132 KV Substation Srinagar/ Satpuli/ Simli) One No. operation signifies deployment of 1 semi-skilled and 1 skilled manpower for a period of 8 hours.
- b) For the work of Sl. No. 2 (Assistance in Shutdown and other works of 132 KV Substation (Srinagar/Satpuli/Simli) One No. operation signifies deployment of 1 highly skilled, 2 skilled and 2 semi-skilled manpower for a period of 8 hours.

### **SCOPE OF WORK :-**

This specification covers the Annual maintenance of 132 KV Sub-station Srinagar, Satpuli and Simli under O&M Division, Srinagar involving routine work like cleaning, sweeping, gardening etc. in control room building, store building and substation premises also. Non Shut Down and Shut Down jobs & also attending the normal break downs of CT, PT & LA etc. as per following specifications-

**Note :** *Any Breakdown which shall considered major breakdown by Engineer In-charge shall not be covered under AMC contract.*

### **ROUTINE WORKS: -**

#### **1. Maintenance of all the rooms of control room building.**

Regular Cleaning, sweeping of all the rooms of control room building office building, store building etc. Regular cleaning also covers the job of regular toilet cleaning. Cleaning of different panels and equipment of all the rooms, sweeping and cleaning of surrounding area of Control Room building is also in this scope. All the work shall be carried out strictly as per instruction of Engineer In-charge.

#### **2. Maintenance of different type of Battery set & chargers etc.**

The Following work has to be done for proper maintenance of battery set and charger-

- i) Regular cleaning of different type of battery sets.
- ii) Apply petroleum jelly on battery terminals after cleaning of terminals by brush.
- iii) Routine checking of voltage reading of all battery sets and entered in battery reading register.
- iv) Routine checking of boost and float charging of Battery chargers.
- v) Checking of healthiness/capacity of battery sets at regular intervals by switching off the chargers.
- vi) Any other work as per site requirement or as per direction of site In-charge.

#### **3. Routine Maintenance (Cleaning, sweeping, uprooting of bushes & Grass Cutting) of Switch Yard, drains, trenches & CC roads etc.**

Cleaning of switch yard and Substation premises by cutting/uprooting of bushes, grass, weed, small trees & sapling of girth up to 5 cm. above ground level as well as removal of rubbish, foreign material, waste paper material etc. and throwing approx 50 meter away from switch yard premises. Cleaning and sweeping of CC roads of switchyard and substation premises. Cleaning of drains/trenches by removing all sludge/plants/grass/mud. Disposal of waste material outside the switch-yard and Sub-Station area. All the work shall be strictly carried out as per site In-charge.

#### **4. Maintenance Flower Pots and plants etc.**

Horticulture maintenance of Flower pots and plants as per instruction shall be carrying out by following activities-

- i) Hoeing of flower beds and removal of weeds, bushes etc.
- ii) Plantation of seasonal flowers/seedling in flower beds.
- iii) Up keeping of flower beds by fertilisation, curing and removal of weeds etc.
- iv) Up keeping of flower pots/plants by daily curing, fertilisation and pruning.
- v) Providing and Plantation of new plant in place of dead/poor plant in flower pots.
- vi) Up keeping of existing tree by curing, fertilisation and pruning.

## **SHUTDOWN WORKS: -**

### **1. Quarterly/ Half Yearly/ Annual Maintenance of Transformers.**

- i)* Checking of oil level in Main & OLTC Conservator tank and filling if found low.
- ii)* Checking of oil level in HT/LT bushings.
- iii)* Checking and rectification of minor oil leakage/seepage from various place of T/F's.
- iv)* Checking and Tightening of all bushing clamps.
- v)* Checking of auto/manual operation of cooling fans.
- vi)* Checking of cooling fans & rectification of fault if found.
- vii)* Checking of working of On load tap changer & rectification of fault if found.
- viii)* Checking of cubical heater and replace if found defective.
- ix)* Cleaning of bushing polyclone insulator by CTC & checking of damage.
- x)* Testing of insulation resistance with the help of megger.
- xi)* Checking of neutral and body earthing.
- xii)* Checking of BDV of Transformer oil.
- xiii)* Cleaning of Transformer body.
- xiv)* Checking of all connections in cubical and apply CRC on all connections.
- xv)* Lubrication of all moving parts if required.
- xvi)* Checking of WTI & OTI capillary pockets (annually).
- xvii)* Checking of working of WTI & OTI (annually).
- xviii)* Checking of earth resistance (annually).
- xix)* Taking of oil sample in bottles and sealing etc. for testing by PTCUL (annually).
- xx)* Any other work as per site requirement or as per direction of site Incharge.

### **2. Quarterly/ Half Yearly/ Annual Maintenance of Circuit Breakers.**

- i)* Checking of air pressure leakage.
- ii)* Checking of gas pressure leakage.
- iii)* Cleaning of polycone insulator by CTC and checking of damage.
- iv)* Checking and tightening of clamps.
- v)* Checking & tightening of cable connections in cubical.
- vi)* Checking of AC & DC supply of CB's.
- vii)* Checking and tightening of structure nut & bolts.
- viii)* Checking and tightening of earthing.
- ix)* Apply CRC on all connections in cubical.
- x)* Checking of local/remote operation.
- xi)* Checking of tripping/closing system.
- xii)* Taking of timings of breaker by timer and contact resistance by CRM (Annually).
- xiii)* Taking measurement of earth resistance (Annually).
- xiv)* Any other work as per site requirement or as per direction of site Incharge.

### **3. Quarterly/ Half Yearly/ Annual Maintenance of Isolators.**

- i)* Cleaning of polycone insulator by CTC and checking of damage.
- ii)* Checking and tightening of clamps.
- iii)* Replacement of rusted nut/bolts if found.
- iv)* Checking of male/female contacts and replace if found damage/defective.
- v)* Apply petroleum jelly between male/female contacts.
- vi)* Checking of earth link and its jaws.
- vii)* Lubrication of all moving parts.
- viii)* Alignment of isolator and earth link.
- ix)* Checking of driver motor in cubical.
- x)* Checking and tightening of all connections in cubical.
- xi)* Apply CRC on all connections in cubical.
- xii)* Any other work as per site requirement or as per direction of site Incharge.

### **4. Quarterly/ Half Yearly/ Annual Maintenance of CT/PT/CVT/LA.**

- i)* Checking of oil level & filling if found low.
- ii)* Checking of oil leakage and rectification if found.
- iii)* Cleaning of polycone insulator by CTC and checking of damage.
- iv)* Checking and tightening of clamps.

- v) Replacement of rusted nut/bolts if found.
- vi) Checking and tightening of earthing.
- vii) Checking of surge counter.
- viii) Taking reading of surge counter (annually).
- ix) Any other work as per site requirement or as per direction of site Incharge.

**5. Quarterly/ Half Yearly/ Annual Maintenance of Station Transformers.**

- i) Checking of oil level in Conservator tank and filling if found low.
- ii) Checking and rectification of minor oil leakage/seepage from various place of T/F.
- iii) Checking and Tightening of all bushing clamps.
- iv) Cleaning of bushing polycone insulator by CTC & checking of damage.
- v) Testing of insulation resistance with the help of megger.
- vi) Checking of neutral and body earthing.
- vii) Checking of BDV of Transformer oil.
- viii) Cleaning of Transformer body.
- ix) Checking and maintenance of fuse set.
- x) Checking of earth resistance (Annually).
- xi) Any other work as per site requirement or as per direction of site Incharge.

**6. Replacement of Damaged/Burnt/ Defective 132 KV, 66 KV & 33 KV different type of jaw, Blades, Connectors and clamps etc of 132 KV, 66 KV & 33 KV Breaker/ Isolator/CT/PT/LA /Wave trap /Bus Bar etc.**

Replacement of Damaged/burnt/defective 132 KV, 66 KV & 33 KV different type of jaw, blades, connectors and clamps including opening of existing Damaged/burnt/defective jaw, blades, connectors and clamps and fixing of new jaw/blade/connector/clamp with proper alignment. Complete work as per site requirement or as per direction of site Incharge.

**7. Replacement of Damaged/Burnt/ Defective 132 KV, 66 KV & 33 KV different type of jumpers etc.**

Replacement of Damaged/Burnt/Defective different type of jumpers including shifting of conductor from store to site, opening of existing damaged/burnt/defective jumpers, cutting of jumper & fixing of new jumper as required on existing place with proper clamping and shifting of balance material from site to store. Complete work as per site requirement or as per direction of site Incharge.

**8. Cleaning of trenches and drainage system of substation premises and switchyard.**

Cleaning of trenches and drainage system of substation premises and switchyard of as per requirement and instruction of Site Engineer.

**BREAK-DOWN WORK**

1. **Replacement of Defective/Damaged CT:-** The work includes opening/dismantling of existing defective/damaged 132 KV, 66 KV and 33 KV CT after opening of existing jumpers, cable connections & earthing, shifting to store from site, shifting of new 132/66/33 KV CT from store to site, erection of new CT's including cabling, earthing & Jumpering. Complete work as per site requirement or as per direction of site Incharge.
2. **Replacement of Defective/Damaged CVT: -** The work includes opening/dismantling of existing defective/damaged 132/66/33 KV CVT after opening of existing jumpers, cable connections & earthing, shifting to store from site, shifting of new 132/66/33 KV CVT from store to site, erection of new 132/66/33 KV CVT including cabling, earthing & Jumpering. Complete work as per site requirement or as per direction of site Incharge.
3. **Replacement of Defective/Damaged LA: -** The work includes opening/dismantling of existing defective/damaged 132/66/33 KV Lightning arrester after opening of existing jumpers, surge counter & earthing, shifting to store from site, shifting of new 132/66/33 KV Lightning arrester from store to site, erection of new 132/66/33 KV Lightning arrester including fixing of surge

counter, earthing & Jumpering. Complete work as per site requirement or as per direction of site Incharge.

- Note:**
1. Attending the breakdown in both time day and night or as per decision of engineer in-charge or his authorised representative Subject to the site condition and natural calamity.
  2. Any breakdown which shall be considered as major breakdown by Engineer In-charge shall not be cover under this AMC Contract.
  3. If Hydra/ crane is used for safe and early completion of work it shall be provided either by PTCUL of contractor for which extra payment shall be made after approval of competent authority.

**T&P :-**

All the T&P required for proper completion of above works shall be arranged by the contractor. Only heavy T&P like oil testing set, Timer, CRM, Earth Resistivity Tester, Thermovision camera, Megger, gas leakage detector, pulley block, blower, rope and ladder etc. shall be provided by the PTCUL. T&P like Loan mover, Talwar, ceaser, dranti, Pathal, spade, Tasla, spanner set etc. shall be arranged by the contractor for proper completion of work.

**MATERIAL :**

The entire consumable items like conductor, different type of jaws, blades, connectors & clamps, CTC, CRC, Petroleum Jelly, electrolyte, Rust cleaner, lubricants, Transformer oil, silica gel & lighting material shall be issued by the department as per actual requirement. Consumable items like washing & cleaning material (detergent powder, surf, vim, phenyl, harpic, naphthalene, odonil, broom, wiper, polish, Colin, old dhoti, duster, cloth etc.) shall be provided by the PTCUL for proper completion of work.

**WATER AND ELECTRICITY: -**

For proper completion of work water and electricity shall be provided by the department free of cost.