

SECTION-III

SCOPE OF WORK (SOW)

1.0 INTRODUCTION

Job Description: Hiring services for raising, shifting of LT/HT overhead lines at the ILM route/approach road/plinth location of Drilling & Workover locations.

2.0 SCOPE OF WORK:

- 2.1 LT/HT overhead line jobs up to 11KV including supply, erection/installation and transportation of new materials, consumables and newly fabricated structures/fixtures (wherever required).
- 2.2 Raising of pole height, shifting of pole, erection of pole, dismantling of pole, shifting of LT/HT overhead lines up to 11KV of State Electricity Boards/Govt. Departments/Tea gardens within the states of Assam and Arunachal Pradesh.
- 2.3 Fixing of additional fixtures (e.g. cross arm, pin insulators, shackle insulators, stay rod assembly etc.) including fabrication, supply of materials and consumables for the above jobs.
- 2.4 Services of escort line-man for transferring of OIL's equipment.
- 2.5 Arranging for obtaining permission from concerned authorities for electrical shutdown & clearance, to carry out the job effectively and smoothly.
- 2.6 Liaising with the State Electricity Board authorities/Govt. Departments/Tea Garden Management to carry out the job effectively and smoothly.

3.0 RESPONSIBILITIES OF CONTRACTOR:

- 3.1 Personnel engaged by the contractor shall have sufficient working knowledge of various types of electrical overhead lines.
- 3.2 Contractor shall provide manpower as per job requirement.
- 3.3 Personnel deployed by the contractor must be changed/replaced by the contractor if OIL asks to do so. OIL shall not be required to give any reasons for such request/instruction.
- 3.4 Boarding and lodging, transportation (to and from contractor's site office to installations), Insurance and medical facilities etc. of the contractor personnel shall

be the responsibility of the contractor. OIL shall not be responsible for these and shall not bear any cost on these accounts.

3.5 The Contractor shall maintain attendance of his personnel and the same shall be made available to the Company's Engineer (OIL) as and when asked for.

3.6 The Contractor must ensure that payments have been made to his personnel in time for smooth functioning of the Contract.

4.0 TRANSPORTATION:

4.1 Transportation of all contractor personnel and material required to carry out jobs at various sites within the states of Assam and Arunachal Pradesh shall be in the scope of the contractor.

4.2 Loading and unloading of materials for transportation and execution of jobs shall be in the scope of the contractor.

4.3 Transportation of contractor personnel for all administrative requirements such as liaising with various authorities (such as Electricity Boards, Govt. departments, Tea Garden Authority, OIL etc.), recce, inspection, shut down clearance, execution, measurement, certification etc. shall be in the scope of the contractor.

5.0 TOOLS AND TACKLES:

5.1 All tools and tackles shall be of standard make and must conform to BIS or relevant standard.

5.2 Whenever OIL inspector/Engineer wishes to inspect, contractor shall produce the tools and tackles for inspection. Items must be replaced suitably whenever found defective.

5.3 Any additional tools/instruments required for working shall have to be arranged by the contractor.

5.4 Contractor should keep the following minimum tools and instruments in good working condition during the contract period:

- a. Two-legged aluminium ladder - double ladder length (Max. 32ft. - Min. 18ft.)
- b. Single aluminium ladder: 20ft.
- c. Pulley.
- d. Pulling and lifting machine (Maxpull) - minimum two nos. (1 No. of capacity 3ton and 1 No. of capacity 5ton)
- e. Standard lineman tools kit.
- f. Spade.

- g. Crowbar.
- h. Fung.
- i. Ropes.
- j. Conductor jointing tool.
- k. Insulation tester: 5KV.
- l. Discharge stick for working up to 11KV.
- m. Rubber Hand gloves for working up to 11KV.

6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE):

- 6.1 Contractor shall provide all safety gadgets to his work-persons. The conditions of all PPE and other safety gadgets provided by the contractor to his work persons shall be in proper/good condition.
- 6.2 The contractor's personnel while on duty/work must use the following personal protective equipment:
 - a. Safety Shoes
 - b. Safety belt
 - c. Safety Helmet
 - d. Rubber Hand gloves for working up to 11KV
- 6.3 If any violation of above is observed, the contractor will not be allowed to execute the job and for any resulting delay, contractor will be charged penalty as per SCC Clause No. 9.0 accordingly.

7.0 SAFETY MEASURES TO BE TAKEN BY THE CONTRACTOR:

- 7.1 The contractor shall at all times exercise all precautions for the safety of employees, man and material in the execution/performance of his contract and shall comply with all applicable provisions of safety laws/regulations of State or Central Government or Municipalities and other authorities in India. The contractor shall comply with the provisions of the safety acts/regulations as promulgated and amended from time to time by the Government of India (e.g. Electricity act, CEA Regulations etc.).
- 7.2 The contractor shall observe the safety guidelines required or recommended by all applicable laws codes, statutes, and regulations.
- 7.3 The contractor shall familiarize himself with and be governed by all laws and rules of Indian and Local Statutes and orders and regulations applicable to his work.
- 7.4 To carry out any job on overhead line, live or dead, the contractor shall:
 - a. Inform and take shutdown permission from the concerned authority such as APDCL, OIL, Govt. departments, tea garden as the case may be.
 - b. Arrange for proper shutdown comprising of:

- Contacting the accountable & responsible persons of the owner of the line.
- Physical isolation of the line from all incoming supply and/or possible incoming supply by authorized & competent person of the owner of the line."
- Display of all cautionary sign boards such as "do not close man working on line" etc.
- Ensuring that the shutdown is logged/recorded in the log sheet of the concerned owner/authority.
- Obtaining clearance sheet from the accountable, responsible & authorized person of the owner of the line.
- Locking of safety devices etc.
- Discharge of the line to earth with proper discharge device/stick in safe/prescribed manner.
- Three phase shorting and effective earthing on one pole ahead at both ends of the working pole.
- c. Use all safety gadgets such as safety belts, helmets, boots, hand gloves etc.
- d. Use proper tools & ladder.
- e. Conduct tool box meeting on the job, identification of hazard and precaution thereof.
- f. Head count the people working on a particular job.
- g. Have at least one vehicle at site (i.e. location of work) all the time.

7.5 After completion of the job to ensure:

- a. Removal of shorting wire.
- b. Head count of the working person so that no person is working on the line.
- c. Removal of danger boards and locks from safety devices.
- d. Return of clearance sheet to the accountable & authorized person of the owner of the line.

7.6 Any job if not completed in one shutdown & if remaining part of the job has to be taken up on any subsequent day the contractor shall follow the complete shutdown procedure as mentioned in step (7.4) above.

7.7 When a ladder is used at the time of working on a pole, extra labourer shall have to be engaged for holding the ladder and if materials are being carried while the ladder is in inclined position, suitable footholds and handholds shall be provided on the ladder. The ladder shall be given an inclination not steeper than 45° from horizontal.

7.7 In case of any accident, the contractor shall be responsible for compliance with all the requirements imposed by the Workmen's Compensation Act or any other similar laws in force for medical treatment etc.

7.8 Before taking up any job, contractor must submit to OIL an overhead line diagram, showing details of all feeders that are connected to and/or from the overhead line where job has to be executed.

- 7.9 If isolating devices, located in an open area are used for shutdown of any feeder, contractor shall lock and engage his personnel to guard it, till the job is over.
- 7.10 Switching-on and switching-off of any feeder is not allowed/permitted over telephonic or verbal communication.
- 7.11 All jobs shall be carried out under supervision of responsible/accountable person of the concerned authority/owner/agency such as APDCL, OIL, Govt. department, Tea Gardens etc.

8.0 GENERAL TERMS & CONDITIONS:

- 8.1 The work shall not be sublet/sub contracted to any other party.
- 8.2 No fruit tree or valuable plant or trunk shall be pulled/destroyed/damaged by the contractor, failing which the cost of such trees or plant shall have to be borne by the contractor.
- 8.3 The execution of work is to be carried out in such a manner that it does not interfere with the public convenience. Any claim arising out of any such dispute shall be the responsibility of the contractor.
- 8.4 Supervision charges payable to the concerned owner/agency shall be borne by the contractor.
- 8.5 The contractor shall submit one undertaking on safety measures to be adopted at site clearly stating that he/she is aware of all electrical and other hazards associated with the execution of the contract and has understood the necessary safety requirements to be adopted and taken and that he/she shall not violate:
- a. Stated safety procedures
 - b. Statutory rules and regulations
 - c. Shutdown procedure
 - d. Departmental procedure while execution of the contract and carry out any job that he/she shall be responsible and accountable for violation.
- 8.6 The contractor's personnel shall submit one undertaking as per standard format before execution of the contract.

9.0 MATERIALS AND CONSUMABLES:

- 9.1 The contractor shall supply/provide all overhead line materials and consumables required against item of schedule of works during the execution of contract.

9.2 No extra payment will be borne by OIL for any material(s)/consumables and services. Item rate shall include all cost including material cost.

9.3 Contractor shall arrange & deliver required materials/consumables in the site at the earliest so that job can be completed without any interruption due to non-availability of materials/consumables.

10.0 STATEMENT OF APPROXIMATE QUANTITIES, VARIATIONS, ADDITIONS, ALTERATIONS, DRAWING AND SPECIFICATIONS:

10.1 The quantities noted are approximate and no claim shall be made against the company for reduction or enhancement of quantity.

10.2 OIL reserves the right to make any alterations in or additions to the original specification, drawing and instructions that may appear to be necessary or advisable during the progress of the work. The contractor shall be bound to carry out the work in accordance with any instructions which might be given to him in writing by OIL Engineer in charge and such alterations shall not invalidate the contract.

11.0 OFFICE ACCOMMODATION:

11.1 Contractor should arrange for office cum store accommodation at Duliajan (within a radius of approximately 5 km from OIL industrial area), where he can be contacted in case of requirement/emergency (24 hours a day) with a permanent telephone number.

11.2 Contractor shall arrange boarding, lodging, transportation and medical facility for his personnel.

12.0 QUALITY OF WORK:

12.1 Contractor shall abide by all instructions of OIL Engineer and carry out standard quality jobs/works to satisfaction of State Electricity Boards and OIL Engineer.

12.2 OIL and State Electricity Board shall reserve the right to ask the contractor to re-do poor quality job at no extra cost to OIL.

12.3 Contractor shall supervise the quality, safety and progress by engaging knowledgeable, qualified and experienced supervisor having relevant certificate of competency issued by any State Licensing Board/Govt. Authorized Body throughout the execution of the contract and at all point in the time of work.

13.0 COLLECTION/ATTENDING OF REPORT:

- 13.1 The contractor or his representative shall visit the office of Deputy General Manager-Electrical (Rigs) on all working days at 7:00AM to collect in which area jobs are to be undertaken by the contractor.
- 13.2 Jobs shall be attended as and when required.
- 13.3 Standard format supplied by OIL shall be filled up in triplicate before taking up any job and two copies shall be signed and handed over to OIL.
- 13.4 The contractor shall start the job within 07 days from the date of assignment of the job.
- 13.5 The contractor shall complete the assigned job within stipulated time frame. Time frame for completion of assigned job shall be decided based on job volume, site condition etc. The same shall be communicated to the contractor at the time of allotment of job.

14.0 MEDICAL

- 14.1 Contractor shall carry out Initial Medical Examination (IME), Periodic Medical Test (PME), Periodic Audiometric Test etc. of his employees at his own cost.
- 14.2 The frequency of periodic medical examinations should be as per statutory requirement.
- 14.3 OIL shall not be responsible for providing any medical assistance to contractor's personnel.

15.0 JOB REQUIREMENT:

As part of the job execution, the Contractor shall deploy adequate manpower, including the following personnel, to ensure smooth execution of operations, with the experience criteria as specified below:

- a) The Contractor shall deploy a Electrical Supervisor having valid Electrical Supervisor's Certificate of Competency with relevant parts for minimum 11 KV issued by any State Licensing Board/Govt. Authorized Body.
- b) The Contractor shall deploy a Electrical Workman having a valid permit with relevant parts for minimum 11 KV issued by any State Licensing Board/Govt. Authorized Body.

Necessary supporting documents/certificates endorsing the above criteria, qualification and experience details of the engaged personnel together with their CV

should be submitted to OIL during Mobilization Period for approval and clearance prior to their deployment. In line with the above, the bidder shall submit an **undertaking along with their bid** as per PQC Clause No. 'Note to BEC, I.' confirming the deployment of the specified personnel during the execution of the contract and the submission of their CVs during the mobilization period.

The Curriculum Vitae (CV) of the proposed personnel shall be submitted during the mobilization period as per format enclosed in **ANNEXURE-I** for approval and clearance prior to their deployment, containing the following information:

- Employee ID.
- Date of Birth
- Educational qualification
- Experience

The Curriculum Vitae (CVs) shall be duly authenticated and certified by a competent authority or authorized representative of the bidding entity (company/firm/proprietor). Service Provider/Bidder should submit CVs for at least the specified nos. of qualified **personnel** as above. However, bidder can propose/offer more than requisite number of personnel as indicated above for selection/consideration by the company under this tender.

16.0 TECHNICAL

Technical Description of Item-wise job details:

Item 10.0: Supply and Erection of new 9 Mtr. Stepped tubular MS pole or PSC pole with associated jobs, for single phase two wire/three phase four wire LT overhead line.

Job Details:

- i) Pole to be erected by concreting in the pole pit (ratio for concreting: Cement: Sand: Stone chips = 1:4:8)
- ii) Size of the pole pit: 0.60 M x 0.60 M x 1/6th of the pole length.
- iii) Additional fixtures such as two cross arms, pin insulators, shackle insulators; earth clamps, bracket clamp etc. shall be incorporated.
- iv) Dismantling and stringing of Dog or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- v) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- vi) Any other job/activity which may be required to complete the process/job.
- vii) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating

to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).

vii) Supply of required materials is in the scope of contractor.

Specification of the pole:

- a) Length: 9 Mtrs. Steel tubular MS pole, swaged type, conforming to BIS: 2713 (part-I & II)
- b) Designation: 410 SP-30
- c) Effective length & thickness of Each section should be as per standard BIS: 2713 (Part-I & Part-III): 1980
- d) Corrosion protection: Pole planting depth should be coated with bituminous paint as per BIS: 1580-1968 and rest of the pole length be painted with one coat of red-oxide primer as per IS: 2074-1979 and two coats of aluminium paint.
- e) Base plate: Mild steel base plate of 300mm x 300mm x 6mm size should be welded to the bottom of the pole as per BIS: 2713 with a hole of diameter 14mm at the middle of the base plate.
- f) Tests: Various Tests as per BIS: 2713-1985 should be carried out. The same must be submitted to OIL before the Pole is delivered and erected at working site.

Additional fixture: Pole should be fitted with two number of cross arm bracket with fixing arrangement (removable type) along with suitable clamp with nut, bolts and washer. The bracket should be of MS type, 90 mm OD, 850 mm long. Cross-section should be 75mm X 75mm X 6 mm. Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint

Item 20.0: Supply and Erection of new 9 Mtr. Stepped tubular GI pole with associated jobs, for single phase two wire/three phase four wire LT overhead line.

Job Details:

- i) Pole to be erected by concreting in the pole pit (ratio for concreting: Cement: Sand: Stone chips = 1:4:8)
- ii) Size of the pole pit: 0.60 M x 0.60 M x 1/6th of the pole length.
- iii) Additional fixtures such as GI cross arms, pin insulators, shackle insulators; earth clamps, bracket clamp etc. shall be incorporated.
- iv) Dismantling and stringing of Dog or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- v) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- vi) Any other job/activity which may be required to complete the process/job.

- vii) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- vii) Supply of required materials is in the scope of contractor.

Specification of the pole:

- a) Length: 9 Mtrs. Steel tubular GI pole conforming to BIS: 2713 (part- I & II)
- b) Designation: 410 SP-30
- c) Effective length & thickness of Each section should be as per standard BIS: 2713 (Part-I & Part-III): 1980
- d) Corrosion protection: Pole and its cross arm should be zinc coated. Galvanization of the same should be as per BIS: 2629-1985.
- e) Base plate: Mild steel base plate of 300mm x 300mm x 6mm size should be welded to the bottom of the pole as per BIS: 2713 with a hole of diameter 14mm at the middle of the base plate.
- f) Tests: Various Tests as per BIS: 2713-1985 should be carried out. The same must be submitted to OIL before the Pole is delivered and erected at working site.

Additional fixture: Pole should be fitted with two number of GI cross arm bracket with fixing arrangement (removable type) along with suitable clamp with nut, bolts and washer. The bracket should be of GI type, 90 mm OD, 850 mm long. Cross-section should be 75mm X 75mm X 6 mm. Metallic parts of shall be painted with one coat of red oxide and two coats of aluminium paint.

Item 30.0: Dismantling of Existing 9 Mtrs. stepped tubular MS/GI/ PSC pole for single phase and neutral (two wire)/ three phase and neutral (four wire) LT overhead line.

Job Details:

- i) Removal of bindings from insulators (including dismantling of conductors, earth wire, guard wire if necessary).
- ii) Removal of the pole from earth by digging out.
- iii) Dug out hole to be filled back with soil, stones etc. and subsequent hammering of the soil for maintaining soil level with the surroundings.
- iv) Any other job/activity which may be required to complete the process/job.
- v) Supply of required materials is in the scope of contractor.

Item 40.0: Shifting/relocation of Existing 9 Mtr. stepped tubular MS pole for single phase and neutral (two wire)/ three phase and neutral (four wire) LT overhead line.

Job Details:

- i) Removal of bindings from insulators (including dismantling of conductors, guar wire & earth wire if necessary).
- ii) Removal of the pole from earth by digging out.
- iii) Dug out hole to be filled back with soil, stones etc. and subsequent hammering of the soil for maintaining soil level with the surroundings.
- iv) Shifting of pole with fixtures.
- v) Pole to be erected by concreting in the pole pit, (Ratio for concreting: Cement: Sand: Stone chips = 1:4:8)
- vi) Size of the pole pit: 0.60 M x 0.60 M x 1/6th of the pole length.
- vii) Dismantling, shifting and stringing of Dog or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- viii) If necessary, dismantling/shifting/laying/ stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- ix) Any other job/activity which may be required to complete the process/job.
- x) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- xi) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint.

Item 50.0: Shifting/relocation of Existing 9 Mtr. Stepped tubular GI pole for single phase and neutral (two wire)/ three phase and neutral (four wire) LT overhead line.

Job Details:

- i) Removal of bindings from insulators (including dismantling of conductors, guar wire & earth wire if necessary).
- ii) Removal of the pole from earth by digging out.
- iii) Dug out hole to be filled back with soil, stones etc. and subsequent hammering of the soil for maintaining soil level with the surroundings.
- iv) Shifting of pole with fixtures.
- v) Pole to be erected by concreting in the pole pit, (Ratio for concreting: Cement: Sand: Stone chips = 1:4:8)
- vi) Size of the pole pit: 0.60 M x 0.60 M x 1/6th of the pole length.
- vii) Dismantling, shifting and stringing of Dog or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- viii) If necessary, dismantling/shifting/laying/ stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.

- ix) Any other job/activity which may be required to complete the process/job.
- x) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- xi) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint.

Item 60.0: Shifting/relocation of Existing 9 Mtr. PSC pole for single phase and neutral (two wire)/three phase and neutral (four wire) LT overhead line.

Job Details:

- i) Removal of bindings from insulators (including dismantling of conductors, guard wire & earth wire if necessary).
- ii) Removal of the pole from earth by digging out.
- iii) Dug out hole to be filled back with soil, stones etc. and subsequent hammering of the soil for maintaining soil level with the surroundings.
- iv) Shifting of pole with fixtures.
- v) Pole to be erected jamming by stone chips/boulders.
- vi) Size of the pole pit: 0.60 M x 0.60 M x 1/6th of the pole length.
- vii) Additional fixtures such as cross arms, pin insulators, shackle insulators, earth clamps etc. shall be incorporated.
- viii) Dismantling and stringing of Dog or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- ix) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- x) Any other job/activity which may be required to complete the process/job.
- xi) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- xii) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint.

Item 70.0: Extension of 9 Mtrs. stepped tubular MS/GI/PSC pole by additional fixture in case of single phase two wire, LT overhead line.

Job Details:

- i) Removal of bindings from insulators (including dismantling of cross arms/ conductors/guardwire/earthwire if necessary).
- ii) Additional fixtures such as extension piece, cross arms, pin insulators, shackle insulators; earth clamps, bracket clamp etc. shall be incorporated.
- iii) Stringing of Dog or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- iv) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- v) Any other job/activity which may be required to complete the process/job.
- vi) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations,2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- vii) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint and shall be fitted as per DRAWING NO. ELE. RIG.O.H.05 A/ B/ C/ D.

Item 80.0: Extension of 9 Mtrs. stepped tubular MS/GI/PSC pole by additional fixture in case of three phase 4 wire, LT overhead line.

Job Details:

- i) Removal of bindings from insulators (including dismantling of cross arms/conductors/guard wire/earth wire if necessary).
- ii) Additional fixtures such as extension piece, cross arms, pin insulators, shackle insulators; earth clamps, bracket clamp etc. shall be incorporated.
- iii) Stringing of Dog or undersize conductor, jointing with new conductor of the same size wherever required, pin/shackle binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- iv) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- v) Any other job/activity which may be required to complete the process/job.
- vi) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations,2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- vii) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint and shall be fitted as per DRAWING NO. ELE. RIG.O.H.06 A/B/C/D.

Item 90.0: Extension of existing 9 to 12 Mtrs. stepped tubular MS/GI/PSC pole in case of single phase two wire/three phase 4 wire, LT and 11KV HT Composite overhead line.

Job Details:

- i) Removal of bindings from LT/HT insulators (including dismantling of cross arms/ conductors if necessary).
- ii) Additional fixtures such as extension piece, cross arms, pin insulators, shackle insulators; earth clamps etc. shall be incorporated.
- iii) Stringing of Dog or undersize conductor, jointing with new conductor of the same size wherever required, pin/shackle binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- iv) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- v) Any other job/activity which may be required to complete the process/ job.
- vi) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- vii) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint and shall be fitted as per DRAWING NO. ELE. RIG.O.H.07 A/B/C/D.

Item 100.0: Extension of existing 9 to 12 Mtrs. Tubular MS/GI/PSC pin pole in case of 11KV HT overhead line.

Job Details:

- i) Removal of bindings from insulators (including dismantling of cross arms/ conductors/guard wire/earth wire if necessary).
- ii) Additional fixtures such as extension piece, cross arms, pin insulators, earth clamps etc. shall be incorporated.
- iii) Stringing of Dog/Wolf or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- iv) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.

- v) Any other job/activity which may be required to complete the process/job.
- vi) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- vii) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint and shall be fitted as per DRAWING NO. RIG.O.H.08 A/ B.

Item 110.0: Extension of existing 9 to 12 Mtrs. Tubular MS/GI/PSC Single/Shackle structure poles in case of 11KV HT overhead line.

Job Details:

- i) Removal of bindings from insulators (including dismantling of conductors, guard wire, earth wire if necessary).
- ii) Additional fixtures such as extension piece, cross arms, pin insulators, earth clamps etc. shall be incorporated.
- iii) Stringing of Dog/Wolf or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- iv) If necessary, dismantling/ laying/ stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- v) Any other job/activity which may be required to complete the process/ job.
- vi) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- vii) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint and shall be fitted as per DRAWING NO. ELE. RIG.O.H.09 A/ B/ C/ D.

Item 120.0: Dismantling of existing 12 Mtrs. Tubular MS/GI/PSC poles for 11KV HT overhead lines.

Job Details:

- i) Removal of bindings from insulators (including dismantling of conductors, guard wire, earth wire if necessary).
- ii) Removal of the pole from earth by digging out.
- iii) Dug out hole to be filled back with soil, stones etc. and subsequent hammering of the soil for maintaining soil level with the surroundings.

- iv) Any other job/activity which may be required to complete the process/job.
- v) Supply of required materials is in the scope of contractor.

Item 130.0: Supply and erection of new 12 Mtrs. Stepped Tubular MS poles for 11KV HT overhead lines.

Job Details:

- i) Pole to be erected by concreting in the pole pit (ratio for concreting: Cement: Sand: Stone chips = 1:4:8).
- ii) Size of the pole pit: 0.75 M x 0.75 M x 1/6th of the pole length.
- iii) Additional fixtures such as two cross arms, insulators, earth clamps, bracket clamps, etc. shall be incorporated.
- iv) Dismantling and stringing of Wolf or undersize conductor, jointing with new conductor of the same size wherever required, insulator binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- v) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- vi) Any other job/ activity which may be required to complete the process/ job.
- vii) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- viii) Supply of required materials is in the scope of contractor.

Specification of the pole:

- a) Length: 12 Mtrs. Steel tubular pole, swaged type, conforming to IS: 2713 (part- I & II) - 1980.
- b) Designation: 410 SP-60
- c) Effective length & thickness of Each section should be as per standard BIS: 2713 (Part-I & Part-III): 1980
- d) Corrosion protection: Pole planting depth should be coated with Bituminous paint as per IS: 1580-1968 and rest of the pole length be painted with one coat of red-oxide primer as per IS: 2074-1979 and two coats of aluminium paint.
- e) Base plate: Mild steel base plate of 450mm x 450mm x 6mm size should be welded to the bottom of the pole as per IS: 2713 with a hole of diameter 14mm at the middle of the base plate.
- f) Tests: Various Tests as per BIS: 2713-1985 should be carried out. The same must be submitted to OIL before the Pole is delivered and erected at working site.

Additional fixture: Pole should be fitted with two number of cross arm bracket with fixing arrangement (removable type) along with suitable clamp with nut, bolts and washer. The bracket should be of GI type, 90 mm OD, 1200 mm long. Cross-section

should be 75mm X 75mm X 6 mm. Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint.

Item 140.0: Supply and erection of new 12 Mtrs. Stepped Tubular GI poles for 11KV HT overhead lines.

Job Details:

- i) Pole to be erected by concreting in the pole pit (ratio for concreting: Cement: Sand: Stone chips = 1:4:8).
- ii) Size of the pole pit: 0.75 M x 0.75 M x 1/6th of the pole length.
- iii) Additional fixtures such as two cross arms, insulators, earth clamps, bracket clamps, etc. shall be incorporated.
- iv) Dismantling and stringing of Wolf or undersize conductor, jointing with new conductor of the same size wherever required, insulator binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- v) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- vi) Any other job/activity which may be required to complete the process/job.
- vii) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- viii) Supply of required materials is in the scope of contractor.

Specification of the pole:

- a) Length: 12 Mtrs. Steel tubular pole, swaged type, conforming to IS: 2713 (part- I & II) - 1980.
- b) Designation: 410 SP-60
- c) Effective length & thickness of Each section should be as per standard BIS: 2713 (Part-I & Part-III): 1980
- d) Corrosion protection: Pole and its cross arm should be zinc coated. Galvanization of the same should be as per BIS: 2629-1985.
- e) Base plate: Mild steel base plate of 450mm x 450mm x 6mm size should be welded to the bottom of the pole as per IS: 2713 with a hole of diameter 14mm at the middle of the base plate.
- f) Tests: Various Tests as per BIS: 2713-1985 should be carried out. The same must be submitted to OIL before the Pole is delivered and erected at working site.

Additional fixture: Pole should be fitted with two numbers of cross arm brackets with fixing arrangement (removable type) along with suitable clamp with nut, bolts and washer. The bracket should be of GI type, 90 mm OD, 1200 mm long. Cross-section

should be 75mm X 75mm X 6 mm. Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint.

Item 150.0: Shifting/relocation of existing 12 Mtrs. Tubular MS pole in case of 11KV HT overhead lines.

Job Details:

- i) Removal of bindings from insulators (including dismantling of conductors, guard wire, earth wire if necessary).
- ii) Removal of the pole from earth by digging out.
- iii) Dug out hole to be filled back with soil, stones etc. and subsequent hammering of the soil for maintaining soil level with the surroundings.
- iv) Shifting of pole with fixtures.
- v) Pole to be erected by concreting in the pole pit (ratio for concrete: Cement: Sand: Stone chips = 1:4:8).
- vi) Size of the pole pit: 0.75 M x 0.75 M x 1/6th of the pole length.
- vii) Additional fixtures such as cross arms, pin insulators, shackle insulators, earth clamps etc. shall be incorporated.
- viii) Dismantling and stringing of Wolf or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- ix) If necessary, dismantling/laying/stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- x) Any other job/activity which may be required to complete the process/job.
- xi) Re-routing, laying & termination of cable if required.
- xii) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- xiii) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint.

Item 160.0: Shifting/relocation of existing 12 Mtrs. Tubular GI/PSC pole in case of 11KV HT overhead lines.

Job Details:

- i) Removal of bindings from insulators (including dismantling of conductors if necessary).
- ii) Removal of the pole from earth by digging out.

- iii) Dug out hole to be filled back with soil, stones etc. and subsequent hammering of the soil for maintaining soil level with the surroundings.
- iv) Shifting of pole with fixtures.
- v) Pole to be erected by concreting in the pole pit (ratio for concrete: Cement: Sand: Stone chips = 1:4:8).
- vi) Size of the pole pit: 0.75 M x 0.75 M x 1/6th of the pole length.
- vii) Additional fixtures such as cross arms, pin insulators, shackle insulators, earth clamps etc. shall be incorporated.
- viii) Dismantling and stringing of Wolf or undersize conductor, jointing with new conductor of the same size wherever required, pin binding with aluminium binding wire, also jumpering if necessary by approved PG clamps or aluminium wire.
- ix) If necessary, dismantling/ laying/ stringing of Earth wire and guard wire of the existing size (to be provided by the contractor, if necessary) that prevails in the existing overhead line.
- x) Any other job/activity which may be required to complete the process/job.
- xi) Re-routing, laying & termination of cable if required.
- xii) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- xiii) Supply of required materials is in the scope of contractor.

Item 170.0: Dismantling and erection of LT overhead lines/cables per span for single phase and neutral (two wire)/ three phase and neutral (four wire) LT overhead line.

Job Details:

- i) Removal of bindings/cable connection from the existing insulators/point
- ii) Dismantling and stringing of Dog or undersize conductor, insulator binding with aluminium binding wire, also jumpering if necessary.
- iii) If necessary, dismantling/laying/stringing of Earth wire and guard wire that prevails in the existing overhead line.
- iv) Any other job/activity which may be required to complete the process/job.
- v) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- vi) Supply of required materials is in the scope of contractor.

Note: This job is applicable only where overhead line/cable sags are more and additional materials are not required except aluminium binding wire.

Item 180.0: Dismantling and erection of HT overhead lines per span for 11KV HT overhead lines.

Job Details:

- i) Removal of bindings from the existing insulators
- ii) Dismantling and stringing of Wolf or undersize conductor, insulator binding with aluminium binding wire, also jumpering if necessary.
- iii) If necessary, dismantling/laying/stringing of Earth wire and guard wire that prevails in the existing overhead line.
- iv) Any other job/activity which may be required to complete the process/job.
- v) On completion of the above job minimum ground clearance of the overhead lines should be maintained (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- vi) Supply of required materials is in the scope of contractor.

Note: This job is applicable only where overhead line sags are more and additional materials are not required except aluminium binding wire.

Item 190.0: Installation of stay wire complete with installation of stay rod assembly.

Job Details:

- i) Excavation of hole of size 1.5 mtr. deep X 0.75 mtr. width X 0.75 mtr. breadth.
- ii) Placing of stay rod and anchor plate.
- iii) Back filling and earth ramming.
- iv) Fixing of stay wire in the pole with clamp of size 10mm for LT overhead lines and 15.8mm for H.T./composite overhead lines including suitable thimble and accessories.
- v) Any other job/activity which may be required to complete the process/job.
- vi) Supply of required materials is in the scope of contractor.

Specification of the stay rod assembly with G.I. wire:

Galvanized stay rod complete with bow, rod, thimble & Galvanized plate with the following specifications:

Stay rod: Mild steel rod of Dia. 19mm, Long 1.8mtr. & minimum tensile strength of 42kgf/mm sq. as per IS: 5613 (Part-1/sec-2)-1985

Bow: Length of bow 375mm to 390mm (approx) dia 15mm and should be suitable for use with stay rod of minimum tensile strength of 42 kgf/mm sq.

Thimble: 1 no. of suitable open type galvanized thimble for use with above stay rod and bow stay wire dia of 15.8mm (5/8inch).

Galvanized plate: Galvanized plate of size 100mm (L) X 100mm (B) X 6mm (Thickness)

G.I. wire: 10mm/15.8mm G.I. wire of standard quality.

Item 200.0: Extension of existing LT pole with additional fixture to increase ground clearance of existing PVC service line by replacing to consumers premises.

Job Details:

- i) Additional fixtures shall be fitted in the APDCL's /other agency existing pole.
- ii) Service line to the consumers' premises to be raised.
- iii) Service line to consumers' premises needs to be replaced with a new one without jointing in between with centenary wire, size 12 S.W.G., G.I. wire. For binding the service line 18 S.W.G., G.I. wire and black tape to be used.
- iv) Any other job/activity which may be required to complete the process/job.
- v) Minimum ground clearance should be maintained for the service lines (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations,2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- vi) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint.

Specification of service line:

Cable twin core, Flat PVC insulated, 2.5/4 mm sq, aluminium conductor suitable for electric power and lighting for voltage up to and including 1100 volt, as per IS:1554 part-1 and IS: 7098 part-1 specification.

Item 210.0: To increase ground clearance by replacing existing PVC service line (LT) to consumers premises with bamboo.

Job Details:

- i) Service line to consumers' premises to be raised with good quality bamboo at both ends of the road.
- ii) Service line to consumers' premises needs to be replaced with a new one without jointing in between with centenary wire, size 12 S.W.G., G.I. wire. For binding the service line 18 S.W.G., G.I. wire and black tape to be used.
- iii) Any other job/activity which may be required to complete the process/job.
- iv) Minimum ground clearance should be maintained for the service lines (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations,2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- v) Supply of required materials is in the scope of contractor.

Specification of service line:

Cable twin core, Flat PVC insulated, 2.5/4 mm sq, aluminium conductor suitable for electric power and lighting for voltage up to and including 1100 volt, as per IS:1554 part-1 and IS: 7098 part-1 specification.

Item 220.0: Services of one Lineman along with one Helper for escorting OIL's equipment while transfer.

Job Details:

- i) Services to be provided for shifting OIL's Equipment to various operational areas of OIL as and when required.
- ii) Lineman along with one helper should move with OIL's transport.
- iii) Lineman needs to raise the overhead lines including service lines for crossing of OIL's vehicle wherever overhead lines and service lines obstruct equipment movements.
- iv) Lineman should carry along with him insulated stick and HT insulated hand gloves.
- v) All safety precautions should be taken as per CEA Regulations, 2023 and as amended up to date.
- vi) Any other job/activity which may be required to complete the process/ job.
- vii) Supply of required materials is in the scope of contractor.

Item 230.0: Extension of existing LT pole with additional fixture to increase ground clearance of existing PVC service line/lines(bunch) (without replacing) to consumers premises.

Job Details:

- i) Additional fixtures shall be fitted in the ASEB's/other agency existing pole.
- ii) Service line/lines (bunch) to the consumers' premises to be raised without jointing pvc cable in between.
- iii) Any other job/activity which may be required to complete the process/job.
- iv) Minimum ground clearance should be maintained for the service lines (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- v) Supply of required materials is in the scope of contractor.

Additional fixture: Metallic parts shall be painted with one coat of red oxide and two coats of aluminium paint.

Item 240.0: To increase ground clearance of existing PVC service line (without replacing) (BPL line) to consumers premises with bamboo.

Job Details:

- i) Service line to consumers' premises to be raised with good quality bamboo at both ends of the road.
- ii) Service line to consumers' premises needs raised without jointing in between.
- iii) Any other job/activity which may be required to complete the process/job.
- iv) Minimum ground clearance should be maintained for the service lines (wherever the contractor works) as per CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 and for safe passage of OIL's equipment (which shall be intimated by OIL).
- v) Supply of required materials is in the scope of contractor.

End of Section-III (SOW)