



Document for Tender
No. (72/2019)
(52 Pages)

Supply of:

- 630 A 3-phase / 33 K.V Pole Mounted Autoreclosers.

Tenderer:

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

Tender document cost = 60 JD.



List of Contents

Table No.1

No.	Description	Page
1	Cover Page	1
2	List of Contents	2
3	Invitation to Tender	3
4	General Conditions	4
5	Tendering Instructions	13
6	General requirements	17
7	Inspection and Testing	21
8	Form of Bid Bond	23
9	Form of Performance Bond	24
10	Technical specifications	25-44
11	Special Requirements	45
12	Departure from Specification	46
13	Program for Manufacture and Delivery	47
14	Manufacturing and Places and Testing	48
15	Price Summary and Delivery	49
16	Price Summary for Spare Parts	50
17	Inspection program & main offer details	51
18	Tender Agreement Summary	52

Invitation to Tender
No. (72/2019)

Dear Sir;

You are kindly requested to tender for the supply of the below mentioned materials as per the quantities and technical specifications enclosed herewith, by filling in the schedules, signing the form of tender, and forward the complete tender documents to the attention of **IDECO - Director General** addressed as seen on the cover page, to be received not later than 2 pm (local time) due **October 14, 2020.**

All bids must be accompanied with a Bid Bond of a value not less than 5% of the highest alternative tender price, otherwise your tender will not be considered. The bid bond shall be enclosed in the same envelope of the tender and must be delivered to tenders secretary office located in general management building - financial department not later than 2 pm (local time) due **October 14, 2020.**

Table No.2

Item No.	Quantity (PCS)	Material Description	Stock Code
1	30	630 Amps 3- phase pole mounted Automatic 33kv circuit auto reclosers with electronically controlled vacuum interrupters complete with digital based control, with all accessories with 220 V AC PT, external power or internal supply, complete with mounting bracket for erection on two poles H- shape with 2 m distance between the (2) poles and the pole diameter will be about 270 mm for concrete pole and 168 mm for steel pole.	6110-3164
1.1	30	Single phase voltage transformer <u>33/0.220 KV</u> for item No. 1	6110-3165
1.2	30	DC batteries 24V DC and charger 220 VAC/24V DC for item No.1.	6110-3166
1.3	1	A training course (covering installation, operation and maintenance) for (2) IDECO Engineers for one week at the manufacturer's factories.	

GENERAL CONDITIONS

- The below are general conditions of contract for the supply and delivery of plant and materials based on United Nations economic commission for Europe publication ref.: me/188 Geneva. March, 1953.

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." 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" whose 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 effected 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.

2. Formation of Contract

2.1. The contract shall be deemed to have been entered into when the purchaser has sent an acceptance in writing before the time set in the tender for acceptance or any such later date extended by the tenderer at the request of the purchaser.

2.2. Notwithstanding that the contract and correspondence in connection with the contract shall be in the English language, the contract shall be and be deemed to be a Jordan contract and shall accordingly be governed by and construed according to the laws for the time being in force in the Hashemite Kingdom of Jordan.

2.3. **Power to Vary The Work:** 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, also the purchaser shall have the absolute right to increase the quantities in such manner that the increment does not exceed the amount of 25% of the total price payable under the contract, however; the same prices awarded and any other relevant conditions shall remain the same for this purpose. This right is valid during the tender validity and within 120 days from the date of the order letter, and during delivery period.**

2.4. Precedence: In the event of any discrepancy or contradiction between the provisions of the conditions of contract and of the specification, the conditions of contract shall take precedence.

2.5. Prices: The Tender calls for **firm prices**.

3. Drawings and Descriptive Documents

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

3.2. Any drawings or technical documents intended for use in the construction of the material or of part thereof and submitted to the purchaser prior or subsequent to the formation of the contract remain the exclusive property of the Vendor. They may not, without the Vendor's consent, be utilized by the purchaser or copied, reproduced, transmitted or communicated to a third party. Provided, however, that the said plans and documents shall be the property of the purchaser.

a. If it is expressly so agreed, or

b. If they are referable to a separate preliminary development contract on which no actual construction was to be performed and in which the property of the Vendor in the said plans and documents was not reserved.

3.3. Any drawings or technical documents intended for use in the construction of the material or of part thereof and submitted to the Vendor by the Purchaser prior or subsequent to the formation of the contract remain the exclusive property of the Purchaser. They may not, without his consent be utilized by the Vendor or copied, or reproduced, transmitted or communicated to a third party.

3.4. The Vendor shall, if required by the purchaser, furnish free of charge to the purchaser at the commencement of the Guarantee Period, as defined in clause 9, information and drawings other than manufacturing drawings of the material in sufficient detail to enable the purchaser to carry out the erection, commissioning, operation and maintenance (including running repairs) of all parts of the material. Such information and drawings shall be the property of the purchaser and the restrictions on their use set out in paragraph 2 hereof shall not apply thereto. Provided that if the Vendor so stipulates, they shall remain confidential.

4. 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.

5. Inspection and Testing

5.1. If expressly agreed in the contract, the purchaser shall be entitled to have the quality of the materials used and the parts of the instruments, both during manufacture and when completed, inspected and checked by his authorized representatives. Such inspection and checking shall be carried out at the place of manufacture during normal working hours after agreement with the Vendor as to date and time.

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

5.3. 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.

5.4. 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.

5.5. 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.

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

5.7. 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.

6. Passing of Risk

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

7. Delivery:

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

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

7.2. Should delay in delivery be caused by any of the circumstances mentioned in clause 10 or by an act or omission of the purchaser and whether such cause occur before or after the time or extended time for delivery, 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.

7.3. If a fixed time for delivery is provided for in the contract and the Vendor fails to deliver within such time or any extension thereof granted under paragraph 2 hereof, the purchaser shall be entitled, on giving to the Vendor within a reasonable time notice in writing, to claim a deduction of the price payable under the contract. Such deduction shall be calculated at the rate of one half of one percent of that part of the price payable under the contract which is properly attributable to such portion of the plant as cannot in consequence of the said failure be put to the use intended for each complete week of delay commencing on the due date of delivery, but shall not exceed a maximum percentage deduction of ten percent. Such deduction shall be allowed when a payment becomes due on or after delivery. Save as provided in paragraph 5 hereof, such deduction of price shall be to the exclusion of any other remedy of the purchaser in respect of the Vendor's failure to deliver as aforesaid.

7.4. If the time for delivery mentioned in the contract is an estimate only, either party may after the expiration of two thirds of such estimated time require the other party in writing to agree a fixed time. Where no time for delivery is mentioned in the contract, this course shall be open to either party after the expiration of six months from the formation of the contract. If in either case the parties fail to agree, either party may have recourse to arbitration, in accordance with the provisions of clause 13, to determine a reasonable time for delivery and the time so determined shall be deemed to be the fixed time for delivery provided for in the contract and paragraph 3 hereof shall apply accordingly.

7.5. If any portion of material in respect of which the purchaser has become entitled to the maximum deduction provided for by paragraph 3 hereof, or in respect of which he would have been so entitled had he given the notice referred to therein, remains undelivered, the purchaser may by notice in writing to the Vendor require him to deliver and by such last mentioned notice fix a final time for delivery which shall be reasonable taking into

account such delay as has already occurred. If for any reason whatever the Vendor fails within such time to do everything that he must do to effect delivery, the purchaser shall be entitled by notice in writing to the Vendor, and without requiring the consent of any court, to terminate the contract in respect of such portion of the material and thereupon to recover from the Vendor any amount not exceeding that part of the price payable under the Contract which is properly attributable to such portion of the material as could not in consequence of the Vendor's failure be put to the use intended.

7.6. If the purchaser fails to accept delivery on due date, he shall nevertheless make any payment conditional on delivery as if the material had been delivered. The Vendor shall arrange for the storage of the material at the risk and cost of the purchaser. If required by the purchaser, the Vendor shall insure the material at the cost of the purchaser. Provided that if the delay in accepting delivery is due to one of the circumstances mentioned in clause 10 and the Vendor is in a position to store it in his premises without prejudice to his business, the cost of storing the material shall not be borne by the purchaser.

7.7. 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.

8. Force Majeure

8.1. Notwithstanding the provisions of clauses 7, the supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

8.2. For purposes of this clause, "Force Majeure" means an event beyond the control of the supplier not involving the supplier's fault or negligence. Such events may include, but are not restricted to, acts of God, acts of the purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

8.3. 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 employ all reasonable alternative means for performance not prevented by the Force Majeure event.

8.4. Payment:

8.4.1 Terms of Payment:

1. The company prefers to deal with the supplier on an open account basis, and the payment to be made 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

- document shall be legalized for shipping purposes.
- 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 born by the supplier and charge to his own account 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 document shall be legalized for shipping purposes.
 - b. 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.

8.4.2 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.

8.4.3 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.

8.4.4 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.

8.4.5 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.

8.4.6 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.

8.4.7 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.

8.4.8 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.

9. Guarantee:

- 9.1.** Subject as hereinafter set out; the Vendor undertakes to remedy any defect resulting from faulty design, materials or workmanship.
- 9.2.** This liability is limited to defects which appear during the period (hereinafter called the Guarantee Period) of fifteen months from date of dispatch ex-works or twelve months from the date of setting to work whichever shall be the later.
- 9.3.** In fixing this period due account has been taken of the time normally required for transport as contemplated in the contract.
- 9.4.** In respect of such parts (whether of the Vendor's own manufacture or not) of the material as are expressly mentioned in the contract, the Guarantee Period shall be such other period (if any) as is specified in respect of each of such parts.
- 9.5.** The Guarantee period 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.
- 9.6.** The Guarantee period is based on the continuous use of the material in service for 24 hours every day.
- 9.7.** 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.
- 9.8.** 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.
- 9.9.** 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.
- 9.10.** The Vendor shall bear all the costs and risks of the transport of defective parts or equipments and their replacements.
- 9.11.** 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.
- 9.12.** Defective parts replaced according to this clause shall be placed at the disposal of the Vendor.

- 9.13.** 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.
- 9.14.** The Vendor's liability does not apply to defects arising out of materials provided, or out of a design stipulated, by the purchaser.
- 9.15.** 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.
- 9.16.** 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.
- 9.17.** 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.
- 9.18.** 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.
- 10. Relief:**
- 10.1.** The following shall be considered as cases of relief if they intervene after the formation of the contract and impede its performance: industrial disputes, and any other circumstances (e.g. fire, mobilization, requisition, embargo, currency restrictions, insurrection, shortage of transport, general shortage of materials and restrictions in the use of power) when such other circumstances are beyond the control of the parties.
- 10.2.** The party wishing to claim relief by reason of any of the said circumstances shall notify the other party in writing without delay on the intervention and on the cessation thereof.
- 10.3.** The effects of the said circumstances so far as they affect the timely performance of their obligation by the parties, are defined in clauses 7 and 8. Save as provided in paragraph 7.5, 7.7, and 8.7, if by reason of any of the said circumstances, the performance of the contract within a reasonable time becomes impossible, either party shall be entitled to terminate the contract by notice in writing to the other part without requiring the consent of any court.
- 10.4.** If the contract is terminated in accordance with paragraph 3 hereof, the division of the expenses incurred in respect of the contract shall be determined by agreement between the parties.

- 10.5.** In default of agreement it shall be determined by the arbitrator which party has been prevented from performing his obligations and that party shall bear the whole of the said expenses. Where the purchaser is required to bear the whole of the expenses and has before termination of the contract paid to the Vendor more than the amount of the Vendor's expenses, the purchaser shall be entitled to recover the excess. If the arbitrator determines that both parties have been prevented from performing their obligation, he shall apportion the said expenses between the parties in such manner as to him seems fair and reasonable, having regard to all the circumstances of the case.
- 10.6.** For the purposes of this clause "expenses" means actual out of pocket expenses reasonably incurred, after both parties shall have mitigated their losses as far as possible. Provided that as respects material delivered to the purchaser the Vendor's expenses shall be deemed to be that part of the price payable under the contract which is properly attributable thereto.
- 11. Limitation of Damages:**
- 11.1.** Where either party is liable in damages to the other these shall not exceed the damage which the party in default could reasonably have foreseen at the time of the formation of the contract.
- 11.2.** The party who sets up a breach of the contract shall be under a duty to take all necessary measures to mitigate the loss which has occurred provided that he can do so without unreasonable inconvenience or cost. Should he fail to do so, the party guilty of the breach may claim a reduction in the damages.
- 12. Rights at Termination:** Termination of the contract from whatever cause arising shall be without prejudice to the rights of the parties accrued under the contract up to the time of termination.
- 13. Arbitration and Law Applicable:**
- 13.1.** 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.
- 13.2.** 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.
- 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.** 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.
- 16.** 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.

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. **(72/2019)** 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. Tenderer 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, tenderer 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 60 days 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. Tenderer 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 equal to (10) percent of the total amount of the order within (30) days from date of receipt of the order. Any delay will be subject to delay penalty. If the successful tenderer fails for any reason to submit the required performance bond within (30) days, the purchaser will confiscate the bid bond and the awarding letter will be cancelled too.
21. 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.

22. The performance bond should be valid for a period expiring at least one year after receipt of the last consignment in IDECO warehouse.
23. 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.
24. 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. All prices offered shall be exempted from custom duties, sales taxes, import license fees and any other tariffs.
25. The tenderer may state the tender price in Jordanian Dinars. If however, a portion of the tenderer's expenditure under the contract is expected to be made in countries other than Jordan he may state a corresponding foreign currency portion of the tender price in the currencies of those other countries.
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.
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. The successful tenderer has to submit a performance bond equal to (10) percent of the total amount of the order within (30) days from date of receipt of the order. Any delay will be subject to delay penalty. If the successful tenderer fails for any reason to submit the required performance bond within (30) days, the purchaser will confiscate the bid bond and the awarding letter will be cancelled too.

- 32.** 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.
- 33.** 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.
- 34.** Where compliance with a specific standard specification is called for the standard specification used shall be that in force at the time of tender.

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, equipments 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 any thing 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 (72/2019).**

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.

Inspection and Testing

1. General Requirement

The whole of the material by the contract will be subject to inspection and testing by the engineer during manufacture and on completion. The approval of the engineer or the passing of any such inspection or test will no, however; prejudice the right of the purchaser to reject the material if it fails to comply with the specification when erected or to give complete satisfaction in service. The costs of all tests and inspection shall be borne by the contractor and shall be deemed to be included in the contract price. Before any material is packed or dispatched from the main or sub-contractor's works, all tests called for are to have been successfully carried out in presence of the engineer.

Adequate notice shall be given when the material is ready for inspection or test and every facility shall be provided by the contractor and his inspection and his sub-contractors to enable the Engineer to carry out the necessary inspections and tests.

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

2. Sub-Contractors

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

IRBID DISTRICT ELECTRICITY Co. CONTRACT No (72/2019).

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

3. Material Tests

The contractor shall provide test prices as required by the engineer to enable him to determine the quality of the material supplied free of charge and any cost of the tests shall be borne by the contractor. If any test pieces fail to comply with the requirements of the appropriate specifications for the material in question, the engineer may reject the whole of the material represented by that piece, the contractor's designers and metallurgists will be consulted before any material is so rejected. In the event of the engineer being furnished with the certified particulars of the tests which have been carried out for the contractor by the suppliers of the material, he may, at his own discretion, dispense with the previously mentioned tests entirely.

4. Tests at Manufacture's Works

Works tests shall include all routine, electrical, mechanical and hydraulic tests in accordance with the relevant IEC standard or other standard may be approved except where departures there from and modifications thereto are embodied in this specification. For material not covered by an IEC or British standard or specifically mentioned in this specification the tests shall be agreed with the Engineer. After satisfactory completion of the witnessed tests at the works, the material shall be submitted for the engineer's approval

preparatory to shipping. No item of material is to be dispatched to site until the Engineer has given his approval in writing.

5. Test Certificates

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

6. Rejection of Plant

IF Any item of material or component which fails comply with the requirements of this specification in any respect whatsoever at any stage of manufacture, test, erection or on completion at site may be rejected by the engineer either in whole or in part as he considers necessary, and after adjustment or modification if so directed by the Engineer, the contractor shall submit the item for the item for the further inspection and / or test. In the event defects of such a nature that the requirements of this specification cannot be fulfilled by adjustment or modification shall be replaced by the contractor, at his own expense, to the entire satisfaction of the engineer.

7. Maintenance

The contractor is to guarantee the efficient and good working of the material supplied under the contract for a period of twelve months (Gregorian) from the date of delivery of the material to Irbid, in accordance with the General conditions of contract.

8. Tests

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

Irbid District Electricity Co.

Form of Bid Bond

Tender No. (72/ 2019)

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. (72 / 2019)

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

- The following technical Specifications and particulars are applicable for the manufacturing, testing, and supplying of the materials seen on the invitation to tender page 3, unless otherwise is mentioned in the following special requirements section.

1. Climate and design particulars

Particulars of system

The following are the particulars of the systems on which the equipment covered by the specification shall operate:

33 K.V / 3-phase at a frequency of 50 cycles per second with the neutral point resistance earthed.

1. Electrical Design Data

1.1 System particulars

- Nominal system voltage between phases	K.V	33
- Highest system voltage	K.V	36
- System fault level	K.A	25/1s
- Earthing system	Resistance earthed	
- System frequency cycles/sec		50

2.2 Equipment with stand voltages

- Insulation Level: The rated lightning impulse withstand voltage of Automatic Circuit Reclosers when tested in accordance with IEC 62271-111 IEEE STd C37-60 (2012) standard shall be 170 kV (peak), and the power frequency withstand voltage 70kv for 33 kV systems.

2.3 Outdoor bushing and insulator creepage distance

- Minimum creepage distance	mm	1188
- Protected creepage distance	mm	545

2.4 Minimum clearances from live metal to metal earthed parts.

- | | | |
|--------------------------|---|----|
| - Highest system voltage | K.V | 36 |
| - Minimum clearance mm | as per approved standards (preferred high value) | |

A part from the clearance detailed under this item, no phase or earth clearances are specified for transformers where an impulse voltage test level is specified.

2. Climate:

The climate is tropical, the extreme shade temperature wind press and ice loading. being as follows:

Maximum. ambient temperature	50 degree C
Minimum. ambient temperature	- 10 degree C
Design temperature	45 degree C
Max wind press	420 N/M2
ICE thickness	10mm

Site altitude is between 0 and 1200 meters above sea level. Average annual rainfall is approx. 450mm occurring mainly in the period during November – April.

Relative humidity is normally in the range 30 to 60%.

3. Pole mounted Automatic Circuit Reclosers

General description:

Rated 36kV 630A 3-phase self-contained automatic recloser to be used outdoor comply with IEC62271-111 IEEE C37.60 &C37.63 latest version or any other approved equivalent standard (if the contractor wishes to provide an equipment that comply to otherwise mentioned standard he should specify the deviations and provide at his own cost three copies of the latest version of the proposed standard in English upon request).

, the Automatic Circuit Reclosers should be supplied along with a 33/0.220kV voltage transformer, 24V battery, 220V AC/24VDC charger, and controller panel.

The equipment and it all associative parts shall be proven reliable under the climate and operational conditions specified herein and not to be harmful to the electrical network, operators, maintainers, and itself. And shall be capable of operating for long periods with little or no maintenance, with remote operation (open and close).

3.2 Insulation media

- The Automatic Circuit Recloser Shall be vacuum interrupters type .

3.1 Mounting

- The Recloser shall be suitable for mounting on two concrete poles H-shape ,The distance between the centers of the two poles (H) will be 2.40 meters and the pole diameter will be about 270 mm .
- The Recloser should be provided with lifting lugs.

4. Design and operating

The recloser shall be capable of making and breaking repeatedly the loads as per latest relative IEC standard or equivalent standards.

The reclosers shall derive the energy required to operate from the H.V circuit, via external or internal P.T or V.T 220 V

A manual trip and lockout facility shall be provided and this shall be operated at ground level.

A position indicator shall be provided to show clearly from ground level whether the recloser is open or closed.

Indicators on stored – energy operation systems shall have the legends charged and discharged. In case of spring charging mechanized.

Reclosers shall employ digital based protective relays reading current transformers or sensors and powered by 24 volt DC.

The coil shall be provided with suitable means of diverting over-voltage surges (such as those due to lightning strikes on the over head line) without damage to the coil .

Operation counters shall be fitted to the recloser closing mechanism . Voltage free contacts shall be provided for SCADA indicators of the recloser when it reaches the lockout position .

- timer circuit must be provided to make open/close automatically according to programming time
- All metal bases and mechanism boxes..... etc. , shall be provided with a stud of between 8-12 mm diameter for connection to the earth system .

5.1 Operating sequence

The operating sequence of the reclosers shall be with the number of operations to lockout adjustable, reset time and trip type curves , time delay, pickup shall be adjustable for all shoots , number of shoot shall be adjustable and 5 shoot choice shall be available .

The control panel shall be digital based unit to provide the flexibility and easy selection of the above operation,

The period of the delay in steps shall be adjustable from 1 s to 5 s.

Instantaneous and time delay curves shall be available for each shoot.

recloser shall not reach the lockout condition on fault clearance after adjustable period between 10 s and 180 s, the operating sequence shall reset when . Adjustable period from 10-180 second

Each recloser shall be provided with means to manually trip and lock out the recloser while energized , the operation being independent to the speed of the operator .

Operating mechanisms shall be of the trip free type.

The trip and close mechanism may be operated by stored energy , the energy being stored during the closing sequence to ensure adequate tripping energy whenever it is required.

Electrical tripping devices shall be of approved design and shall be operated between limits of 50 % below and 20 % above normal operating voltage.

Electrical closing devices shall operate successfully between the limits of 80 % and 120% of the normal operating voltage at the terminals of the device.

5.2 Fault sensing

Fault sensing shall be by means of bushing current transformers inside the recloser tank. Connected to digital based protection unit in the electronic control panel

5.3 Control

The reclosers shall be provided with digital , digital based control which provide protection application flexibility, complete phase and ground/earth over current detection with a wide choice of minimum trip settings, time current curves and control functions, all operating parameters and settings are programmable via personal computer with a suitable software based on windows. also dispatch software are required through open protocol building center.

- The following protocols must be provided as a minimum:
IEC 60870-5-104
- The required interface types are:
Ex. (Rs232, Rs485, Ethernet),
- The front panel shall be equipped with LCD interface (preferred to be 10cm*10cm) interface screen shall be large enough to configure setting through it easily ; unit shall be ready for SCADA system (control center).

Manual and point list for IEC 60870-5-104 and any other available communication protocols must be submitted with tenderer offer.

- Default protection and communication settings must be agreed with the engineer and implemented on all devices before FAT.
- Additional test may be asked to be performed as per IDECO engineers at FAT as a check of the control circuits and communication protocols.
- The following measurements must be provided by the processor **and must be able to be monitored remotely from control center:**
 - Current (Present and max. values) at each phase.
 - Voltage (Phase to Phase).
 - Power Factor (Total and per phase).
 - Active, Reactive, Apparent power (Total, per phase, Present and max. Values).
 - load profile.
- Alarm features:
The following alarms must be able to be presented on the controller indication LEDs:
 - Battery under Voltage Alarm. Preferred
 - Battery Fail Alarm. Preferred.
 - charger fail Alarm. Preferred
 - O.C Alarm.
 - EF Alarm.
 - SEF Alarm. Preferred
- Protection feature
 - a) The reclosers shall be provided with the following protections function:
 - Loss of phase voltage.
 - Current unbalance.
 - Sensitive earth-fault protection IEC 50Ns/51Ns

- Earth fault IEC 51N
- Overcurrent protection IEC 51P
- instantaneous protection, IEC50 , IEC50n, IEC50P

b) The protection relay shall contain the following:

- 1- Fault recorder , fault summary, which contains fault type (overcurrent, earth fault..) , operating time if the recloser tripped at fault, fault pick up to fault clear time if the fault wasn't cleared by reclosers,
- 2- The recloser shall record fault clear time and the value shall be available at fault records window.
- 3- Every operation sequence shall be setting adjustable (current level, curve type, delay time)
- 4- Instantaneous overcurrent, earth fault shall be available at all operation sequence and can be set that the relay operation less than 50ms.

- Arabic language of the controller text should be available(preferred)
- Counter for the number of operations with manual reset must be provided (preferred)
- Panel shall be provided with 220VAC socket.
- Control cable between the recloser and its control panel must be with plug at each end of the cable
- Control cable shall be removable from both side of recloser tank and control panel
- Heater circuit must be separated circuit
- free space (11cm, 21cm, 31cm /H, W, L) inside the control panel preferred to be provided

6. Power sources and charger

The reclosers shall be equipped with 33 / $\sqrt{3}$ KV / 220 volts 50 HZ single phase transformer -conforming to attached specification of voltage transformer- with suitable capacity or via built in voltage transformer to supply control circuits with the necessary D.C supply and to operate the closing and tripping mechanism

In all cases the reclosers shall be self – contained so that it operates without the provision of auxiliary supplies.

Charger Properties:

- Charger must not be built in charger inside the controller (The charger should be separate from the controller).
- Charger circuit must be provided with separate miniature circuit breaker.
- Outputs of the charger must be separate for the protection relay and batteries (the charger should have output for protection relay and other one for batteries).

7. Line terminal clamps

The terminals on the automatic reclosers for connection of line conductors must be such that connections cannot work loose due to vibration.

The terminals shall be suitable for AAAC (150- 240) mm² and ACSR 200 mm² conductors, without risk of corrosion.

8. Coordination Between Sectionalizers and Autoreclosers

The successful tenderer is preferred to provide a study on the IDECO System to coordinate between sectionalizer and the existing 33 KV Autoreclosers.

Drawings of the system showing IDECO's preferred locations for both Autoreclosers and sectionalizers shall be submitted after placing the contract .

9. Training

A training course (covering installation, operation and maintenance) shall be provided for (2) IDECO Engineers for one week at the manufacturer's factories. The training shall be conducted in English, and each trainer shall be furnished with copies of manuals as well as spare parts catalogue with prices. The one week training course will consist of (5) work days each comprising (8) hours.

6. Inspection and Testing

6.1 General

Tests shall be carried out in order to determine whether the goods comply with the specification and to provide the necessary operation data. All tests shall be arranged to represent the working conditions as closely as possible.

Unless an alternative place of testing is agreed or specified the test shall be carried out at the manufacturer's works.

Not less than fourteen days notice of all tests shall be given to the Engineer in order that he may be present if he so desires . As many tests as possible shall be arranged together, in accordance with a program to be agreed with the Engineer.

No passing of the materials by the Engineer shall relieve the supplier of his responsibility. The supplier shall also be responsible for the proper carrying out of all tests of work and of material carried out or supplied by a subcontractors to the same extent as if the work, material were carried out or supplied by the supplier himself .

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

Six copies of the supplier's records of all tests shall be submitted to the Engineer immediately after the conclusion of each test. These records shall be clearly marked so that the equipment items or components to which they refer can be readily identified.

Type test will not be required in those cases where the supplier can produce certified evidence to the satisfaction of the Engineer that the required type tests have been performed

successfully on identical equipment or equipment which is for practical test purposes similar and produced in the factory where the goods are to be produced Evidence to this affect shall be submitted at the time of tendering, or as soon as practicable thereafter.

High voltage tests shall be conducted generally in accordance with IEC 60060-1

Insulating oil or gas used in any equipment undergoing tests shall comply with the requirements of IEC 60296 and 60376 respectively.

Except where otherwise indicated all electrical test shall be carried out at rated frequency and with the supply voltage wave form approximately sinusoidal.

The manufacturer's test equipment shall be of satisfactory quality and condition and where necessary shall be calibrated at the expense of the supplier by such other body as may be agreed.

After the contract has been awarded and the main features of the project design are known then the Engineer's inspection and testing program will be established with supplier. Where no tests are detailed for items of equipment a full program of tests shall be agreed with the Engineer.

The Engineer reserves the right to call for such additional tests as may be necessary to prove compliance with the specification.

6.2 Manufacturer inspection and testing program

The supplier shall carry out a comprehensive inspection and testing program during manufacture of material. The supplier shall allow in his tenderer for a cost of carrying out the following stages of inspection and /or test. These are not intended to form a comprehensive program, as it is the supplier's responsibility to draw up, carry out and furnish evidence of "type tests "on certain items of equipment.

7. Automatic reclosers tests

The reclosers shall be tested according to IEC62271-111 and IEEE STd C37-60 (2012) latest version or any other approved equivalent standard

7.1 Circuit breakers

Type tests

Shall be tested according to IEC 62271-111

Routine Tests

In accordance with the requirements of IEC 62271-111, together with any test carried out as a normal routine procedure by the manufacturer in addition

7.2 Bushings

Type Tests

In accordance with the requirements of IEC 60137

Sample Tests

In accordance with the requirements of IEC 60137

Routine Tests

In accordance with the requirements of IEC 60137

7.3 Protective Equipment

Type Tests

Type tests shall be in accordance with the relevant of IEC standard or other applicable standard. Tests shall also be carried out to prove composite relay system, e.g. auto-reclose relays in respect or stability sensitivity, operating time, settings and setting ranges under all fault condition.

These shall be performed in a manner to simulate working conditions as closely as possible utilizing equipment assembled as in service and including resistance not less in value of any external leads associated with the equipment as connected at site.

Routine Tests

All relays, instruments and other equipment shall be subjected to routine tests as specified in the relevant IEC publications or other standards before incorporation in the complete equipment.

Composite relay system , including auto- reclose relays shall be subject to such testing to IEC or other standards by approved manufactures works inspection and testing procedure, as shall satisfactorily prove the correctness of the assembly and its settings and ranges of operation.

7.4 Current Transformers

Type Tests

In accordance with the requirements of IEC 61869-2 &1.

Routine Tests

In accordance with the requirements of IEC 61869-2 &1. These shall also include a check of the magnetization characteristic.

7.5 Voltage Transformers

Type Tests

In accordance with the requirements of IEC 61869-3&1.

Routine Tests

In accordance with the requirements of IEC 61869-3&1.

Additionally, for magnetic voltage transformers, it shall be demonstrated to the satisfaction of the Engineer that capacitance discharge capability of the transformer is not less than the rating assigned or stated in the schedules. Where deemed necessary by the Engineer discharge tests shall be made on representative units to confirm the mechanical and thermal stability of the windings.

7.6 Control Module and Accessories

Type Tests

Performance tests to the approval of the Engineer under extremes of environmental and operating conditions on a sample of each item of equipment. This test may be waived if acceptable records of such tests are available for inspection.

Routine Tests

All components shall have been tested in accordance with relevant IEC or other standards prior to assembly in the complete equipment. Tests shall be carried out to prove the correct functioning and wiring of the complete equipment to the requirements of the specification.

All secondary wiring including panel wiring and control circuits and all apparatus connected directly thereto shall stand a high voltage test of 2 kv to earth unless subject to other requirements such as detailed under protective equipment.

7.7 Structures

Type Tests

One type of each structure shall be erected in the works in order to check the fabrication of the steel work.

Loads corresponding to the assumed conditions of loading shall be applied to the structures.

7.8 Handling Devices and lifting tackle

Routine Tests

All handling devices and lifting tackle supplied for maintenance purposes under the contract shall, unless they are built in to and form part of the equipment, be tested, marked and certificates of test provided. Lifting tackle built in to and forming part of the equipment shall be operated with the maximum working load to the satisfaction of the Engineer.

8. Technical Requirements Common to All Electrical Equipment.

8.1 Standards

Although IEC or British standards for workmanship, material and equipment have been selected in these specifications as a basis of reference, national standards and specifications of other countries and recommendations of other standard international organizations will be acceptable provided they are substantially equivalent to, or higher than the supplier submits

standards and provided furthermore that the supplier submits for approval details of the specification he proposes to use.

When IEC or National standards are referred to the Edition shall be that current at the date of tender, together with any Amendments issued to that date.

If requested by the Engineer, the supplier shall provide at his own expense three copies in English and one in the original language of any national standards which are applicable to the contract.

8.2 Design and Standardization

The Goods shall be designed to facilitate inspection, cleaning and repairs, and for operation in which continuity of service is the first consideration. All apparatus shall be designed to ensure satisfactory operation under the atmospheric conditions prevailing at the sites and under such sudden variations of load and voltage as may be met with under working condition on the system, and short circuits, including those due to faulty synchronizing within the rating of the apparatus.

The design shall incorporate every reasonable precaution and provision for the safety of all those concerned in the operation and maintenance of the Goods and of associated works supplied under other contracts.

All material used shall be of the best quality and of the class most suitable for working under the conditions specified and shall stand the variations of temperature and atmospheric conditions arising under working conditions without distortion or deterioration or the setting up of undue stresses in any part, and also without affecting the strength and suitability of the various parts for the work which they have to perform. NO welding, filling or plugging of defective parts will be permitted without the sanction in writing of the Engineer.

Corresponding parts liable to renewal shall be interchangeable. When required by the Engineer, the supplier shall demonstrate this quality.

All apparatus shall operate without undue vibration and with the least practicable amount of noise.

All connections and contacts shall be of ample section and surface for carrying continuously the specified currents without undue heating, and shall be secured by bolts or set screws of ample size, fitted with locking devices of approved type and material.

All apparatus shall be designed to obviate the risk of accidental short circuit due to animals, birds, and vermin. Openings in ventilated enclosures shall be so constructed to prevent the entry of vermin and insects.

8.3 Galvanizing

Galvanizing shall be applied by the hot dipped process. The preparation for galvanizing and the galvanizing process shall not adversely affect the mechanical properties of the material being coated. The zinc coating shall be clean, of uniform thickness and free from defects.

drilling, punching, cutting, bending and removal of burrs shall be completed before galvanizing.

For zinc spray coating, surfaces shall be shot blasted before spraying.

The average thickness of the zinc coating shall be equivalent to not less than 0.6 kg/m² of zinc for all surfaces, except steel wires.

The thickness of the zinc coating for steel wires shall be in accordance with a national standard and shall be approved by the Engineer.

Material on which galvanizing has been damaged shall be re dipped unless, in the opinion of the Engineer, the damage is local and can be repaired by applying a coat of galvanizing repair paint. Where such re pair is authorized, the damaged area shall be cleaned by wiping with clean rags saturated with mineral spirits or xylene followed by wire brushing. After wire

brushing, the area shall be re cleaned with solvent to remove residue and shall be given a minimum of two coats of zinc rich paint in accordance with the manufacturer's instructions.

Sherardising or other similar processes shall not be used unless expressly approved by the Engineer.

8.4 Copper Conductors

All copper conductors shall be composed of electrolytic copper having a conductivity of not less than 99.9 % of the international standard.

8.5 Aluminum and Aluminum Alloys

Aluminum shall be of high commercial quality. The composition, including the percentage and nature of any impurities, shall be stated in the schedules.

All aluminum alloys shall be of approved compositions as stated in the schedules.

Aluminum and alloy castings shall be sound and free from porosity.

8.6 Labels and Number Plates

All equipment shall be clearly and permanently labeled, to the approval of the Engineer in English, unless otherwise specified. Where labels are provided for making clear the method of operation of apparatus they shall be concise and preferably diagrammatic in form and any inscription shall be in English unless otherwise specified.

A label shall be permanently fixed to each item of equipment in a clearly visible position stating: property of the IDECO, year of manufacture.

All control and relay panels, marshaling boxes, kiosks distribution boxes and other cubicles shall be labeled to show the circuit with which it is associated. These labels shall be fitted to the front and back of all equipment.

Labels, number plates and their fixing screws for outdoor use shall be of stainless or other corrosion resistant material. Where the use of vitreous enameled labels is approved, the whole surface including the back and edges shall be properly covered and protective washers shall be provided front and back on the fixing screws.

The material of the labels and number plates for indoor or outdoor use shall be approved by the Engineer and shall be fixed so as to prevent buckling due to temperature and humidity variations.

Danger notices shall have red lettering on a white background and shall be in English and Arabic.

Unless otherwise approved by the Engineer all other labels and number plates shall have black inscriptions on a white base color.

Labels for similar equipment shall be of uniform appearance and the dimensions and size of lettering shall be to the approval of the Engineer.

Each equipment shall be marked with its function, manufacturer's name or trademark and the code type number or code number together with the batch or serial number.

Each detachable unit shall be either marked so as to enable it to be identified with the parent equipment, or else marked with the manufacturer's name and type number or code number and where definable, its function.

Each unit and sub-unit mounting position shall be marked to indicate the type of unit or sub-unit to be located in that position. Additional markings may be required for apparently identical units or sub-unit having different pre-set characteristics.

Component reference numbers shall be marked adjacent to the component. Where this is impossible, components shall be identifiable from the drawings provided by the contractor.

The following shall be marked in all instances: -

One) Fuse. The rating and circuit identification of each fuse shall be marked adjacent to the fuse base.

Two) Control and indicating devices. The function of each control and indication device shall be marked, the caption and its arrangement shall be subject to the approval of the Engineer.

Three) Pre-set controls. The circuits reference and if possible, the function, shall be marked adjacent to each pre-set control in a position where it will be clearly visible while the adjustment is being made.

Four) Connectors. The diagram reference number shall be marked on, or adjacent to each connector.

Five) Test points shall be individually marked with the diagram reference number.

All junction boxes shall include a record pasted inside the lid showing the terminal allocation.

Each terminal of a screw type terminal block shall bear the identification marking either on the body of the block, or adjacent to it. All other terminal blocks shall be marked with their circuit designations and rows shall be marked to identify each connection to the approval of the Engineer.

All wiring shall be identifiable by an approval color code, ferrules marked with the nomenclature adopted for these conductors, on the manufacturer's diagrams, or by circuit reference at the terminals.

8.7 Bolts and Nuts

Bolts and studs for electrical wiring connections shall preferably be of brass M6 size. Alternatively, size M5 may be used, but these must be of stainless steel, phosphor bronze or high tensile brass.

Nuts and pins shall be locked in position with lock nuts or lock washers. Or other devices if approved. Lock washers shall not be used above M24 except when a spring type is specially approved.

No bolt or stud shall project through its nut by more than approximately 10mm or four threads whichever is the less, except for terminals and relays systems.

Bolts, nuts and washers on outdoor equipment shall be of non corroding material where they are in contact with non-ferrous parts in conductor clamps and fittings and elsewhere if specially required.

Suitable special spanners shall be provided for bolts and nuts which are not properly accessible by means of an ordinary spanner.

8.8 Cleaning and painting

Before painting or filling with oil, gas or compound, all ungalvanized parts shall be thoroughly cleaned, free from rust scale, burrs, grease and moisture and all external rough surfaces on castings shall be filled.

The following minimum painting requirements shall apply to all ferrous parts unless the supplier can show, to the satisfaction of the Engineer, that any alternative he proposes is in all respects equal or superior to the specified requirements: -

External surfaces at works	

All ungalvanised surfaces other than Nuts, bolts and washers, which may be Removed for maintenance purposes, for use out doors -----	a) one priming coat of corrosion inhibiting paint applied immediately after cleaning
	b) Two coats of non-glossy oil and weather resisting paint applied

	after inspection and testing and before dispatch.
	c) One finishing coat of glossy oil and water resisting non-fading paint before dispatch.
Exposed, ungalvanized nuts, bolts And washers which may be removed for Maintenance purposes, for use outdoors -----	one coat of oil and weather resisting, non-fading paint applied.
Panels, cubicles, kiosks and apparatus boxes, For use in doors coat.	Three coats of paint, the color and finish of the final coat To be to the approve of the Engineer
Internal surfaces Apparatus Painting	
Oil filled chambers and tanks	one coat of oil resisting varnish Or paint
Kiosks and apparatus boxes for use outdoors	Three coats of paint, the final Coat being an anti-condensation Finish colored white or light Gray
Cubicles, Kiosks and apparatus boxes for use In doors	Three coats of paint, the final Coat being a white or Light color.

Successive coats of paints shall be easily distinguishable by shade of color and shall be applied to a clean, dry and properly prepared surface. Each coat shall be compatible with the previous coat.

All paint work which has been damaged during transport or erection shall be made good to the approval of the Engineer.

The color and shade of all painted external surfaces shall be to the approval of the Engineer.

a. Corona and radio interference

All equipment shall be designed so as to minimize corona or other electrical discharge and radio interference.

b. Tools

The supplier shall provide any special tools that may be required for making adjustments to equipment during normal operation or maintenance. These tools are to be of alloy steel and shall be contained in steel boxes, complete with locks and keys.

All tools shall be stamped in approved manner for identification purposes.

c. Erection marks

All material that requires assembly at site shall have distinguishing marks on it to facilitate erection and to identify the material in relation to drawings, material lists or shipping

documents. All marks shall be legible and easily visible. Where relevant, erection marks shall be stamped before galvanizing and shall be clearly visible after galvanizing.

d. Operating and maintenance instructions.

Operating and maintenance instructions from part this contract and shall be provided in accordance with the conditions of contract.

e. Spare Parts

Additional amount of VT, control cable, controller shall be given in schedule (6) as spare parts.

f. Packing

All apparatus shall be carefully packed for transport and any storage on site, in such a manner that it is protected against all climatic condition. Particular attention to be paid to the possibility of deterioration during transit to the site for the country of manufacture be sea and overland.

Parts liable to damage form knocks or jolting shall be appropriately protected. When equipment is dispatched in cases or crates all items shall be so secured they are not free to move and cannot work loose in transit. Bags of lose equipment shall be placed in supplementary cases, each bag having a metal label wire stitched to it, indicating the amount and nature of its contents. Packing shall subject to inspection by the Engineer. The contractor shall be held responsible for and make good, any and all damages due to improper preparation of goods for shipment.

Packing cases shall be marked with an approved color band required to assist in the identification at points of transfer.

Each crate or other unit shall be legible and properly marked in accordance with the details to be issued under the contract procedure and shall include the name, size and quantity of the material.

Any additional expenses involved, due to failure on the part of the contractor to comply with this requirement shall be borne by the contractor.

All packing cases shall remain the property of the purchaser and shall be rot and insect proof. In particular the cases containing spares shall be effectively protected for storage over a period of several years without deterioration.

All case marking shall be legible and weatherproof. Tags shall be durable, securely attached and duplicated.

It shall be noted that each meter shall be individually wrapped and packed in a separate box.

g. Manufacturing Experience

The tenderer shall provide documentary evidence confirming that equipment of identical design , rating and voltage to those offered against this document have been in production for a minimum of ten years. In addition, a list shall be provided with addresses and telex or fax numbers of users of equipment identical to those offered.

Schedule (1)
Automatic circuit reclosers
(To be completed by Tenderer)

Item No	Description	DATA
-----	-----	-----
1	Type of recloser	-----
2	Number of phases	-----
3	Rated normal current at site	A -----
4	Rated voltage: -	
	(a) Nominal system voltage	KV 33
	(b) Highest system voltage	KV 36
5	Rated frequency	HZ -----
6	Method of closing	-----
7	Method of tripping	-----
8	Normal voltage for operation of closing mechanism	V -----
7	Normal voltage for operation of tripping mechanism	V -----
8	Power at normal voltage required For shunt trip coils	W -----
9	Normal current required for high Voltage closing solenoids	A -----
12	Rated making capacity	KA peak -----
13	Rated breaking capacity: -	
	(a) Symmetrical	KA -----
	(b) Asymmetrical	KA -----
	(c) Rated short time current	KA -----
	(d) Rated duration of short circuit	KA -----
14	Voltage limits with in which tripping device will operate	KV -----
15	Voltage limits with in which closing device will operate	KV -----
16	Opening time (until separation of The arcing contacts): -	
	(a) with out current	ms -----
	(b) At 100 % of rated breaking current	ms -----
	(c) Maximum arc duration on any duty cycle	ms -----
	(d) Duty cycle on which maximum arc duration occurs	ms -----
17	Total opening time	ms -----
18	Make – time	ms -----
19	(a) dead time range	sec -----
	(b) Minimum operating time	ms -----
20	Number of current interrupting breaks In series per phase	-----
21	Method of controlling voltage distribution between breaks	-----
22	Estimated voltage distribution between breaks (where controlled)	% -----
23	Length of each break	mm -----
24	Length of stroke of moving	mm -----

25	Whether a separate series isolator Is incorporated in the breaker		-----
26	Type of main contacts		-----
27	Type of arcing contacts		-----
28	Type of arc control device		-----
29	Type of device, if any, used to limit Rate of rise of re-striking.		-----
30	Drop across main contacts at normal current Contact resistance		-----
31	Does magnetic effect of load current increase Contract pressure ?		-----
32	Static weight of whole auto re closer equipment Complete with all fittings as in service	kg	-----
33	Dynamic weight of whole circuit breaker equipment Complete with all fittings as in service	kg	-----
34	Routine pressure test on re closer tank or containers	KN/m ²	-----
35	Pressure type test on re closer tank or containers	KN/m ²	-----
36	Minimum clearance in air: - (a) Between phases	mm	-----
	(b) Live parts to earth .	mm	-----
37	Type of bushing (material)		-----
38	Creepage distance (1188 mm required)	mm	-----
39	Number of tanks or containers per three – phase equipment		-----
40	Material of tank or container		-----
41	Thickness of tank or container: - (a) Walls	mm	-----
	(b) Bottom	mm	-----
42	Size of tank or container: - (a) Diameter or rectangular dimension	mm	-----
	(b) Length	mm	-----
43	Material of top plate		-----
44	Thickness of top plate	mm	-----
45	Method of attaching top plate to main tank		-----
46	Volume of insulating medium		-----
47	(a) Type (e.g. post, bushing , etc)		-----
	(b) Number of phases per unit		-----
	(c) Number of secondary winding per unit.		-----
48	Standard rated out put per phase:- (a) Ratio primary / secondary	A	-----
	(b) Out put	VA	-----
49	Standard accuracy classification for protection service		-----
50	Frequency range over above accuracy applies	HZ	-----
51	(a) Primary continuous thermal current rating	A	-----
	(b) Rated short-time thermal current rating	A	-----
	(c) Rated short-time dynamic current rating	A	-----
52	Resistance of secondary winding at 75 deg.c.	ohms	-----
53	Dimensions of control module	mm	-----
54	Weight of control module	kg	-----
55	Connection between module re closer		-----
56	over current relay	make type	----- -----

57	Earth fault relay	Setting available	-----
		make	-----
		Type	-----
58	Battery	Setting available	-----
		make	-----
		size	-----
		life	-----
59	Battery charge	make	-----
		type	-----

Technical specifications Voltage Transformers

Voltage Transformers: voltage Transformer, Rated 36 KV, post type, single pole rubber , with rated secondary winding 220-230 v Outdoor pole mounted with creepage distance not less than 1188 mm. The VT's is required to withstand short current governed by IEC 61869-1&3 and Impulse withstand voltage (1.2 / 50 μ s) wave peak (170) KV, and Power frequencies withstand voltage 70 KV.

VT with ratio (33/ $\sqrt{3}$:220-230) KV, in accordance with IEC 61869-3 with accuracy class equal or less than 3 (3P) according to IEC 61869 – 1&3.

The VT shall be suitable to provide power for charger and control panel of autorecloser and sectionalized, etc.

Magnetization curves for voltage transformer shall be submitted for approval.

□ Specifications:

1. Voltage transformers shall be in accordance with IEC 61869-1&3
2. The type of Insulation is preferred silicon rubber or cast resin (five years' warranty shall be provided for cast resin insulation) for bushing.
3. Insulation class E or B related to insulation of VT
4. Quality inspection, type test and special test certification according to IEC 61869 – 1&3 shall be provided for the same offered VT from an accredited laboratory KEMA, CESI, IPH preferred, any other laboratory will be investigated by IDECO later on.
5. Creepage distance not less than 1118 cm, impulse withstand voltage (1.2/50 micro second) wave peak (170) KV, and power frequencies withstand voltage 70 kv.
6. V.Ts ratio (33/ $\sqrt{3}$: 220-230) KV 50Hz outdoor
7. Voltage factor for phase to ground connection not less than: 1.2 x Un continuous /1.5 x Un for 30 sec. as per IEC
8. single pole.
9. Rated burden not less than 300 VA and The Thermal Burden shall be not less than 800 VA.
11. Contact box must be easy contact and have rubber cascade.
12. Name plat IDECO and tender, serial number.

5. TESTS ON /VT

The following tests shall be carried out on the completed VT:

Voltage Transformers

Type, routine, and special tests

In accordance with IEC 61869 – 1&3.

A – Routine Tests.

All routine test according to IEC 61869 – 1&3 shall be performed and witnessed by IDECO engineer at factory acceptance test.

1. Verification of terminal markings.
2. Power- frequency voltage withstand test on the primary terminals.
3. Partial discharge measurements. The test procedure In accordance with IEC 61869 – 1+3 the partial discharge level shall not exceed the limits specified in Table 3/ IEC 61869-1:2007
4. Power-frequency voltage withstand tests between sections
5. Power-frequency voltage withstand tests on secondary terminals

6. Test for accuracy
7. Verification of markings
8. Enclosure tightness test at ambient temperature
9. Pressure test for the enclosure

B - Type Tests

All applicable type tests shall be provided for the same offered VT from an accredited laboratory KEMA, CESI, IPH.

C- Special tests

All applicable type tests according to IEC 61869 – 1&3.

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 Firm Prices. Variable prices are totally not accepted.
 2. The manufacturer shall print IDECO Contract No. **(72/2019)**, Stock code, and country of origin at the nameplate of the material. And QR code contain the following message shall be printed name plate of the required materials.
IDECO Tender No. 72/2019, Stock code xxxx-xxxx (as mentioned in table 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. Maintenance: The contractor is to guarantee the efficient and good working of the material supplied under the contract for a period of twelve months (Gregorian) from the date of delivery of the material to ideco store, in accordance with the General conditions of contract.
 5. Catalogues: a set of the manufacturer's catalogues shall be attached to the tender. All features included in submitted catalogues will be considered as a part of the tenderer offer, and must be delivered.
 6. Each shipment shall be inspected by two IDECO engineers, and all Inspection Costs (Visa, Air Tickets, Hotel, Accommodation, Transportation, etc.) of IDECO representatives shall be borne by the contractor.
 7. The Materials required shall be delivered in two shipments each shipment shall be 50 % of the required materials.
 - For the first shipment (15) pcs for all required items shall be delivered within (2-4) months from order letter date.
 - For second shipment (15) pcs for all required items shall be delivered within 6 months from order letter date.
 8. The manufacturer shall to submit with his offer reference list for his product for the last five years ago.
 9. The material safety data sheet (MSDS) of all equipment / materials is required to be submitted with the offer.
 10. **The contractor shall have calibrated equipment's by authorized party for inspection purposes.**
 11. 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.
 12. 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.
 13. Euro one certificate shall be submitted during clearance process, in case the country of origin of the required materials from Europe countries.
 14. 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).
 15. 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

The Tenderer shall fill in the following schedule in case there are any technical deviations from the required or deviate from the standard.

Schedule No. (2)

No.	Required Particular	Offered Particular
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Program for Manufacture and Delivery

Below schedule shall be completed by the tender and the periods entered shall be binding on the contractor. It is essential that the overall period for completion of the contract is adhered to and the programmer shall be formulated accordingly. **All periods entered below are to be in weeks and relate to the placing of the contract.**

Schedule No. (3)

No	Item	Manufacturing Period	Ex-Works Delivery	Aqaba Port Delivery
1	630 Amps 3- phase pole mounted Automatic 33kv circuit auto reclosers with electronically controlled vacuum interrupters complete with digital based control, with all accessories with 240 VAC PT, external power or internal supply, complete with mounting bracket for erection on two poles H- shape with 2 m distance between the (2) poles and the pole diameter will be about 270 mm for concrete pole and 168 mm for steel pole.			
1.1	Single phase voltage transformer <u>33/0.220 KV</u> for item No. 1			
1.2	DC batteries 24V DC and charger 220 VAC/24V DC for item No.1.			

Manufacturer and Places of Manufacture and Testing

Schedule No. (4)

No	Item	Manufacturer	Place of Manufacturing	Place Of testing
1	630 Amps 3- phase pole mounted Automatic 33kv circuit auto reclosers with electronically controlled vacuum interrupters complete with digital based control, with all accessories with 240 VAC PT, external power or internal supply, complete with mounting bracket for erection on two poles H-shape with 2 m distance between the (2) poles and the pole diameter will be about 270 mm for concrete pole and 168 mm for steel pole.			
1.1	Single phase voltage transformer <u>33/0.220 KV</u> for item No. 1			
1.2	DC batteries 24V DC and charger 220 VAC/24V DC for item No.1.			

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.
- Delivery period shall be expressed **in weeks**, and is recommended to start from the date of the order letter, and transportation obligations shall be indicated by **putting a tick** at the proper following choice:
 - CFR - Aqaba Port CPT- Amman Customs CPT- IDECO Stores

Schedule No. (5)

No.	Quantity (PCS)	Material	Delivery Period	Currency	Unit Price	Total Price
1	30	630 Amps 3- phase pole mounted Automatic 33kv circuit auto reclosers with electronically controlled vacuum interrupters complete with digital based control, with all accessories with 240 V AC PT, external power or internal supply, complete with mounting bracket for erection on two poles H- shape with 2 m distance between the (2) poles and the pole diameter will be about 270 mm for concrete pole and 168 mm for steel pole.				
1.1	30	Single phase voltage transformer <u>33/0.220 KV</u> for item No. 1				
1.2	30	DC batteries 24V DC and charger 220 VAC/24V DC for item No.1.				
Cost for Providing Sureties or Bonds IF ANY						
Total Contract Price: (In Writing)						

Name(s) of Sureties:

Name(s) and Address of Tenderer:

Tele / Fax:

Signature:

Answer Back Code:

Position of Signatory:

Price summary for spare parts

The manufacturer shall suggest the spare parts which may be used in maintenance works. The spare parts required shall be quoted by the bidder; the purchaser has the complete right to award all spare parts items or partial of them or none of them.

Schedule (6)

No.	Quantity (pcs)	Spare parts	Delivery Period	Currency	Unit Price	Total Price
1						
2						
3						
4						
5						
6						
7						
8						
9						
Cost for Providing Sureties or Bonds IF ANY						
<u>Total Price for spare parts</u>						

Inspection Details

- In case of foreign material origin, and inspection of material is required, the bidder shall fill the following table.

Schedule No.7

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.	

Main Offer details

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

Schedule No.8

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

Tender Agreement Summary

Tender No. (72/2019)

1. Having examined the conditions of Contract, specification and schedule for the above Works, the undersigned, offer to manufacture, supply, work, test, and deliver the said works described in the specification and schedules and in accordance with the said conditions of contract, for the sum ofor such other sum as may be ascertained in accordance with the said conditions.
2. We agree that this tender shall be held open for acceptance or rejection for the validity period of **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, together with your written acceptance thereof, shall constitute a binding contract between us.
4. If our tender 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 calculated from the date of **Order Letter Awarding**, and to deliver on the dock at (.....port) - Jordan the whole of the works offered within a further (.....) weeks, or to **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 / Maintenance Period will apply to each section of the works of twelve-to-fifteen months from the date of accepting the materials at IDECO stores or in case of projects from the date of setting to work.
8. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated thisday of / / 2020.

Signature.....in the capacity of

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

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