



Two Years Call - Off Contract No. (59/2022) for Supply of

- Rated 33 KV, 1X400 mm² AL / XLPE / AWA / PVC – Single Core Cable.
- Rated 33 KV, 1X500 mm² AL / XLPE / AWA / PVC – Single Core Cable.

(48 pages)

Tenderer:

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

Tender summary mentioned in page (4-7) shall be fill by the tenderer, otherwise his tender will not be considered.

Tender Document Cost = 350 JD.



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Invitation to Call - Off Contract
NO. (59/2022)

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 on call-off basis for a period of two (2) years by filling in the schedules, signing the form of tender, and forward the complete tender documents to the attention of IDECO general manager addressed as seen on the cover page, to be received not later than **2 pm** (local time) due **July 27, 2022.**

All bids must be accompanied with a Bid Bond of **not less than 5% of the highest alternative offered price valid for 120 days from the closing date based on basic price for AL/CU** valid for 120 days from the closing date, 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 tenders secretary office located in Supplies Department – tenders section not later than **2 pm** (local time) due **July 27, 2022.**

Table 2

Item No.	Quantity (KM)	Material Description	Stock Code
1	93	Rated 33 KV, 1X400 mm ² AL / XLPE / AWA / PVC – Single Core Cable.	6145-1104
2	270	Rated 33 KV, 1X500 mm ² AL / XLPE / AWA / PVC – Single Core Cable.	6145-1136

Tender Summary form for Tender No. 59/2022

These 4 pages must be completely filled out by the bidder; otherwise it may be a reason for exclusion from the bidding competition:

Name of bidder:			
Address:			
Telephone/Cellular/Fax			
E- Mail			
Contact Person:			
Name of the manufacturer and country of origin:			
The value of the bid bond and the bank issued from:			
The total value of the bid:	Currency		
	Total price	Including sales tax & custom fees	
		Exclude sales tax & custom fees	
		exempt	
	Total price in writing		
Delivery	Ex-works delivery		
	Aqaba port delivery		
	IDECO stores delivery		
Testing	Place of manufacturing		
	Place of testing		
Cost for inspection & testing:			

Official signature and seal / Bidder

<u>Irbid Electricity Company Use:</u>
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Chairman of the Committee

Deputy Chairman of the Committee

Committee member

Committee member

Committee member

Committee member

Committee member

Departures

		Required	offered
Departures from	Technical specifications		
	Special requirements		

Official signature and seal / Bidder

Irbid Electricity Company Use:

Chairman of the Committee

Deputy Chairman of the Committee

Committee member

Committee member

Committee member

Committee member

Committee member

- 1- **General Condition:** We committed to implementing all items mentioned in the general conditions within the bid document number (), and the subcategories of these items.
- 2- **Tendering Instructions:** We committed to implementing all items mentioned in the tendering instructions within the bid document number (), and the subcategories of these items.
- 3- **General Requirement (Standards and Regulation):** We committed to implementing all items mentioned in the general conditions within the bid document number (), and the subcategories of these items.
- 4- **Inspection and testing:** We committed to implementing all items mentioned in the inspection and testing within the bid document number (), and the subcategories of these items.
- 5- **Special Requirements:** We committed to implementing all items mentioned in the special requirements within the bid document number (), and the subcategories of these items.
- 6- We committed to fill out all the required pages with the bid documents, without any discrepancies with similar information contained in the Tender Summary.
- 7- We committed that in case there is a difference in the prices provided by us, the lower price will be approval.
- 8- Based on the above we sign.

Official signature and seal / Bidder

<u>Irbid Electricity Company Use:</u>
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Chairman of the Committee

Deputy Chairman of the Committee

Committee member

Committee member

Committee member

Committee member

Committee member

In case there are any comments or additional terms or other offers by the bidder; it must be mentioned or Brief about it in the summary of this page:

Official signature and seal / Bidder

<u>Irbid Electricity Company Use:</u>
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Chairman of the Committee

Deputy Chairman of the Committee

Committee member

Committee member

Committee member

Committee member

Committee member

GENERAL CONDITIONS

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 "Irbid District Electricity Co. Ltd." Hereinafter called "IDECO", and shall include IDECO's legal personal representatives and duly appointed engineers. The "**Engineer**" shall mean "Irbid District Electricity Co." Engineers or persons for the time being or from time to time duly appointed in writing by the purchaser to act as Engineer or 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". "C&F 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. The contractor must provide full details of the material to be shipped in good time for IDECO to arrange for Marine Insurance before the material is actually shipped.

"**The call - off purchase order**" means formal request for delivery to be issued by IDECO specifying equipment to be supplied, delivered, and tested by the contractor upon request by IDECO.

"Parties" means IDECO and contractor / vendor.

2. IDECO will sign a Framework Agreement with successful supplier which governs the relationship between the company and the supplier, and upon signing the agreement. The supplier should submit a design package for each awarded type, in addition a milestone table to be established to determine the durations of supply activities; i.e.: design submittal, FAT advanced notice, release of shipment, ETC; where each purchase order date should be considered as the initial milestone date.

3. Formation of call - off Contract

3.1. The contract shall enter into force upon the date of awarding (hereinafter referred to as the "Effective Date") and shall be valid for Two years thereafter and until the parties fulfill all their obligations hereunder.

3.2. During the agreement validity, IDECO has the right to extend the contract up to extra one year.

3.3. The contract is not a commitment to purchase by the buyer. Commitment to purchase will only be made when IDECO issues an official purchase order under the terms of the agreement.

- 3.4. The call off contract shall remain valid for on – call delivery for a period of Two years from the date of signing the contract or until the expiration of the total contract quantity, whichever occurs first.**
- 3.5. The required materials under this contract shall be required partially in accordance with number of call-off purchase orders during agreement validity for on-call delivery for a period of two years from the date signing agreement, and/or the expiration of the total contract quantity, whichever first occurs.**
- 3.6. Power to Vary The Work:** 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 the said variations occurred in the specification. If any suggested variations would, in the opinion of the contractor, if carried out, prevent him 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.
- 3.7. IDECO shall have the absolute right during the validity of the contract up to the last delivery to increase the quantity of the items that does not exceed 25% of the total contract value.**
- 3.8. IDECO has a complete right not to award all items under this contract to one supplier, partial awarding per item or per quantity for a single item might be applicable and the suppliers do not have the right to object.**
- 3.9. IDECO has a complete right to substitute certain items instead of other items by increasing or decreasing the required quantity in purchase order.**

- 3.10. 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.

4. Drawings and Descriptive Documents

- 4.1.** 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.
- 4.2.** 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.
If it is expressly so agreed, or 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.
- 4.3.** 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, reproduce, transmitted or communicated to a third party.
- 4.4.** 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.

5. Materials Packing and Shipping Marks

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, and for a reasonable period of storage at Aqaba and latter storage at IDECO stores. Packing for indoor materials should be done in such manner as to adequately ensure no ingress of moisture during the shipping and storage periods. 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. Packing shall in general be adequate and in compliance with the best international practice. 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 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, IDECO will supply the successful tenderer with a drawing of its shipping mark for utilization. All packing cases, crates, barrels and drums shall remain the property of the purchaser.

6. Inspection and Testing

- 6.1.** 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.
- 6.2.** 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.
- 6.3. TESTS:** 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.
- 6.4.** 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.
- 6.5.** 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.
- 6.6.** Unless otherwise agreed, the Vendor shall bear all the expenses of tests carried out in his works.
- 6.7.** 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.

7. 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.

- 8. Delivery:** Unless otherwise agreed the delivery period shall run from the date of the formation of the contract as defined in clause 2.
- 8.1.** 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, there 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.
- 8.2.** 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** 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 from the purchase order value**, 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.

- 8.3.** 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.
- 8.4.** 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. 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.
- 8.5.** 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.
- 8.6.** 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.

9. Force Majeure

- 9.1.** Notwithstanding the provisions of causes 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, it's delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.
- 9.2.** 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.
- 9.3.** 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.

10. Payment:

10.1. Terms of Payment:

- 1. The company prefers to deal with the supplier on an open account basis, and the payment to be made for each purchase order as the following:**
 - a. The supplier has to send the following documents: (Invoice origin + five copies), (Certificate of origin + five copies), (Bill of lading 3-negotiable + 5 non-negotiable), (Test certificate (where applicable) + 6 copies), to IDECO company/ financial department. And those documents shall be legalized shipping.**
 - b. 100% of Payment will be released within one month after the receipt of goods and acceptance at IDECO stores.**
 - c. Payment will be released on first week of each month.**
- 2. In case the supplier insists on L/C as a method of payment, all /LC charges will be borne by the supplier and charge to his own account for each purchase order and 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 documents: (Invoice origin + five copies), (Certificate of origin + five copies), (Bill of lading 3-negotiable + 5 non-negotiable), (Test certificate (where applicable) + 6 copies). And those documents shall be legalized shipping.**
 - b. 100% of Payment will be released after submitting IDECO's acceptance certificate to the bank within one month after receipt of goods at IDECO's stores.**
 - c. Payment will be released on first week of each month.**

- 10.2. 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.

- 10.3.** 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.
- 10.4.** If delivery has been made before payment of the whole sum payable under the contract, material 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 material, 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 any assistance in taking any measures required to protect the Vendor's right of proper or such other rights as aforesaid.
- 10.5.** 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 purchaser is due to an act or omission of the purchaser.
- 10.6.** 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.
- 10.7.** 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.
- 10.8.** Save as aforesaid, if the purchaser delays in making any payment, the Vendor shall on giving to 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 material, the payment for which has been unreasonably delayed.

11. Guarantee:

- 11.1.** Subject as hereinafter set out; the Vendor undertakes to remedy any defect resulting from faulty design, materials or workmanship.
- 11.2.** 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 setting to work whichever shall be the later.
- 11.3.** In fixing this period due account has been taken of the time normally required for transport as contemplated in the contract.
- 11.4.** 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.
- 11.5.** The Guarantee period shall start from the later of the dates mentioned in paragraph 2 above. If however dispatch ex-works is delayed for a period in excess of three months due to a cause beyond the control of the Vendor the Guarantee Period shall not extend beyond eighteen month from the date the material was ready for dispatch ex-works.
- 11.6.** The Guarantee period is based on the continuous use of the material in service for 24

hours every day.

- 11.7.** 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.
- 11.8.** 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.
- 11.9.** 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.
- 11.10.** The Vendor shall bear all the costs and risks of the transport of defective parts or equipment and their replacements.
- 11.11.** 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.
- 11.12.** Defective parts replaced according to this clause shall be placed at the disposal of the Vendor.
- 11.13.** 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.
- 11.14.** The Vendor's liability does not apply to defects arising out of materials provided, or out of a design stipulated, by the purchaser.
- 11.15.** 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.
- 11.16.** 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.

11.17. The vendor is required to transport all the defective or not in accordance materials, from our stores within a month from date of notification. All costs and expenses of transportation shall be borne by the vendor. Unless otherwise agreed. IDECO has the right to deal with the defective materials in a proper way.

11.18. 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.

12. Relief:

12.1. 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.

12.2. 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.

12.3. 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.

12.4. 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.

12.5. 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.

12.6. 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.

13. Limitation of Damages:

13.1. 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.

13.2. 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.

14. 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.

15. Arbitration and Law Applicable:

15.1. 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. One arbitrator shall be nominated by the purchaser and one by the contractor, and the third arbitrator shall be appointed by both parties. 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.

15.2. 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.

16. Ordering Procedures and Delivery Period.

16.1. IDECO Company prefer Delivery period for each call - off purchase order for the required material within 90-120 days, and the priority will be given to the contractor who decrease the delivery period for purchase orders.

16.2. The contractor shall determine the delivery period which should be considered as the contractual delivery period for each call-off purchase order where this period is an important factor during the evaluation and priority should be given to earlier.

16.3. The purchaser will issue official call-off purchase orders for the required quantity including the date of adjust price as per London Metal Exchange (LME).

16.4. The contractor shall send to the purchaser a revised price letter for the required quantity in the call-off purchase order, and the total value for each call-off purchase order will be calculated in according to the formula mentioned, and based on LME Copper/Aluminum closing price.

16.5. The purchaser has to send a final awarded letter for each call-off purchase order containing the final total order value for the required items, enabling the contractor or his representative to pay the stamps fees.

16.6. The contractor shall determine the minimum and maximum value per each purchase order, and determine the number of times of purchase orders can be delivered within Two years. And the priority will be given to the contractor who minimize the purchase order value and maximize the number of times of purchase orders.

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. **(59/2022)** but bearing no other mark from which the identity of the tenderer can be ascertained.
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 (120) 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 submit 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 120 days from the time fixed for closing date of tender, or certified check in favor of and payable to the purchaser for a sum of.....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 120 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 for each call-off purchase order will be issued by the purchaser equal to (10) percent of the total call-off purchase order value within (30) days from date of the final awarded letter for purchase order.**

- 21. The performance bond for each call-off purchase order should be valid for period of (15) months from the date of the purchase order.**
- 22. If the contractor fails for any reason to submit the required performance bond within (30) days from order letter date, the purchaser has the right to confiscate the bid bond and any other submitted performance bond, and the awarding letter for issued call-off purchase order will be cancelled too.**
- 23. If the successful tenderer fails for any reason to submit the required performance bond within (30) days, the purchaser has the complete right to reserve the value of materials supplied, and payment will not release till the successful tenderer submit the required performance bond. And the bid bond will not return to the tenderer unless the performance bond shall submit to the purchaser according to tender conditions.**
- 24. 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.**
- 25. Prices are highly recommended to be on the basis of C&F IDECO STORES. However, C&F AQABA port or Amman customs are also accepted.**
- 26. 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 for each purchase order.**
- 27. 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.**
- 28. Tender revaluation 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.**
- 29. The purchaser does not bind himself to accept the lowest or 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.**

30. 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.
31. 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.
32. 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.
33. Where compliance with a specific standard specification is called for the standard specification used shall be that in force at the time of tender.
- 34. After Awarding Tenders, winner tenderer will be assessment according to quality of good, delivery period, service after sale, and assessment weight will be considered in coming tenders' evaluation.**
35. Where the contractor, who was awarded the bid, ceased or failed in implementing the conditions of the bid; IDECO Company has the right to take the appropriate decision on the confiscation of the amount of guarantee or insurance provided by the bidder upon his participation in the tender. In addition, the IDECO company has the right to the restriction of participation of this bidder in all of the company's bids for the duration seen appropriate.
- 36. The purchaser has the complete right to reply on contractor's clarifications during 7 days, and during this period there is not exemption from incurred penalty for the event.**
- 37. The Irbid Electricity Company shall be entitled to penalize the contractor (late to supply the required materials by tender or tender) the value of the fine due to the Irbid Electricity Company imposed by the Regulatory Authority of the Energy Sector as a result of the company's failure to comply with the required periods in executing the specified subscriber transactions Treatment is the delay of the supplier in the supply of material or materials necessary in the implementation of transactions subscribers.**

General Requirements Standards and Regulations

- The following general requirements will apply, in so far as they may be applicable, to material to be supplied under this particular contract.

1. Design and Construction:

In complying with the requirements of the specification both with respect to arrangement and detail, design is to conform to the best current engineering practice. Each of the several parts of the material is to be of the maker's standard design provided that this design is in general accordance with the specification.

The essence of design should be simplicity and reliability in order to give long continuous service with high economy and low maintenance cost. Particular attention should be paid to internal and external access in order to facilitate inspection, cleaning and maintenance. The design dimensions and materials of all parts are to be such that they will not suffer damage as a result of stresses under the most severe conditions. Fully detailed specifications of the several parts of the material are to be submitted describing particularly the materials to be used. The materials used in the construction of the material are to be of the highest quality and selected particularly to meet the duties required of them. Mechanisms are to be constructed to avoid sticking due to rust or corrosion. Workmanship and general finish are to be of the highest class throughout. All similar parts of the material are to be interchangeable.

All equipment is to operate without undue vibration and with the least possible amount of noise and is not to cause a nuisance. All equipment is to be designed to minimize the risk of fire and any damage, which may be caused in the event of fire.

The equipment is also to be designed to prevent ingress of all vermin, accidental contact with live parts and to minimize the ingress of dust and dirt. The use of materials, which may be liable to attack by termites or other insects, is to be avoided.

2. Compliance with Standards:

Although the standards for workmanship, material, and equipment have been selected in these specifications as a basis of reference, standards and specifications of the other bank member countries and recommendations of standards international organizations will be acceptable provided they are substantially equivalent to the designated standards and provided furthermore that the contractor submits for approval detailed specifications which he proposes to use. Reference to brand names or catalog numbers if any in these specifications 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. And in certain cases such references have also been made for purposes 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. If the contractor offers materials, equipment, design calculations or tests, which conform to standards other than those specified, full details of the differences between the proposed standards and that specified in so far as they affect the design or purpose of the equipment, are to be supplied by the contractor if called upon to do so by the engineer, where required by the engineer for approval purposes, the contractor shall supply, without charge, duplicate copies of the proposed standards with English translations of the relevant portions. The contractor shall have available in his place of business (or in his supplier's works) the relevant copies of standards or codes used for the use of the Engineer.

3. Statutory Regulations

The materials, equipment and instruments forming part of this contract are to comply in all respect with any relevant local statutory regulations, by laws & orders currently in force.

4. Language

English language shall be used in all documents contained in the tender and in all correspondence between the contractor and engineer. Whenever anything is required under the terms of the contract to be written marked, printed or engraved, the English language shall be used and duplicated in Arabic except where otherwise provided in this specification.

5. Correspondences

All correspondences on matters arising out of the contract shall be addressed by the contractor to Engineer and not directly to but copied to the purchaser.

7. Units of Measurement

In all correspondence, in all technical schedules, on all drawings and for all instrument scales, SI units of measurement are to be employed. On drawings where IEC or other units have been used it will be in order if the equivalent SI measurement is suitably marked in addition.

8. Contractor's Responsibilities

Unless stated specifically to the contrary in the tender with full supporting explanations, the contractor will be deemed to have concurred as a practical manufacturer with the design and layout of the works as being sufficient to ensure reliability and safety in operation, freedom from undue stresses and satisfactory performance in all other essentials as a working material.

9. Compliance with Specification

Notwithstanding any descriptions, drawings or illustrations which may have been submitted with the tender, all details other than those shown on the schedule of departures will be deemed to be in accordance with the specification and the standard specification and codes referred to therein. No departures from the specification except those shown on the schedule of departures and approved by the purchaser are to be made without the written approval of the Engineer.

10. Drawings and catalogues

The Tenderer must submit with his offer all the specification indicating rating, weights, and dimension and time current characteristics of the offered materials.

Before the work is put in hand, dimensioned drawings and diagrams showing all details of the material, and materials to be used are to be submitted to the engineer for approval.

No wiring or connection diagrams shall be submitted for approval unless prior approval has been obtained for schematic diagrams, which are to include control and protection schematics showing the facilities being provided and the working of the schemes.

The drawings are to be submitted in quadruplicate and as soon as possible after the commencement date of the contract, and in any case in sufficient time to permit modifications to be made, if such deemed necessary by the Engineer without delay in the delivery of the contract work. The drawings submitted are to be modified as necessary if requested by the Engineer and resubmitted for final approval. If the contractor requires urgent approval of any drawing to avoid delay in the delivery of the contract works, he is to advise the Engineer accordingly when submitting the drawing. One copy of each drawing and diagram shall be sent direct to the purchaser. It is to be understood, however, that approval of the drawings will not exonerate the contractor from any responsibility in connection with the work. After all items of material have been manufactured and accepted three 35mm negatives of each drawing previously approved is to be

provided together with one reproducible on gauge polyester base film or similar and two prints on heavy gauge white paper from such drawings as may be required to show the detail and arrangement of the material as made. All drawings submitted by the contractor or by any sub-contractor are to have the following particulars in the lower right hand corner in addition to the contractor's name:

IRBID DISTRICT ELECTRICITY COMPANY, CONTRACT NUMBER (59/2022).

11. Program of work

Within one month of acceptance of the tender, the contractor is to forward to the engineer four copies of chart detailing the material manufacture and delivery Program for the complete contract work for his comment or approval. Copies of the approved chart, as required by the engineer, are to be provided by the contractor. The chart is to indicate the various phases of work for all items of the contractor from the commencement of the contract to its final completion, e.g. design, ordering, of materials, manufacture and delivery. If at any time during the execution of the contract it is found necessary to modify the approved chart, the contractor is to inform the engineer and submit a modified chart for approval. Such approval is not to be deemed to be consent to any amendment of the completion date stated in the schedule.

12. Progress Report and Meetings

a. Progress Reports

At monthly intervals after approval of the Program chart, the contractor is to submit to the Engineer and the purchaser written detailed progress reports in triplicate in an approved form, indicating the stage reached in the design, ordering of material, manufacture and delivery of all components of the material. The reports should include details of any delays and the remedial action proposed. These reports are to be forwarded promptly so that on receipt by the engineer the information contained therein is not more than seven days out of date.

b. Meeting:

If during the execution of the contract the Engineer considers the progress position of any section of the work to be unsatisfactory, he will be at liberty to call such meetings, either in Irbid office, or at the contractor's work, as he deems to be necessary. If required by the Engineer a responsible representative from the contractor's works is to attend such meetings. Access to the contractors and sub-contractor's works is to be granted to the engineer at all reasonable times for the purpose of ascertaining progress.

13. Packing

Each item to be packed properly or protected for shipment and be capable of sustaining heavy handling during transportation from the place of manufacture to the purchasers stores in Irbid and hence to site and to be suitable for storage for a period of 6 to 12 months after to site.

Tube ends and other similar open ends are to be protected from both external damage and ingress of dirt and moisture during transit and while at purchaser's stores. Flanged pipes are to have their open ends protected by adhesive tape or jointing and then be covered with a wooden blank flange secured by service bolts. Precautions are to be taken to protect shafts and journals where they rest on wooden or other supports likely to contain moisture. At such points, wrappings impregnated with anti-rust composition or vapor phase inhibitors are to be used with sufficient strength to resist chafing and indentation due to movement which is likely to occur in transit. Protective wrappings and impregnation are to be suitable for a period of three months. In the case of ball or roller bearings installed in any items of material, precautions are to be taken to avoid indentation of the bearing races.

Metal bindings of cases are to be of corrosion resistant material position with struts or cross battens and not with wood chocks wedged in place, unless they are fastened firmly in place. All struts or cross battens are preferably to be supported by cleats fixed to the case above and below to form ledges on which the batten may rest. Cases are to be unopened after packing to prove that there is no movement of contents.

Where parts are required to be bolted to the sides of the case, large washers are to be used to distribute the pressure and the timber is to be strengthened by means of a pad.

Where practicable, all indoor items such as electric motors, switch and control gear, instruments and panels, machine components, etc., are to be cocooned or covered in polyethylene sheeting, sealed at the joints and the enclosure provided internally with a desiccator. Each crate or package is to contain a packing list in a waterproof envelope. All items of material are to be clearly marked for easy identification against the packing list. All cases, packages, etc. are to be clearly marked on the outside to indicate the total weight, to show where the weight is bearing and the correct position of the slings and are to bear an identification mark relating them to the appropriate shipping documents. Stencil marks on the outside of casings are to be indelible. The Engineer may require inspecting and approving the packing before the items are dispatched but the contractor is to be entirely responsible for ensuring that the packing is suitable for transit and such inspection will not exonerate the contractor from any loss or damage due the faulty packing.

Irbid District Electricity Co.

Form of Bid Bond

Tender No. (59/2022)

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 one hundred twenty
days from the time fixed for opening the Tenders by IRBID DISTRICT ELECTRICITY CO. LTD.

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

Signed.....Bank (Surety)

Irbid District Electricity Co. Ltd.

Form of Performance Bond

Tender No. (59/2022)

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 word), 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)

Technical Specifications and Tests

1. Climate Particulars:

The following is applicable unless otherwise is mentioned:

1	Maximum Ambient Temperature	50 C ^o
2	Minimum Ambient Temperature	-10 C ^o
3	Design temperature	75 C ^o
4	Maximum daily range of air temperature	20 C ^o
5	Maximum Wind Pressure	700 n/m ²
6	Ice Thickness	10 mm
7	Snow Falls	1-4 days – 30 cm
8	Site altitude	0-1400m ASL
9	Average annual rainfall	40cm during November–April
10	Relative humidity in the range	30 to 60%
11	Average number of thunder storms	15 days / year
12	Prevailing wind winter average daily approximately 5-8 m/s, with gust up to 30 m/s.	
13	Summer wind average afternoon 10-13 m/s, during morning generally light and variable, gust speed up to 30 m/s	

2. Power System Particulars;

The plant and materials supplied shall be suitable in all respect for continuous operation in the existing system having the following data:

1	Normal Voltage	415V	11KV	33KV
2	Maximum Voltage	500V	12KV	36KV
3	No. Of phases	3	3	3
4	System frequency (Hz)	50	50	50
5	No. of wires	5	3	3
6	Fault level (MVA)	25	350	1500
7	Fault Current / Duration	120KA/3S	*	25 kA / 3s
8	Earth Fault Current / Duration	*	3 kA / 3s	3 kA / 3s
9	Neutral point Earthing	Solid	Resistance	Resistance
10	Conductor arrangement	Vertical	Horizontal	Horizontal

➤ Technical Specifications for Item no.1:

Rated 36 KV, Single Core Cable, Aluminum Conductor of 400 mm², XLPE Insulated, Copper Wire Screened, Aluminum Wire Armored, And PVC Sheath.

■ As per the details

- a) Depth of laying 1.4m
- b) Ground temperature 25 Co at 1.2 m
- c) Solid thermal resistivity 1, 75 Co m/ w
- d) Spacing between circuits 0.55 m

1. **Solid Dielectric power cable:** This section of the specification applies to single core cables with an extruded solid dielectric insulation. They shall be generally manufactured in accordance with the latest International Electro technical commission Publication 60502.
 - a. **Conductors:** Conductors shall consist of a stranded aluminum wires, as detailed elsewhere in the specification. They shall comply with latest IEC publication 60228. Non circular conductors shall be pre spiraled and compacted.
 - b. **Conductor screen:** Conductor screening shall be non-metallic in accordance with, latest of I.E.C publication 60502-2.
 - c. **Insulation:** The insulating compounds shall consist of chemically cross-linked polyethylene (XLPE) in accordance with latest of I.E.C publication 60502-2.
 - d. **Core screen and core identification:** The core screens shall consist of a non – metallic semi conducting extruded layer in combination with a metallic layer in accordance with clause 7.3 and 10 of latest I.E.C publication 60502.
 - e. **Metallic layer:** Where the cable core screen shall in adequate to meet the earth fault current specified, for single core cable the geometrical cross – sectional area of **metallic layer screen shall be not less than 36 mm²**, a metallic layer of adequate cross – sectional area shall be included in the design either laid- up with the main cores or applied over the screen. The metallic layer shall be constructed of annealed high – conductivity copper in accordance with IEC publication 60502. Adding a semi-conductive water blocking tape below and above copper wire screening which can protect outer semi-conductive layer from moisture and mechanical damage during installation
 - f. **Manufacturer's identification tape:** The identity of the manufacturer shall be provided throughout the length of the cable by means of a plastic tape on which is printed the name of the manufacturer, year of manufacture and cable nominal voltage at intervals more than 300 mm.
 - g. **Lying – Up:** The insulated cores, the metallic layer and the manufacturer's identification tape shall be laid-up with suitable synthetic non – hydroscopic preformed fillers to make a circular cable and then bound over all.
 - h. **Anti – corrosion sheath:** The anti- corrosion sheath shall consist of an extruded PVC compound to I.E.C publication 60502-2 applied directly over the laid-up cores.
 - i. **Armor bedding:** The armor bedding shall consist of PVC tapes or alternatively may be in the form of an extruded PVC compound in accordance with I.E.C publication 60502-2.
 - j. **Armor:** The armor on single core cables, shall consist of aluminum wire or other non- magnetic armoring as approved by the Engineer.
 - k. **Outer- Covering:** Unless otherwise specified the cable outer cover rings shall be provided in the form of an extruded continuous black PVC sheath which meet the requirements of BS 6747 or equivalent I.E.C

standard. As a protection against termite attack the outer covering suitable deterrent which shall be stated in the tender for approved by the Engineer. The contractor shall stage on the cable test certificate the amounts of insecticide added. The Engineer reserves the right to select samples of such outer coverings for analysis to check the quantities added.

- l. Voltage – Identification:** The plastic over sheath shall be embossed with the name of the manufacturer followed by: IDECO, Electric cables – 33 KV – (Cable size) Contract No --/---, the letters and numerals shall comply with the requirements of BS 6346, or equivalent.
- m. Sealing and drumming:** Immediately after the works tests, both ends of the cable shall be sealed against the ingress of moisture, dirt and insects and the end projecting from the drum shall be adequately protected against mechanical damage during handling and shall be fitted with a pulling eye bonded to cores, sheath and armors.
- n. Jointing Accessories:** Stranded aluminum conductors shall be jointed with indentation ferrules or by a welding process. Conductor temperature during welding shall be monitored by means of a thermocouple. The temperature shall not exceed the value stated in the schedule of particulars and guarantees. Compression type ferrules are not approved for stranded aluminum conductors.
- o. Drumming:** All cables shall be supplied on robust drums of approved materials and construction suitable to withstand very rough transport and handling and to enable conductors or cables to be pulled out smoothly. Drums shall be non- returnable and, if made from timber, shall be pressure – impregnated against fungal and insect attack. Wooden drums shall be logged with closely fitting battens in accordance with BS .1559 or such other standard as may be approved. Battens shall be firmly secured to the drum flange using steel tape not less than 25 mm wide and 2mm thick and stapled to at least every third batten. Drum spindle holes shall be reinforced by steel plates. Drum diameters and the maximum width of drums shall be suitable for the jacks provided under this contract. Each drum shall bear a distinguishing number on the outside of flange. Particulars of the conductor or cable, i.e. Voltage, conductor size and material, number of cores, length type code name and gross and net weights shall also be clearly shown on one flange, together with an approved mark. The gross weight of cable drums shall be clearly shown on one flange. The direction of rolling shall be indicated by an arrow on each flange. The method of marking shall be by gouging, burning or other legible and indelible method approved by the Engineer. Immediately after works tests both ends of cables shall be sealed against the ingress of moisture, dirt and insects and the end projecting from the drum shall be adequately protected against mechanical damage during handling. Cut ends of bare conductors shall also be treated in an approved manner. Where applicable, cables and conductors shall be supplied in maximum drum length, bearing in mind the transport limitations in gaining access to the site. No drum shall contain more than one length.
- p. Condition of operation, System Parameters:** Except where otherwise specified in the schedule of requirements, all cables shall be suitable for operation at the guaranteed max. Sustained rating throughout all the seasons of the year. The nominal A.C system voltages to which the cables will be connected are 33000 V. The highest operating voltages for this system will be 110% of the nominal value; the cable shall with stand the highest operating voltage and the nominal A.C system voltage. **(Nominal system voltage 33KV, Highest system voltage 36KV, Fault Current rating 25kA for 3 Sec, Earth fault current rating 3 KA for 3 Sec).**
- q. Current rating:** The maximum continuous current rating and the maximum permissible conductor temperature for the cable shall be stated in the schedule of particulars and guarantees by the Tenderer.

- r. Reliability:** All cables shall be designed for operation on systems where continuity of supply is the first consideration. They shall also be satisfactory in operation under the atmospheric and climatic conditions prevailing at the site and under such variations of current, voltage and frequency as may be met under fault and surge conditions on the system.
- s. Type of approval:** Cables and accessories for voltages of 33 KV and above shall have satisfactorily passed type approval tests equal to those required by the International Electro Technical commission IEC and details of the cable designs offered shall be given in the appropriate place in the schedules here to.
- t. Design particulars:** Cable shall comply with the design details entered in the schedules of particulars and guarantees here to and except where otherwise specified, their individual components shall meet the requirements of IEC standards. The conductor shall certify that the cables and /or accessories offered will be identical in all essential particulars in respect of design, materials and workmanship with the cables and/or accessories for which type approval certificates are offered in support of his tender. The contractor shall also ensure that all materials used will be subjected to and shall have satisfactorily with stood such tests as are customary in the manufactures. They shall be available for inspection if required by the Engineer.
- u. Cable lengths:** the cables shall be supplied in drum lengths of not less than 1000 m for the required cables.

Tests

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

For test purpose ($U_o = 18$ KV for 33KV cables, $U = 33$ KV nominal system voltage, $U_m = 36$ KV highest system voltage).

A. Routine test at works: Each cable drum shall be routine tested according to IEC 60502-2 or relevant equivalent.

- 1. High voltage/partial discharge test:** Each completed cable drum length shall be subjected to a combined high voltage/ partial discharge test in three steps to measure the permissible discharge. The A.C Test voltage shall be applied between the conductor and the core screen and /or metal sheath connected together and bonded to earth. The tests shall be made at normal room temperature generally in accordance with IEC 60502-2 and IEC 60885-3 or relevant equivalent.
- 2. Conductor resistance test:** The D.C. resistance of the conductor of the completed cable shall be measured and, when corrected to 20 Co, shall not exceed the guaranteed values stated in the schedule of particulars and guarantees and also shall not exceed the appropriate value specified in IEC 60228.
- 3. Capacitance test:** The capacitance of each core of every drum length of completed cable shall be measured at room temperature and recorded on the test certificate.
- 4. Insulation thickness measurement:** The measurement of the insulation thickness shall be determined from a representative sample of the cable not more than 150mm in length taken no less than 300 mm from the end of each factory length. Measurements shall be made by an optical method in which the error of determination does not exceed 0.025 mm. The measurements shall be made at six approximately equally spaced points round the periphery of the sample and care shall be taken to ensure that the minimum thickness is measured the average value stated in the schedule of particulars and guarantees.
- 5. Voltage test on outer covering:** Each drum length of completed cable shall with Stand a voltage test in accordance with clause 3.1 of IEC 60229. If the cable outer sheath is not provided with a baked-on graphite coating, the cable drum length shall be completely immersed in water for the execution of this test.
- 6. Measurement of extruded bidding and over sheath thickness:** The thickness of the bedding and over sheath shall be measured on a representative sample taken from the cable, not less than 150mm from the end of a manufacturing length, by a method in which the error of determination does not exceed 0.025mm (e.g., by use of a micrometer or an optical device).

- B. Sample Tests:** Sample tests shall be required for cable manufacturer's lengths in accordance with IEC 60502. One cable sample 10 meters long shall be cut from the completed cable and subjected to the following tests in the following sequence.
- a. Conductor examination, clause (17.4)
 - b. Check of dimensions, clause (17.5, 6, 7, & 8)
 - c. Voltage test for cables of rated voltage above 7.2 KV, clause (17.9).
 - d. Hot set test for EPR, HEPR and, XPLE insulation and elastomeric sheaths, clause (17.10).
 - e. galvanized wires tensile strength and thickness of galvanized coating according to approved latest B.S standard.
- C. Type Approval Test Requirement:** (33 KV) cables and associated jointing and terminating accessories shall have satisfactorily passed type approval tests generally in accordance with IEC. 60811 and IEC 60502-2 as follows:
- a. Insulation resistance measurement at room temperature, IEC 60502-2 or equivalent
 - b. Partial discharge test as per IEC 60502 –2
 - c. Bending test as per IEC 60502-2
 - d. Partial discharge test as per sample test at works
 - e. Power factor/voltage and capacitance measurement as per IEC 60502-2 Power factor/temperature measurement at maximum temperature as per IEC 60502-2
 - f. Insulation resistance measurement at maximum temperature as per IEC 60502-2
 - g. Heating cycle test as per IEC 60502-2
 - h. Impulse withstand test as per IEC 60502-2 but withstand value to be 170 KV (10+ve 10-ve) followed by a power frequency test, and hot partial discharge test at 3U₀ as per sample test at works.
 - i. Abrasion, penetration and saline tests on outer sheath as per IEC 60229 and IEC 60450
 - j. Impulse and DC voltage tests on protective boxes for use with jointing accessories having a sheath sectionalizing insulation. Also the tests procedure shall be performed by qualified and well – recognized testing accredited laboratories such as KEMA, CISI and IBH.
 - k. Aging test: the manufacturer shall perform ageing test in accordance with IEC – 60811-1-2 or equivalent latest approved standards. The supplier shall provide the necessary documentations associated with the performance of ageing test for power cables.

➤ **Technical Specifications for Item no.2:**

Rated 36 KV, Single Core Cable, Aluminum Conductor of 500 mm², XLPE Insulated, Copper Wire Screened, Aluminum Wire Armored, And PVC Sheath.

■ **As per the details**

- e) Depth of laying 1.2m
- f) Ground temperature 25 Co at 1.2 m
- g) Solid thermal resistivity 1, 75 Co m/ w
- h) Spacing between circuits 0.55 m

3. **Solid Dielectric power cable:** This section of the specification applies to single core cables with an extruded solid dielectric insulation. They shall be generally manufactured in accordance with the latest International Electro technical commission Publication 60502.
- a. **Conductors:** Conductors shall consist of a stranded aluminum wires, as detailed elsewhere in the specification. They shall comply with latest IEC publication 60228. Non circular conductors shall be pre spiraled and compacted.
 - b. **Conductor screen:** Conductor screening shall be non-metallic in accordance with, latest of I.E.C publication 60502-2.
 - c. **Insulation:** The insulating compounds shall consist of chemically cross-linked polyethylene (XLPE) in accordance with latest of I.E.C publication 60502-2.
 - d. **Core screen and core identification:** The core screens shall consist of a non – metallic semi conducting extruded layer in combination with a metallic layer in accordance with clause 7.3 and 10 of latest I.E.C publication 60502.
 - e. **Metallic layer:** Where the cable core screen shall in adequate to meet the earth fault current specified, for single core cable the geometrical cross – sectional area of **metallic layer screen shall be not less than 36 mm²**, a metallic layer of adequate cross – sectional area shall be included in the design either laid- up with the main cores or applied over the screen. The metallic layer shall be constructed of annealed high – conductivity copper in accordance with IEC publication 60502. Adding a semi-conductive water blocking tape below and above copper wire screening which can protect outer semi-conductive layer from moisture and mechanical damage during installation
 - f. **Manufacturer's identification tape:** The identity of the manufacturer shall be provided throughout the length of the cable by means of a plastic tape on which is printed the name of the manufacturer, year of manufacture and cable nominal voltage at intervals more than 300 mm.
 - g. **Lying – Up:** The insulated cores, the metallic layer and the manufacturer's identification tape shall be laid-up with suitable synthetic non – hydroscopic preformed fillers to make a circular cable and then bound over all.
 - h. **Anti – corrosion sheath:** The anti- corrosion sheath shall consist of an extruded PVC compound to I.E.C publication 60502-2 applied directly over the laid-up cores.
 - i. **A armor bedding:** The armor bedding shall consist of PVC tapes or alternatively may be in the form of an extruded PVC compound in accordance with I.E.C publication 60502-2.
 - j. **A armor:** The armor on single core cables, shall consist of aluminum wire or other non- magnetic armoring as approved by the Engineer.
 - k. **Outer- Covering:** Unless otherwise specified the cable outer cover rings shall be provided in the form of an extruded continuous black PVC sheath which meet the requirements of BS 6747 or equivalent I.E.C

standard. As a protection against termite attack the outer covering shall preferably contain an evenly dispersed mixture of Aldrin and dieldrin in the ratio of 0.25% Aldrin and 0.25% dieldrin by weight of PVC, or another suitable deterrent which shall be stated in the tender for approved by the Engineer. The contractor shall stage on the cable test certificate the amounts of insecticide added. The Engineer reserves the right to select samples of such outer coverings for analysis to check the quantities added.

- l. Voltage – Identification:** The plastic over sheath shall be embossed with the name of the manufacturer followed by: IDECO, Electric cables – 33 KV – (Cable size) Contract No --/----, the letters and numerals shall comply with the requirements of BS 6346, or equivalent.
- m. Sealing and drumming:** Immediately after the works tests, both ends of the cable shall be sealed against the ingress of moisture, dirt and insects and the end projecting from the drum shall be adequately protected against mechanical damage during handling and shall be fitted with a pulling eye bonded to cores, sheath and armors.
- n. Jointing Accessories:** Stranded aluminum conductors shall be jointed with indentation ferrules or by a welding process. Conductor temperature during welding shall be monitored by means of a thermocouple. The temperature shall not exceed the value stated in the schedule of particulars and guarantees. Compression type ferrules are not approved for stranded aluminum conductors.
- o. Drumming:** All cables shall be supplied on robust drums of approved materials and construction suitable to withstand very rough transport and handling and to enable conductors or cables to be pulled out smoothly. Drums shall be non- returnable and, if made from timber, shall be pressure – impregnated against fungal and insect attack. Wooden drums shall be logged with closely fitting battens in accordance with BS .1559 or such other standard as may be approved. Battens shall be firmly secured to the drum flange using steel tape not less than 25 mm wide and 2mm thick and stapled to at least every third batten. Drum spindle holes shall be reinforced by steel plates. Drum diameters and the maximum width of drums shall be suitable for the jacks provided under this contract. Each drum shall bear a distinguishing number on the outside of flange. Particulars of the conductor or cable, i.e. Voltage, conductor size and material, number of cores, length type code name and gross and net weights shall also be clearly shown on one flange, together with an approved mark. The gross weight of cable drums shall be clearly shown on one flange. The direction of rolling shall be indicated by an arrow on each flange. The method of marking shall be by gouging, burning or other legible and indelible method approved by the Engineer. Immediately after works tests both ends of cables shall be sealed against the ingress of moisture, dirt and insects and the end projecting from the drum shall be adequately protected against mechanical damage during handling. Cut ends of bare conductors shall also be treated in an approved manner. Where applicable, cables and conductors shall be supplied in maximum drum length, bearing in mind the transport limitations in gaining access to the site. No drum shall contain more than one length.
- p. Condition of operation, System Parameters:** Except where otherwise specified in the schedule of requirements, all cables shall be suitable for operation at the guaranteed max. Sustained rating throughout all the seasons of the year. The nominal A.C system voltages to which the cables will be connected are 33000 V. The highest operating voltages for this system will be 110% of the nominal value; the cable shall with stand the highest operating voltage and the nominal A.C system voltage. **(Nominal system voltage 33KV, Highest system voltage36KV, Fault Current rating 25kA for 1 Sec, Earth fault current rating 3 KA for 3 Sec).**
- q. Current rating:** The maximum continuous current rating and the maximum permissible conductor temperature for the cable shall be stated in the schedule of particulars and guarantees by the Tenderer.

- r. Reliability:** All cables shall be designed for operation on systems where continuity of supply is the first consideration. They shall also be satisfactory in operation under the atmospheric and climatic conditions prevailing at the site and under such variations of current, voltage and frequency as may be met under fault and surge conditions on the system.
- s. Type of approval:** Cables and accessories for voltages of 33 KV and above shall have satisfactorily passed type approval tests equal to those required by the International Electro Technical commission IEC and details of the cable designs offered shall be given in the appropriate place in the schedules here to.
- t. Design particulars:** Cable shall comply with the design details entered in the schedules of particulars and guarantees here to and except where otherwise specified, their individual components shall meet the requirements of IEC standards. The conductor shall certify that the cables and /or accessories offered will be identical in all essential particulars in respect of design, materials and workmanship with the cables and/or accessories for which type approval certificates are offered in support of his tender. The contractor shall also ensure that all materials used will be subjected to and shall have satisfactorily with stood such tests as are customary in the manufactures. They shall be available for inspection if required by the Engineer.
- u. Cable lengths:** the cables shall be supplied in drum lengths of not less than 1000 m for the required cables.

Tests

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

For test purpose (For test purpose ($U_0 = 19.05$ KV for 33KV cables, $U = 33$ KV nominal system voltage, $U_m = 36$ KV highest system voltage).).

A. Routine test at works: Each cable drum shall be routine tested according to IEC 60502-2 or relevant equivalent.

1. High voltage/partial discharge test: Each completed cable drum length shall be subjected to a combined high voltage/ partial discharge test in three steps to measure the permissible discharge. The A.C Test voltage shall be applied between the conductor and the core screen and /or metal sheath connected together and bonded to earth. The tests shall be made at normal room temperature generally in accordance with IEC 60502-2 and IEC 60885-3 or relevant equivalent.

2. Conductor resistance test: The D.C. resistance of the conductor of the completed cable shall be measured and, when corrected to 20 Co, shall not exceed the guaranteed values stated in the schedule of particulars and guarantees and also shall not exceed the appropriate value specified in IEC 60228.

3. Capacitance test: The capacitance of each core of every drum length of completed cable shall be measured at room temperature and recorded on the test certificate.

4. Insulation thickness measurement: The measurement of the insulation thickness shall be determined from a representative sample of the cable not more than 150mm in length taken no less than 300 mm from the end of each factory length. Measurements shall be made by an optical method in which the error of determination does not exceed 0.025 mm. The measurements shall be made at six approximately equally spaced points round the periphery of the sample and care shall be taken to ensure that the minimum thickness is measured the average value stated in the schedule of particulars and guarantees.

5. Voltage test on outer covering: Each drum length of completed cable shall with Stand a voltage test in accordance with clause 3.1 of IEC 60229. If the cable outer sheath is not provided with a baked-on graphite coating, the cable drum length shall be completely immersed in water for the execution of this test.

6. Measurement of extruded bedding and over sheath thickness: The thickness of the bedding and over sheath shall be measured on a representative sample taken from the cable, not less than 150mm from the end of a manufacturing length, by a method in which the error of determination does not exceed 0.025mm (e.g., by use of a micrometer or an optical device).

B. Sample Tests: Sample tests shall be required for cable manufacturer's lengths in accordance with IEC 60502. One cable sample 10 meters long shall be cut from the completed cable and subjected to the following tests in the following sequence.

1. Conductor examination, clause (17.4)
2. Check of dimensions, clause (17.5, 6, 7, & 8)
3. Voltage test for cables of rated voltage above 7.2 KV, clause (17.9).
4. Hot set test for EPR, HEPR and, XPLE insulation and elastomeric sheaths, clause (17.10).

C. Type Approval Test Requirement: 33 KV cables and associated jointing and terminating accessories shall have satisfactorily passed type approval tests generally in accordance with IEC. 60811 and IEC 60502-2 as follows:

- a- Partial discharge test, clause (18.1.3)
- b- Bending test followed by a partial discharge test, clause (18.1.4)
- c- Tan measurement, clause (18.1.2 & 18.1.5)
- d- Heating cycle test followed by a partial discharge test, clause (18.1.6)
- e- Impulse test, followed by a voltage test, clause (18.1.7)
- f- Voltage test for 4 h, clause (18.1.8)

The Tenderer is kindly requested to fill in the below schedule for 1*400 & 1*500 cables:

Schedule (1)
Technical Particulars and Guarantees

No.	Description	Unit	Particulars for 1*400mm ²	Particulars for 1*500mm ²
1	Line voltage of 3-phase circuit	KV	33	33
2	Number of cores		1	1
3	Conductor			
	- Cross sectional area	mm	400	500
	-Material			
	- Design			
	- Over all dimension	mm		
	- Soldering Temperature	°C		
4	Conductor Screen			
	- Material			
	- Nominal thickness	mm		
5	Insulation			
	- Type of curing			
	- Minimum radial thickness			
6	Core screen			
	- Material			
	-Nominal thickness	mm		
	-Diameter over screen	mm		
	-Cross sectional area per phase	mm ²		
7	Filler Material			
8	Binders over laid –up cores			
	- Material			
	- Nominal thickness			
	-Diameter over binder			
9	PVC anti-corrosion			
	- Material			
	-Sheath thickness	mm		
10	Armor bedding			
	- Material			
	-Nominal thickness			
11	Armor			
	- Material of wire or tape			
	- Number of wires or tapes			
	- Diameter of wire	mm		
	- Thickness and width of tapes	mm		
12	Outer covering			
	-Material			
	-Minimum average thickness			
	-Type of termite repellent			
13	Completed cable			
	-Over all diameter	mm		
	-Weight per meters	kg		

	-Maximum drum length	m		
14	Maximum dielectric stress at the conductor screen (assumed smooth)	MV /m		
15	Maximum conductor temperature			
	-laid direct in ground	°C		
	-Drawn in to duct	°C		
	-Erected in air	°C		
16	Minimum radius of bend around which cable can be laid			
	-laid direct	m		
	-In ducts	m		
	-In air	m		
17	Nominal internal diameter of pipes or ducts through which cable may be pulled	mm		
18	Maximum Dc Resistance per Meter of cable at 20° C			
	-Of conductor	μΩ		
	-Of metallic layer	μΩ		
19	Maximum AC resistance of conductor per meter of cable at maximum conductor temperature	μΩ		
20	Insulation resistance per Meter of cable			
	- At 20 °C	MΩ		
	- At maximum rated temperature	MΩ		
21	Equivalent star reactance per meter of three phase circuit at 50 HZ			
22	Maximum electrostatic capacitance per phase per meter of cable	pF		
23	Maximum charging current per conductor per meter of cable at nominal Voltage and frequency	mA		
24	Current carrying capacity			
	a- Laid directed in ground:			
	- One circuit	Amp		
	- Two circuits	Amp		
	- Three circuits	Amp		
	b- Drawn in to single way ducts			
	- One circuit	Amp		
	- Two circuits	Amp		
	- Three circuits	Amp		
	c- In Air			
	- One circuit	Amp		
25	Conductor short circuit carrying capacity for one second, cable loaded as above before short circuit and final conductor temperature 250 C	KA		

26	Metallic layer loss (including armor if applicable)Of cable per meter of three phase circuit at nominal voltage and normal frequency at circuit rating .			
27	Maximum dielectric loss of cable per meter of three Phase circuit when laid direct in the ground at Nominal voltage and normal frequency at maximum Conductor temperature	W		
28	Maximum dielectric loss angle of charging VA of cable when laid direct in ground at nominal voltage and normal frequency			
	- A conductor temperature of 20 C	TAN		
	- Maximum conductor temperature	TAN		
29	Maximum dielectric loss angle of charging VA cable at normal frequency and conductor temperature of 20 C at			
	- 50 % rated voltage			
	- 200 % rated voltage			
30	Metallic layer earth fault current carrying capacity for one second , cable fully Temperature of 250 C	KA		
31	Cable drum			
	-Diameter	m		
	-Width	m		
	-Weight loaded	kg		
32	Conditions upon which current carrying capacities are based			
	- Axial spacing between phase cables	mm		
	- Axial spacing between circuits	mm		
	- Soil thermal resistivity	c-m/w		
	- Ground temperature	°C		
	- Air temperature	°C		
	- Burial depth	m		
	- Type of earth bonding			

Special Requirements

The Below mentioned requirements shall have a precedence in all of the preceding specifications and requirements, and the tenderer is kindly requested to strictly follow.

1. The Tender Calls for: {»} variable Prices.
2. The manufacturer shall print IDECO Contract No. (59/2022), country of origin and purchase order No. () along with the stock code corresponding to the certain material as seen in the Stock Code Tape in the invitation to tender table no.2 - page (3), and the message already described above. And QR code contain the following message shall be printed on nameplate of required materials. (IDECO Tender No. 59/2022, Purchase order No., Stock code xxxx xxxx as mentioned in table No.2., Serial number, Manufacturer name, Manufacturing date).
3. Maintenance instructions: Where the equipment / materials supplied are subject to maintenance during service the manufacturer shall submit for approval a draft of the recommended maintenance instructions. After approval the supplier shall supply any further copies required by the Engineer. These maintenance instructions shall be provided before the taking over of any part of the equipment.
4. Catalogues: a set of the manufacturer's catalogues shall be attached to the tender.
5. All Inspection Costs (Visa, Air Tickets, Hotel, Accommodation, Transportation, etc.) of at least (2) IDECO representative engineers, at the manufacturer house, for each purchase order to ensure the proper handling and operation of the supplied materials is required. And contractor is to handle all related costs.
6. The contractor shall nominate third party laboratory and cost of inspection by third party as shown in **Schedule No. 6**, in case the attendance of IDECO engineers is not applicable due to any reason.
7. When the visit to a factory is required for evaluation purposes before signing the agreement, the tenderer must do all necessary arrangement for this visit; the related cost of visit by IDECO team will be borne by the manufacturer.
8. The material safety data sheet (MSDS) of all equipment / materials is required to be submitted with the offer.
9. The tenderer shall consider the USD as the only accepted reference currency under this contract.
10. PCB'S test shall be conducted in IDECO laboratory, and based on the test results, the required transformers will be approved or not.
11. The technical drawing approval shall be submitted during 7 days from order letter date, any delay in this period from contractor side, the delivery period will start after 7 days from order letter. (In case the contractor offered delivery period from order letter date and drawing approval).
12. **The purchaser has the complete right to reply on contractor's clarifications during 7 days, and during this period there is not exemption from incurred penalty for the event.**
13. The contractor shall have calibrated equipment's by authorized party for inspection purposes.
14. After Awarding Tenders, winner tenderer will be assessment according to quality of good, delivery period, service after sale, and assessment weight will be considered in coming tenders' evaluation.
15. Euro one certificate shall be submitted during clearance process, in case the country of origin of the required materials from Europe countries.
16. The manufacturer shall print 128 c bar code in each item as below shape, and bar code character will be submitted to manufacturer at awarding date.



Departures from Technical Specifications and / or Special Requirements

- The Tenderer is kindly requested to fill in the below schedule if applicable:

Schedule No. 2 (Departures).

No.	Required Specification	Departure

Remarks:

❖ ...
❖ ...
❖ ...

Signed:

On behalf of:

Address:

.....

Date2022

Manufacturing and Delivery

Below schedule shall be completed by the tenderer and the periods entered shall be binding on the contractor. All periods entered below are to be in weeks and relate to the placing of the contract. Material shall be shipped uniformly throughout the contract.

The tenderer shall determine the minimum quantity per each purchase order, and determine the number of times purchase orders can be delivered within two years. And the priority will be given to tenderer who minimize the purchase order quantity and maximize the number of times of purchase orders.

Schedule 3 (Manufacturing & Delivery)

Required	DATA for item (1) Rated 33 KV, 1X400 mm² AL / XLPE / AWA / PVC – Cable.	DATA for item (2) Rated 33 KV, 1X500 mm² AL / XLPE / AWA / PVC – Cable.
Manufacturer		
Manufacturing Place		
Inspection Place		
Number of purchase order during two years .		
Manufacturing Period and Delivery (week) to from purchase order date
Minimum quantity per each purchase order based on basic price for CU= 9,000 USD/MT AL=2,500 USD/MT		
Maximum quantity per each purchase order based on basic price for CU= 9,000 USD/MT AL=2,500 USD/MT		

PRICE ADJUSTMENT FORMULA

LME PRICE ADJUSTMENT FORMULA:

$$\text{Final Price} = P_o + [(\text{CLME(AL) at awarding dated} - \text{BLME(AL) quoted price}) \times \text{V.F(AL)}] + [(\text{CLME(CU) at awarding dated} - \text{BLME(CU) quoted price}) \times \text{V.F(CU)}]$$

Where:

1. **P_o**: Quoted Price per unit. (KM) based on the basic price of Aluminum = **2,500** USD/MT and the basic price of Copper = **9,000** USD/MT.
2. **CLME**: Current Aluminum/ copper Price as Per London Metal Exchange Closing Price at awarding date of Purchase Order (**Cash Seller**).
3. **BLME**: the basic price of Aluminum / Copper.
4. **V. F.**: Variation factor for Aluminum/copper.

The basic price of Aluminum = **2,500** USD per metric ton as per London metal exchange, and the basic price of copper = **9,000** USD per metric ton as per London metal exchange.

PRICE VARIATION DATA

Schedule 4

ITEM No.	Material	Aluminum Weight of all conductor per 1000 meters (kg)	Copper Weight of all conductor per 1000 meters (kg)	Variation Factor for Aluminum V.F	Variation Factor for Copper V.F
1	Rated 33 KV, 1X400 mm ² AL / XLPE / AWA / PVC – Cable.				
2	Rated 33 KV, 1X500 mm ² AL / XLPE / AWA / PVC – Cable.				

Price Summary and Delivery

- The tenderer shall enter in the appropriate columns of this schedule the prices at which each item will be supplied. Prices shall include shipment and delivery to the selected destination seen below based on the following selected transportation obligations.
- IDECO Company is not exempted from custom duties, sales taxes, import license fees and any other tariffs.
- transportation obligations shall be indicated by **putting a tick** at the proper following choice:

☐ **CFR - Aqaba Port**
 ☐ **CPT- Amman Customs**
 ☐ **CPT- IDECO Stores**

- The tenderer shall be filled in the below tables for Variable Prices, based on the basic price of Aluminum = **2,500** US Dollar per metric ton and copper = **9,000** US Dollar per metric ton, according to the PRICE ADJUSTMENT FORMULA
- The tenderer shall be determined the aluminum weight in the conductors per Kg/ KM, and the copper weight in the cable per Kg/KM.
- The tenderer shall be determined the variation factor for Aluminum and copper.
- The tender shall consider the USD as the only accepted reference currency under this contract.

Schedule 5

No.	Quantity Within 2 years (KM)	Material	Unit Price Per KM Based on basic price for AL/CU CU= 9,000 USD/MT AL= 2,500 USD/MT (Po)	Total Price (USD)
1	93	Rated 33 KV, 1X400 mm ² AL/ XLPE / AWA / PVC – Cable.		
2	270	Rated 33 KV, 1X500 mm ² AL/ XLPE / AWA / PVC – Cable.		
<u>Total Contract Price (in words)</u>				
Minimum value per each purchase order (USD)				

Name(s) of Sureties:

Name(s) and Address of Tenderer:

Tele / Fax:

Answer Back Code:

Signature:

Position of Signatory:

Inspection Details

- In case of foreign material origin, and inspection of material is required, the bidder shall fill up the following table.
- The inspection is required for each purchase order and for 2 IDECO Engineers at least, and the cost shall be borne by the contractor until otherwise agreed.

Schedule No. 6

NO	Description	
1	Inspection cost in the country of origin per engineer. (If not included in the main offer).	
2	Air flight class.	
3	Transportation cost during the period of inspection (Included/not included).	
4	Residential Hotel Rank.	
5	Daily meals (included/Not included), Number of meals.	
Inspection cost in third party		
	Name of laboratory	
	Cost	

Main Offer details

- The bidder shall fill the following table otherwise his offer may be not considered.

Schedule No.7

NO.	Description	
1	Value and currency of Bid Bond	
2	Payment method (open account/ LC/ Other)	
3	Offer validity	

Tender Agreement Summary

Tender No. (59/2022)

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 mentioned works described in the specification and schedules and in accordance with the mentioned conditions of contract, for the sum ofor such other sum as may be ascertained in accordance with the mentioned conditions.
2. We agree that this tender shall be held open for acceptance or rejection for validity period of **120 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, along with your written acceptance thereof, shall constitute a binding contract between us.
4. If our offer is accepted, we will deliver to Irbid District Electricity Co. Ltd. Within **(30) 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 starting from the date of **Order Letter**, and to deliver on the dock at (.....port) - Jordan the whole of the works offered within a further (.....) weeks, or to **IDECO 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 effected by Irbid District Electricity and we will provide details of the materials to be shipped in good time for Irbid District Electricity to arrange for the said marine insurance.
7. A guarantee Period will apply to each section of the works of fifteen months from the date of dispatch ex-works or twelve months from the date of setting to work whichever shall be the later.
8. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated thisday of / / 2022.

Signature.....in the capacity of

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

Address..... Occupation.....