

**SECTION - V**  
**(VOLUME -1)**

**SPECIAL CONDITIONS OF CONTRACT**  
**(SCC)**

**SPECIAL CONDITIONS OF CONTRACT  
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**SECTION - V**

**SPECIAL CONDITIONS OF CONTRACT**

## **1.0 PROJECT DESCRIPTION:**

“Establishing 4 nos of 2 x 150 MVA, 220/66kV stations at Nagalamadike Hobli in Pavagada Taluk, Tumkur District along with connected Transmission lines and Terminal Bays on Total Turnkey Basis, in two lots ( Lot1 & Lot 2 ) in respect of the proposed 2000 MW Pavagada Solar Park in Tumkur District, Karnataka including supply of all Materials, Erection (including Civil Works), Testing and commissioning.

- 1.2 The bidder shall quote for construction of the entire line. KSPDCL has got the survey conducted, which includes detailed survey, tower spotting etc., The contractor shall carry out only check survey and maintain the same corridor as far as possible. The contractor shall get the tower locations, route profiles etc., approved from the owner as per check survey conducted by him before commencing the work.

### **1.3 Statutory Clearances and Way leave:**

All statutory clearances such as forest clearance, clearance from aviation authorities, PTCC clearance and clearance from Railway authorities wherever required shall be arranged by the owner. Any way leave problem, obstacle, hindrance should be cleared by the contractor. The owner shall also stand by the contractor and extend necessary help and cooperation for removal of obstructions and hindrances. Delay in obtaining any clearance including right of way shall not form a ground for extension in the period for completion of works and waiver of the penalties.

- 1.4 Tree cutting and tree cut compensation, crop compensation, Electrical Inspectorate Charges would be organized to be paid by the contractor. The owner shall render necessary help for fixing the compensation through Horticulture/ Agriculture Department. The compensation / charges so paid by the contractor shall be reimbursed separately by the owner as per actuals.
- 1.5 The owner however in case of any obstructions/hindrances will render necessary assistance to the contractor in terms of Part-III, Section-10, 16 & 18 of Indian Telegraphic Act 1885, the power of which are vested with KPTCL by Government Order No. PWD 20 EEB 69 dated 22/25<sup>th</sup> July 1969.

### **1.6**

**1) The Technical and Commercial evaluations will be carried out offline.**

- 2) Loading on account of Technical Evaluation such as Transformer loss capitalization, 220KV transmission line loss capitalization, etc. will be carried out on the quoted Prices.
- 3) The declaration of the status of the Bidders upon opening of Price offers is intended to merely indicate the lowest of the quoted prices by the Bidders. The Technical/Commercial Loading will be carried out on the quoted Prices to arrive at the Evaluated Prices which will be the basis for declaration of the status of the Bidders.
- 4) The Bidders are required to quote the unit rates and the total bid price as per the Price sheets uploaded. Bidders shall also indicate the total bid price in the mandatory field in the e-Procurement system. In case of any discrepancy between the total price indicated in the uploaded price sheets and that filled in the e-procurement system, the highest of the two will be considered for Evaluation and the lowest of the two will be considered for award. Bidders shall accept the same and in the absence of which the EMD deposited will be forfeited.
- 5) Irrespective of the nomenclature of the Mandatory field in the e-procurement system for indicating the total bid price, the unit prices and total price shall be as per the tender conditions.
- 6) At present, only e-tendering feature in e-Procurement platform is adopted in KSPDCL. All other activities shall be as per the tender documents.

## **2.0 SCOPE OF PROPOSAL:**

2.1 The Scope of Works under this Package covers

### **Lot I :**

- a. Establishing 2x150MVA, 220/66kV sub-station in land bearing Sy no. 154/2,3,4&5 of Tirumani along with connected Terminal Bays
- b. Establishing 2x150MVA, 220/66kV sub station in land bearing Sy no. 131/1 & 2 of Tirumani along with connected Terminal Bays
- c. Establishing 2x150MVA, 220/66kV sub stn. in land bearing Sy no. 225/1,2 & 3 of Rayacharlu along with connected Terminal Bays
- d. Establishing 2x150MVA, 220/66kV sub-station in land bearing Sy no. 175 of Rayacharlu along with connected Terminal Bays
- i. Construction of 220kV SC line from proposed 220/66kV substation, in solar park to PGCIL station in solar park.

on Total Turnkey basis, in respect of the proposed 2000MW Pavagada Solar Park in Tumkur District, Karnataka including supply of all Materials, Erection (including Civil Works, Testing and Commissioning)

**Lot II :**

- a. Establishing 2x150MVA, 220/66kV sub station in land bearing Sy no. 44 of Kyataganacharlu along with connected Terminal Bays
  - b. Establishing 2x150MVA, 220/66kV sub station in land bearing Sy no. 242 of Vallur along with connected Terminal Bays
  - c. Establishing 2x150MVA, 220/66kV sub station in land bearing Sy no. 166 of Vallur along with connected Terminal Bays
  - d. Establishing 2x150MVA, 220/66kV sub station in land bearing Sy no.35/2 of Ballasamudra along with connected Terminal Bays.
- i. Construction of 220kV SC line from proposed 220/66kV substation, in solar park to PGCIL station in solar park.

On Total Turnkey basis, in respect of the proposed 2000MW Pavagada Solar Park in Tumkur District, Karnataka including supply of all Materials, Erection (including Civil Works, Testing and Commissioning).

**2.2 Contractor's Scope of Works:**

The Scope of the Turnkey Contractor is: Design, Engineering, manufacture, testing at factory, Supply on FOR destination site basis, transportation, storage, Erection/Installation, Testing and Commissioning of all the Equipments/Materials required for

**Lot I :**

- a. Establishing 2x150MVA, 220/66kV sub-station in land bearing Sy no. 154/2,3,4&5 of Tirumani along with connected Terminal Bays
  - b. Establishing 2x150MVA, 220/66kV sub station in land bearing Sy no. 131/1 & 2 of Tirumani along with connected Terminal Bays
  - c. Establishing 2x150MVA, 220/66kV sub stn. in land bearing Sy no. 225/1,2 & 3 of Rayacharlu along with connected Terminal Bays
  - d. Establishing 2x150MVA, 220/66kV sub-station in land bearing Sy no. 175 of Rayacharlu along with connected Terminal Bays
- ii. Construction of 220kV SC line from proposed 220/66kV substation, in solar park to PGCIL station in solar park.

on Total Turnkey basis, in respect of the proposed 2000MW Pavagada Solar Park in Tumkur District, Karnataka including supply of all Materials, Erection (including Civil Works, Testing and Commissioning)

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- c. Establishing 2x150MVA, 220/66kV sub station in land bearing Sy no. 166 of Vallur along with connected Terminal Bays

- d. Establishing 2x150MVA, 220/66kV sub station in land bearing Sy no.35/2 of Ballasamudra along with connected Terminal Bays.
- ii. Construction of 220kV SC line from proposed 220/66kV substation, in solar park to PGCIL station in solar park.

On Total Turnkey basis, in respect of the proposed 2000MW Pavagada Solar Park in Tumkur District, Karnataka including supply of all Materials, Erection (including Civil Works, Testing and Commissioning).

The Work shall include but shall not limited to the following:

#### 2.2.1 **ELECTRICAL WORKS:**

Design, Engineering, Manufacturing, Testing and Supply on FOR Destination Site basis, Transportation, Storage, Erection/Installation, Testing and Commissioning of all Equipments and associated essential Works including, but not limited, to the following for successful Commissioning of Substation, Terminal Bay and Transmission lines.

- i) Power Transformers
- ii) SF6 Circuit Breaker.
- iii) Isolators.
- iv) CT's/PT's/ CVT's
- v) Lightning Arrestors
- vi) Control & Relay Panels.
- vii) Station Structures and Mounting Structures.
- viii) Bus-Bar Materials, Bus-Post Insulators, Insulator Strings, Hard Wares, Clamps and Connectors, Aluminium Tubes, Bay Marshalling Boxes, Cable Supporting Angles / Channels, Cable Trays and Covers, Junction Boxes etc.
- ix) Control and power cables.
- x) Battery & Battery Charger.
- xi) D.G Set.
- xii) LTAC Panels, DCDB panels, bay marshalling boxes
- xiii) Testing, Maintenance and Condition Monitoring Equipments.
- xiv) Design and Providing Illumination inside the Control Room, along the Roads and Station Yard as per requirement.
- xv) PLCC and SCADA Equipments
- xvi) Testing of all Equipments individually and Commissioning of Sub-Station.
- xvii) Preparation of fabrication/shop drawing manufacture/fabrication, proto-assembly and delivery of towers.
- xviii) ACSR Conductor and Earth wire
- xix) All Tower, Conductor & Ground wire Accessories.
- xx) Insulator Strings & accessories.
- xxi) Commissioning of the Transmission line

**Note : All the equipments/meters proposed for the sub-station should be SCADA and Sub-station Automation operational and the energy meters should have ABT features.**

**2.2.2 CIVIL WORKS:**

- a) Site Preparation including Gravel filling, re-spreading of Gravel filling (in Gravel filled area after excavations).
- b) Formation of the Earth Mat.
- c) Construction of Cable Ducts etc.
- d) Foundations of Station Structures, Mounting Structures of Equipments, power transformers, SF6 Circuit Breakers, Isolators, CT's, PT's, 11 KV switch gear etc.
- e) Providing Security Fencing and Gate.
- f) Providing permanent water supply and sanitary arrangements to the substations
- g) Providing Drainage System to the Station Yard.
- h) Final Land Dressing, Gravel filling and Anti-weed Treatment.
- i) Construction of Control Room building, Roads & Culverts, Piped Water supply arrangements for the building.
- j) Conducting of check survey of the detailed survey that is already conducted by KSPDCL. Tower spotting, conducting of detailed theodolite survey, if any discrepancy is noticed in the earlier detailed survey or deviation of line route if found necessary at the time of execution due to various field problems.
- k) Excavation, casting of tower foundation, stub setting, including all Civil and Structural works as per specification.

**Note:** The Contractor has to supply all the Materials required for the Works including Cement and Steel.

**2.2.3 GENERAL:**

For Stations :

- a) Providing Furniture to the Control Room and Office of the Engineer.
- b) Providing Fire Fighting Equipments.
- c) Rubber Mats, Water Filters, Sub-Station / Transmission Lines Name Board, Signboards etc.

2.3 The mode of inland Transportation (such as Rail, Road etc) shall be clearly indicated by the Bidder in his Offer. This shall be again discussed and finalized with the Owner, depending upon actual conditions, before Award of the-Contract. The Transportation charges shall be the same for all modes of Transport and shall be included in the Contract Price. The Transportation charges shall include Unloading charges at Site.

2.4 Bids not covering the entire Scope of Work shall be treated as incomplete and hence may be rejected.

- 2.5 For the purpose of supply of Equipment and Materials the Work 'Site' shall mean the locations where the Goods are delivered and accepted by the Contractor. The Contractor shall decide the location of the Site and set up his Stores for purpose of storing the Materials.
- 2.6 The Equipments Offered by the Bidder shall be complete in all respects with all Mountings, Fittings, Fixtures and Standard Accessories. Any Material and Components not specifically stated in the Specifications and Documents and which is necessary for Trouble Free Operations of Equipments and accessories specified in these Specifications, shall be deemed to be included unless specifically excluded. All such Equipments, Accessories shall be supplied without any extra Cost.
- 2.7 Insurance coverage for the Equipments/ Materials shall be from the Manufacturer's Work till taking over in accordance with the Contract and shall include coverage for Inland Transportation, receipt of Storage at Site and Erection, Testing and Commissioning at Site prior to taking over by the Owner as per **Clause 14.0** infra.
- 2.8 **Information required along with the Bids:**
- a) The Bids must clearly indicate the name of the Manufacturer and the types of Goods proposed to be supplied coming under the Scope of the Contractor. The Bids should also contain Drawings and descriptive Materials indicating general dimensions, Material from which the various Components are Manufactured, process Tests during Manufacturing, major construction/ Erection Equipments and Tools proposed to be deployed and the method of Erection of all Equipments and the extent of Pre-assembly involved.
  - b) The above information shall be provided by the Bidder in the form of separate Sheets, Catalogues etc, which shall be uploaded in the e-Procurement portal.
  - c) Any Bid not containing sufficient descriptive Materials to describe accurately the Goods proposed may be treated as incomplete and non-responsive. Such descriptive Materials and Drawings submitted by the Bidder will be retained by the Owner. Any major deviation from these Drawings and descriptive Materials submitted will not be permitted during the execution of the Contract without specific written permission of the Owner.
  - d) Oral statements made by the Bidder at any time regarding Quality, Quantity or arrangement of the Goods or any other matter will not be considered.
  - e) **Additional Information:**

The Bidder shall submit a list of recommended Erection Equipment/Tools and Tackles, which will be required for the purpose of



various assemblies and Erections under the Contract. In the case the Bid information contradicts the Specification requirements, the Specification requirements will govern unless otherwise brought clearly in Bidders Technical/ Commercial Deviation Schedule.

**2.9 Drawing & Annexures:**

- a) All Drawings & Annexures appended to this Bidding Document shall form part of the Technical Specification and supplement the requirements specified.
- b) The Technical Specification shall be read and construed in conjunction with the Drawings and the Annexures to determine the Scope of Work and Terminal points. **The successful Bidder shall not take up manufacturing of any equipments / materials and go ahead with the execution of works unless the drawings are approved. In case there is any discrepancies between the specification and approved drawings, the same shall be brought to the notice of the Owner within 15 days.**
- c) The Quantities shown on Drawings and Annexures are tentative for Bidding purpose only. Any variation arising during detailed Engineering stage will be taken into account for adjustment of Contract Price based on Unit Rates quoted in the Bid.

**2.10 Site Location and Local Conditions:**

It will be imperative on each Bidder to fully inform himself of all Local Conditions and factors which may have any effect on the Supply and Services covered under these Documents and Specifications.

It shall be understood and agreed that such factors have been properly investigated and considered in any Bid that is submitted. No Claim for Financial adjustments to the Contract Awarded under these Specifications and Documents will be entertained by the Owner. Neither change in the time Schedule of the Contract nor any Financial adjustments arising thereof shall be permitted by the Owner, which are based on incorrect information or its effect on the Contract to the Bidder.

The Equipment shall be Packed for Transportation so as to meet the Space and Weight limitation of Transport facilities especially along the Rail/ Road. Approval from concerned Railway Authorities for movement of over dimensional Consignment/Package shall be obtained by the Contractor before starting Transportation of such Equipment.

- 2.11 The Requirements, Conditions, Appendices etc., stated in various sections of Volume-I, Volume-II and Volume-III shall be considered as part of this Section as if bound together. In case of any discrepancy

between the provisions of this Section and other Sections, the provisions of this Section shall prevail.

- 2.12 Unless brought out clearly, the Bidder shall be deemed to conform strictly to the Bid Documents. The Bids shall, as far as possible, be according to the Specifications. However, Minor deviations, if any, shall be clearly brought out in the respective Schedules of Deviations. Any discrepancy between the Specification and the Catalogues of the Bid, if not clearly brought out in the Schedule, will not be considered as valid Deviation.

### **3.0 BILL OF MATERIALS AND SUPERVISORY SERVICES:**

- 3.1 List of Materials to be Supplied by the Contractor is furnished in Section -1- Bill of Materials, Volume-II , and in Bid Proposal Sheets, Volume -III.

#### **3.2 Services:**

The Bidder shall quote his charges payable for providing Services for Erection, Testing, Commissioning and Civil Works etc, as brought out in the Technical Specifications and Bid Proposal Sheets. These shall be inclusive of all Taxes, charges and incidentals and shall also include Cost towards Boarding, Lodging and Transportation of Bidder's Staff and Labour, which shall be the responsibility of the Bidder only. The above charges shall be in accordance with the clause 15.0 of Section ITB during the currency of the contract.

### **4.0 QUALIFYING REQUIREMENTS OF BIDDERS:**

The Qualifying Requirements are enumerated in Section-I, Invitation for Bid -IFB, Volume-I.

### **5.0 DUTIES AND POWERS OF THE ENGINEER AND ENGINEER'S REPRESENTATIVES:**

- 5.1 The Duties of the Engineer are to supervise the Work of the Contractor and issue Suitable directions if needed. The scope of the Duties of the Engineer, pursuant to the Contract will include but not limited to the following:
- a) Interpretation of all the Terms and Conditions of these Specifications and Documents.
  - b) Witness, or authorise his Representative to witness, Tests and Trial either at the Manufacturer's Work or at Site or at any place where the Work is performed under the Contract.
  - c) Inspect, accept or reject any Equipment Material and Work under the Contract.

- d) Review and interpretation of all the Contractor's Drawings, Engineering Data etc.
- e) Issue Certificate of acceptance and/or progressive Payment and final Payment Certificates.
- f) Review and suggest Modifications and improvements in Completion Schedule from time to time.
- g) Review the Quality of Work at all the stages of Project implementation.

5.2 The Engineer, his duly authorised Representative and/or an outside agency acting on behalf of the Owner shall have at all the reasonable times, access to the Contractor's premises or Works and shall have the power to inspect and examine the Materials and Workmanship of the Works during its Manufacture or Erection and if part of the Works is being Manufactured or assembled at other premises or Works, the Contractor shall obtain for the Engineer and for his duly authorised Representative, permission to inspect, as if the Materials /Equipments are Manufactured or assembled on the Contractor's premises or Works. On Completion of the Erection of the Equipments and before Commissioning each item, the Equipments shall be thoroughly cleaned and then inspected jointly by the Engineer and the Contractor for correctness and completeness of Installation so that the Equipments are ready for pre-Commissioning Tests to be performed. The Contractor's Commissioning Engineers shall be responsible for carrying out all the pre-Commissioning Tests of the various Equipments/ Lines installed in the Sub-Stations / Transmission Lines.

5.3 The following actions are however subject to approval of the Owner:

- a) Approving Subletting of any part of the Works.
- b) Determining extension of time.
- c) Issuing a Variation Order except:
  - i.) In an emergency situation as reasonably determined by the Engineer.
  - ii.) If such variation Order would increase the Contract Price.

5.4 The Engineer's Representatives are responsible to the Engineer and their Duties are to watch and Supervise the Works, to Test and examine any Materials to be used or Workmanship employed in connection with the Works. He has no authority to relieve the Contractor of any of the Duties or obligations under the Contract nor except as expressly provided hereunder or elsewhere in the Contract, to Order any Work involving delay or any extra Payment nor to make any variations of/or in the Works.

- 5.5 The Engineer may, from time to time, delegate in writing to the Engineer's Representative any of the Powers, Authorities vested with the Engineer and furnish to the Contractor a copy of all such written delegation of Powers and Authorities. Any written instruction or approval given by the Engineer's Representative to the Contractor within the terms of such delegation, but not otherwise, shall bind the Contractor and the Owner as though it has been given by the Engineer provided always as follows:
- a) Failure of the Engineer's Representatives to disapprove any Work or Materials shall not prejudice the Power of the Engineer thereafter to disapprove such Work or Materials and to Order the pulling down, removal or breaking thereof.
  - b) If the Contractor shall be dissatisfied by reason of any decision of the Engineer's Representative, he shall be entitled to refer the matter to the Engineer who shall there upon confirm, reverse or vary such decision.

5.6 **CLAIMS:**

5.6.1 The Contractor shall send to the Engineer's Representative, once in every Month, an Account giving particulars, full and as detailed as possible, of all Claims for any additional Payment to which the Contractor may consider himself entitled and of all extra, or additional Work Ordered by the Engineer which he has executed during the preceding Month. No final or interim Claim for Payment for any such Work or expense will be considered which has been included in such particulars. Provided always that the Engineer shall be entitled to authorize Payments to be made for any such Work or expense, notwithstanding the Contractor has, at the earliest opportunity, notified the Engineer in writing that he intends to make a Claim for such Work. But not from any other Clause, the amount of the Contract Price shall be adjusted by such Sum as may be agreed between the Contractor and Engineer or failing agreement, fixed by the Engineer having regard to all the Materials and relevant factors including the Contractor's Site and general overhead Costs of the Contract.

5.6.2 **Settlement of Final Claims;**

**The turnkey agency shall submit the price variation bills within one month of supply of individual materials where price variation is applicable with all relevant documents to the office of the Chief Executive Officer, KSPDCL and the same shall be passed by the Chief Executive Officer, KSPDCL within two months from the date of submission of the bills by the turnkey Agency. All the Agencies / Contractors, have to complete balance works of their commissioned projects and final bills of Retention, Quantity Variation, Price Variation, Penalty, etc., if any has to be claimed within 3 months from the date of commissioning of the project. The KSPDCL Office**

**has to settle all the claims of the Firm within 2 months from the date of receipt of final bills.**

## **6.0 BASIS OF EVALUATION:**

As this Bid Document is for a total Turnkey Construction, covering Supply of all matching Materials/Equipments, Erection, Testing and Commissioning of Substation, Terminal Bay and Transmission Lines, the Bidder shall quote for all the Equipments identified under Contractor's Scope of Supply and Services mentioned. The Offer will be considered as **"incomplete"** and the Bid **will be liable for rejection at the discretion of the owner**, if all the Equipments identified under Contractor's Scope of Supply and Services are not offered. The Total Quoted Price for all the Scope in each Schedules including the Cost of the Mandatory Spares will be the basis for evaluation. The Contractor shall quote his rates for all the items of Materials identified under Contractor's Scope of Supply and Works included in the Bid Proposal Sheets, even if there is no requirement at present, in the "Schedule of Requirement Sheet". The evaluation will be based on the Schedule of Requirements indicated in the Bid Proposal Sheets. However, the Payment will be as per actual based on the Unit Rate quoted.

The following factors will also be taken to evaluate the Bid in addition to above.

- a) The Cost of Components.
- b) Services indicated.
- c) Cost of Special Tools and Tackles required and Mandatory Spares.
- d) Erection charges including Civil Works.
- e) Testing and Commissioning charges.
- f) Delivery/ Completion Schedule Offered.
- g) Any Technical Deviation having Financial implications.

## **7.0 Procedure for Evaluation of Technical Bid:**

7.1 The Bids are liable to be treated as Non-Responsive if the Offers do not comply with the following:

1. Qualifying Requirements of the Bidder shall be as per Clause 11.0, Section - 1, Invitation for Bid- IFB, Volume-I.
2. Financial Capability of the Bidder shall be as per Clause 11.6, Section - 1, Invitation for Bid- IFB, Volume-I.
3. Qualifying Requirements of the Sub-Vendors / Manufactures of Bought Out items shall be as per Clause 11.0 Section - 1, Invitation for Bid- IFB, Volume-I.
4. Bid Security/EMD shall have been paid as per Clause 22.0 Section-II, Instructions to Bidder-ITB, Volume-I.
5. Completion Period shall be as specified in the Bid.
6. Technical Particulars of all the Equipments/ Materials shall be complying with the provisions of Technical Specifications Volume-II.
7. Bid shall be submitted for the entire Scope of Package.

8. Bid containing Certificate for Acceptance to Important Conditions as per Clause No. 19 of Section-V, Special Conditions of Contract- SCC, Volume-I.

**8.0 TERMS OF PAYMENT:**

- 8.1** All the Payment will be made by the Chief Executive Officer, KSPDCL under whose supervision the Contract Work is executed.

- 8.2 EQUIPMENT/MATERIAL SUPPLY:** The Price Component of Equipment/Material including Mandatory Spares (excluding Special Tools and Tackle) supplied to Site by the Contractor will be paid as indicated in the below mentioned Sub-paragraphs.

**8.2.1 STAGES OF PAYMENT:**

The terms of Payments will be as stated below;

- (1) **Fifty percent(50%)** of the works price plus 100% taxes and duties and 100% Freight & Insurance charges in respect of **both direct transaction materials (on receipt of 1<sup>st</sup> Bill after supply of Turnkey Materials) and Fifty percent (50%)** of the Total price including taxes and duties and 100% Freight & Insurance charges in respect of **Bought Out items** shall be paid on MAS (Material Acknowledgement Statement) **subject to the following:**
- i. Material Acknowledgement Statement issued by the Deputy General Manager (Field), KSPDCL.
  - ii. Copy of the Certificate of Transit Insurance.
  - iii. Pre-dispatch clearance certificate issued by the owner, prior to dispatch of the Consignment.
  - iv. Packing list/ Bill of materials.
  - v. Contractor's Detailed Invoice.
  - vi. Test Certificates.
  - vii. Physical Verification Certificate by the site Engineers.
- (2) **30 percent (30%)** of Ex-works price of **Direct transaction materials/ Thirty percent (30%)** of total price including taxes and duties in respect of **bought out items** shall be paid progressively on erection of the equipments/materials.
- (3) **10 percent (10%)** of Ex-works price of **Direct transaction materials/ Ten percent (10%)** of total price including taxes and duties in respect of **bought out items** shall be paid on successful completion of **Trail Operation.**
- (4) **Ten percent (10%)** of the Ex-works price in respect of **direct transaction materials / Ten percent (10%)** of total price including taxes and duties in respect of **bought out items** shall be **paid on submission of required number of reproducible, manuals, approved drawings, test report and pamphlets and**

**complete documents pertaining to Transmission lines / Sub-Stations.**

The above Payment terms are Subject to the following conditions stated herein below:

- i. The Chief Executive Officer, KSPDCL, Should ensure before making any payment towards materials received that the material has been supplied as per **Activity Chart** pertaining to the work concerned.
- ii. The work is going according to the plan.
- iii. Notwithstanding anything contained to the contrary in the Bid documents, storage insurance for materials stored at the site by the contractor shall be to the account of the Contractor alone and no amount whatsoever is payable by the KSPDCL.

**8.2.2** The Bills will be passed on the basis of the following certificates:

1. Certificate recorded by the Contractor that the Materials/Equipments are received as per the Terms and Conditions of the Purchase order placed for Materials and Turnkey Agreement entered into by him with KSPDCL.
2. Certificate recorded by the Junior Engineer, Elec/Asst. Engineer, Elec designated as “**Site Engineer or Engineer in charge of Work**” to the effect that the Materials/Equipments are actually received in the Store of the Turnkey Contractor or at Site as per the Terms and Conditions of the Purchase order placed for Materials and **Total Turnkey** Agreement entered into by him with KSPDCL.
3. Certificate by the Deputy. General Manager (Field)/ Officer in charge of the Contract to the effect of the receipt of Materials/Equipments.
4. Countersignature of the General Manager, KSPDCL in charge of the Work and under whose jurisdiction the Contract is being executed.

**8.3 Price Component for Erection and Civil Works:**

**8.3.1** Ninety percent (90%) of the total Erection and Civil Works Price Component of the Package shall be paid progressively on **prorata** basis on Certification by the Engineer, for:

- i) The quantum of Work completed.
- ii) The successful Completion of Quality Check Points involved in the Erection.

**8.3.2** Ten percent (10%) of the total Erection and Civil Works Price Component of the package shall be paid on successful Completion and Commissioning of the Substation, Terminal bay and Transmission Lines in accordance with Clause No. 9.0 of Section-V, Special Conditions of Contract- SCC, Volume-I.

**8.4** It is made clear that, notwithstanding anything contained to the contrary in the Bid Documents elsewhere, Storage Insurance for Materials/

Equipments stored at the Site by the Contractor shall be to Contractor's account alone and no amount whatsoever is payable by the Owner.

**8.5** VOID.

**8.6** The Bidder shall furnish a Detailed Billing Break-Up for the Erection Price Component of the package which shall be mutually discussed with the Owner and finalized before signing of the Contract. Progressive Payments for Erection will be made on Monthly bills of the Work completed, as per the Billing Breakup, based on certification by the Engineer.

**8.7** The Total Payments towards Supply of Equipments/Material, Erection Charges and Civil Engineering Works etc., as per the Contract shall be governed by the Clauses 34.0 & 35.0 of Section -III, General Conditions of Contract-GCC, Volume-I.

**8.8** Wherever Ceiling Quantities are indicated in the Bid Proposal Sheets, the Payment will be limited to the Ceiling Quantity/ies vis-à-vis actual Quantity/ies (arrived at after Engineering) whichever is less.

**8.9** In respect of Switchyard Materials other than Main Equipments i.e. Isolators, PLCC Equipments, LTAC Panel, Battery and Battery Charger, the Quantities furnished in respect of some of the Materials are estimated provisional quantities. The Bidder can estimate and quote for change in the Quantities, if any. In the event of change in the Quantities (after approval of Designs/ Drawings) as compared to Quantities quoted in the Bid, the Payment will be made for the quoted Quantities or actual Quantities as arrived after approval of Design/Drawings whichever are lower.

**8.10** In respect of Civil Works, the Quantities are mentioned in Numbers, Meters, and LumpSum and 'To be assessed by Bidder'. In respect of Quantities mentioned in Meters, the same are furnished based on the layout. Any increase in the Quantity is to the account of the Bidder. On the other hand, if the Quantity executed is less than indicated, then the actual Quantity executed will be reckoned for Payment.

**9.0 TAKING OVER:**

Upon successful Completion of all the Tests to be performed at Site on Equipments erected by the Contractor, the Engineer shall issue to the Contractor a "**Taking Over Certificate**" as a proof of the final acceptance of the Equipment. Such Certificates shall not reasonably be withheld nor will the Engineer delay the issuance thereof on account of minor omissions or defects, which do not affect the Commercial Operation and/or cause any serious risk to the Equipment. Such Certificates shall not relieve the Contractor of any of his obligations,



which otherwise survive by the Terms and Conditions of the Contract after issuance of such Certificate.

## **10.0 WORK SCHEDULE:**

**10.1** The Bidder shall include in this **Work Schedule** his program for furnishing Designs, Testing, Supply of Materials (in his Scope), when the Owner Supplied Equipments to be provided (if any) and Erecting the Equipments and Commissioning covered in the Bid Documents. The Program shall be in the form of **Activity Chart** identifying Key Phases in various areas of the total Works like procurement of Materials and Bought Out items, Testing, Manufacture, deliveries and Field activities. The **Activity Chart** shall conform to the following Scheduled Commissioning Period reckoned from the Date of Award Letter:

**"COMMISSIONING PERIOD IS 12 (Twelve) MONTHS FROM THE DATE OF LETTER OF AWARD OF THE CONTRACT INCLUDING MONSOON PERIOD"**

**While preparing the above mentioned Activity Chart, the Contractor may take guidance from the Tentative Dates of various activities indicated in the Technical Specification. The Owner has no objection to modify the intermittent activities without affecting the Final Completion Schedule. However, all the Schedules shall be approved by the Owner.**

This **Activity Chart** will be discussed and agreed to before the Award of Contract. It may be required by the Owner to revise the periods indicated above based on the interface requirements of the Project. Such revisions, if made, will be finalised before the Award of Contract. The provisions of Clauses 14.0 and 44.00 Section -III, General Conditions of Contract-GCC, Volume-I and Clause 13.0 Section -V, Special Conditions of Contract-SCC, Volume-I regarding **Penalty** leviable for delays shall become effective after the dates mentioned above.

**10.2** After the Award of the Contract, the Contractor shall Plan the sequence of Work of Manufacture and Erection to meet the dates stated above and shall ensure that all Work / Manufacture, shop Testing and dispatch of the Equipment and Materials is in accordance with the required Construction / Erection sequence.

**10.3** The provisions of **Penalty** leviable in case of delay in Completion shall become effective after the periods mentioned above for successful Completion of Testing and Commissioning.

**10.4** Within one Month of Notification of Award, the Contractor shall submit for review and approval, detailed Network Schedules based on **Activity Chart** (mutually agreed by the Owner and Contractor ) to the Engineer showing the logic and duration of activities in the following areas:

- a) Detailed Engineering, Procurement (including Bought Out Items and Raw Materials), Manufacture, Shop Inspection, Testing, Dispatch and Receipt at Site in case of Equipments/Materials in the Scope of the Contractor.
- b) Detailed Erection and Commissioning activities covering the complete Scope of Work.
- c) Inputs required from Owner (including handing over of Owner Supplied Equipments/Materials to the Contractor) for smooth and timely execution of Contract and also major details / information to be submitted by Contractor for further related Engineering to be done by Owner/ Consultant. These are to be identified in the Net Work based on details finalised during pre- Award discussions.

**After approval of the Activity Chart, the Contractor shall submit one reproducible of the Activity Chart as well as detailed Network with sufficient Nos. of prints as desired by Owner.**

- 10.5** Detailed Erection and Commissioning Program including Pre-Erection activities covering Manpower deployment, Tools and Plants Mobilisation etc., shall be submitted by Contractor within suitable time as agreed to during Pre- Award discussions.
- 10.6** Detailed Drawing Schedule based on Programs referred above shall be submitted by the Contractor within 15 days time from the notification of Award, in the format to be specified by the Owner.
- 10.7** Detailed Cash flow in accordance with Terms of Payment and in line with agreed Work Schedule should be submitted within Thirty (30) days after the Award.
- 10.8** The Contractor shall submit to the Engineer, his manufacturing and Delivery Schedules for all Equipment's, within Thirty days (30 days) from the Notification of Award. Such Schedules shall be in line with the detailed Network for all phases of the Work of the Contract. Such Schedules shall be reviewed, up-dated and submitted to the Engineer by the Contractor, once in every two Months thereafter, only for the purpose of Progress Monitoring. Schedules shall also include the Materials and Equipment purchased from outside Suppliers.
- 10.9** The Contractor shall submit to the Owner/Engineer the detailed Bill of Materials, within **45 days** of the Notification of Award. Additions / deletions to the Bill of Materials, during detailed Engineering will also be incorporated in the Bill of Materials within 2 weeks of the approval of the Drawings, if such approval of Drawings necessitates the change.
- 10.10** Within one week of approval of the **Activity Chart**, the Contractor shall forward to the Engineer copies of the Computer Run Data if it be so required. The type of output and number of copies of each type to be supplied by the Contractor shall be determined by the Engineer.

**10.11** The **Activity Chart** shall be updated at a frequency mutually agreed upon for the purpose of Monitoring. However, for the purpose of identification of Contractors Contractual liability, the agreed **Activity Chart** referred in Clause 10.1 shall only be applicable. Monthly review of the Progress and identification of necessary Corrective actions as may be desired by the Engineer. The Meeting will be attended by the Engineer or his authorised Representatives and such responsible Representatives of the Contractor as may be considered necessary by the Engineer. Such Meeting shall be attended by the Contractor's Representatives at the Contractor's own Cost. The Contractor shall be responsible for recording the proceeding of the Meeting(s), a report of which shall reach the Owner or the Engineer not later than seven (7) days after the Meeting (s).

**10.12** Access to the Contractor's and Sub-Vendor's/ Sub - Contractor's Work shall be granted to the Engineer at all reasonable times for the purpose of ascertaining the Progress.

**10.13** During execution of the Contract / Manufacture/ Erection / Commissioning, the Contractor shall furnish fortnightly Progress Reports to the Engineer in a Format to be specified by the Engineer indicating the Progress up to the Month as against Scheduled and Anticipated Completion Dates in respect of Activities covered in Programs/ Schedules referred above. If called for by the Engineer, the Contractor shall also furnish to the Engineer resources Data in the specified Format(s), and Time Schedule(s). The Contractor shall also furnish any other information necessary to ascertain Progress, if called for by the Engineer.

#### **11.0 INDEMNITY BOND:**

**11.1** It will be the responsibility of the Contractor to take Delivery, Unload and Store all the **Material/ Equipments**. The Contractor shall execute an Indemnity Bond as per the Proforma enclosed to Section ITB in favour of the Owner against Loss, Damage and any Risks involved for the full value of these Materials. This Indemnity Bond shall be furnished by the Contractor before commencement of the Supplies and shall be valid till the Scheduled Date of Testing, Commissioning and handing over of the Work to the Engineer.

**11.2** For the Equipments/Materials to be provided by the Owner, the Contractor shall adopt the following Procedure to take delivery of Equipments/ Materials:

- a) The dispatch title Documents will be handed over to the Contractor only after obtaining a Trust Receipt in respect of Plant, Equipment and Materials as per prescribed proformas enclosed herewith as Annexure-XIII
- b) The Indemnity Bond as per Proforma, enclosed as Annexures VIII & IX shall be executed by the Contractor.

- c) KSPDCL will also issue a separate authorisation letter to the Contractor to enable him to take physical delivery of Materials / Plant / Equipments.

**12.0 CONTRACT PRICE ADJUSTMENT:**

In accordance with Clause 15.0 of Section –II, Instruction to Bidder-ITB, Volume-I and Clause 33.0 of Section –III, General Conditions of Contract-GCC, Volume-I.

**13.0 PENALTY FOR DELAY IN COMPLETION:**

- 13.1** The Bidder shall clearly note that time is the essence of the Contract and the Substation, Terminal Bay and Transmission Lines shall be completed within the Time frame specified in Clause No.10.1 Supra and hence no time extension shall be allowed on any account. If the Contractor fails to successfully complete the Trial Operation in terms of the Contract, within the time fixed under the Contract or any extension thereof granted by the Owner by way of Amendment to the Notification of Award/ Contract Agreement, the Contractor shall pay to the Owner, as **Penalty** in three / four (3 / 4) Stages as detailed below:

<b>LINES:</b> Completion period <b>Twelve (12)</b> Months from the date of Letter of Award of Contract including monsoon period			
<b>No. of Stages</b>	<b>Activities</b>	<b>Completion period</b>	<b>Percentage of penalty</b>
Stage –I	Check survey, approval of Vendors/drawings, etc.	<b>1 Months</b>	<p>½ % per week subject to maximum of 10% of the value of the stage i.e. ½ % per week of Rs. .... Crores of Stage-I for the uncompleted portion of the work.</p> <p>The penalty so liable shall only be calculated and kept aside and shall not be deducted from the bills submitted for Stage I completion of works.</p> <p>This amount liable as penalty shall be deducted as per the procedure mentioned in Stage III below.</p>

Stage-II	Excavation, Supply of stubs and stub concreting, etc. (33.33% of total location per month to be completed)	<b>3 Months</b>	<p>½ % per week subject to maximum of 10% of the value of the stage i.e. ½ % per week of Rs. .... Crores of Stage-II for the uncompleted portion of the work.</p> <p>The penalty so liable shall only be calculated and kept aside and shall not be deducted from the bills submitted for Stage II completion of works.</p> <p>The amount liable as penalty for Stage I and Stage II shall be deducted as per the procedure mentioned in Stage III below.</p>
Stage-III	Supply of tower parts, Erection of towers, etc.	<b>5 Months</b>	<p>½ % per week subject to maximum of 10% of the value of the stage i.e. ½ % per week of Rs. .... Crores of Stage-III for the uncompleted portion of the work.</p> <p>The penalty so liable shall only be calculated and kept aside.</p> <p>The 25% of the total amount liable as penalty for stage I, Stage II and stage III shall be deducted from the bills submitted for the completion of stage III work. The balance amount liable as penalty shall be kept aside which is to be deducted as per the procedure mentioned in stage IV below.</p>
Stage-IV	Supply of Conductors & Hard wares etc., Stringing, inspection and Commissioning.	<b>3 Months</b>	<p>½ % per week subject to maximum of 10% of the total contract value i.e. the DWA amount duly deducting the penalties recovered during Stage-I, Stage-II and Stage-III for the uncompleted portion of the work.</p> <p>“If project is completed 100% in all respect as per the stipulated completion time then penalty levied at stage-III</p>

			<p>including the penalties liable to be deducted as per stage – I and Stage II shall be returned back to the turnkey contractor by the Chief Executive Officer, KSPDCL.</p> <p>If the sum of the penalty liability exceeds the balance amount due for payment to the contractor for the work, then in such case, the same shall be recovered from the balance 10% retention money payable against submission of required number of reproducible, manuals, approved drawings, test report and pamphlets and complete documents pertaining to Transmission lines/ Sub stations”.</p> <p>In case the successful bidder fails to execute the supplies/works as per the program or opinion of purchaser, the supplies/works are progressing at a slow pace, the owner reserves its right to get the balance or part of supplies/works executed through other agencies at the risk and cost of the turnkey agencies, this is in addition to the right of the KSPDCL to recover any damage from the contractor and also blacklisting.</p>
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<b>Substation and Terminal Bays:</b> Completion period Twelve (12) Months from the date of Letter of award of Contract including monsoon period			
<b>No. of Stages</b>	<b>Activities</b>	<b>Completion Period</b>	<b>Percentage of Penalty</b>
Stage-I	Approval of Drawings/Vendors, Land leveling, Security	<b>4 Months</b>	½ % per week subject to maximum of 10% of the value of the stage

	fencing etc. and Foundation Works for ODS, Erection of Columns for Control Room, Earthmat work		i.e. ½ % per week of Rs. .... Crores of Stage-I for the uncompleted portion of the work. The penalty so liable shall only be calculated and kept aside and shall not be deducted from the bills submitted from the state – I completion of works. This amount liable as penalty shall be deducted as per the procedure mentioned in stage – II
Stage-II	Supply of all Equipments (including Power Transformer) / Erection of Gantry, Mounting Structure and Construction of Control Room Building, Cable Ducts, Laying of Power and Control Cables etc.,	<b>6 Months</b>	½ % per week subject to maximum of 5% of the value of the stage i.e. ½ % per week of Rs. .... Crores of Stage-II for the uncompleted portion of the work/supplies. The penalty so liable shall only be calculated and kept aside. The 25% of the total amount liable as penalty for stage I and stage II shall be deducted from the bills submitted for the completion of stage II work. The balance amount liable as penalty shall be kept aside which is to be deducted as per the procedure mentioned in stage III below.
Stage-III	Erection of Equipments, Wiring of C&R Panels, Illumination, Painting etc., Testing/inspection,	<b>2 Months</b>	½ % per week subject to maximum of 10% of the total contract value i.e. the DWA amount duly deducting the

	Commissioning.	<p>penalties recovered during Stage-I and Stage-II for the uncompleted portion of the work.</p> <p>“If project is completed 100% in all respect as per the stipulated completion time then penalty levied at stage-II including the penalties liable to be deducted as per stage – I shall be returned back to the turnkey contractor by the Chief Executive officer, KSPDCL.</p> <p>If the sum of the penalty liability exceeds the balance amount due for payment to the contractor for the work, then in such case, the same shall be recovered from the balance 10% retention money payable against submission of required number of reproducible, manuals, approved drawings, test report and pamphlets and complete documents pertaining to Transmission lines/ Sub stations”.</p> <p>In case the successful bidder fails to execute the supplies/works as per the program or opinion of purchaser, the supplies/works are progressing at a slow pace, the owner reserves its right to get the balance or part of supplies/works</p>
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			executed through other agencies at the risk and cost of the turnkey agencies, this is in addition to the right of the KSPDCL to recover any damage from the contractor and also blacklisting.
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**Bidder shall also define, while submitting the tender, the quantum of work (in Rs Lakhs) that will be carried out in each stage. KSPDCL will indicate the stage wise quantum of work (in Rs Lakhs) in the DWA after assessing the correctness of the amounts mentioned by the successful bidder.**

### 13.2 VOID

**13.3** The total amount of **penalty** for delay under the Contract shall be subject to a Maximum of Ten percent (10%) of the total Contract Price & the Owner has got every right to terminate the Contract without any liability if it crosses 10%.

### 13.4 Recovery of Penalty :

**The following procedure shall be adopted for recovery of the 10% penalty amount on total contract value from the turnkey agency for delay in completion of the project.**

- a) **Calculate the penalty recoverable from turnkey agencies as per DWA terms and conditions for those works delayed beyond contractual agreement period.**
- b) **Limit the recovery of penalty to 10% of each bill value admitted in case of supply / Civil / erection bills.**
- c) **If the total penalty to be recovered is not fully recovered under Supply / Civil / Erection bills, the balance penalty has to be recovered in lump sum out of the final 10% retention bills of turnkey works.**

### 14.0 STORAGE-CUM-ERECTION INSURANCE:

**14.1** All the Equipment and Materials being supplied by the Contractor for the package shall be kept completely insured by the Contractor at his Cost from the time of dispatch from their Works, up to the Completion of Erection Testing and Commissioning at Site and taking over of the Substation, Terminal bay and Transmission Lines by the Owner in accordance with the Contract.

**14.2** Further all the Equipment and Materials being supplied by the Owner for the Erection as per Technical Specification shall be kept insured by

the Contractor against any Loss, Damage, Pilferage, Theft, Fire etc. from the time of Unloading up to the time of Taking Over by the Owner including Handling, Transportation, Storage, Erection, Testing and Commissioning etc. The premium to be paid to the Insurance Company by the Contractor for such Insurance shall be included in the total Bid Price.

**14.3** It will be the responsibility of the Contractor to Lodge, Pursue and Settle Claims with the Insurance Company in case of any Damage, Loss, Theft, Pilferage or Fire and the Owner shall be kept informed about it. The Contractor shall be responsible for the, replacement of losses, Damage etc. in the execution of the Contract to any Equipment/ Material either supplied by the Contractor or issued to the Contractor by KSPDCL irrespective of the time or amount of receipt of Insurance Claim. Any loss in this shall be to the Contractor's account.

**15.0 LATENT DEFECT WARRANTY:**

**15.1** The period of Latent Defect Warranty, for Equipments/Materials supplied by the Contractor, in terms of Clause- 15.0, Section -III, General Conditions of Contract-GCC, Volume-I, shall be limited to 18 months from the date of expiry of Guarantee period.

**16.0 GUARANTEES AND PENALTIES FOR NON-PERFORMANCE:**

**16.1** The Bidder shall Guarantee that Equipment Offered shall meet the Ratings and Performance requirements stipulated for various Equipment covered in these Specifications and Documents. In case **penalties** for non-Performance are being stipulated then:

- i.) The Bidder shall also furnish a declaration in the manner prescribed and included in the Bid Proposal Sheets for certain Guarantees, which shall attract levy of **penalties** for non-Performance.
- ii.) Owner reserves the right to either, reject the Equipment/Material, if the Guaranteed Ratings and Performance Parameters are not established during the factory Tests. Alternatively the Owner may accept the Equipment after assessing the **penalties** for shortfall, against the Contractor as per provisions of the Technical Specifications, and such assessed amounts shall be deducted from the Contract Price or otherwise recovered.

**17.0 PRE-COMMISSIONING TESTS AND TAKING OVER:**

**17.1 Pre-Commissioning Tests:**

On Completion of Erection of the Substation, Terminal bay and Transmission Lines Equipments and before Charging, each item shall be thoroughly cleaned and then inspected jointly by the Owner or his duly authorised Representative and the Contractor for correctness and

Completeness of Installation and acceptability for Charging leading to initial Pre - Commissioning. The Contractor's Commissioning Engineers, specifically identified as far as possible, shall be responsible for carrying out all the Pre-Commissioning checks. On Completion of inspection, checking and after the Pre-Commissioning Tests are satisfactorily over, the Complete Substation, Terminal bay and Transmission Lines shall be ready for Charging.

During the Pre-Commissioning checks, the Operations shall be under the supervision of the Contractor, but the Schedule of Operations shall be agreed to by the Owner and the Contractor. During the Tests, the safety of the Substation, Terminal bay and Transmission Lines Materials etc., is the responsibility of the Contractor. During the pre-Commissioning, Commissioning and Performance Guarantee Tests, the Operations will be under the supervision of the Contractor, if the Tests are being carried out by him. In case the Tests are being carried out by a third Party, the Operations will be under the control of the Owner. In both cases, all aspects of the Tests shall be agreed to by the Owner and the Contractor. The safety of the Equipment shall be the responsibility of the Contractor.

## **17.2 Rejection:**

**17.2.1** The Owner will reject any Material/Equipment supplied by the Contractor if, during Tests, or Service, any of the following conditions arise when the provisions under the relevant Clause of the General Conditions of Contract shall immediately become applicable:

- 1) Material/Equipment, including its Components, are proved to have been manufactured not in accordance with the agreed Specifications.
- 2) Material/Equipment fails on any Test indicated in the Technical Specification.

**17.2.2** The Owner reserves the right to retain the rejected Equipment and take it into service until the Bidder replaces, at no extra Cost to the Owner, the defective Material by a new Material. Alternately the Bidder shall Repair or Replace the Equipment within a reasonable period to the satisfaction of the Owner at no extra Cost to the Owner. **Till the equipments are replaced, the performance bank guarantee will not be released by the owner.**

## **17.3 TAKING OVER:**

When the whole of the Works have been completed and have passed all the Tests on Completion, prescribed in the Contract, to the satisfaction of the Engineer, the Engineer shall issue to the Contractor a Taking Over Certificate, as proof of the Final acceptance of the Substation, Terminal bay and Transmission Lines. Such Certificate shall not unreasonably be withheld nor will the Engineer delay the issuance thereof on account of

minor omissions or defects, which do not affect the Commercial Operation and/or cause any serious risk to the Substation, Terminal bay and Transmission Lines. Such Certificate shall not relieve the Contractor of any of his obligations which, otherwise become due, by the Terms and Conditions of the Contract, after issuance of such Certificate. The Contractor shall give an Undertaking to finish with due expedition any outstanding Work during the Warranty Period.

The Contractor shall hand over the following Documents in 8 sets at the time of handing over the Substation, Terminal bay and Transmission Lines to the Engineer for reference and Records:

- a) Brief details of the Substation, Terminal bay and Transmission Lines.
- b) The detailed Drawing of the Substation, Terminal bay and Transmission Lines showing the Dimensions, Reduced Levels, Road Formations, Control Room Building, Water Supply and Sanitary Pipe Lines etc.
- c) The detailed Lay out and Single Line Diagram of the Sub-Station.
- d) The Name Plate Details and Brochures of all Equipments.
- e) The Factory Test results and Pre-Commission Test results of all Equipments.
- f) The Drawings/ Maintenance Manuals of all Equipments.
- g) The Schematic Diagrams of all Control and Protection Circuits and Drawings of all A. C and D C Circuits.
- h) The Foundation details of all Equipments and Station / Transmission Line Structures and Control Room
- i) Set of all approved foundation drawings and Bill of Materials.
- j) Soil classification and soil thermal resistivity, Soil resistivity, thermal back fill data at each location.
- k) The Earth Tests results and Earth Mat Drawing of Sub-Station.
- l) The G.A. and Schematic Drawings of C & R Panels.
- m) Set of route profiles, tower schedules, details of types of towers used and foundations at each locations etc.
- n) Set of all approved foundation drawings and Bill of Materials of towers.
- o) Soil classification and soil resistance data at each location.
- p) Set of approved drawings of all others materials such as Insulator, Conductor, Hardware's, Accessories Etc.,

## **18.0 MAINTENANCE OF REGISTER FOR SOIL CLASSIFICATION:**

**18.1** The Contractor shall maintain a Register, duly indicating all the details of Type of Soils, Foundations of Station / UG Cable Transmission Line and Mounting Structures, Equipments and Control Room etc. in the following Proforma:

**A. For Sub-Stations**

- a) Date of inspection by Engineer : \_\_\_\_\_
- b) Details of Soil:
  - 1. Type of Surface Soil \_\_\_\_\_
  - 2. Type of Soils encountered at different depths from the Ground Level \_\_\_\_\_
  - 3. Whether Water Table encountered. If so, at what depth from Ground Level \_\_\_\_\_
  - 4. Type of Soil classification for Foundation adopted \_\_\_\_\_
  - 5. Name of Owner's Engineer who Inspected and his Signature. \_\_\_\_\_
- c) Any other information: \_\_\_\_\_

**B. For Transmission Lines.**

- a) **Date of inspection by Engineer** : \_\_\_\_\_
- b) **Location No.** : \_\_\_\_\_
- c) **Type of tower** : \_\_\_\_\_
- d) **Details of Soil Pit No.** : **1 2 3 4**
- 1.Type of surface soil**
- 2.Type of soils en countered at different depths from the ground level** : \_\_\_\_\_
- 3. Whether water table encountered. If so at what depth from ground Level.** : \_\_\_\_\_
- 4. Type of soil classification for Foundation adopted** : \_\_\_\_\_
- 5. Name of Corporation Engineer who Inspected and his signature.** : \_\_\_\_\_
- 6. Name of Corporation Engineer who Checked the block levels for tower protection works and signature.** : \_\_\_\_\_
- e) **Any other information** : \_\_\_\_\_

Name and Designation of Inspecting Engineer

Signature of Contractor

**18.2** The extract of this Register shall be sent to the Owner once a Month and two bound copies at the end of the Contract along with other Documents.

**19.0 CERTIFICATE REGARDING ACCEPTANCE OF IMPORTANT CONDITIONS:**

**19.1** It is brought to the specific Notice of the Bidders that they are not permitted to take any deviations whatsoever to the following Conditions:

a) **Terms of Payment:**

Clause 34.0 of Section-III, General Conditions of Contract-GCC, Volume-I and Clause 8.0 of Section -V, Special Conditions of Contract-SCC, Volume-I.

b) **Bid Security /EMD:**

Clause 22.0, Section -II, Instruction to Bidder-ITB, Volume-I.

c) **Contract Performance Guarantee.**

Clause 39.0, Section—II, Instruction to Bidder-ITB, Volume-I.

d) **Penalties for Delay.**

Clause 14.0 Section -III, General Conditions of Contract-GCC, Volume-I and Clause 13.0 of Section -V, Special Conditions of Contract-SCC, Volume-I.

e) **Price basis**

Clause 13.0 & 15.0, Section-II, Instruction to Bidder-ITB, Volume-I.

f) **Guarantee.**

Clause 15.0 Section-III, General Conditions of Contract-GCC, Volume-I.

g) **Work Schedule.**

Clause 10.0 Section -V, Special Conditions of Contract-SCC, Volume-I.

h) **Taxes and Duties:**

Clause 14.0 Section-II, Instruction to Bidder-ITB, Volume-I

**19.2** Bidders shall be required to furnish a Certificate in Format enclosed at **Annexure-I** for acceptance of Important Conditions mentioned in 19.1 above in a separate envelope containing Bid Security.

**20.0 GENERAL INFORMATION:**

**20.1** The requirements stated in and Schedule/ Annexures appended to the Conditions of Contract, Bid Proposal Sheets, Technical Specifications and Exhibits/ Enclosures shall apply to and shall be considered as a part of this Section as if bound together

**20.2** The Design and Workmanship shall be in accordance with best Engineering Practices to ensure Satisfactory Performance throughout the service life of the Equipment.

**20.3** In case of discrepancy between the Conditions specified in General Conditions of Contract (GCC) and this Section (SCC), the stipulations specified in this Section (SCC) shall prevail.

**21.0 GUARANTEES, PENALTIES FOR NON- PERFORMANCE**

21.1 The bidder shall guarantee that the equipment offered shall meet the rating and performance requirements stipulated for various equipments covered in this specification / **GTP offered and accepted and also in the techno-commercial sheets submitted and accepted by the owner.** The bidder shall also furnish a declaration in the manner prescribed and included in the relevant schedule of Bid form & price Schedules for guarantees which shall attract levy of **Penalty** for non-performance.

21.2 If the guarantees are not established at factory tests, then the owner at his discretion may reject or accept the equipment after assessing the **Penalties** as per table below in Clause 21.4 against the Contractor and such amounts shall be deducted from the Contract Price or otherwise recovered from the Contract.

21.3 In case of Power Transformer & L.T. Transformer, the guaranteed loss at rated voltage for each equipment shall be corrected in accordance with IEC-289 & IEC-76 by multiplication with square of the ratio between measured current (at rated voltage) and rated current for the purpose of comparison of guaranteed losses with measured losses for levy of **Penalties**. However, the equipment under no circumstances shall be accepted if the measured losses are more than + **10%** of the guaranteed losses at rated voltage quoted by the bidder.

**21.4 Differential Price Factors and Evaluation:**

a) The factors and the respective Indian Rupees Value per unit of differential loss for the purpose of calculation of differential price for the bid shall be as stipulated below:

Equipment	Parameter to be taken for applying differential price element (F)	Value of F in Indian Rupees per unit of parameter differential
1. 100MVA, 220/110kV or 150/100MVA, 220/66kV or 20MVA, 110/33-11kV or 20MVA, 66/11kV or 31.5MVA, 66/11kV Power Transformers	Differential copper loss(KW) Differential iron loss(KW) Differential cooler loss(KW)	Rs.1,27,000/- per KW Rs.2,93,000/- per KW Rs.1,17,000/- per KW
2. 10MVA, 110/33-11kV	Differential copper	Rs.1,27,000/- per KW

or 8/12.5MVA, 66/11kV power transformers.	loss(KW) Differential iron loss(KW)	Rs.2,93,000/- per KW
3. L.T Transformer	Differential copper loss(KW) Differential iron loss(KW)	Rs.1,27,000/- per KW Rs.2,93,000/- per KW

- b) The best parameter of loss quoted at rated voltage, rated frequency, rated current and at 75deg.C for each equipment by any technical responsive bidder shall be taken as basis and that quoted by the particular bidder shall be used to arrive at differential price to be applied for the bid.