



شركة توزيع الكهرباء  
Electricity Distribution Co.

THE HASHEMITE KINGDOM OF JORDAN  
ELECTRICITY DISTRIBUTION COMPANY (EDCO)

**Tender No.( 20/2024 )**

توريد وصلات ضغط متوسط 33&11 ك.ف  
نحاس وألمنيوم

**Tenderer:**

- Name: \_\_\_\_\_
- Address: \_\_\_\_\_
- Telephone/ Cellular: \_\_\_\_\_
- Fax: \_\_\_\_\_
- Website: \_\_\_\_\_
- E-Mail: \_\_\_\_\_
- Contact Person: \_\_\_\_\_

**Director General**

**Electricity Distribution Company (EDCO)**

**P.O. BOX: 830878.**

**Amman - 11183 - Jordan.**

**The Hashemite Kingdom of Jordan.**

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## **INVITATION TO TENDER**

**(20/2024)**

**Dear Sir,**

You are kindly requested to tender for the supply of the below mentioned materials as per the quantities and technical specifications enclosed herewith, by filling in the schedules, signing the form of tender, and forwarding the complete tender documents to the attention of **EDCO-Director General** addressed as seen on the cover page, to be **received not later than 2: 00 pm (local time) ( 1/ 5 /2024)**.

All bids must be accompanied with a bid bond of a value not less than **5%** of the highest alternative tender price, otherwise your tender will not be considered. The bid bond shall be enclosed in the same envelope of the tender and must be delivered to the above office **not later than 2:00 pm (local time) ( 1/5 /2024)**.

- **The winning bidders/bidder shall bear the announcement costs in the local newspapers, no matter how often the announcement has been posted.**

## **GENERAL CONDITIONS**

- The below are general conditions of contract for the supply and delivery of plant and materials based on United Nations economic commission for Europe publication ref.: me/ 188 Geneva. March, 1953 And/or according to FIDIC 1999 if there is a constructions works.

### **1. Preamble**

1.1. These General Conditions shall apply, save as varied by express agreement accepted in writing by both parties.

### **1.2. Definition of Terms:**

The "**Purchaser**" shall mean "**ELECTRICITY DISTRIBUTION COMPANY.**" Hereinafter called "**EDCO**", and shall include **EDCOS** legal personal representatives and duly appointed engineers. The "**Engineer**" shall mean ". **ELECTRICITY DISTRIBUTION COMPANY** " or persons for the time being or from time to time duly appointed in writing by the purchaser to act as Engineer for the purpose of the contract.

The words "approved" and "approval" where used in these conditions or in the specification shall mean "**approved by**" and "**approval of**" the purchaser respectively. The "Vendor" shall mean the "Contractor" who's tender has been accepted by the purchaser and shall include the **Vendor's**. (Contractor's) legal personal representatives, successors and permitted assigns, "**F.O.B. Price**" shall mean the cost of the equipment delivered free on board the ship or truck or aircraft, all port charges and handling charges (also heavy lift if applicable) included .

The contractor must insure the material against all risks from the time it leaves the works until it is placed F.O.B "**CFR price**" shall mean F.O.B. price plus freight including unloading at the port of destination. All Marine Insurance will be affected by the purchaser.

**NOTE:-**The contractor must provide full details of the material to be shipped in good time for **EDCO** to arrange for Marine Insurance before the material is actually shipped.

## **2. Formation of Contract**

- 2.1. The contract shall be deemed to have been entered into when the purchaser has sent an acceptance in writing before the time set in the tender for acceptance or any such later date extended by the tenderer at the request of the purchaser.
- 2.2. Notwithstanding that the contract and correspondence in connection with the contract shall be in the English language, the contract shall be and be deemed to be a Jordan contract and shall accordingly be governed by and construed according to the laws for the time being in force in the Hashemite Kingdom of Jordan.
- 2.3. **Power to Vary The Work:** no alternations, amendments, omissions, additions, suspensions, or variations of the work, (hereinafter referred to as "variations") under the contract as shown by the contract drawings or the specification shall be made by the contractor except as directed in writing by the purchaser, but the purchaser shall have full power, subject to the provision hereinafter contained, from time to time during the execution of the contract by notice in writing to instruct the contractor to make such variation without prejudice to the contract and the contractor shall carry out such variations, and be bound by the same conditions, as far as applicable, as though they said variations occurred in the specification. If any suggested variations would, in the opinion of the contractor, if carried out, prevent him from fulfilling any of his obligations or guarantees under the contract, he shall notify the purchaser thereof in writing, and the purchaser shall decide forthwith whether or not the same shall be carried out, and if the purchaser confirms his instructions, the contractor's obligations and guarantee shall be modified to such an extent as may be justified. The difference in cost, if any, occasioned by any such variations, shall be added to or deducted from the contract price as the case may require. The amount of such difference, if any, shall be ascertained and determined in accordance with the rates specified in the schedule of prices so far as the same may be applicable, and where the rates are not contained in the said Schedule, or are not applicable they shall be settled by the purchaser and the contractor jointly.

But the purchaser shall not become liable for the payment of any charge in respect of any such variations, unless the instruction for the

performance of the same shall have been given in writing by him. In the event of the purchaser requiring any variation, such reasonable a proper notice shall be given to the contractor as will enable him to make his arrangements accordingly, and in cases where goods or materials are already prepared, or any designs, drawings, or patterns made or work done that requires to be altered a reasonable sum in respect thereof shall be allowed by the purchaser. Provided that no such variations shall, except with consent in writing of the contractor, be such as will involve an increase or decrease of the total price payable under the contract by more than 25 percent thereof. The power given to the purchaser to make any alteration, amendment, omission, addition or variation to, from or in any part of the works shall include power to vary from time to time the date for the completion of the works or any part thereof, **also the purchaser shall have the absolute right to increase the quantities in such manner that the increment does not exceed the amount of 25% of the total price payable under the contract, however; the same prices awarded and any other relevant conditions shall remain the same for this purpose. This right is valid during the delivery period of the ordered material, implementation of works, or (90) days from the date of the letter of award, which is come later.**

**2.4. Precedence:** In the event of any discrepancy or contradiction between the provisions of the conditions of contract and of the specification, the conditions of contract shall take precedence. Furthermore in case of discrepancy between unit and total prices then unit price will be considered.

**2.5. Prices:** the tender calls for firm prices, unless; otherwise mentioned in the special requirements schedule.

### **3. Drawings and Descriptive Documents**

**3.1.** The weights, dimensions, capacities, prices, performance rating and other data included in catalogues, prospectuses, circulars, advertisement, illustrated matter and price lists constitute an approximate guide. These data shall not be binding save to the extent that they are by reference expressly included in the contract.

**3.2.** Any drawings or technical documents intended for use in the construction of the material or of part thereof and submitted to the purchaser prior or

subsequent to the formation of the contract remain the exclusive property of the Vendor. They may not, without the Vendor's consent, be utilized by the purchaser or copied, reproduced, transmitted or communicated to a third party. Provided, however, that the said plans and documents shall be the property of the purchaser.

- a. If it is expressly so agreed, or
- b. If they are referable to a separate preliminary development contract on which no actual construction was to be performed and in which the property of the Vendor in the said plans and documents was not reserved.

- 3.3. Any drawings or technical documents intended for use in the construction of the material or of part thereof and submitted to the Vendor by the Purchaser prior or subsequent to the formation of the contract remain the exclusive property of the Purchaser. They may not, without his consent be utilized by the Vendor or copied, reproduced, transmitted or communicated to a third party.
- 3.4. The Vendor shall, if required by the purchaser, furnish free of charge to the purchaser at the commencement of the Guarantee Period, as defined in clause 9, information and drawings other than manufacturing drawings of the material in sufficient detail to enable the purchaser to carry out the erection, commissioning, operation and maintenance (including running repairs) of all parts of the material. Such information and drawings shall be the property of the purchaser and the restrictions on their use set out in paragraph 2 hereof shall not apply thereto. Provided that if the Vendor so stipulates, they shall remain confidential.

#### **4. Packing of the materials and shipping marks**

- 4.1. All materials, equipment and goods shall be very well packed, in seaworthy containers and/or wooden cases, etc. These should protect the material during shipping, handling, unloading for a reasonable period of storage at Aqaba and latter storage at EDCO stores.
- 4.2. Packing for indoor materials should be done in such manner as to adequately ensure no ingress of moisture, during the shipping and storage periods.

- 4.3. Packing of fragile equipment (e.g. including instruments and porcelain) should be done in a way which ensures a reasonable resistance to impact breakage during transport.
- 4.4. Packing shall in general be adequate and in compliance with the best international practice.
- 4.5. A descriptive and fully itemized list shall be prepared for the contents of each packing case. A copy of this list shall be placed in a waterproof envelope under a metal or other suitable plate and securely fastened to the outside of one end of the case. And its position adequately indicated by stenciling on the case. Where appropriate drawing showing the erection marking of the items concerned shall be placed inside the case.
- 4.6. **EDCO** will supply the successful tenderer with a drawing of its shipping mark for utilization.
- 4.7. All packing cases, crates, barrels and drums shall remain the property of the purchaser.

## 5. **Inspection and Tests**

All inspections and tests of the Plant and materials shall be performed to the extent and in the manner as stipulated in the Standards specified. Type test certificates shall be submitted for all important items supplied. They shall contain all major technical particulars which are mentioned in the Technical Data Sheets.

Routine test certificates showing the results of all tests performed on the individual Plant and materials shall be furnished to the Purchaser before dispatch of such equipment. The Purchaser reserves the right to have certain tests performed in the presence of his representative or an independent testing authority. A suitable program for such inspections and tests shall be agreed upon and adequate notice (at least 21 days) shall be given when the Plant and/or materials are ready for inspection or test and every facility shall provide by the Contractor to enable the Purchaser to carry out the necessary inspections and tests. The performance of any such inspections and tests in the presence of the Purchaser and/or an independent testing authority does not relieve the Contractor from his Contractual obligations.



## **5.1 General Inspection Requirement**

The whole of the material by the contract will be subject to inspection and testing by the engineer during manufacture and on completion. The approval of the engineer or the passing of any such inspection or test will not, however; prejudice the right of the purchaser to reject the material if it fails to comply with the specification when erected or to give complete satisfaction in service. The costs of all tests and inspection shall be borne by the contractor and shall be deemed to be included in the contract price. Before any material is packed or dispatched from the main or sub-contractor's works, all tests called for are to have been successfully carried out in presence of the engineer. Adequate notice shall be given when the material is ready for inspection or test and every facility shall be provided by the contractor and his inspection and his sub-contractors to enable the Engineer to carry out the necessary inspections and tests.

Triplicate copies of all principal test records and test certificates shall be supplied to the Engineer for all tests carried out in accordance with the provisions of the contract.

- 5.1.1** If expressly agreed in the contract, the purchaser shall be entitled to have the quality of the materials used and the parts of the instruments, both during manufacture and when completed, inspected and checked by his authorized representatives.

Such inspection and checking shall be carried out at the place of manufacture during normal working hours after agreement with the Vendor as to date and time.

- 5.1.2** If as a result of such inspection and checking the purchaser shall be of the opinion that any materials or parts are defective or not in accordance with the contract, he shall state in writing his objections and the reasons therefore.

- 5.1.3 Sub-Contractors:** Within two months of acceptance of the tenders the contractor shall forward to the engineer a list of all sub-orders placed or intended. The contractor shall submit three copies of all sub-orders or selected by the engineer for progress or inspection. One copy

of all drawings referred to in the sub-order is to be submitted unless otherwise agreed by the engineer. The drawings and sub-orders submitted to the engineer will cover all major components which are subject to electrical and mechanical pressure or stress when the material is in operation and also auxiliaries and stores which will be dispatched to site direct from the sub-contractor's work. For the purpose of this clause inter-works orders are to be treated as sub-order. Sub-orders are to include a statement advising the sub-contractor that the items being order will be subject to inspection and test by the Engineer. It is important that all copies of such orders are clearly marked with the main contractor's name and the following reference:

**ELECTRICITY DISTRIBUTION COMPANY. CONTRACT No. (20/2024)**

Sub-Contractors are to comply with all the applicable requirements of this specification. Orders issued by the sub-contractor are also to include the main contractor's reference on their sub-order in addition to the above-mentioned heading.

## 5.2 **TESTS:**

All tests should meet the requirements of latest international standard mentioned in the contract or any relevant standard

5.2.1 Acceptance tests will be carried out and, unless otherwise agreed, will be made at the Vendor's works and during normal working hours. If the technical requirements of the tests are not specified in the contract, the tests will be carried out in accordance with the general practice obtaining in the appropriate branch of the industry in the country where the material is manufactured.

5.2.2 The Vendor shall give to the purchaser sufficient notice of the tests to permit the purchaser's representatives to attend. If the purchaser is not represented at the tests, the tests report shall be communicated by the Vendor to the purchaser and shall be accepted as accurate by the purchaser.

5.2.3 If on any test (other than a test site, where test on site are provided for in the contract) the material shall be found to be defective or not in accordance with the contract, the Vendor shall with all speed make good the defect or ensure that the plant complies with the contract. Thereafter, if the purchaser so requires, the test shall be repeated.

5.2.4 Unless otherwise agreed, the Vendor shall bear all the expenses of tests carried out in his works.

5.2.5 If the contract provides for tests on site, the terms and conditions governing such tests shall be such as may be specially agreed between the parties

5.2.6 **Material Tests:** The contractor shall provide test prices as required by the engineer to enable him to determine the quality of the material supplied free of charge and any cost of the tests shall be borne by the contractor. If any test pieces fails to comply with the requirements of the appropriate specifications for the material in question, the engineer may reject the whole of the material represented by that piece, the contractor's designers and

Metallurgists will be consulted before any material is so rejected. In the event of the engineer being furnished with the certified particulars of the tests which have been carried out for the

contractor by the suppliers of the material, he may, at his own discretion, dispense with the previously mentioned tests entirely.

**5.2.7 Tests at Manufacture's Works:** Works tests shall include all routine, electrical, mechanical and hydraulic tests in accordance with the relevant IEC standard or other standard may be approved except where departures there from and modifications thereto are embodied in this specification. For material not covered by an IEC or British standard or specifically mentioned in this specification the tests shall be agreed with the Engineer. After satisfactory completion of the witnessed tests at the works, the material shall be submitted for the engineer's approval preparatory to shipping. No item of material is to be dispatched to site until the Engineer has given his approval in writing.

**5.2.8 Test Certificates:** Triplicate sets of all principal test records test certificates and performance curves shall be supplied for all tests carried out in accordance with the provisions of this contract. These test records, certificates and performance curves shall be supplied for all tests, whether or not they have been witnessed by the engineer. The information given in such test certificates and curves shall be sufficient to identify the material or equipment to which the certificates refers and should also bear the contract reference and heading as given in clause 7.2 of this section.

**5.2.9 Rejection of the materials:** If Any item of material or component which fails comply with the requirements of this specification in any respect whatsoever at any stage of manufacture, test, erection or on completion at site may be rejected by the engineer either in whole or in part as he considers necessary, and after adjustment or modification if so directed by the Engineer, the contractor shall submit the item for the item for the further inspection and / or test.

In the event defects of such a nature that the requirements of this specification cannot be fulfilled by adjustment or modification shall be replaced by the contractor, at his own expense, to the entire satisfaction of the engineer.

### **5.3 Maintenance:**

The contractor must submitted maintenance bond equal to (5%) of the Order amount to guarantee the efficient and good working of the material supplied under the contract for a period of 12 months (Gregorian) from the date of delivery of the material to EDCO SORES in accordance with the General conditions of contract.

## **6. Passing of Risk**

Save as provided in paragraph 7.6, the time at which the risk shall pass shall be fixed in accordance with the International Rules for the Interpretation of Trade Terms (Incoterms) of the International Chamber of Commerce in force at the date of the formation of the contract.

## **7. Delivery:**

7.1. Unless otherwise agreed the delivery period shall run from the latest of the following dates:

- a. The date of the formation of the contract as defined in clause 2.
- b. The date on which the Vendor receives notice of the issue of a valid import license where such is necessary for the execution of the contract.
- c. The date of the receipt by the Vendor of such payment in advance of manufacture as stipulated in the contract.

7.2. Should delay in delivery be caused by any of the circumstances mentioned in clause 10 or by an act or omission of the purchaser and whether such cause occur before or after the time or extended time for delivery, they shall be granted subject to the provisions of paragraph 5 hereof such extension of the delivery period as is reasonable having regard to all the circumstances of the case.

7.3. If a fixed time for delivery is provided for in the contract and the Vendor fails to deliver within such time or any extension thereof granted under paragraph 2 hereof, the purchaser shall be entitled, on giving to the Vendor within a reasonable time notice in writing, to

**Claim a deduction of the price payable under the contract. Such**

**deduction shall be calculated at the rate of one half of one percent (0.5%) of that part of the price payable under the contract which is properly attributable to such portion of the plant as cannot in consequence of the said failure be put to the use intended for each complete week of delay commencing on the due date of delivery, but shall not exceed a maximum percentage deduction of ten percent.** Such deduction shall be allowed when a payment becomes due on or after delivery. Save as provided in paragraph 5 hereof, such deduction of price shall be to the exclusion of any other remedy of the purchaser in respect of the Vendor's failure to deliver as aforesaid.

- 7.4. If the time for delivery mentioned in the contract is an estimate only, either party may after the expiration of two thirds of such estimated time require the other party in writing to agree a fixed time. Where no time for delivery is mentioned in the contract, this course shall be open to either party after the expiration of six months from the formation of the contract. If in either case the parties fail to agree, either party may have recourse to arbitration, in accordance with the provisions of clause 13, to determine a reasonable time for delivery and the time so determined shall be deemed to be the fixed time for delivery provided for in the contract and paragraph 3 hereof shall apply accordingly.
- 7.5. If any portion of material in respect of which the purchaser has become entitled to the maximum deduction provided for by paragraph 3 hereof, or in respect of which he would have been so entitled had he given the notice referred to therein, remains undelivered, the purchaser may by notice in writing to the Vendor require him to deliver and by such last mentioned notice fix a final time for delivery which shall be reasonable taking into account such delay as has already occurred.
- 7.6. If for any reason whatever the Vendor fails within such time to do everything that he must do to effect delivery, the purchaser shall be entitled by notice in writing to the Vendor, and without requiring the consent of any court, to terminate the contract in respect of such portion of the material and thereupon to recover from the Vendor any amount not exceeding that part of the price payable under the Contract which is properly attributable to such portion of the material as could not in

consequence of the Vendor's failure be put to the use intended.

- 7.7. If the purchaser fails to accept delivery on due date, he shall nevertheless make any payment conditional on delivery as if the material had been delivered. The Vendor shall arrange for the storage of the material at the risk and cost of the purchaser. If required by the purchaser, the Vendor shall insure the material at the cost of the purchaser. Provided that if the delay in accepting delivery is due to one of the circumstances mentioned in clause 10 and the Vendor is in a position to store it in his premises without prejudice to his business, the cost of storing the material shall not be borne by the purchaser.
- 7.8. Unless the failure of the purchaser is due to any of the circumstances mentioned in clause 10, the Vendor may require the purchaser by notice in writing to accept delivery within reasonable time. If the purchaser fails for any reason whatever to do so within such time, the Vendor shall be entitled by notice in writing to the purchaser, and without requiring the consent of any court, to terminate the contract in respect of such portion of the material as is by reason of the failure of the purchaser aforesaid not delivered and thereupon to recover from the purchaser any loss, suffered by reason of such failure up to an amount not exceeding the value of the material, the delivery of which has not been accepted.
- 7.9. If the winner contractor in the tender, refrained from supplying the material or execution of works which were awarded for him or failed to execute the contract on the limited time, or failed to replace the rejected material or works in another applying materials on his account, the tender committee which took its previous design to award the tender for this supplier has the right to confiscate the bid bond or the performance bond or part of them as commensurate with the material & works value.
- 7.10. If a refrained bidder to comply with his offer or did not complete the necessary contract and signing of the purchase order and did not submit the performance bond within 15 days from the date of the order, the tender committee has the right to confiscate the bid bond.

## **Force Majeure**

- Notwithstanding the provisions of clauses 7, the supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.
- For purposes of this clause, "Force Majeure" means an event beyond the control the supplier not involving the supplier's fault or negligence. Such events may include, but are not restricted to, acts to the purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and fright embargoes.
- If a Force Majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall all reasonable alternative means for performance not prevented by the Force Majeure event.



## 8. Payment:

### 8.1. **Terms of Payment:**

Subject to any deduction which the purchaser may be authorized to make under the contract or subject to any additions or deductions provided for under clause 2-3 above, The Company (EDCO) prefers to deal with the supplier on an **open account basis**, and the payment to be made as the following:

a. (10%) of the CFR contract value (as shown by the supplier's invoice/contractor invoice) on receipt of the following **legalized shipping** documents by EDCO:

- (Original Invoice + five copies)
- (Certificate of origin + five copies)
- (Bill of lading 3-negotiable + 5 non-negotiable)
- (Test certificate (where applicable) + 6 copies).
- 

**The original shipping documents must arrive to EDCO or to our bank before (5) days at least prior the materials arrival.**

b. (80%) of the invoice value to be paid within 60 days of Receipt of EDCO's certificate of acceptance, Receipt of goods at EDCO stores.

c. (10%) of the contract value within 60 days from expiration of the guarantee period.

If the bidder insists on L/C (letter of credit) as a method of payment, all L/C charges will be on his own expense, in all respects all banking charges are at vendor account, the terms will be as follows:

a. The L/C will be confirmed and irrevocable but has to be **acceptance** L/C, and the supplier has to send the following **legalized shipping** documents:

- (Original Invoice + five copies),
- (Certificate of origin + five copies),
- (Bill of lading 3-negotiable + 5 non-negotiable),
- (Test certificate (where applicable) + 6 copies).
- (Release of shipment (where applicable) – fax copy is accepted).

b. Payment will be released after submitting EDCO's certificate of acceptance to the bank within (30) days after receipt of goods at EDCO's stores.

In the case of a Jordanian Supplier (materials are delivered from local companies), payment will be made through presentation of the invoice as following:

- a. (90%) of the contract value to be paid within 30 days from date of receipt and acceptance of the materials at our EDCO stores.
- b. (10%) of the contract value within 30 days from expiration of the guarantee period (one year from the date of receipt and acceptance of the materials at EDCO stores)

**NOTE:**

- In case the supplier has better terms of payment than those mentioned above the purchaser will discuss such terms.
- Any deviation on the payment methods mentioned above, will negatively affect the evaluation of tenderer's offer.
- In case the payment by acceptance L/C, The performance bond should be valid for a period expiring at least one year after receipt of the last consignment in EDCO stores.
- EDCO has the right to request an additional bank guarantee equal to (5%) five percent to cover the guarantee period.

**Currency of Payment:** The contract price will normally be paid in the currency or currencies in which the price has been stated. The purchaser, however, reserves the right to make payments in the currencies of the countries of origin of goods and services at the exchange rates applicable at the time of payment of the contract price.

**Shipping documents shall comprise the following documents: -**

- 1) **Invoices** – one original, five copies.
- 2) **Shipping specification (packing list)** – six copies.
- 3) **Certificate of origin** – one original, five copies.
- 4) **Bill of lading** – 3 three negotiable, five non-negotiable.
- 5) **Test certificates (where applicable)** – six copies.
- 6) **Release of shipment (where applicable)** – fax copy is accepted.
- 7) **EDCO's Certificate of Acceptance** - fax copy is accepted

- 8.2. Any advance payments made by the Purchaser are payments on account and do not constitute a deposit, the abandonment of which would entitle either party to terminate the Contract.
- 8.3. If delivery has been made before payment of the whole sum payable under the Contract, plant delivered shall, to the extent permitted by the law of the country where the plant is situated after delivery, remain the property of the Vendor until such payment has been effected. If such law does not permit the Vendor to retain the property in the plant, the Vendor shall be entitled to the benefit of such other rights in respect thereof as such law permits him to retain. The Purchaser shall give the Vendor every assistance in taking any measures required to protect the Vendor's right of property or such other rights as aforesaid.
- 8.4. A payment conditional on the fulfillment of an obligation by the Vendor shall not be due until such obligation has been fulfilled, unless the failure of the Vendor is due to an act or omission of the Purchaser.
- 8.5. If the Purchaser delays in making any payment, the Vendor may postpone the fulfillment of his own obligations until such payment is made, unless the failure of the Purchaser is due to an act or omission of the Vendor.
- 8.6. If delay by the Purchaser in making any payment is due to one of the circumstances mentioned in clause 10, the Vendor shall not be entitled to any interest on the sum due.
- 8.7. Save as aforesaid, if the Purchaser delays in making any payment, the Vendor shall on giving to the Purchaser within a reasonable time notice in writing be entitled, and without requiring the consent of any Court, to terminate the Contract and thereupon to recover from the Purchaser the amount of his loss up to the value of the plant, the payment for which has been unreasonably delayed.

## 9. **Guarantee:**

- 9.1. Subject as hereinafter set out; the Vendor undertakes to remedy any defect resulting from faulty design, materials or workmanship.
- 9.2. This liability is limited to defects which appear during the period (Hereinafter called the Guarantee Period) of **fifteen** months from date of dispatch ex-works or twelve months from the date of accepting the Materials at EDCO stores whichever shall be later.

Or in case of turn key projects eighteen months from the date of setting to work.

- 9.3. In fixing this period due account has been taken of the time normally required for transport as contemplated in the contract.
- 9.4. In respect of such parts (whether of the Vendor's own manufacture or not) of the material as are expressly mentioned in the contract, the Guarantee Period shall be such other period (if any) as is specified in respect of each of such parts.
- 9.5. The Guarantee period is based on the continuous use of the plant in services for 24 hours every day.
- 9.6. A fresh Guarantee Period equal to that stated in paragraph 2 hereof shall apply, under the same terms and conditions as those applicable to the original material, to parts supplied in replacement of defective parts or to parts renewed in pursuance of this clause. This provision shall not apply to the remaining parts of material, the Guarantee Period of which shall be extended only by a period equal to the period during which the material is out of action as result of a defect covered by this clause.
- 9.7. In order to be able to avail himself of his rights under this clause the purchaser shall notify the Vendor in writing without delay of any defects that have appeared and shall give him every opportunity of inspecting and remedying them.
- 9.8. On receipt of such notification the Vendor shall remedy the defect forthwith and at his own expense. Save where the nature of the defect is such that it is appropriate to effect repairs on site, the purchaser shall return to the Vendor any part in which a defect covered by this clause has appeared, for repair or replacement by the Vendor, and in such case the delivery to the purchaser of such part properly repaired or a part in replacement thereof shall be deemed to be a fulfillment by the Vendor of his obligations under this paragraph in respect of such defective part.
- 9.9. The Vendor shall bear all the costs and risks of the transport of defective parts or equipment's and their replacements.
- 9.10. Where, in pursuance of paragraph 9 hereof, repairs are required to be

effected on site, the conditions covering the attendance of the Vendor's representatives on site shall be such as may be specially agreed between the parties.

- 9.11. Defective parts replaced according to this clause shall be placed at the disposal of the Vendor.
- 9.12. If the Vendor refuses to fulfill his obligations under this clause or fails to proceed with due diligence after being required so to do, the purchaser may proceed to do the necessary work at the Vendor's risk and expense, provided that he does so in a reasonable manner.
- 9.13. The Vendor's liability does not apply to defects arising out of materials provided, or out of a design stipulated, by the purchaser.
- 9.14. The Vendor's liability shall apply only to defect that appears under the conditions of operation provided for by the contract and under proper use. It does not cover defects due to causes arising after the risk in the material has passed in accordance with clause 6. In particular it does not cover defects arising from the purchaser's faulty maintenance or erection, or from alterations carried out without the Vendor's consent in writing, or from repairs carried out improperly by the purchaser, nor does it cover normal deterioration.
- 9.15. Save as in this clause expresses, the Vendor shall be under no liability in respect of defects after the risk in the material has passed in accordance with clause 6, even if such defects are due to causes existing before the risk so passed. It is expressly agreed that the purchaser shall have no claim in respect of personal injury or of damage to property not the subject matter of the contract or of loss of profit unless it is shown from the circumstances of the case that the Vendor has been guilty of gross misconduct.

**9.16.** All defective and/ or not complying materials shall be

Evacuated from

EDCO stores within a maximum of one month by the vender from the date of notifying him. All costs and expenses of transportation shall be borne by the vendor. Unless otherwise agreed.

Otherwise; EDCO has the right to deal with the defective materials in a proper way.

**9.17.** Gross misconduct "does not comprise any and every lack of proper care or skill, but means an act or omission on the part of the Vendor implying either a failure to pay due regard to serious consequences which a conscientious contractor would normally foresee as likely to ensue, or a deliberate disregard of any consequences of such act or omission.

## **10. Relief**

**10.1.** The following shall be considered as cases of relief if they intervene after the formation of the contract and impede its performance: industrial disputes, and any other circumstances (e.g. fire, mobilization, requisition, embargo, currency restrictions, insurrection, shortage of transport, general shortage of materials and restrictions in the use of power) when such other circumstances are beyond the control of the parties.

**10.2.** The party wishing to claim relief by reason of any of the said circumstances shall notify the other party in writing without delay on the intervention and on the cessation thereof.

**10.3.** The effects of the said circumstances so far as they affect the timely performance of their obligation by the parties, are defined in clauses 7 and 8. Save as provided in paragraph 7.5, 7.7, and 8.7, if by reason of any of the said circumstances, the performance of the contract within a reasonable time becomes impossible, either party shall be entitled to terminate the contract by notice in writing to the other part without requiring the consent of any court.

**10.4.** If the contract is terminated in accordance with paragraph 3 hereof, the division of the expenses incurred in respect of the contract shall be determined by agreement between the parties.

**10.5.** In default of agreement it shall be determined by the arbitrator which

party has been prevented from performing his obligations and that party shall bear the whole of the said expenses.

Where the purchaser is required to bear the whole of the expenses and has before termination of the contract paid to the Vendor more than the amount of the Vendor's expenses, the purchaser shall be entitled to recover the excess. If the arbitrator determines that both parties have been prevented from performing their obligation, he shall apportion the said expenses between the parties in such manner as to him seems fair and reasonable, having regard to all the circumstances of the case.

- 10.6. For the purposes of this clause "expenses" means actual out of pocket expenses reasonably incurred, after both parties shall have mitigated their losses as far as possible. Provided that as respects material delivered to the purchaser the Vendor's expenses shall be deemed to be that part of the price payable under the contract which is properly attributable thereto.

#### **11. Limitation of Damages:**

- 11.1. Where either party is liable in damages to the other these shall not exceed the damage which the party in default could reasonably have foreseen at the time of the formation of the contract.
- 11.2. The party who sets up a breach of the contract shall be under a duty to take all necessary measures to mitigate the loss which has occurred provided that he can do so without unreasonable inconvenience or cost. Should he fail to do so, the party guilty of the breach may claim a reduction in the damages.

#### **12. Rights at Termination:**

Termination of the contract from whatever cause arising shall be without prejudice to the rights of the parties accrued under the contract up to the time of termination.

#### **Arbitration and Law Applicable:**

- 13.1. If Any dispute, question or controversy shall arise between the purchaser and the contractor concerning this contract the matter in dispute shall be referred to an arbitration committee composed of three (3) arbitrators

- 13.2.** One arbitrator shall be nominated by the purchaser and one by the contractor, and the third arbitrator shall be appointed by both parties.
- 13.3.** If either party fails to appoint his arbitrator within one month of the appointment of the arbitrator by the other party, or if the two parties fail to agree on the third arbitrator within two months of the date of the request to refer the dispute to arbitration, such arbitrator shall be appointed by the president of the highest court in Jordan at the request of either or both parties.
- 13.4.** The decision of the arbitrators shall be final and binding on both the purchaser and the contractor. Any such reference shall conform to the statutory enactment or regulation governing arbitration as may be in force in Jordan at the time. The assessment of costs incidental to the reference and award respectively shall be at the discretion of the arbitration committee.



## **TENDERING INSTRUCTIONS**

1. The Tender shall be made in one copy of the accompanying form; however, all blanks and schedules shall be filled up in ink, and signed without alteration to the form of tender. If any such alteration were made, or if these Instructions were not fully complied with, the tender may be rejected. The tenderer; however, is at liberty to add any further details that he may deem desirable and, in the event of his so doing, shall print or type such details and annex the added matter to the tender submitted by him. Such additional details shall not be binding upon the purchaser unless they shall be subsequently incorporated in the contract.
2. One copy of the tender, and its accompanying documents, filled up as directed, together with the drawings, catalogs, and relevant documents called for, must be enclosed in a secure envelope endorsed **(Tender for Contract No. (20/2024))**.
3. All correspondences in connection with this tender and all matters accompanying the tender that are relevant to its examination shall be in English language and expressed in metric units.
4. The tender is to be held open for acceptance or rejection for a validity period of (90) days from the time fixed for opening the tenders.
5. Tenders received prior to the time fixed for opening of tenders will be securely kept, unopened. Tenders received after that time will be rejected. The purchaser bears no responsibility for premature opening of tenders not properly addressed or identified.
6. Tenders may be withdrawn by formal request received in writing from the tenderer prior to the time fixed for opening. If for any reason the tender should be withdrawn after the time fixed for opening and before expiry of the said validity period, the purchaser has the right to retain the full value of the tender bond.
7. The successful tenderer shall abide by the commercial and professional regulations as required by the Ministry of Industry & Trade, Engineering Association and other relevant Institutions in Jordan.

8. Tenderers attention is drawn to the action of customs officers in the discharge of their duties. Whereby air parcels are frequently opened In their own interests and in order to preserve the confidential nature of the tender price, tenderers are urged to pay attention to the:
  - a. To dispatch the completed tender document and any covering letter only by Air Mail which should be endorsed and labeled in the manner laid down in paragraph 10 of the Instructions to Tendering.
  - b. Technical literature and the like may reasonably be sent by Air Parcel or Air Freight but since this would then be separated from the actual Tender, each parcel should contain specific evidence identifying the Tender to which the contents refer.
  - c. The purchaser will not consider late or incompletely delivered tenders or literature supporting tenders due to the action of any customs officer.
9. In the event that the intending signatory does not manufacture one or more of the main sections of equipment and materials, then the tender submitted should give evidence to show that all the obligations imposed by the documents on the intending signatory have been fully understood and accepted, where applicable, by the manufacturer(s) to whom it would be intended to sub-contract one or more of the main sections of the equipment and materials.
10. For overseas transport of the contractor and his Sub-contractors, suppliers and manufactures must give priority to Jordan shipping national lines, and to Arab shipping companies and their subsidiaries for the shipping of goods, materials provided such companies ships call at the port of export. The contractor shall also give priority to the Royal Jordanian Airlines for air freight shipment and transport of personnel.
11. Tenderer must submit country of origin and name of manufacturer for the offered goods.
12. The foreign bidders who participate in this tender must submit their bids through a registered local agent or through their registered office in Jordan.
13. For all manufacturers from inside Jordan it is quite essential that they have JQM for their products and the purchaser will have the right to accept or reject their offer if they did not submitted the JQM certificate with their offer.

14. If samples were not re-claimed by the tenderer within one month from date of order all samples shall remain the property of the purchaser.
15. The purchaser will not be responsible for, nor to pay for, any expenses or losses which may be incurred by a tenderer in the preparation of his tender.
16. If the tenderer has any doubt about the meaning of any portion of the General Conditions, Specifications, Drawings, he shall clarify such doubts before submitting his tender, or in case of any further information can be obtained by an application in writing to the director general.
17. Tenderers are particularly directed that the amount entered on the form of tender shall be a fixed price for performing the contract strictly in accordance with the bound document, and shall be the sum total of all the amounts printed into and entered by the tenderer upon the schedule of prices.
18. Tender price shall include all incidental and contingent expenses.
19. The tender shall be accompanied by a tender bond in the form of a Bank Guarantee valid for at least 90 days from the time fixed for opening the tenders or certified check in favor of and payable to the purchaser for a sum of **5% Of Your Offer** \_\_\_\_\_ as a guarantee of good faith. This bond is to be issued by any approved bank in Jordan. The bond will be returned to the unsuccessful tenderer within (90) days from the time fixed for opening the tenders or at such earlier time as a tender shall have been accepted by the purchaser. In the case of the successful tenderer, the bond will, subject to the conditions of contract, be returned as soon as a formal contract agreement and a performance bond have been entered into.
20. The successful tenderer has to submit a performance bond equal to (10%) ten percent of the total amount of the order within (15) days from date of receipt of the order. Any delay will be subject to delay penalty.

If the successful tenderer fails for any reason to submit the required performance bond within (15) days, the purchaser will confiscate the bid bond and the awarding letter will be cancelled too.
21. The performance bond should be valid for a period; expiring at least one month after receipt of the last consignment in EDCO stores.

22. The tenderer shall state in his tender the name or names of the sureties, insurance company, or bank proposed for guaranteeing the performance of the contract.
23. Prices are highly recommended to be on the basis of C&F EDCO STORES. However CFR Aqaba port or Amman customs are also accepted. All prices offered shall be exempted from custom duties, sales taxes, import license fees and any other tariffs.
24. The tenderer may state the tender price in Jordanian Dinars. If however, a portion of the tenderer's expenditure under the contract is expected to be made in countries other than Jordan he may state a corresponding foreign currency portion of the tender price in the currencies of those other countries.
25. Stamp duty and award fees are payable on Jordanian contracts according to Jordanian laws and, after the placing of a contract, it is the contractor's responsibility to purchase legal stamps to the requisite amount depending on the contract value.
26. If after receipt of tenders, the purchaser finds any difference between prices shown on the form of tender in writing and in numerals, then the price shown in writing shall be considered correct by the purchaser and the tenderer. If any discrepancies are found between the total in the price schedule and the total obtained by adding the products of each quantity and its particular rate then, whether the price shown on the form of tender in numerals or in writing corresponds or not, the total obtained by adding the products of the quantities and their particular rates shall be considered by the purchaser and the tenderer as the tender price.
27. Tender evaluation will be consistent with the terms and conditions set forth in the tender document. In addition to the tender price adjusted to correct arithmetical errors, other relevant factors such as the time of completion of delivery or construction, operating costs where applicable, or the efficiency and compatibility of the equipment, the availability of service and spare parts, and reliability of construction methods proposed will be taken into consideration, to the extent and in the manner specified in the tender documents, in determining the evaluated tender most advantageous to the purchaser. For comparison of all tenders, the currency or currencies of the tender price for each tender will be valued in terms of Jordanian Dinars. The

rates of exchange to be used in such valuation will be the selling rates published by the CENTRAL BANK OF JORDAN and applicable to similar transactions, on the day tenders are opened unless there should be a change in the value of the currencies before the award is made. In the latter case, the exchange rates prevailing at the time of the decision to notify the award to the successful tenderer may be used.

28. The purchaser does not bind himself to accept the lowest offers of any tender, nor to assign any reason for the rejection of any tender, nor to purchase the whole of the equipment and materials specified. The purchaser has the right to purchase part of the tender, even if it is only one item from the schedule of rates and prices.
29. The tenderer shall submit with his tender in order of the relevant clauses, a statement of any departures from specifications, or he can fill in the related schedule attached herewith. Notwithstanding any description, drawings, or literature which may be submitted, all details other than those in the statement of departures shall be assumed to be in accordance with the specification.
30. Although IEC standards for workmanship, equipment and materials, have been selected in this specification as a basis of reference, standards and specifications of other countries and recommendations of other international standard organizations will be acceptable provided that they are substantially equivalent to the designated standards and provided

Further that the tenderer submits for approval detailed specification which he proposes to use.

31. References to brand names or catalog numbers, if any, in this specification have been made only for that equipment for which it has been determined that a degree of standardization is necessary to maintain certain essential features. In certain instances such references have also been made for purpose of convenience to specify the requirements. In either case offers of alternative goods which have similar characteristics and provide performance and quality at least equal to those specified are acceptable.
32. Where compliance with a specific standard specification is called for the standard specification used shall be that in force at the time of tender.
33. The Tenderer should submit a type test certificate from independent testing laboratory similar to the Tender materials as an evidence of his capability to

manufacture such materials also to submit a reference list showing his past supply and he should prove that he supplied similar materials to more than one firm and operated for more than 3 years without problems otherwise his offer will not be considered.

34. A nonrefundable fee of (100) JD will be charged for each set comprising one copy of the Tender Documents.

## **TENDER AGREEMENT SUMMARY**

**Tender No. (20/2024)**

**Dear Sir;**

1. Having examined the conditions of Contract, specification and schedule for the above Works, the undersigned, offer to manufacture, supply, work, test, and deliver the said works described in the specification and schedules and in accordance with the said conditions of contract, for the sum of \_\_\_\_\_ or such other sum as may be ascertained in accordance with the said conditions.
2. We agree that this tender shall be held open for acceptance or rejection for the validity period of **(90) days** from the date fixed for opening tenders and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
3. Unless and until a formal agreement is prepared and executed, this tender, together with your written acceptance thereof, shall constitute a binding contract between us.
4. If our tender is accepted, we will deliver to **ELECTRICITY DISTRIBUTION COMPANY**. Within **(15) days** of being called upon to do so a performance bond by bank or insurance company (to be approved in either case by the purchaser) to be jointly and severally bound with us in a sum equal to **10%** of the value of the contract. The form of the performance bond will be as attached hereto. We propose the following Bank or insurance company as surety (or sureties) in this respect:-.....

5. We undertake if our tender is accepted and on receipt of your acceptance to commence and manufacture, works test, and complete for delivery **ex-works** the whole of the Works offered within (——) weeks calculated from the date of **Order Letter Awarding**, and to deliver on the dock at (—— port) - Jordan the whole of the works offered within a further (—— weeks, or to **EDCO stores** within a further (——) weeks.
6. We undertake to insure the materials against all risks from the time they leave the works until they are placed on board ship. We understand that marine insurance will be affected by **ELECTRICITY DISTRIBUTION COMPANY**. And we will provide details of the materials to be shipped in good time for **ELECTRICITY DISTRIBUTION COMPANY** to arrange for the said marine insurance.
7. A guarantee Period will apply to each section of the works of 15 months from the date of dispatch ex-works or 12 months from the date of setting to work whichever shall be later.
8. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this ——— day of / / 2024.

Signature———— in the capacity of————

Duly authorized to sign Tender for and on behalf of ———

ADDRESS ——— OCCUPATION ———

**ELECTRICITY DISTRIBUTION COMPANY.**

**Form of Bid Bond**

**Tender No. (20/2024)**

**Dear Sir,**

We are pleased to inform you that we guarantee  
M/S \_\_\_\_\_for the amount  
of \_\_\_\_\_in order to allow them to submit an offer  
for the due performance of the undertaking and obligation as specified in their  
Tender for Contract No. \_\_\_\_\_This Guarantee shall remain valid for a  
period of **(90)** days from the time fixed for opening the Tenders by  
**ELECTRICITY DISTRIBUTION COMPANY.**

This Guarantee shall be free from any interest and will be extended or paid in cash upon your first request in any or required, without the need for natural warning or judicial proceedings and without any rights to delay, oppose, or stop payment on our part, or on the part of the Tenderer or any of his representatives whomever.

This Guarantee shall be deemed valid until the submittal of a duly executed Performance Bond.

***Signed*** \_\_\_\_\_ ***Bank (Surety)***



**ELECTRICITY DISTRIBUTION COMPANY.**

**Form of Performance Bond**

**Tender No. (20/2024)**

**Dear Sirs,**

At the request of \_\_\_\_\_ bank (the Foreign Bank)  
and on behalf of M/S \_\_\_\_\_  
(Contractor's Name and Address), we \_\_\_\_\_ Bank (the  
Local Bank) issue in your favor our irrevocable and unconditional Performance  
Bond No. \_\_\_\_\_ in the amount of \_\_\_\_\_  
\_\_\_\_\_(In \_\_\_\_\_ words), in this connection we  
\_\_\_\_\_ Bank (the Local Bank) hereby consider  
ourselves responsible forth unconditional payment to you or to your authorized  
representatives of the above sum on your first written demand in whole or in  
part notwithstanding any objections on the part of the above named contractor  
and without any need for natural warning or judicial proceedings.

This Bond will expire on \_\_\_\_\_ and shall be renewed automatically for  
a period of \_\_\_\_\_ months and for consecutive similar periods until it is  
returned by you to us.

***Signed \_\_\_\_\_ Bank (Surety)***

**ELECTRICITY DISTRIBUTION COMPANY.**

**Form of Maintenance Bond**

**Tender No. (20/2024)**

**M/S. ELECTRICITY DISTRIBUTION CO. (EDCO)  
Amman – Jordan**

At the request of \_\_\_\_\_ Bank ( the foreign bank ) and on behalf of M/S : \_\_\_\_\_ ( The Contractor name and address ), we \_\_\_\_\_ Bank (the local bank) issue in your favor our irrevocable and unconditional maintenance bond No.(\_\_\_\_\_ ) in the amount of \_\_\_\_\_ (In words) valid until \_\_\_\_\_ covering \_\_\_\_\_ PCT value of the \_\_\_\_\_ (Contract No. Name), in this connection we the \_\_\_\_\_ Bank (local bank ), hereby consider ourselves responsible for the unconditional payment to you or your authorized representatives of the above sum on your first written demand in whole or in part notwithstanding any objections on the part of the above named Contractor and without any need for notarial warning or judicial proceedings.

This bond will expire on \_\_\_\_\_and shall be renewed automatically for a period of (\_\_\_\_\_) months and for consecutive similar periods until it is returned by you to us.

***Signed \_\_\_\_\_ Bank (Surety)***

## Cable joint and termination accessories for power cable

### 1. General

XLPE cables shall be terminated and jointed with suitable terminating kits and shall be of the blocking type designed that prevents the ingress of moisture from one cable to the next through the through joints.

The Straight through joint kit or termination shall be complete with all accessories, jointing material, insulating stress control and sealing material, lugs, nuts, bolts etc. as well as an instruction booklet Explaining the method of using the kit and it shall be complied with IEC 60502.

The straight through joints should be absolutely impervious to the entry of water. The manufacturer shall use the proven technologies and design to ensure a construction which will prevent entry of water or any other liquid inside the straight through joint and cable.

#### 1.1 General requirements for straight joint and terminations

- Each kit shall be provided with all necessary insulation materials and other accessories, cable lugs must be tinned copper suitable for connection Cu, Al, Al Alloy, ACSR on copper terminals or aluminium terminals. Cable lugs inside covered with contact grease for a best electrical contact, closed by protection cap. It shall be suitable for crimping by hexagonal compression, where all **accessories shall be dry & clean.**
- **Red anti-tracking mastic**  
The Red anti-tracking mastic must be suitable for power cable heat shrink outdoor termination and joints for 12 and 36 kV to provide insulation and sealing. The red mastic shall not flow or exude at temperature below 85°C.
- Each kit shall be provided with all necessary insulation materials, grounding kit and other accessories; the thickness of insulated material should comply with the min thickness of cable's insulation.
- Designs, drawings and details of all terminations, quantified materials to be used, with copies of instructions shall be submitted for approval by the Engineer before the factory orders are issued for manufacture.
- Each kit shall be provided with complete detailed installation instruction and be clearly marked to show its application.
- Three copies of the instruction for the installation of each type of cable termination supplied shall be submitted to the engineer

#### 1.2 Condition of operation and rating:

The cables where laid in the ground shall be rated to suit the following conditions:-

- |                             |                     |
|-----------------------------|---------------------|
| a) Depth of laying          | 1.0 m               |
| b) Ground Temperature       | 40°C at 1.0 m depth |
| c) Soil thermal resistivity | 2 C m / W           |
| d) Spacing between circuits | 0.6 m               |

## 2. Heat Shrinkable Cable Joints and Termination

### 2.1 General

The cable jointing and terminating accessories **for power cables** shall be according to related standards and comprise the standard predicts of an approved manufacturer. These having been previously type tested according to **IEC 60502-4, IEC 61442 and CENELEC HD 639.1** and approved in service.

**The required type of straight joints and terminations is heat shrinkable, where other proposed type could be accepted.**

The heat shrink tubing and moulded parts shall be flexible, flame retardant, polyolefin based materials and shall reduce to the predetermined size and shape when heated above 120°C. Where ever required, the heat shrinkable components shall be provided with an internal coating of hot melt adhesive/ compound which shall not flow or exude at temperature below 85°C. Stress control tubing shall be included to provide stress relief for the higher voltage cables as required. The complete kit should also include additional components necessary for efficiently connecting the cable screen and armour to the earth and to provide adequate protection to the joint or termination.

The joints shall be suitable for operation when directly buried in the ground or installed in exposed conditions as required in service. The terminations shall have adequate sealing against ingress of moisture/water and the core insulating tubes shall be non-tracking and weather resistant. Details of design of all Joints and terminations, materials to be used, with copies of jointing instructions shall be submitted for approval by the Engineer before the factory orders are issued for manufacturing.

### 2.2 Straight Joints

- a) For conductor jointing, the required number of crimping type connectors shall be supplied in the kit. The dimensions of the connectors should conform to DIN 46267.

For the ease of installation and to eliminate problems arising out of improper crimping or use of improper crimping connectors or tools, joints with sheer bolt bimetallic mechanical connectors will be preferred. However the connector design should have been tested in accordance with **IEC-61238 Class A**.

- b) High permittivity void filler mastic shall be used over the screen end to fill the voids that may exist below the stress control tubing.

The stress control function over the connectors and at the screen cut back shall be achieved by a combination of stress grading filler and thermally stable heat shrinkable stress control tubing.

The impedance of the stress control tubing shall not change over a range of temperature from 0 Deg. C to 125 Deg. C. The impedance shall also remain constant irrespective of the differences in stress which will exist within the tubing due to the heating effect within the conductor and the ambient temperature.

- c) Insulation tube layer over the stress control tube and outer tube layer over armour should have a high recovery force to achieve tight electrical interfaces and perfect sealing ability.

A Joint design with mechanical sheer bolt connectors and insulation tubing, duly tested as a complete system, in accordance with IEC-60502-4 and CENELEC HD 629.1 S2 standard, will be given preference to joints with multi-layer tubings.

- d) Electrical continuity of the copper tape screen across the joint shall be provided by means of tinned copper mesh of adequate cross section and constant force stainless steel roll springs.

In case of cables with wire shield, the required connectors should be included in the kit for connection of the shield wires across the joint.

- e) In 3 core cables, the electrical continuity of the armour shall be reinstated by use of a steel armour case with adequate short circuit withstand capability. The steel armour case shall also withstand the external mechanical forces that may otherwise damage the cable components.

On all armoured cable, armouring wires or tapes shall be bonded across each straight joint in an approved manner by means of a copper bond with a sectional area of at least 95 mm<sup>2</sup>. The resistance of all copper bonds shall not be higher than that of an equal length of the armouring and the metallic screen.

The design of the steel armour case shall ensure reduced overall diameter and minimum air entrapment in the joint to improve heat dissipation and increased rating factor of the cable. The armour case shall be secured over the armour with 2 no of stainless-steel worm drive clamps on either side. An adjustable stainless steel support ring shall be placed under the armour to enable adequate electrical contact and to avoid the penetration of wire armour into the cable bedding.

To ensure a reliable connection of the cable armour in single core cables, the aluminum wires must be joined across the joint with sheer bolt mechanical or compression connectors.

- f) To prevent the joint and cable components from external environment and water ingress, the encapsulation of the joint shall be achieved by thick wall adhesive lined sealing sleeves.

Each kit shall be provided with complete detailed installation instruction and be clearly marked to show its application.

Three copies of the instruction for the installation of each type of cable joint supplied, shall be submitted to the engineer.

### **2.3 Repair Joints**

Repairing joints will be used to repair the damaged cables without adding additional cable length.

Each Repairing joint shall be provided with all necessary insulation materials and other accessories; the mechanical connector shall be bolted type with more than 400mm length, to join the cable conductor and must be for connection Cu, Al.

Thickness of insulated material should comply with the min thickness of cable's insulation.

They shall utilize the heat shrinkable system with mechanical connector according to IEC 61238-1 Class A.

Each Repairing joint shall be provided with all necessary insulation materials and other accessories. And shall be provided with complete detailed installation instruction and be clearly marked to show its application.

## **2.4 General requirements for heat shrinkable terminations**

- a) The stress control function at the screen cut back shall be provided by thermally stable heat shrinkable stress control tubing in combination with high permittivity void filler mastic over the screen end. The impedance of the stress control tubing shall not change over a range of temperature from 0 Deg. C to 125 Deg. C. The impedance shall also remain constant irrespective of the differences in stress which will exist within the tubing due to the heating effect within the conductor and the temperature of environment.
- b) The kits offered shall provide for total environmental sealing of the cable crotch. A cable breakout with sealant coating should be provided for 3 core cable terminations.
- c) Adequate quantity of sealant strips for application over the lug barrel and exposed strands between the lug and cable insulation shall be provided in the kit.
- d) Anti-tracking breakout Insulation Tubing shall be supplied to provide complete leakage insulation between the lugs and the cable breakout to prevent the cable insulation from the effects of weathering and electrical tracking caused by the leakage current flowing over the insulation surface. The tubing shall be coated with non tracking flexible sealant at one end.  
Single piece, heat shrinkable weather sheds having non tracking, weather resistant properties shall be supplied with the kits for application over non tracking tubing. The quantity of sheds to be supplied shall depend upon voltage grade and Indoor / Outdoor application and shall be indicated in the kit content list.
- e) Connection of the copper tape screen to ground shall be achieved by tinned copper braids of adequate cross section secured in place with constant force stainless steel roll springs.

Each kit shall be provided with complete detailed installation instruction and be clearly marked to show its application.

Three copies of the instruction for the installation of each type of cable termination supplied, shall be submitted to the engineer.

### **2.4.1 Indoor Terminations**

Indoor termination kits shall be suitable for terminating the cables in air, transformer/switchgear cable boxes. Each termination kit shall be complete in all respects including crimping type lugs the Lugs dimensions should be according to DIN 46235.

Aluminum cable lugs shall have corrosion inhibiting compound filled inside and ends closed with protection caps. Sheer bolt mechanical lugs suitable for both copper and aluminum conductors, shall also be considered. All required materials for cable preparation shall be supplied with the kit.

For 3 Core cables Indoor terminations, the tail length shall not be less than 600 mm and 850mm for 12 kV and 36 kV respectively & (1) shed per phase for 36kv indoor terminations.

### **2.4.2 Outdoor Terminations**

Terminating kits shall be suitable for outdoor use for terminating cables .The termination kit shall be complete in all respects including crimping type cable lugs. Aluminum cable lugs shall have corrosion

inhibiting compound filled inside and ends closed with protection caps. Sheer bolt mechanical lugs suitable for both copper and aluminum conductors, shall also be considered. All required materials for cable preparation shall be supplied with the kit.

For 3 Core Outdoor terminations, the tail length shall not be less than 800mm and 1200mm for 12 kV and 36 kV respectively.

The recovered thickness of insulation tubing over the connector shall be uniform and equal to insulation thickness as in IEC 60502-2. The insulation tubing shall be generally suitable for outdoor installation, ultra-violet and chemical resistant, with creepage distance not less than 40mm/kV.

### **3. Cold Cable Terminations**

The cable jointing and terminating accessories for power cables shall be according to IEC 60502-4 and comprise the standard predicts of an approved manufacturer. These having been previously tested and approved in service.

They shall be cold silicon rubber terminations, and shall meet or exceed the specifications of cables mentioned.

Terminations shall provide water proofing, mechanical and electrical protection, moisture sealed, including the croched area of multi core cables and complete re-jacketing of individual cores( **including 3 core anti tracking breakout**) , to be suitable for operation in the ground or installed in exposed position or in condition of high humidity, as required in service.

The recovered thickness of insulation tubing over the connector shall be uniform and equal to insulation thickness as in IEC 60502-2. The insulation tubing shall be generally suitable for indoor / outdoor installation, ultra-violet and chemical resistant, with creepage distance of 40mm/kV.

The kit shall include all arrangements to terminate cable screening, armouring and sheathing in such a way as to provide earth continuity and adequate protection as required at all joints and terminations.

### **4. Packing & Identification**

All components shall be supplied in a single package as a complete kit.

The kit label shall indicate the complete details of the kit such as voltage grade, type of kit, i.e. indoor/ outdoor termination or joint along with number of cores and conductor size. Each kit shall have a batch no printed on the label.

### **5. Traceability**

For traceability purpose, each component of termination& straight joint shall be made up into kits in which each part shall be correctly identify the manufacturer's name, part number, manufacturing date, minimum & maximum cable cross-sections, minimum & maximum insulation diameters, rated voltage and any other necessary marking.

### **6. Samples**

The Contractor may be required to submit a sample for offered terminations and joints for evaluation purposes. EDCO has the right to reject the offer if the samples are not submitted or do not meet the specification requirement.

## **7. Inspection and Testing**

All cables joints and terminations shall be subjected to inspection and testing in accordance with IEC 60502-4 or IEEE 404. The purchaser shall attend these tests.

Adequate notice shall be given when the cables joints and terminations are ready for inspection and tests, every facility shall be provided by the supplier to enable the purchaser to carry out the necessary inspections and tests.

Before the Joints and terminations are packed or dispatched, all tests including the electrical test shall have been carried out successfully.

No passing of plant or materials by the purchaser shall relieve the Contractor from this responsibility. The Contractor shall also be responsible for proper carrying out of all tests of plant or materials carried out or supplied by a sub-contractor to the same extent as if the work were carried out or supplied by the Contractor himself.

If, due to the Contract work and/or component materials not complying with this specification, further tests are necessary, the Contractor shall pay all additional costs, which may be incurred in re-testing.

The following tests shall be carried out in accordance with IEC 60502 and its amendments: -

- a) Routine Tests.
- b) Type Tests, Electrical
- c) Type Tests, non-electrical.
- d) Special Tests

## **8. Document to be Supplied in the Offer**

The following items must be attached and submitted with the offer:

- Instructions for installation for each type of offered accessories.
- Catalogues, technical leaflets, drawings...etc.
- Test certificates.
- Reference lists for similar products.

## **9. XLPE Cable (NOT REQUIRED)**

All XLPE cables shall comply with the current editions of IEC 60502-2, or other equivalent and related National Standards, subject to the variations and additions stated herein.

**All cables shall be suitable for operation under the respective loads and such sudden variations of load and voltage as may be met with under working conditions on the system, and in the climatic conditions prevailing on site.**

### **Rated Voltage**

The rated voltages of cables in this tender are  $U_0/U(U_m) = 19/33(36)$  KV and  $6.35/11(12)$  kV according to BS 6622, where  $U_0$ ,  $U$  and  $U_m$  as defined in IEC 60502-2 or other approved Standards. Conductors shall be circular stranded and compacted copper or aluminium with cross sections, as mentioned in SCOPE OF WORK above.



### **Highest Rated Temperature**

XLPE insulated cables shall be designed for a maximum continuous conductor temperature of 90°C, and a maximum short-circuit temperature of 250°C.

### **Conductor Screening**

Conductor screening shall consist of a layer of thermosetting extruded semi-conducting compound of adequate thickness having a smooth even surface in intimate contact with the cable insulation and the conductor, but firmly bonded to the insulation layer. The nominal thickness of this layer shall be 0.5mm.

### **Insulation and Insulation Screening**

Insulation material and thickness shall meet all the relevant requirements of IEC 60502 or other approved standards. The insulation shall be dry-cured cross-linked polyethylene (XLPE) with a nominal thickness of 8.0mm and 3.4mm (minimum average) for 19/33(36) kV and 6.35/11(12) kV respectively. The minimum thickness at any point shall not fall below 7.10mm and 2.96mm for 19/33(36) kV and 6.35/11(12) kV respectively.

Insulation screening shall consist of a layer of thermosetting extruded semi-conducting compound (easy strippable), having an intimate contact with the cable insulation and the semi conductive swellable tape. The nominal thickness of this layer is 0.7 mm.

### **Metallic Layer**

The metallic layer shall be constructed of annealed high-conductivity copper wires and tape in accordance with IEC 60228 and other related standard.

semi-conducting insulation screening shall have a supplementary copper wire screen helically applied in intimate contact with the non-metallic semi-conducting screening.

A copper tape counter-helix shall be applied over the copper wires.

The nominal cross section of the metallic screen for each cable shall not be less than 50mm<sup>2</sup> excluding copper tape. The metallic layer should have an earth fault current carrying capacity of 7 KA for one second.

The minimum size of copper tape binder shall be 0.1 x 15 mm<sup>2</sup>.

### **Water Swelling Tape**

The screen area shall be watertight in the longitudinal direction by means of two layers of semi conductive swellable tapes with one layer under and the second layer over the metallic screen.

### **Identification of Cores**

The cores of all three core power cables shall be identified by colors as follows:-

#### **COLOR**

RED

YELLOW

BLUE

While black coloured for single core cables

### Separation Sheath (Bedding)

The inner covering (Separation sheath) material shall be PVC compound for Al cables and single phase Cu cables, while it should be PE for three phase Cu cables (PVC to be replaced by PE compound is acceptable), and should be applied under the armour. The nominal thickness of this sheath shall conform to IEC 60502/ other approved standards, while the minimum accepted value shall be 2mm for nonarmoured cables.

### Fillers Requirements

Fillers shall be of materials suitable for the operating temperature of the cable and compatible with the insulation. The fillers shall be non-hygroscopic.

### Armour

Armour for multicore cables shall consist of a layer of round or flat galvanized steel wires applied over an approved bedding. While for single core cables it should be of hard drawn aluminum wires.

The dimensions of the armour wires shall conform to IEC 60502/other approved Standards.

### OverSheath

The outer sheath shall consist of :

- extruded continuous **black** PVC type ST2 for armoured, Cu, three phase cables.
- for armoured, Cu, single phase cables, and Al single and three phase cables:
- The outer sheath to be PE if the inner sheath is PVC or the outer sheath PVC ST2 if the inner sheath is PE.
- HDPE ST7 for nonarmoured.

according to IEC 60502 or equivalent standard. As a protection against termite attack, the outer covering shall contain an evenly dispersed mixture of an approved antitermite deterrent. The Tenderer shall state in this offer the types and amounts of chemicals he intends to add. The Contractor shall state on the cable test certificate the amounts of insecticides added. The Engineer reserves the right to select samples of such outer covering for analysis to check the quantities added.

The nominal thickness of the sheath shall be in accordance with IEC 60502 or other approved Standards, while the min nominal value for nonarmoured cables should not be less than 2.5 mm.

The extruded over sheaths of cables shall be embossed with the following: -

cable voltage designation, the conductor size, and the words "**ELECTRIC CABLE**" in English, the number of tender, the manufacturer name, year of manufacture and **EDCO** name. The length in meters shall be also embossed on the outer sheath all along each cable length at each three meter. The letters and figures shall consist of upright block characters arranged along two or more lines approximately equally spaced around the circumference of the cable. The maximum height of the characters shall be 13 mm and the minimum size 15 per cent of the approximate overall diameter of the cable or 3 mm whichever is the greater. The space between the end of one set of engraved characters and the beginning of the next shall not be greater than 150 mm

**Current Carrying Capacity and Design Parameters**

The maximum continuous current carrying capacity, the maximum permissible continuous conductor temperature, and the factors for determining such rating and temperature shall be based on IEC 60287 and subsequent amendments/ other approved Standards.

**A sample of each type should be submitted with the offer and any offer received without drawings and samples will be rejected during evaluation without any prior notice.**

<b><u>SCHEDULE NO.</u></b>	<b><u>DESCRIPTION</u></b>
<b>A</b>	<b>Schedule of Requirements</b>
<b>B</b>	<b>Price Schedule</b>
<b>C</b>	<b>Guaranteed Delivery Periods and manufacturer Schedule</b>
<b>D</b>	<b>Deviations From Specification</b>
<b>E</b>	<b>Type test certificate</b>

**SCHEDULE (A)**  
**SCHEDULE OF REQUIREMENTS**

<b>ItemNo.</b>	<b>Description Unit</b>	<b>UNIT</b>	<b>Quantity</b>
<b>1.</b>	Straight joint for 6.35/11 (12) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened XLPE and paper cable. Armoured (galvanized SWA)	Kit	<b>30</b>
<b>2.</b>	Straight joint for 6.35/11 (12) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened XLPE cable. Armoured (galvanized SWA)	Kit	<b>150</b>
<b>3.</b>	Straight joint for 19/33 (36) kV, 240 mm <sup>2</sup> Cu., 1-Core, copper wire and tape screened, XLPE cable. Armoured (AWA)	Kit	<b>20</b>
<b>4.</b>	Straight joint for 19/33 (36) kV, 150 mm <sup>2</sup> Cu., 3-Core, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	150
<b>5.</b>	Straight joint for 19/33 (36) kV, 240 mm <sup>2</sup> Cu., 3-Core, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	200
<b>6.</b>	Straight joint For 19/33 (36) kV, 500 mm <sup>2</sup> AL., 1-Core, copper wire and tape screened, XLPE cable. Armoured (AWA)	Kit	30
<b>7.</b>	Heat shrinkable tubing 75/22 (25 m length for each package)	M	1000
<b>8.</b>	Heat-shrink tubing (46/18) (25 m length for each package)	M	500
<b>9.</b>	Straight joint for 6.35/11 (12) kV, 240 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	<b>20</b>
<b>10.</b>	Straight joint For 19/33 (36) kV, 300 mm <sup>2</sup> AL., 3-Core, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	<b>3</b>
<b>11.</b>	Outdoor type termination for 19/33 (36) kV, 300 mm <sup>2</sup> AL., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	<b>3</b>
<b>12.</b>	Indoor type termination For 6.35/11 (12) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	<b>30</b>
<b>13.</b>	Indoor type termination For 19/33 (36) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	<b>50</b>
<b>14.</b>	Indoor type termination For 19/33 (36) kV, 120 mm <sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)	Kit	<b>30</b>
<b>15.</b>	Outdoor type termination For 6.35/11 (12) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	<b>40</b>
<b>16.</b>	Outdoor type termination For 19/33 (36) kV, 120 mm <sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)	Kit	<b>50</b>
<b>17.</b>	Outdoor type termination For 19/33 (36) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	<b>100</b>
<b>18.</b>	Indoor Tee connector For 19/33 (36) kV, 240 mm <sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA) with interface C, including earthing kit	Kit	<b>12</b>
<b>19.</b>	Plug in Elbow type termination For 19/33 (36) kV, 120mm <sup>2</sup> Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA), interface A, , including earthing kit	Kit	<b>10</b>

<b>20.</b>	Outdoor type termination For 19/33 (36) kV, 300 mm <sup>2</sup> AL., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)	Kit	<b>6</b>
<b>21.</b>	Outdoor type termination For 6.35/11 (12) kV, 120 mm <sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)	Kit	<b>6</b>
<b>22.</b>	Plug in Elbow type termination For 19/33 (36) kV, 150 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit	Kit	<b>15</b>
<b>23.</b>	Straight repair joints For 6.35/11 (12) kV, 150mm <sup>2</sup> Cu., Three Core, copper wire and tape screened, XLPE cable. Armoured (SWA)	Kit	<b><u>3</u></b>
<b>24.</b>	Straight repair joints For 6.35/11 (12) kV, 240 mm <sup>2</sup> CU., Three Core, copper wire and tape screened, XLPE cable. Armoured (SWA)	Kit	<b><u>3</u></b>
<b>25.</b>	Indoor Tee connector For 19/33 (36) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA) with interface C, including earthing kit.	Kit	<b><u>6</u></b>
<b>26.</b>	Indoor Tee connector For 19/33 (36) kV, 240mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA) with interface C, including earthing kit.	Kit	<b><u>21</u></b>
<b>27.</b>	Plug in Elbow type termination For 19/33 (36) kV, 240mm <sup>2</sup> Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit.	Kit	<b>12</b>
<b>28.</b>	Indoor type termination For 19/33 (36) kV, 120 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	Kit	<b>12</b>
<b>29.</b>	Tape lead for iron joints (about 5 meter per unit )	unit	<b>200</b>
<b>30.</b>	Plug in Elbow type termination For 6.35/11 (12) kV, 120 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface A including earthing kit	Kit	<b><u>2</u></b>
<b>31.</b>	Plug in Elbow type termination For 6.35/11 (12) kV, 150 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit	Kit	<b><u>2</u></b>
<b>32.</b>	Plug in Elbow type termination For 6.35/11 (12) kV, 240 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit	Kit	<b><u>2</u></b>
<b>33.</b>	Heat Shrinkable Wrap-Around Repair Sleeves for Cable,105/30	M	<b><u>150</u></b>
<b>34.</b>	Heat Shrinkable Wrap-Around Repair Sleeves for Cable,146/38	M	<b><u>150</u></b>
<b>35.</b>	Training for installations at EDCO site*	-	

\*- 3 days for comprehensive for local training at EDCo selected site .

- A training certificate is required.
- The training plan shall be approved by EDCo.

**SCHEDULE (B)**  
**PRICE SCHEDULE**

Item No.	Description	Quantity	UNIT PRICE & CURRENCY		TOTAL PRICE C&F AQABA-JORDAN
			FOB	C&F AQABA	
1.	Straight joint for 6.35/11 (12) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened XLPE and paper cable. Armoured (galvanized SWA)	30 KIT			
2.	Straight joint for 6.35/11 (12) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened XLPE cable. Armoured (galvanized SWA)	150 KIT			
3.	Straight joint for 19/33 (36) kV, 240 mm <sup>2</sup> Cu., 1-Core, copper wire and tape screened, XLPE cable. Armoured (AWA)	20 KIT			
4.	Straight joint for 19/33 (36) kV, 150 mm <sup>2</sup> Cu., 3-Core, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	150 KIT			
5.	Straight joint for 19/33 (36) kV, 240 mm <sup>2</sup> Cu., 3-Core, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	200 KIT			
6.	Straight joint For 19/33 (36) kV, 500 mm <sup>2</sup> AL., 1-Core, copper wire and tape screened, XLPE cable. Armoured (AWA)	30 KIT			
7.	Heat shrinkable tubing 75/22 (25 m length for each package)	1000 M			
8.	Heat-shrink tubing (46/18) (25 m length for each package)	500 M			
9.	Straight joint for 6.35/11 (12) kV, 240 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	20 KIT			
10	Straight joint For 19/33 (36) kV, 300 mm <sup>2</sup> AL., 3-Core, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	3 KIT			
11	Outdoor type termination for 19/33 (36) kV, 300 mm <sup>2</sup> AL., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	3 KIT			
12	Indoor type termination For 6.35/11 (12) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	30 KIT			

13	Indoor type termination For 19/33 (36) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	50 KIT			
14	Indoor type termination For 19/33 (36) kV, 120 mm <sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)	30 KIT			
15	Outdoor type termination For 6.35/11 (12) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	40 KIT			
16	Outdoor type termination For 19/33 (36) kV, 120 mm <sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)	50 KIT			
17	Outdoor type termination For 19/33 (36) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	100 KIT			
18	Indoor Tee connector For 19/33 (36) kV, 240 mm <sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA) with interface C, including earthing kit	12 KIT			
19	Plug in Elbow type termination For 19/33 (36) kV, 120mm <sup>2</sup> Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface A, , including earthing kit	10 KIT			
20	Outdoor type termination For 19/33 (36) kV, 300 mm <sup>2</sup> AL., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)	6 KIT			
21	Outdoor type termination For 6.35/11 (12) kV, 120 mm <sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)	6 KIT			
22	Plug in Elbow type termination For 19/33 (36) kV, 150 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit	15 KIT			
23	Straight repair joints For 6.35/11 (12) kV, 150mm <sup>2</sup> Cu., Three Core, copper wire and tape screened, XLPE cable. Armoured (SWA)	3 KIT			
24	Straight repair joints For 6.35/11 (12) kV, 240 mm <sup>2</sup> CU., Three Core, copper wire and tape screened, XLPE cable. Armoured (SWA)	3 KIT			
25	Indoor Tee connector For 19/33 (36) kV, 150 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA) with interface C, including earthing kit.	6 KIT			
26	Indoor Tee connector For 19/33 (36) kV, 240mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA) with interface C, including earthing kit.	6 KIT			



27	Plug in Elbow type termination For 19/33 (36) kV, 240mm <sup>2</sup> Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit.	12 KIT			
28	Indoor type termination For 19/33 (36) kV, 120 mm <sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)	12 KIT			
29	Tape lead for iron joints (about 5 meter per unit )	200 UNIT			
30	Plug in Elbow type termination For 6.35/11 (12) kV, 120 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface A including earthing kit	2 KIT			
31	Plug in Elbow type termination For 6.35/11 (12) kV, 150 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit	2 KIT			
32	Plug in Elbow type termination For 6.35/11 (12) kV, 240 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit	2 KIT			
33	Heat Shrinkable Wrap-Around Repair Sleeves for Cable,105/30	150 M			
34	Heat Shrinkable Wrap-Around Repair Sleeves for Cable,146/38	150 M			
35	Training for installations at EDCO site*				

#### IMPORTANT NOTES:

1. THE REQUIRED TYPE OF STRAIGHT JOINTS AND TERMINATIONS ARE HEAT SHRINKABLE, WHERE OTHER PROPOSED TYPE COULD BE ACCEPTED.
2. EDCO HAS THE RIGHT TO ACCEPT PARTIAL OFFERS AND TO AWARD PART OF THE ITEMS QUANTITIES WITHOUT ANY LIMIT OR NOTICE.
3. FAILURE TO SUBMIT SUCH SAMPLE, EDCO HAS THE RIGHT TO REJECT THE OFFER.
4. EDCO HAS THE RIGHT TO REJECT ANY OFFER BASED ON EVALUATION THE SUBMITTED SAMPLE IN TERMS OF THE QUALITY, LIABILITY AND WELL-KNOWN AND REPUTABLE MANUFACTURERS.

**SCHEDULE (C)****MANUFACTURERS & GUARANTEED DELIVERY PERIODS**

The Tenderer shall state the country where manufacture and the delivery periods entered shall be binding on the Contractor.

<b>Item No.</b>	<b>Description Unit</b>	<b>MANUFACTURER</b>	<b>DELIVERY PERIOD C &amp; F AQABA PORT- JORDAN</b>
	<p>Straight joint For 6.35/11 (12) kV, 150 mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened XLPE and paper cable. Armoured (galvanized SWA)</p> <p>Straight joint For 6.35/11 (12) kV, 150 mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened XLPE cable. Armoured (galvanized SWA)</p> <p>Straight joint For 19/33 (36) kV, 240 mm<sup>2</sup> Cu., 1-Core, copper wire and tape screened, XLPE cable. Armoured (AWA)</p> <p>Straight joint For 19/33 (36) kV, 150 mm<sup>2</sup> Cu., 3-Core, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)</p> <p>Straight joint For 19/33 (36) kV, 240 mm<sup>2</sup> Cu., 3-Core, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)</p> <p>Straight joint For 19/33 (36) kV, 500 mm<sup>2</sup> AL., 1-Core, copper wire and tape screened, XLPE cable. Armoured ( AWA)</p> <p>Heat shrinkable tubing 75/22 (25 m length for each package)</p> <p>Heat-shrink tubing (46/18) (25 m length for each package)</p> <p>Straight joint For 6.35/11 (12) kV, 240 mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)</p> <p>Straight joint For 19/33 (36) kV, 300 mm<sup>2</sup> AL., 3-Core, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)</p> <p>Outdoor type termination For 19/33 (36) kV, 300 mm<sup>2</sup> AL., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)</p> <p>Indoor type termination For 6.35/11 (12) kV, 150 mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured</p>		

<p>(galvanized SWA)</p> <p>Indoor type termination For 19/33 (36) kV, 150 mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)</p> <p>Indoor type termination For 19/33 (36) kV, 120 mm<sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)</p> <p>Outdoor type termination For 6.35/11 (12) kV, 150 mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)</p> <p>Outdoor type termination For 19/33 (36) kV, 120 mm<sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)</p> <p>Outdoor type termination For 19/33 (36) kV, 150 mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)</p> <p>Indoor Tee connector For 19/33 (36) kV, 240 mm<sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA) with interface C, including earthing kit</p> <p>Plug in Elbow type termination For 19/33 (36) kV, 120mm<sup>2</sup> Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface A, , including earthing kit</p> <p>Outdoor type termination For 19/33 (36) kV, 300 mm<sup>2</sup> AL., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)</p> <p>Outdoor type termination For 6.35/11 (12) kV, 120 mm<sup>2</sup> Cu., 1-Cores, copper wire and tape screened, XLPE cable. Armoured (AWA)</p> <p>Plug in Elbow type termination For 19/33 (36) kV, 150 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit</p> <p>Straight repair joints For 6.35/11 (12) kV, 150mm<sup>2</sup> Cu., Three Core, copper wire and tape screened, XLPE cable. Armoured (SWA)</p>		
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	<p>Straight repair joints For 6.35/11 (12) kV, 240 mm<sup>2</sup> CU., Three Core, copper wire and tape screened, XLPE cable. Armoured (SWA)</p> <p>Indoor Tee connector For 19/33 (36) kV, 150 mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA) with interface C, including earthing kit.</p> <p>Indoor Tee connector For 19/33 (36) kV, 240mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA) with interface C, including earthing kit.</p> <p>Plug in Elbow type termination For 19/33 (36) kV, 240mm<sup>2</sup> Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit.</p> <p>Indoor type termination For 19/33 (36) kV, 120 mm<sup>2</sup> Cu., 3-Cores, copper wire and tape screened, XLPE cable. Armoured (galvanized SWA)</p> <p>Tape lead for iron joints (about 5 meter per unit )</p> <p>Plug in Elbow type termination For 6.35/11 (12) kV, 120 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit</p> <p>Plug in Elbow type termination For 6.35/11 (12) kV, 150 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit</p> <p>Plug in Elbow type termination For 6.35/11 (12) kV, 240 Cu., 3 Core, copper wire and tape screened, XLPE cable. Armoured (SWA) , interface C including earthing kit</p> <p>Heat Shrinkable Wrap-Around Repair Sleeves for Cable,105/30</p> <p>Heat Shrinkable Wrap-Around Repair Sleeves for Cable,146/38</p>		
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**SCHEDULE (D)**

**DEVIATIONS FROM SPECIFICATION IF ANY**

**TO BE COMPLETED BY THE TENDERER**

TEM NO.	BREIF DESCRIPTION	DEVIATIONS

**SCHEDULE (E)**

**LIST OF TYPE TEST CERTIFICATES**

**The following type test certificates covering the equipment offered to IEC recommendations shall be submitted with the tender.**

<b><u>Type test</u></b>	<b><u>Certificate No.</u></b>	<b><u>Certificate Authority</u></b>