



## Two years Call - Off contract NO. (47/2021) for supply of

- Rated 33kV, Extensible, Motorized, very compact-sized, vacuum type interrupter, Ring Main Units.
- 33 KV Metering units “pad mounted “.

### Tenderer:

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

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

### Tender Document Cost = 150 JD.



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## Invitation to Call - Off Contract NO. (47/2021)

Dear Sir;

You are kindly requested to tender for the supply of the below mentioned materials as per the quantities and technical specifications enclosed herewith on call-off basis for a period of two (2) years by filling in the schedules, signing the form of tender, and forward the complete tender documents to the attention of IDECO general manager addressed as seen on the cover page, to be received not later than 2 pm (local time) due **February 16, 2022.**

All bids must be accompanied with a Bid Bond of not less than 5% of the highest alternative offered price valid for 120 days from the closing date, otherwise your tender will not be considered. The bid bond shall be enclosed in the same envelope of the tender and must be delivered to **tenders secretary office located in Supplies Department – Tenders Section** not later than 2 pm (local time) due **February 16, 2022.**

Table 2

| Item No. | Quantity (PCS) Within 2 years | Material Description                                                                                                                                                                                              | Stock Code |
|----------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 1        | 7                             | Indoor type Rated 33kV, Extensible, Motorized, very compact-sized, vacuum type interrupter, Ring Main Unit, with two rated <b>630 A</b> main switch-disconnector and two rated <b>630 A</b> Tee-Off fuse switch.  | 6110-3830  |
| 1.1      | 7                             | DC batteries 24V DC and charger 240 V AC/24V DC for item No.1.                                                                                                                                                    |            |
| 1.2      | 7                             | Single Phase Voltage Transformer with ratio (33/√3: 0.4/√3) KV for item No.1                                                                                                                                      |            |
| 2        | 2                             | Indoor type Rated 33kV, Extensible, Motorized, very compact-sized, vacuum type interrupter, Ring Main Unit, with two rated <b>630 A</b> main switch-disconnector and One rated <b>630 A</b> Tee-Off fuse switch.  | 6110-3831  |
| 2.1      | 2                             | DC batteries 24V DC and charger 240 V AC/24V DC for item No.2.                                                                                                                                                    |            |
| 2.2      | 2                             | Single Phase Voltage Transformer with ratio (33/√3: 0.4/√3) Kv for item No.2                                                                                                                                      |            |
| 3        | 5                             | Outdoor type Rated 33kV, Extensible, Motorized, very compact-sized, vacuum type interrupter, Ring Main Unit, with two rated <b>630 A</b> main switch-disconnector and One rated <b>630 A</b> Tee-Off fuse switch. | 6610-3070  |
| 3.1      | 5                             | DC batteries 24V DC and charger 240 V AC/24V DC for item No.3.                                                                                                                                                    |            |
| 3.2      | 5                             | Single Phase Voltage Transformer with ratio (33/√3: 0.4/√3) Kv for item No.3                                                                                                                                      |            |
| 4        | 14                            | Indoor type Rated 33 KV metering unit pad mounted included 2 current transformers with ratio 50/5 A and three voltage transformer 33kv/110v.                                                                      | 6625-2403  |

### **Tender Summary for Tender No. 47/2021**

**These 3 pages must be completely filled out by the bidder; otherwise it may be a reason for exclusion from the bidding competition:**

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

**Official signature and seal / Bidder**

|                                              |
|----------------------------------------------|
| <b><u>Irbid Electricity Company Use:</u></b> |
|----------------------------------------------|

**Chairman of the Committee**

**Deputy Chairman of the Committee**

**Committee member**

**Committee member**

**Committee member**

**Committee member**

**Committee member**

## Departures

|                 |                          | Required | offered |
|-----------------|--------------------------|----------|---------|
|                 |                          |          |         |
| Departures from | Technical specifications |          |         |
|                 | Special requirements     |          |         |

Official signature and seal / Bidder

Irbid Electricity Company Use:

Chairman of the Committee

Deputy Chairman of the Committee

Committee member

Committee member

Committee member

Committee member

Committee member

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

**Official signature and seal / Bidder**

|                                              |
|----------------------------------------------|
| <b><u>Irbid Electricity Company Use:</u></b> |
|----------------------------------------------|

**Chairman of the Committee**

**Deputy Chairman of the Committee**

**Committee member**

**Committee member**

**Committee member**

**Committee member**

**Committee member**

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

**Official signature and seal / Bidder**

|                                              |
|----------------------------------------------|
| <b><u>Irbid Electricity Company Use:</u></b> |
|----------------------------------------------|

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**Committee member**

**Committee member**

**Committee member**

**Committee member**

**Committee member**

# GENERAL CONDITIONS

## 1. Preamble

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

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

The "**Purchaser**" shall mean "Irbid District Electricity Co. Ltd." Hereinafter called "IDECO", and shall include IDECO's legal personal representatives and duly appointed engineers. The "**Engineer**" shall mean "Irbid District Electricity Co." Engineers or persons for the time being or from time to time duly appointed in writing by the purchaser to act as Engineer or the purpose of the contract.

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

The contractor must insure the material against all risks from the time it leaves the works until it is placed "F.O.B". "C&F price" shall mean F.O.B. price plus freight including unloading at the port of destination. All Marine Insurance will be affected by the purchaser. The contractor must provide full details of the material to be shipped in good time for IDECO to arrange for Marine Insurance before the material is actually shipped.

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

"Parties" means IDECO and contractor / vendor.

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

## **3. Formation of call - off Contract**

**3.1.** The contract shall enter into force upon the date of awarding (hereinafter referred to as the "Effective Date") and shall be valid for 2 years thereafter and until the parties fulfill all their obligations hereunder.

**3.2.** IDECO has a right during the agreement validity to amend the contract up to extra one year.

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

- 3.4. The call off contract shall remain valid for on – call delivery for a period of two years from the date of signing the contract or until the expiration of the total contract value, whichever occurs first.**
- 3.5. The required materials under this contract shall be required partially in accordance with number of call-off purchase orders during agreement validity for on-call delivery for a period of two years from the date signing agreement, and/or the expiration of the total contract quantity, whichever first occurs.**
- 3.6. 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.**
- 3.7. Power to Vary The Work:** alternations, amendments, omissions, additions, suspensions, or variations of the work, (hereinafter referred to as "variations") under the contract as shown by the contract drawings or the specification shall be made by the contractor except as directed in writing by the purchaser, but the purchaser shall have full power, subject to the provision hereinafter contained, from time to time during the execution of the contract by notice in writing to instruct the contractor to make such variation without prejudice to the contract and the contractor shall carry out such variations, and be bound by the same conditions, as far as applicable, as though the said variations occurred in the specification. If any suggested variations would, in the opinion of the contractor, if carried out, prevent him fulfilling any of his obligations or guarantees under the contract, he shall notify the purchaser thereof in writing, and the purchaser shall decide forthwith whether or not the same shall be carried out, and if the purchaser confirms his instructions, the contractor's obligations and guarantee shall be modified to such an extent as may be justified. The difference in cost, if any, occasioned by any such variations, shall be added to or deducted from the contract price as the case may require. The amount of such difference, if any, shall be ascertained and determined in accordance with the rates specified in the schedule of prices so far as the same may be applicable, and where the rates are not contained in the said Schedule, or are not applicable they shall be settled by the purchaser and the contractor jointly. But the purchaser shall not become liable for the payment of any charge in respect of any such variations, unless the instruction for the performance of the same shall have been given in writing by him. In the event of the purchaser requiring any variation, such reasonable a proper notice shall be given to the contractor as will enable him to make his arrangements accordingly, and in cases where goods or materials are already prepared, or any designs, drawings, or patterns made or work done that requires to be altered a reasonable sum in respect thereof shall be allowed by the purchaser. Provided that no such variations shall, except with consent in writing of the contractor, be such as will involve an increase or decrease of the total price payable under the contract by more than 25 percent thereof. The power given to the purchaser to make any alteration, amendment, omission, addition or variation to, from or in any part of the works shall include power to vary from time to time the date for the completion of the works or any part thereof.
- 3.8. IDECO shall have the absolute right during the validity of the contract up to the last delivery to increase or decrease the quantity of the items or not to order some items in such manner that does not exceed 25% of the total contract value.**
- 3.9. IDECO has a complete right not to award all items under this contract to one supplier,**

**partial awarding per item or per quantity for a single item might be applicable and the suppliers do not have the right to object.**

**3.10. IDECO has a complete right to substitute certain items instead of other items by increasing or decreasing the required quantity in purchase order.**

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

#### **4. Drawings and Descriptive Documents**

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

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

14.1 If it is expressly so agreed, or

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

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

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

#### **5. Materials Packing and Shipping Marks**

All materials, equipment and goods shall be very well packed, in seaworthy containers and/or wooden cases, etc. These should protect the material during shipping, handling, unloading, and for a reasonable period of storage at Aqaba and latter storage at IDECO stores. Packing for indoor materials should be done in such manner as to adequately ensure no ingress of moisture during the shipping and storage periods. Packing of fragile equipment (e.g. including instruments and porcelain) should be done in a way which ensures a reasonable

resistance to impact breakage during transport. Packing shall in general be adequate and in compliance with the best international practice. A descriptive and fully itemized list shall be prepared for the contents of each packing case. A copy of this list shall be placed in a waterproof envelope under a metal or other suitable plate securely fastened to the outside of one end of the case. And its position adequately indicated by stenciling on the case. Where appropriate drawing showing the erection marking of the items concerned shall be placed inside the case, IDECO will supply the successful tenderer with a drawing of its shipping mark for utilization. All packing cases, crates, barrels and drums shall remain the property of the purchaser.

## **6. Inspection and Testing**

- 6.1.** If expressly agreed in the contract, the purchaser shall be entitled to have the quality of the materials used and the parts of the instruments, both during manufacture and when completed, inspected and checked by his authorized representatives. Such inspection and checking shall be carried out at the place of manufacture during normal working hours after agreement with the Vendor as to date and time.
- 6.2.** If as a result of such inspection and checking the purchaser shall be of the opinion that any materials or parts are defective or not in accordance with the contract, he shall state in writing his objections and the reasons therefore.
- 6.3. TESTS:** Acceptance tests will be carried out and, unless otherwise agreed, will be made at the Vendor's works and during normal working hours. If the technical requirements of the tests are not specified in the contract, the tests will be carried out in accordance with the general practice obtaining in the appropriate branch of the industry in the country where the material is manufactured.
- 6.4.** The Vendor shall give to the purchaser sufficient notice of the tests to permit the purchaser's representatives to attend. If the purchaser is not represented at the tests, the tests report shall be communicated by the Vendor to the purchaser and shall be accepted as accurate by the purchaser.
- 6.5.** If on any test (other than a test site, where test on site are provided for in the contract) the material shall be found to be defective or not in accordance with the contract, the Vendor shall with all speed make good the defect or ensure that the plant complies with the contract. Thereafter, if the purchaser so requires, the test shall be repeated.
- 6.6.** Unless otherwise agreed, the Vendor shall bear all the expenses of tests carried out in his works.
- 6.7.** If the contract provides for tests on site, the terms and conditions governing such tests shall be such as may be specially agreed between the parties.

## **7. Passing of Risk**

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

**8. Delivery:** Unless otherwise agreed the delivery period shall run from the date of the formation of the contract as defined in clause 2.

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

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

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

**8.4.** If any portion of material in respect of which the purchaser has become entitled to the maximum deduction provided for by paragraph 3 hereof, or in respect of which he would have been so entitled had he given the notice referred to therein, remains undelivered, the purchaser may by notice in writing to the Vendor require him to deliver and by such last mentioned notice fix a final time for delivery which shall be reasonable taking into account such delay as has already occurred. If for any reason whatever the Vendor fails within such time to do everything that he must do to effect delivery, the purchaser shall be entitled by notice in writing to the Vendor, and without requiring the consent of any court, to terminate the contract in respect of such portion of the material and thereupon to recover from the Vendor any amount not exceeding that part of the price payable under the Contract which is properly attributable to such portion of the material as could not in consequence of the Vendor's failure be put to the use intended.

**8.5.** If the purchaser fails to accept delivery on due date, he shall nevertheless make any payment conditional on delivery as if the material had been delivered. The Vendor shall arrange for the storage of the material at the risk and cost of the purchaser. If required by the purchaser, the Vendor shall insure the material at the cost of the purchaser. Provided that if the delay in accepting delivery is due to one of the circumstances mentioned in clause 10 and the Vendor is in a position to store it in his premises without prejudice to his business,

the cost of storing the material shall not be borne by the purchaser.

**8.6.** Unless the failure of the purchaser is due to any of the circumstances mentioned in clause 10, the Vendor may require the purchaser by notice in writing to accept delivery within reasonable time. If the purchaser fails for any reason whatever to do so within such time, the Vendor shall be entitled by notice in writing to the purchaser, and without requiring the consent of any court, to terminate the contract in respect of such portion of the material as is by reason of the failure of the purchaser aforesaid not delivered and thereupon to recover from the purchaser any loss, suffered by reason of such failure up to an amount not exceeding the value of the material, the delivery of which has not been accepted.

## **9. Force Majeure**

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

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

**9.3.** If a Force Majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall all reasonable alternative means for performance not prevented by the Force Majeure event.

## **10. Payment:**

### **10.1. Terms of Payment:**

- 1. The company prefers to deal with the supplier on an open account basis, and the payment to be made for each purchase order as the following:**
  - a. The supplier has to send the following documents: (Invoice origin + five copies), (Certificate of origin + five copies), (Bill of lading 3-negotiable + 5 non-negotiable), (Test certificate (where applicable) + 6 copies), to IDECO company/ financial department, and those 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 borne by the supplier and charge to his own account for each purchase order and the terms will be as follows:**
  - a. The L/C will be confirmed and irrevocable but has to be acceptance L/C and the supplier has to send the following documents: (Invoice origin + five copies), (Certificate of origin + five copies), (Bill of lading 3-negotiable + 5 non-negotiable), (Test certificate (where applicable) + 6**

copies), and those document shall be legalized for shipping purposes.

- b. 100% of Payment will be released after submitting IDECO's acceptance certificate to the bank within one month after receipt of goods at IDECO's stores.
- c. Payment will be released on first week of each month.

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

**10.3.** Any advance payments made by the purchaser are payments on account and do not constitute a deposit, the abandonment of which would entitle either party to terminate the contract.

**10.4.** If delivery has been made before payment of the whole sum payable under the contract, material delivered shall, to the extent permitted by the law of the country where the plant is situated after delivery, remain the property of the Vendor until such payment has been effected. If such law does not permit the Vendor to retain the property in the material, the Vendor shall be entitled to the benefit of such other rights in respect thereof as such law permits him to retain. The purchaser shall give the Vendor any assistance in taking any measures required to protect the Vendor's right of proper or such other rights as aforesaid.

**10.5.** A payment conditional on the fulfillment of an obligation by the Vendor shall not be due until such obligation has been fulfilled, unless the failure of the purchaser is due to an act or omission of the purchaser.

**10.6.** If the purchaser delays in making any payment, the Vendor may postpone the fulfillment of his own obligations until such payment is made, unless the failure of the purchaser is due to an act or omission of the Vendor.

**10.7.** If delay by the purchaser in making any payment is due to one of the circumstances mentioned in clause 10, the Vendor shall not be entitled to any interest on the sum due.

**10.8.** Save as aforesaid, if the purchaser delays in making any payment, the Vendor shall on giving to purchaser within a reasonable time notice in writing be entitled, and without requiring the consent of any court, to terminate the contract and thereupon to recover from the purchaser the amount of his loss up to the value of the material, the payment for which has been unreasonably delayed.

## **11. Guarantee:**

**11.1.** Subject as hereinafter set out; the Vendor undertakes to remedy any defect resulting from faulty design, materials or workmanship.

**11.2.** This liability is limited to defects which appear during the period (hereinafter called the Guarantee Period) of fifteen months from date of dispatch ex-works or twelve months from the date of setting to work whichever shall be the later.

- 11.3.**In fixing this period due account has been taken of the time normally required for transport as contemplated in the contract.
- 11.4.**In respect of such parts (whether of the Vendor's own manufacture or not) of the material as are expressly mentioned in the contract, the Guarantee Period shall be such other period (if any) as is specified in respect of each of such parts.
- 11.5.**The Guarantee period shall start from the later of the dates mentioned in paragraph 2 above. If however dispatch ex-works is delayed for a period in excess of three months due to a cause beyond the control of the Vendor the Guarantee Period shall not extend beyond eighteen month from the date the material was ready for dispatch ex-works.
- 11.6.**The Guarantee period is based on the continuous use of the material in service for 24 hours every day.
- 11.7.**A fresh Guarantee Period equal to that stated in paragraph 2 hereof shall apply, under the same terms and conditions as those applicable to the original material, to parts supplied in replacement of defective parts or to parts renewed in pursuance of this clause. This provision shall not apply to the remaining parts of material, the Guarantee Period of which shall be extended only by a period equal to the period during which the material is out of action as result of a defect covered by this clause.
- 11.8.**In order to be able to avail himself of his rights under this clause the purchaser shall notify the Vendor in writing without delay of any defects that have appeared and shall give him every opportunity of inspecting and remedying them.
- 11.9.**On receipt of such notification the Vendor shall remedy the defect forthwith and at his own expense. Save where the nature of the defect is such that it is appropriate to effect repairs on site, the purchaser shall return to the Vendor any part in which a defect covered by this clause has appeared, for repair or replacement by the Vendor, and in such case the delivery to the purchaser of such part properly repaired or a part in replacement thereof shall be deemed to be a fulfillment by the Vendor of his obligations under this paragraph in respect of such defective part.
- 11.10.** The Vendor shall bear all the costs and risks of the transport of defective parts or equipment and their replacements.
- 11.11.**Where, in pursuance of paragraph 9 hereof, repairs are required to be effected on site, the conditions covering the attendance of the Vendor's representatives on site shall be such as may be specially agreed between the parties.
- 11.12.** Defective parts replaced according to this clause shall be placed at the disposal of the Vendor.
- 11.13.** If the Vendor refuses to fulfill his obligations under this clause or fails to proceed with due diligence after being required so to do, the purchaser may proceed to do the necessary work at the Vendor's risk and expense, provided that he does so in a reasonable manner.
- 11.14.** The Vendor's liability does not apply to defects arising out of materials provided, or out of a design stipulated, by the purchaser.

- 11.15.** The Vendor's liability shall apply only to defect that appears under the conditions of operation provided for by the contract and under proper use. It does not cover defects due to causes arising after the risk in the material has passed in accordance with clause 6. In particular it does not cover defects arising from the purchaser's faulty maintenance or erection, or from alterations carried out without the Vendor's consent in writing, or from repairs carried out improperly by the purchaser, nor does it cover normal deterioration.
- 11.16.** Save as in this clause expresses, the Vendor shall be under no liability in respect of defects after the risk in the material has passed in accordance with clause 6, even if such defects are due to causes existing before the risk so passed. It is expressly agreed that the purchaser shall have no claim in respect of personal injury or of damage to property not the subject matter of the contract or of loss of profit unless it is shown from the circumstances of the case that the Vendor has been guilty of gross misconduct.
- 11.17.** The vendor is required to transport all the defective or not in accordance materials, from our stores within a month from date of notification. All costs and expenses of transportation shall be borne by the vendor. Unless otherwise agreed. IDECO has the right to deal with the defective materials in a proper way.
- 11.18.** Gross misconduct "does not comprise any and every lack of proper care or skill, but means an act or omission on the part of the Vendor implying either a failure to pay due regard to serious consequences which a conscientious contractor would normally foresee as likely to ensue, or a deliberate disregard of any consequences of such act or omission.

## **12. Relief:**

- 12.1.** The following shall be considered as cases of relief if they intervene after the formation of the contract and impede its performance: industrial disputes, and any other circumstances (e.g. fire, mobilization, requisition, embargo, currency restrictions, insurrection, shortage of transport, general shortage of materials and restrictions in the use of power) when such other circumstances are beyond the control of the parties.
- 12.2.** The party wishing to claim relief by reason of any of the said circumstances shall notify the other party in writing without delay on the intervention and on the cessation thereof.
- 12.3.** The effects of the said circumstances so far as they affect the timely performance of their obligation by the parties, are defined in clauses 7 and 8. Save as provided in paragraph 7.5, 7.7, and 8.7, if by reason of any of the said circumstances, the performance of the contract within a reasonable time becomes impossible, either party shall be entitled to terminate the contract by notice in writing to the other part without requiring the consent of any court.
- 12.4.** If the contract is terminated in accordance with paragraph 3 hereof, the division of the expenses incurred in respect of the contract shall be determined by agreement between the parties.
- 12.5.** In default of agreement it shall be determined by the arbitrator which party has been prevented from performing his obligations and that party shall bear the whole of the said expenses. Where the purchaser is required to bear the whole of the expenses and has

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

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

**13. Limitation of Damages:**

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

- 14. Rights at Termination:** Termination of the contract from whatever cause arising shall be without prejudice to the rights of the parties accrued under the contract up to the time of termination.

**15. Arbitration and Law Applicable:**

- 15.1.** Any dispute, question or controversy shall arise between the purchaser and the contractor concerning this contract the matter in dispute shall be referred to an arbitration committee composed of three (3) arbitrators. One arbitrator shall be nominated by the purchaser and one by the contractor, and the third arbitrator shall be appointed by both parties. If either party fails to appoint his arbitrator within one month of the appointment of the arbitrator by the other party, or if the two parties fail to agree on the third arbitrator within two months of the date of the request to refer the dispute to arbitration, such arbitrator shall be appointed by the president of the highest court in Jordan at the request of either or both parties.
- 15.2.** The decision of the arbitrators shall be final and binding on both the purchaser and the contractor. Any such reference shall conform to the statutory enactment or regulation governing arbitration as may be in force in Jordan at the time. The assessment of costs incidental to the reference and award respectively shall be at the discretion of the arbitration committee.

- 16. 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.**

- 17.** 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.

**18. 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.**

**19. Ordering Procedures and Delivery Period**

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

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

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

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

**20. Pricing Formula:**

The supplier shall obligate to deliver the required materials during two years based on the fixed price of the required materials.

## **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. **(47/2021)** but bearing no other mark from which the identity of the tenderer can be ascertained.
3. All correspondences in connection with this tender and all matters accompanying the tender that are relevant to its examination shall be in English language and expressed in metric units.
4. The tender is to be held open for acceptance or rejection for a validity period of (120) days from the time fixed for opening the tenders.
5. Tenders received prior to the time fixed for opening of tenders will be securely kept, unopened. Tenders received after that time will be rejected. The purchaser bears no responsibility for premature opening of tenders not properly addressed or identified.
6. Tenders may be withdrawn by formal request received in writing from the tenderer prior to the time fixed for opening. If for any reason the tender should be withdrawn after the time fixed for opening and before expiry of the said validity period, the purchaser has the right to retain the full value of the tender bond.
7. The successful tenderer shall abide by the commercial and professional regulations as required by the Ministry of Industry & Trade, Engineering Association and other relevant Institutions in Jordan.
8. Tenderers attention is drawn to the action of customs officers in the discharge of their duties. Whereby air parcels are frequently opened In their own interests and in order to preserve the confidential nature of the tender price, tenderers are urged to pay attention to the:
  - a. To dispatch the completed tender document and any covering letter only by Air Mail which should be endorsed and labeled in the manner laid down in paragraph 10 of the Instructions to Tendering.
  - b. Technical literature and the like may reasonably be sent by Air Parcel or Air Freight but since this would then be separated from the actual Tender, each parcel should contain specific evidence identifying the Tender to which the contents refer.
  - c. The purchaser will not consider late or incompletely delivered tenders or literature supporting tenders due to the action of any customs officer.

9. In the event that the intending signatory does not manufacture one or more of the main sections of equipment and materials, then the tender submitted should give evidence to show that all the obligations imposed by the documents on the intending signatory have been fully understood and accepted, where applicable, by the manufacturer(s) to whom it would be intended to sub-contract one or more of the main sections of the equipment and materials.
10. For overseas transport of the contractor and his Sub-contractors, suppliers and manufactures must give priority to Jordan shipping national lines, and to Arab shipping companies and their subsidiaries for the shipping of goods, materials provided such companies ships call at the port of export. The contractor shall also give priority to the Royal Jordanian Airlines for air freight shipment and transport of personnel.
11. Tenderer must submit country of origin and name of manufacturer for the offered goods.
12. The foreign bidders who participate in this tender must submit their bids through a registered local agent or through their registered office in Jordan.
13. For all manufacturers from inside Jordan it is quite essential that they have JQM for their products and the purchaser will have the right to accept or reject their offer if they did not submitted the JQM certificate with their offer.
14. If samples were not re-claimed by the tenderer within one month from date of order all samples shall remain the property of the purchaser.
15. The purchaser will not be responsible for, nor to pay for, any expenses or losses which may be incurred by a tenderer in the preparation of his tender.
16. If the tenderer has any doubt about the meaning of any portion of the General Conditions, Specifications, Drawings, he shall clarify such doubts before submitting his tender, or in case of any further information can be obtained by an application in writing to the director general.
17. Tenderers are particularly directed that the amount entered on the form of tender shall be a fixed price for performing the contract strictly in accordance with the bound document, and shall be the sum total of all the amounts printed into and entered by the tenderer upon the schedule of prices.
18. Tender price shall include all incidental and contingent expenses.
19. The tender shall be accompanied by a tender bond in the form of a Bank Guarantee valid for at least 120 days from the time fixed for the closing date of tender, or certified check in favor of and payable to the purchaser for a sum of.....as a guarantee of good faith. This bond is to be issued by any approved bank in Jordan. The bond will be returned to the unsuccessful tenderer within 120 days from the time fixed for opening the tenders or at such earlier time as a tender shall have been accepted by the purchaser. In the case of the successful tenderer, the bond will, subject to the conditions of contract, be returned as soon as a formal contract agreement and a performance bond have been entered into.

- 20. The successful tenderer has to submit a performance bond for each call-off purchase order will be issued by the purchaser equal to (10) percent of the total call-off purchase order value within (30) days from date of the final awarded letter for purchase order.**
- 21. The performance bond for each call-off purchase order should be valid for period of (15) months from the date of the purchase order.**
- 22. If the contractor fails for any reason to submit the required performance bond within (30) days, the purchaser has the right to confiscate the bid bond and any other submitted performance bond, and the awarding letter for issued call-off purchase order will be cancelled too.**
- 23. If the successful tenderer fails for any reason to submit the required performance bond within (30) days, the purchaser has the complete right to reserve the value of materials supplied, and payment will not release till the successful tenderer submit the required performance bond. And the bid bond will not return to the tenderer unless the performance bond shall submit to the purchaser according to tender conditions.**
- 24. The tenderer shall state in his tender the name or names of the sureties, insurance company, or bank proposed for guaranteeing the performance of the contract.**
- 25. Prices are highly recommended to be on the basis of C&F IDECO STORES. However C&F AQABA port or Amman customs are also accepted.**
- 26. Stamp duty and award fees are payable on Jordanian contracts according to Jordanian laws and, after the placing of a contract, it is the contractor's responsibility to purchase legal stamps to the requisite amount depending on the contract value for each purchase order.**
- 27. If after receipt of tenders, the purchaser finds any difference between prices shown on the form of tender in writing and in numerals, then the price shown in writing shall be considered correct by the purchaser and the tenderer. If any discrepancies are found between the total in the price schedule and the total obtained by adding the products of each quantity and its particular rate then, whether the price shown on the form of tender in numerals or in writing corresponds or not, the total obtained by adding the products of the quantities and their particular rates shall be considered by the purchaser and the tenderer as the tender price.**
- 28. Tender revaluation will be consistent with the terms and conditions set forth in the tender document. In addition to the tender price adjusted to correct arithmetical errors, other relevant factors such as the time of completion of delivery or construction, operating costs where applicable, or the efficiency and compatibility of the equipment, the availability of service and spare parts, and reliability of construction methods proposed will be taken into consideration, to the extent and in the manner specified in the tender documents, in determining the evaluated tender most advantageous to the purchaser. For comparison of all tenders, the currency or currencies of the tender price for each tender will be valued in terms of Jordanian Dinars. The rates of exchange to be used in such valuation will be the selling rates published by the central bank of Jordan and applicable to similar transactions, on the day tenders are opened unless there should be a change in the value of the currencies before the award is made. In the latter**

case, the exchange rates prevailing at the time of the decision to notify the award to the successful tenderer may be used.

- 29. The purchaser does not bind himself to accept the lowest or any tender, nor to assign any reason for the rejection of any tender, nor to purchase the whole of the equipment and materials specified. The purchaser has the right to purchase part of the tender, even if it is only one item from the schedule of rates and prices.**
- 30. The tenderer shall submit with his tender in order of the relevant clauses, a statement of any departures from specifications, or he can fill in the related schedule attached herewith. Notwithstanding any description, drawings, or literature which may be submitted, all details other than those in the statement of departures shall be assumed to be in accordance with the specification.**
- 31. Although IEC standards for workmanship, equipment and materials, have been selected in this specification as a basis of reference, standards and specifications of other countries and recommendations of other international standard organizations will be acceptable provided that they are substantially equivalent to the designated standards and provided further that the tenderer submits for approval detailed specification which he proposes to use.**
- 32. References to brand names or catalog numbers, if any, in this specification have been made only for that equipment for which it has been determined that a degree of standardization is necessary to maintain certain essential features. In certain instances such references have also been made for purpose of convenience to specify the requirements. In either case offers of alternative goods which have similar characteristics and provide performance and quality at least equal to those specified are acceptable.**
- 33. Where compliance with a specific standard specification is called for the standard specification used shall be that in force at the time of tender.**
- 34. 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.**
- 35. 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.**
- 36. 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.**
- 37. The Irbid Electricity Company shall be entitled to penalize the contractor (late to supply the required materials by tender or tender) the value of the fine due to the Irbid Electricity Company imposed by the Regulatory Authority of the Energy Sector as a result of the company's failure to comply with the required periods in executing the specified subscriber transactions Treatment is the delay of the supplier in the supply of material or materials necessary in the implementation of transactions subscribers**

## **General Requirements Standards and Regulations**

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

### **1. Design and Construction:**

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

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

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

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

### **2. Compliance with Standards:**

Although the standards for workmanship, material, and equipment have been selected in these specifications as a basis of reference, standards and specifications of the other bank member countries and recommendations of standards international organizations will be acceptable provided they are substantially equivalent to the designated standards and provided furthermore that the contractor submits for approval detailed specifications which he proposes to use. Reference to brand names or catalog numbers if any in these specifications have been made only for that equipment for which it has been determined that a degree of standardization is necessary to maintain certain essential features. And in certain cases such references have also been made for purposes of convenience to specify the requirements, in either case offers of alternative goods, which have similar characteristics and provide performance and quality at least equal to those specified are acceptable. If the contractor offers materials, equipment, design calculations or tests, which conform to standards other than those specified, full details of the differences between the proposed standards and that specified in so far as they affect the design or purpose of the equipment, are to be supplied by the contractor if called upon to do so by the engineer, where required by the engineer for approval purposes, the contractor shall supply, without charge, duplicate copies of the proposed standards with English translations of

the relevant portions. The contractor shall have available in his place of business (or in his supplier's works) the relevant copies of standards or codes used for the use of the Engineer.

### **3. Statutory Regulations**

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

### **4. Language**

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

### **5. Correspondences**

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

### **6. 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.

### **7. 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.

### **8. 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.

### **9. 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 (47/2021).**

#### **10. 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.

#### **11. 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.

#### **12. 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 desiccators. 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 not, however, prejudice the right of the purchaser to reject the material if it fails to comply with the specification when erected or to give complete satisfaction in service. The costs of all tests and inspection shall be borne by the contractor and shall be deemed to be included in the contract price. Before any material is packed or dispatched from the main or sub-contractor's works, all tests called for are to have been successfully carried out in presence of the engineer.

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

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

## 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 (47/2021)**

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 fails to comply with the requirements of the appropriate specifications for the material in question, the engineer may reject the whole of the material represented by that piece, the contractor's designers and metallurgists will be consulted before any material is so rejected. In the event of the engineer being furnished with the certified particulars of the tests which have been carried out for the contractor by the suppliers of the material, he may, at his own discretion, dispense with the previously mentioned tests entirely.

#### **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. (47/2021)**

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. (47/2021)**

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 Particulars:

The following is applicable unless otherwise is mentioned:

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

### 2. Power System Particulars:

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

|                                  |          |            |            |
|----------------------------------|----------|------------|------------|
| Normal Voltage                   | 415V     | 11KV       | 33KV       |
| Maximum Voltage                  | 500V     | 12KV       | 36KV       |
| No. Of phases                    | 3        | 3          | 3          |
| System frequency (Hz)            | 50       | 50         | 50         |
| No. of wires                     | 5        | 3          | 3          |
| Fault level (MVA)                | 25       | 350        | 1500       |
| Fault Current / Duration         | *        | *          | 25 kA / 3s |
| Earth Fault Current / Duration * |          | 3 kA / 3 s | 3 kA / 3 s |
| Neutral point Earthing           | Solid    | Resistance | Resistance |
| Conductor arrangement            | Vertical | Horizontal | Horizontal |

3. **Ring main unit(Two Tee-Off):** specifications shall be motorized, and SF6 type in the form of a metal enclosed and extensible type suitable for indoor floor mounting on 50 Hz systems, with system nominal voltage of 33 kV, **of Two main motorized and manual switch - disconnecter rated at 630A, and Two motorized / manual/ Tee-Off fuse switch rated at 630 A, shall be arranged where specified to form an extensible 33 kV ring main units of the outgoing side or incoming side which shall be provided as complete insulated assemblies ready for installation. (Indoor type) .**

The extension of such assemblies shall be possible without having to relocate the switches. Each fuse switch shall have a rated normal current of 630 A, and capable of withstanding the duty cycle for **1500 MVA at 33 kV** in accordance with the requirements of ATSA publication 22. The rated short – circuit making capacity and rated short-time current shall apply when operated to the “ON “and to the “Earth ON “positions.

Testing facilities shall be provided for carrying out tests on the feeder connected to the fuse switch or switch – disconnecter.

Lockable selector switch (local / supervisory) must be provided. Battery supplying motors shall be charged by a suitable VT supplying a charger. 24 V DC motors is suitable to charge a charging mechanism. 24 V DC & 5A auxiliary N.O & N.C contact for incoming, outgoing and tee – off fuse switches shall be provided.

Manual operation ON-OFF Earth shall be added and easy for use, with interlock to prevent earthing an energized cable. Charging mechanism, motors Auxiliary contacts and other circuits shall be built in inside the RMU. The operation mechanisms and inter locks shall comply with the attention that for the purpose of applying these clauses the word “transformer” whenever is mentioned in this clause shall mean “transformer feeder” (the feeder connected to the Tee-off). The Tee-off fuse switch shall be completed with cable box suitable for accepting 3 single core 33 kV cables having cross section of (300-500) mm<sup>2</sup> Al, XLPE and 3 core 33kv cables having cross section of (3x120-3x300)mm<sup>2</sup> AL,XLPE ,When the cable box is removed the rear of the transformers feeder switch complete with flange plate and bushing shall be suitable for direct connection to the transformer feeder having higher voltage of 33 kV, the Tenderer is required to submit full details, drawings of the Tee-off fuse switches offered and the connection arrangement between the Tee-off fuse switches and the transformer feeder when both have their cable boxes removed. All safety facility shall be applied in case of using fuse - switch. Dual ration C.T shall be **600/200/5 or 1 Amp**.

The protective relay should have the following specifications:

- User-friendly setting procedure.
- Self-powered.
- Earth fault, overcurrent and overload protection relay with directional function.
- Selectable protection functions between:
  - Definite time.
  - Inverse time.
  - Instantaneous time (three stages).
- Selectable inverse time characteristics acc. to IEC.
  - Normal inverse.
  - Very inverse.
  - Extremely inverse.
- Self-reset function.
- High-accuracy components and over-rating guarantee precision, reliability and a long
- Long Service life.

- Trip indication via external flag indicator with mechanical reset.
- Compact construction.
- Insensitive to extreme environmental conditions.
- All alarms, measurements and control functions (indications, commands, local/supervisory status etc.) of the relay must be transferable via SCADA system control center.
- Relay should support remote settings configuration via SCADA.
- The following protocols must be provided as a minimum:  
IEC 60870-5-103, IEC 60870-5-104 and IEC 61850.
- 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
- CB, earth switch and isolator position indications must be taken from source to the relay as double binary indications NOT as single point signals.
- Manual and point list for all control, indications and measurements points for all available communication protocols must be submitted with tenderer offer.
- 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.
  - Fault records
- Alarm features: The following alarms must be able to be presented on the controller indication LEDs and must be communicated with the SCADA (control center ):
  - Battery under Voltage Alarm.
  - Battery Fail Alarm.
  - charger fail Alarm.
  - O.C Alarm.
  - EF Alarm.
  - SEF Alarm, and any other required alarms.

4. **Ring main unit(One Tee-Off):** specifications shall be motorized, and SF6 type in the form of a metal enclosed and extensible type suitable for( indoor for item no. 2 /outdoor for item no. 3 ) floor mounting on 50 Hz systems, with system nominal voltage of 33 kV, **of Two main motorized and manual switch - disconnecter rated at 630A, and one motorized / manual/ Tee-Off fuse switch rated at 630 A, shall be arranged where specified to form an extensible 33 kV ring main units of the outgoing side or incoming side which shall be provided as complete insulated assemblies ready for installation.**

The extension of such assemblies shall be possible without having to relocate the switches. Each fuse switch shall have a rated normal current of 630 A, and capable of withstanding the duty cycle for **1500 MVA at 33 kV** in accordance with the requirements of ATSA publication 22. The rated short – circuit making capacity and rated short-time current shall apply when operated to the “ON “and to the “Earth ON “positions.

Testing facilities shall be provided for carrying out tests on the feeder connected to the fuse switch or switch – disconnecter.

Lockable selector switch (local / supervisory) must be provided. Battery supplying motors shall be charged by a suitable VT supplying a charger. 24 V DC motors is suitable to charge a charging mechanism. 24 V DC & 5A auxiliary N.O & N.C contact for incoming, outgoing and tee – off fuse switches shall be provided.

Manual operation ON-OFF Earth shall be added and easy for use, with interlock to prevent earthing an energized cable. Charging mechanism, motors Auxiliary contacts and other circuits shall be built in inside the RMU. The operation mechanisms and inter locks shall comply with the attention that for the purpose of applying these clauses the word “transformer” whenever is mentioned in this clause shall mean “transformer feeder” (the feeder connected to the Tee-off). The Tee-off fuse switch shall be completed with cable box suitable for accepting 3 single core 33 kV cables having cross section of (300-500) mm<sup>2</sup> Al, XLPE and 3 core 33kv cables having cross section of (3x120-3x300)mm<sup>2</sup> AL,XLPE ,When the cable box is removed the rear of the transformers feeder switch complete with flange plate and bushing shall be suitable for direct connection to the transformer feeder having higher voltage of 33 kV, the Tenderer is required to submit full details, drawings of the Tee-off switches offered and the connection arrangement between the Tee-off switches and the transformer feeder when both have their cable boxes removed. All safety facility shall be applied in case of using fuse switch. Dual ration C.T shall be **600/200/5 or 1 Amp**.

The protective relay should have the following specifications:

- User-friendly setting procedure.
- Self-powered.
- Earth fault, overcurrent and overload protection relay with directional function.
- Selectable protection functions between:
  - Definite time.
  - Inverse time.
  - Instantaneous time (Three stages).
- Selectable inverse time characteristics acc. to IEC.
  - Normal inverse.
  - Very inverse.
  - Extremely inverse.
- Self-reset function.
- High-accuracy components and over-rating guarantee precision, reliability and a long
- Long Service life.

- Trip indication via external flag indicator with mechanical reset.
- Compact construction.
- Insensitive to extreme environmental conditions.
- All alarms, measurements and control functions (indications, commands, local/supervisory status etc.) of the relay must be transferable via SCADA system control center.
- Relay should support remote settings configuration via SCADA.
- The following protocols must be provided as a minimum:  
IEC 60870-5-103, IEC 60870-5-104 and IEC 61850.
- 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
- CB, earth switch and isolator position indications must be taken from source to the relay as double binary indications NOT as single point signals.
- Manual and point list for all control, indications and measurements points for all available communication protocols must be submitted with tenderer offer.
- 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.
  - Fault records
- Alarm features: The following alarms must be able to be presented on the controller indication LEDs and must be communicated with the SCADA (control center ): → Battery under Voltage Alarm. → Battery Fail Alarm. → charger fail Alarm. → O.C Alarm. → EF Alarm. → SEF Alarm, and any other required alarms.

## **5. DC batteries and charger.**

Tenderer must provide indoor AC-DC charger to supply control circuits with necessary DC and to charge 24 V DC motors that will be use to charge a charging mechanism.

Batteries to supply control circuits with necessary DC and to charge 24 V DC motors that will be use to charge a charging mechanism shall be provided; these batteries shall be charged by above mention charger.

In normal operation condition control circuits and motors shall be supplied from charger, at the time of absence of AC power supply, control circuits and motors shall be fed from Batteries automatically via suitable control circuit. However, at the time of re-energizing AC power supply control circuit automatically shall change the supply to be from AC power supply.

DC system shall have mentoring capabilities where battery health indication/measurement can be sent to or measured by the control relay, which in turn shall send it to the control center via the SCADA system.

**6. VT single phase (voltage transformer) (33/√3: 0.400/√3 ) KV.**

Built in single phase voltage transformer at incoming side (33/√3: 0.400/√3) KV with suitable burden for each RMU shall be provided to supply control circuits with necessary DC supply and to charge 24 V DC motors via AC-DC charger.

**7. The R.M.U shall be manufactured in accordance with the following standards and any relevant standard with latest edition.**

- a. IEC 62271-100
- b. IEC 60258
- c. IEC 60376
- d. IEC 60060-1
- e. IEC 62271-102
- f. IEC 60255
- g. IEC 60644
- h. IEC 61000-4
- i. ENATS 41-26 distribution switchgear for service up to 36 kV.

**8. Insulation Level:** The rated lightning impulse withstand voltage of switchgear and equipment when tested in accordance with IEC standard shall be 170 kV (peak) for 33 kV systems.

**9. Type And Design:** The equipment shall comply with the appropriate IEC standards, unless amended to the contrary in this specification or other standards are specifically mentioned, each equipment shall be for free standing situations, rigid and stable on their own supports and shall be rust proof, rodent and insect proof, each equipment shall also be capable of operating in tropical and humid conditions and have suitable weather proof covers to prevent ingress of moisture into any compartment containing parts which may be live. External surface shall not create water traps. Access to handles for operation and access for viewing of indications and instruction labels shall be on side only. This does not necessarily mean that all operating handles shall be located on one side only. Instructions for the assembly of equipment shall be provided by the manufacturer. The instructions shall cover the method in which the switches can be extended using the adjustments provided, in the sequence necessary bus bar coupling links. Equipment shall be designed for minimum maintenance. Adjustment of mechanisms shall not be required at less than 1000 operation. Regular maintenance shall not be required at less than five-year intervals apart from any maintenance due to unusual climatic, service or environmental conditions. Main switches and Tee-off fuse switches shall have three operating positions: “ ON “ , “ OFF “ , and “Earth ON “ with an interlock on incoming/outgoing disconnecter switches to prevent "Earth ON" position making while the cable is energized.

**10. Bus bars and connections to switches:** The normal current rating of bus bars connections and each current carrying component shall be **630A** minimum and the temperature rise conditions shall be in accordance with or the appropriate IEC Recommendations. Tenderer are requested to state in the schedule of particulars the permissible over load rating for the switchgear operating under emergency conditions at an ambient temperature 65C° each

equipment shall be capable of withstanding the specified 3 phase short – circuit current for a period of three seconds.

**11. Main Switches:** Each switch shall have a rated normal current of 630 A. Each switch equipment shall have a rated short-circuit making capacity and short-t time rating equivalent to **1500 MVA** at 33 KV. The rated short-circuit making capacity and rated short-time current shall apply when operated to the “ON” and “Earth ON” positions. The operating mechanisms and inter locks shall be in accordance to the ENA 41-12 as appropriate. Testing facilities shall be provided for carrying out test on the feeder connected to the switch. Each switch shall be complete with cable box suitable for accepting cable with (300-500) mm<sup>2</sup> cross-sections, Al \ XLPE, 3/single cores 33 KV, and and 3 core 33kv cables having cross section of (3x120-3x300) mm<sup>2</sup> AL, XLPE.

**12. Earthing, Testing Facilities, Cable boxes and painting:** Each Tee-off fuse switch and main circuit disconnect switch shall be provided with facilities for carrying out applied high voltage tests and injected current tests on the feeder connected to the switch and this shall be effected by the insertion of a three phase plug in testing device when the switch is in the “Earth” position, to become effective when the switch is in the “OFF” position. Four sets of these test plugs shall be supplied under this contract the cost of which deemed to be included in the contract prices. Tests access covers shall be provided with padlocking facilities and fully water proofed. If SF6 R.M.U's where offered, gas pressure gage shall be supplied with test plug mentioned above. Each equipment shall be provided with a main earth bar of not less than 40 mm X 2.5 h.d.h.c. copper strip or equivalent. The earth bar shall be bolted to the main frame and conveniently provide facilities for Earthing cable sheaths and cable glands. Cable boxes on main switches shall be suitable for 33 KV 3- single cores aluminum conductors, paper or XLPE insulated, screened, load sheathed and armored, of any conductor size up to and **including 500 mm<sup>2</sup>**. Compound-filled cable dividing and sealing boxes shall comply with the requirements of relevant BS or equivalent and shall be supplied under this contract, the cost of which deemed to be included in the contract prices. All cable boxes fitted it each switch or oil switch or supplied under this section, shall be for heat shrink termination shall be fitted with insulated glands for the purpose of fitting earth fault indicating equipment. Each Tee-Off fuse switch and main disconnect switch shall be supplied with all necessary materials, like extension insulated bus bar, heat shrinkable kits for the remaining uninsulated parts, bus bar duct, gasket, screws, ... etc.) needed to connect one side of its bus bar from the **insulated extension side** to other switches supplied under this section. Drawing of the extension joint shall be submitted with the tenderer offer for approval. Each equipment supplied under this section shall be painted in accordance with requirements of relevant standard. Each equipment shall be supplied with all necessary materials, fuses, compound, sealing boxes; cable lugs glands, etc., needed to make it ready for erection and operation.

## **13. IDECO'S Requirements**

### **13.1 general requirements:**

- The RMU'S enclosure shall have minimum IP 56 for (outdoor type ) include all cabinet such as (control cabinet, cable cabinet, bus bare cabinet), this cabinet shall be sealed. (Or the RMU'S shall be inside enclosure)
- And each RMU shall be supplied with all necessary materials such as cable gland.

- The upper side of the RMU'S body / enclosure shall be contain from one piece without any screw or holes (An alternative option: the RMU shall be equipped with a top umbrella to protect it from the rainwater).

Note: the entries of control cables shall not be from the top side of the enclosure

- All metal parts inside the RMU shall be non-corrosive (corrosion resistant).
- Suitable space shall be provided in RMU's enclosure (40\*40\*40) cm<sup>3</sup> to be used for control circuit (mini RTU).

### **13.2 control and protection:**

- Control circuit must be separate from motor circuit by separate mcbs
- Panel shall be provided with ac socket.
- Battery size shall be suitable for all RMU'S loads with addition of 30% overdesign for ideco's uses
- The relay shall be supplied from the battery when the ac supply is disconnected.
- Heater circuit must be separated circuit
- Charger circuit must be provided with separate miniature fuse –switch.
- 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) .

## **14. Testing and Certificate:**

### **14.1 type test**

- Units should be type tested in accordance with standards IEC 62271-100 /200/102/103 and 60529 or other relevant standards.
- Type test report shall be submitted with the offer |.

**14.2 Routine test:** should be carried out in accordance with IEC 62271-200 or other relevant standards.

**Schedule (1)**  
**Technical Particulars and Guarantees**  
**Extensible R.M.U 33 KV with two Tee-Off (Indoor Type)**

This schedule shall be completed by Tenderer.

| No | Particular | Yes | No |
|----|------------|-----|----|
| 1  | Extensible |     |    |

| No | particular                                     | unit | 33 K.V R.M.U | Tee off fuse Switch | Main Disconnecter - Switch |
|----|------------------------------------------------|------|--------------|---------------------|----------------------------|
| 1  | Manufacturer                                   |      |              |                     |                            |
| 2  | Type Number                                    |      |              |                     |                            |
| 3  | Insulation medium                              |      |              |                     |                            |
| 4  | Degree of protection (IP)                      |      |              |                     |                            |
| 5  | Class                                          |      |              |                     |                            |
| 6  | Normal current rating                          | Amp  |              |                     |                            |
| 7  | Breaking current                               |      |              |                     |                            |
| 8  | Making capacity (peak)                         | KAmp |              |                     |                            |
| 9  | Short-circuit withstand current                |      |              |                     |                            |
|    | a) For one second                              | KAmp |              |                     |                            |
|    | b) For three seconds                           | KAmp |              |                     |                            |
| 10 | Earth switch making (peak)                     | KAmp |              |                     |                            |
| 11 | Earth switch Short-circuit withstand current   |      |              |                     |                            |
|    | a) For one second                              | KAmp |              |                     |                            |
|    | b) For three seconds                           | KAmp |              |                     |                            |
| 12 | Type Test Certificate                          |      |              |                     |                            |
| 13 | Type Test Authority                            |      |              |                     |                            |
| 14 | Report reference                               |      |              |                     |                            |
| 15 | Number of breaks in circuit Per pole           |      |              |                     |                            |
| 16 | Total length of per pole                       | mm   |              |                     |                            |
| 17 | Type of main contact                           |      |              |                     |                            |
| 18 | Type of arcing contacts and /or control device |      |              |                     |                            |
| 19 | Minimum clearance in air                       |      |              |                     |                            |
|    | a) Between Two poles                           | mm   |              |                     |                            |
|    | b) Between live parts and earth                | mm   |              |                     |                            |
| 20 | No. of auxiliary contact                       |      |              |                     |                            |
| 21 | D.C supply voltage                             |      |              |                     |                            |
| 22 | Closing circuit type                           |      |              |                     |                            |
| 23 | tripping circuit type                          |      |              |                     |                            |

**Schedule (2)**  
**Technical Particulars and Guarantees**  
**Extensible R.M.U 33 KV with one ( Tee-Off ) indoor type**

This schedule shall be completed by Tenderer.

| No | Particular | Yes | No |
|----|------------|-----|----|
| 1  | Extensible |     |    |

| No | particular                                     | unit | 33 K.V R.M.U | Tee off fuse Switch | Main Disconnecter - Switch |
|----|------------------------------------------------|------|--------------|---------------------|----------------------------|
| 1  | Manufacturer                                   |      |              |                     |                            |
| 2  | Type Number                                    |      |              |                     |                            |
| 3  | Insulation medium                              |      |              |                     |                            |
| 4  | Degree of protection (IP)                      |      |              |                     |                            |
| 5  | Class                                          |      |              |                     |                            |
| 6  | Normal current rating                          | Amp  |              |                     |                            |
| 7  | Breaking current                               |      |              |                     |                            |
| 8  | Making capacity (peak)                         | Kamp |              |                     |                            |
| 9  | Short-circuit withstand current                |      |              |                     |                            |
|    | c) For one second                              | Kamp |              |                     |                            |
|    | d) For three seconds                           | Kamp |              |                     |                            |
| 10 | Earth switch making (peak)                     | Kamp |              |                     |                            |
| 11 | Earth switch Short-circuit withstand current   |      |              |                     |                            |
|    | c) For one second                              | Kamp |              |                     |                            |
|    | d) For three seconds                           | Kamp |              |                     |                            |
| 12 | Type Test Certificate                          |      |              |                     |                            |
| 13 | Type Test Authority                            |      |              |                     |                            |
| 14 | Report reference                               |      |              |                     |                            |
| 15 | Number of feeder in circuit Per pole           |      |              |                     |                            |
| 16 | Total length of per pole                       | mm   |              |                     |                            |
| 17 | Type of main contact                           |      |              |                     |                            |
| 18 | Type of arcing contacts and /or control device |      |              |                     |                            |
| 19 | Minimum clearance in air                       |      |              |                     |                            |
|    | c) Between Two poles                           | mm   |              |                     |                            |
|    | d) Between live parts and earth                | mm   |              |                     |                            |
| 20 | No. of auxiliary contact                       |      |              |                     |                            |
| 21 | D.C supply voltage                             |      |              |                     |                            |
| 22 | Closing circuit type                           |      |              |                     |                            |
| 23 | tripping circuit type                          |      |              |                     |                            |

**Schedule (3)**  
**Technical Particulars and Guarantees**  
**Extensible R.M.U 33 KV with one (Tee-Off) outdoor type**

This schedule shall be completed by Tenderer.

| No | Particular | Yes | No |
|----|------------|-----|----|
| 1  | Extensible |     |    |

| No | particular                                     | unit | 33 K.V R.M.U | Tee off fuse Switch | Main Disconnecter - Switch |
|----|------------------------------------------------|------|--------------|---------------------|----------------------------|
| 1  | Manufacturer                                   |      |              |                     |                            |
| 2  | Type Number                                    |      |              |                     |                            |
| 3  | Insulation medium                              |      |              |                     |                            |
| 4  | Degree of protection (IP)                      |      |              |                     |                            |
| 5  | Class                                          |      |              |                     |                            |
| 6  | Normal current rating                          | Amp  |              |                     |                            |
| 7  | Breaking current                               |      |              |                     |                            |
| 8  | Making capacity (peak)                         | KAmp |              |                     |                            |
| 9  | Short-circuit withstand current                |      |              |                     |                            |
|    | e) For one second                              | KAmp |              |                     |                            |
|    | f) For three seconds                           | KAmp |              |                     |                            |
| 10 | Earth switch making (peak)                     | KAmp |              |                     |                            |
| 11 | Earth switch Short-circuit withstand current   |      |              |                     |                            |
|    | e) For one second                              | KAmp |              |                     |                            |
|    | f) For three seconds                           | KAmp |              |                     |                            |
| 12 | Type Test Certificate                          |      |              |                     |                            |
| 13 | Type Test Authority                            |      |              |                     |                            |
| 14 | Report reference                               |      |              |                     |                            |
| 15 | Number of feeder in circuit Per pole           |      |              |                     |                            |
| 16 | Total length of per pole                       | mm   |              |                     |                            |
| 17 | Type of main contact                           |      |              |                     |                            |
| 18 | Type of arcing contacts and /or control device |      |              |                     |                            |
| 19 | Minimum clearance in air                       |      |              |                     |                            |
|    | e) Between Two poles                           | mm   |              |                     |                            |
|    | f) Between live parts and earth                | mm   |              |                     |                            |
| 20 | No. of auxiliary contact                       |      |              |                     |                            |
| 21 | D.C supply voltage                             |      |              |                     |                            |
| 22 | Closing circuit type                           |      |              |                     |                            |
| 23 | tripping circuit type                          |      |              |                     |                            |

**15. Rated 33 KV metering unit included 2 current transformers with ratio 50/5 A and three voltage transformer 33kv/110v – bad mounted. (indoor type)**

• **APPLICABLE STANDARDS**

The equipment and the components supplied shall be in accordance with the latest editions of the Standards specified below and amendments thereof. However, the CEB Specification shall supersede these Standards in the even there is a discrepancy.

- A- IEC 61869-2:2012 Instrument Transformers Part 1: Current Transformers
- B- IEC 61869-3:2011 Instrument Transformers Part 2: Inductive Voltage Transformers
- C- IEC 61869-4:2013 Instrument Transformers Part 3: Combined Transformers
- D- BS 4190 (2014) Steel Bolts and Nuts BS EN ISO 1461 (2009) Hot dip galvanized coating on iron and steel articles

**GENERAL REQUIREMENTS:**

1. The required item will be used for energy metring using 0.5s three wire meters.
2. The metering unit shall be of first class quality and designed for continuous satisfactory operation as continuity of supply is of prime consideration.
3. The design shall allow all necessary precaution for the safety of operation and maintenance personal.
4. The required metering unit required as full-integrated solution include all needed metering components and **it should be assembled tested and delivered as one piece** excluding the meter it could delivered separately but it must fully compatible with the solution to control and monitor the solution and the **unit should have 2-cable box for termination.**
5. **All wiring should be internal and connected using high quality finishing and the meter cabinet must be installed in the frame of metering unit.**
6. All units shall operate satisfactorily under variation of load, voltage and short circuit or other conditions which may occur on the system provided that these variations are within assigned ratings of the apparatus.
7. Each units shall be designed to withstand 25 KA short – circuit current for a period of one seconds, Rated short –duration power frequency withstand 70kv voltage -1 minute, and rated lightning impulse withstand voltage 170kv peak.

8. The creepage distance of each insulator inside the unit must be 31 mm/kv.
9. The equipment shall be consisting of two cabinet, one for measuring and the other for metering.
10. Measuring cabinet is to include 33 kV Block type current transformers, Voltage transformers and all needed polymeric insulators. The metering cabinet is to include proper space for meter (Dimensions for meter 320\*210 mm approximately) , test block and all needed accessories ,A sealable Completely clear transparent gelatin plate must provide to cover the entire cubicle to protect the meter and connections ,and a logo of the Irbid Electricity Company should be printed in the front of the main body .



meter is not required under this section of specification .

11. Insulated Bus-bar, current transformer and voltage transformer shall be ranged where specified to form a 33 kv metered unit which shall be provided as complete assemblies ready for installation.
12. The normal current rating of bus-bars connections and each current carrying component shall be 630A, the temperature rise conditions shall be in accordance with or the appropriate IEC Recommendations.
13. The whole units are to be contained in an outdoor sheet metal mild steel and thickness not less than 2 mm with galvanized and painted, and The unit shall have an IP rating of at least 54.
14. The sheet metal structure is to be mounted on a rigid frame to ensure easy rigid final structure and successful operation. **The complete unit must be transportable to site as single unit.**

15. Lifting lugs & tackles shall be provided for lifting and positioning the transformer.

16. All removable parts should be sealable with IDECO seal including any cover or any part of the unit

### **BUS BARS, CONNECTIONS, CABLE BOXES AND ACCESSORIES**

1. Unless otherwise approved, bus bars and connections shall be of electrolytic copper in the form of circular section rod or rectangular section strip. All conductors shall be kept as short and straight as possible and be adequately supported to prevent deflection, under rated short circuit conditions, which would reduce clearances to values less than those specified.
2. The continuous current rating at the maximum ambient temperature given in IDECO specification shall be 630A. Bus bars and connections shall withstand the mechanical stresses of the rated short circuit current.
3. The general construction and layout of the bus bars, connections and supports shall be to the Engineers approval.
4. All cable terminals shall be of adequate sizes to ensure that no overheating takes place at the rated current.
5. The metering unit shall be fitted with cable termination boxes.
6. Cable boxes on each side shall be suitable for terminating 33 KV 300 -500 mm<sup>2</sup> single - core aluminum MV XLPE cable insulated, screened, load sheathed and armored, of any conductor size up to and including 300-500 mm<sup>2</sup>. Bimetallic cable lugs suitable for the said range of cable shall be provided. Compound-filled cable dividing and sealing boxes shall comply with the requirements of relevant BS or equivalent and shall be supplied under this contract, the cost of which deemed to be included in the contract prices. All cable boxes supplied under this section shall be for heat shrink termination. Each unit shall be painted according to the relevant BS or equivalent. Each unit shall be supplied with all necessary materials needed to make it ready for erection and operation.  
The bushing should be conveniently located for working with cables specified and allow for the termination of these cables in accordance with the instructions supplied for the 630A M16 bolted connectors.
  - Each unit shall be provided with a main earth bar of not less than 40 mm X 2.5 copper strip or equivalent. The earth bar shall be bolted to the main frame and conveniently provide facilities for earthing cable sheaths and cable glands.
  - Phase labels shall be provided below all the bushings (primary and secondary).
  - The design of the cable box shall comply in all respects with the requirements of IEC standard.

### **Bushings and Separable Connectors**

1. **All** medium voltage bushings shall comply with EN 50181 Type C (630A – tapered, bolted-type bushings) with an M16 x two internal threads. These bushings have an internal screen, which shall be earthed. The bushing-center spacing and distance between the outer bushing-centers and the free-standing 33 kV metering unit metal enclosure shall be as specified below for use with screened separable connectors, 135 mm between phase bushing centers; and 90 mm between phase bushing centers and earth, all cable termination bushings shall be located on the same horizontal plane.
2. The secondary terminals shall be enclosed in a weatherproof terminal box with gland plates at the base of the Transformer, label shall be provided at the secondary terminal board clearly indicating the connections required for each ratio. The connections and ratios in use shall be shown on all diagrams of connection.
3. All bolts, nuts, washers in contact with non-ferrous parts shall be of brass.
4. **Cable clamps:** Provision shall be made for the support (clamping) of the incoming (supply) and outgoing (load) cable in the termination compartment. Three adjustable cable clamps, each suitable for clamping one of 300mm<sup>2</sup> x 1 core aluminum cable and complying with CP\_TSSPEC\_029(*Specification for adjustable cable clamps*) shall be provided with the free-standing 33 kV metering unit. The minimum distance from the cable support point (clamp) to the termination (supply and load) bushing centers shall be 800mm.

### **Earthing:**

The maximum earth fault current shall be 3 kA for 1 second, all earthing connections shall be provided with M12 details.

## **Technical Particulars for Current Transformers 33 KV:**

1. Two single-phase current transformers epoxy resin type for metering purpose shall be fitted at feeder side of the unit.
2. C.T'S ratio shall be 50/5 A, to be installed inside compartment of the measuring unit.
3. The CT's are required to withstand short current for one second. Impulse withstand voltage (1.2 / 50  $\mu$ s) wave peak 170 KV, Power frequencies withstand voltage 70 KV.

| <b>Rated ratio(A)</b> | <b>Minimum Rated short -time thermal current(kA/1s)</b> | <b>Rated insulation level(kV)</b> |
|-----------------------|---------------------------------------------------------|-----------------------------------|
| 50/5                  | 25KA                                                    | 6/70/170                          |

4. C.T's shall be in accordance with IEC 60044-1 with an accuracy class of 0.5 s. The output of the CT is to be not less than **15 VA** and suitable for 3-phase metering applications. The star connection of the secondary windings is to be earthed through a removable link.
5. Current transformers shall have an output rating adequate to cater for the entire burden connected to them. They shall have sufficient rating, terminal voltage and accuracy class for the satisfactory operation of their associated equipment. The contractor shall be responsible for taking in to account lead and all other burdens.
6. Windings shall be capable of carrying the rated primary current for a period of one minute with the secondary winding open circuited.
7. The current transformers particulars, as specified in IEC 60044-1 shall be given on an accessible plate mounted external to the current transformer
8. Current transformers secondary circuits shall be complete in them, and shall be earthed at one point only, through links situated in an accessible position. Each separate circuit shall be earthed through a separate link, suitably labeled. The links shall be of the bolted type, have M6 nuts. And provision for attaching test leads.
9. The terminal must be capable to be sealed by sealing wire.
10. Magnetization curves for current transformers shall be submitted for approval.

|                             |        |
|-----------------------------|--------|
| 1. Transformation ratios    | 50/5 A |
| 2. Rated output "Burden "   | 15VA   |
| 3. Accuracy Class           | 0.5 s  |
| 4. Accuracy Limit factors   | 1.25   |
| 5. Rated primary current    | 50 A   |
| 6. Rated secondary current: | 5 A    |

|                                                  |                 |
|--------------------------------------------------|-----------------|
| 7. Rated Short-time Thermal Current and Duration | As per Schedule |
| 8. Impulse withstand voltage                     | 170kV           |
| 9. Power frequency Withstand voltage (1min.)     | 70kV            |

## **RATING NAME PLATE MARKING**

Ratings and data of the Transformers shall be provided in the nameplate (Aluminum /Stainless steel / Brass nameplate), which shall be weather and corrosion proof. The Name plate shall be securely attached to the side of the Transformer, and showing the following information indelibly marked in English.

- 1- Manufacturer's identification and Country of Origin.
- 2- Serial number and type designation, (Serial Number printed in bar-code 128 Type-C (IDECO will provide the manufacturer with the serial numbers)
- 1- IDECO Purchase Order Number.
- 2- Year of Manufacture.
- 3- Total Weight
- 4- Rated primary and secondary Ratio.
- 5- Rated frequency.
- 6- Rated output and the corresponding accuracy class of transformer.
- 7- Rated highest equipment voltage and the insulation level.
- 8- Rated short-time current (I<sub>th</sub>.) in kA and the rated time expressed.
- 9- Class of insulation.
- 10-Tender Number and stock code.
- 11-Accuracy Class
- 12-Detailed Transformation Ratio. (The ratios of the metering unit must be stated in the nameplate each one with its connection points on the terminal.
- 13-Connection Diagram.
- 14-QR code contain the following message shall be printed on (metallic) plate of materials

IDECO Tender No. 47/2021

Stock code xxxx xxxxx will be provided.

Manufacturer name

Manufacturing date

Ratio

## 11. Technical Particulars for Voltage Transformer 36KV:

1. Three single-phase voltage transformers epoxy resin type for metering purpose shall be fitted at feeder side of the unit.
2. V.T'S ratio (33/ $\sqrt{3}$ : 0.110/ $\sqrt{3}$ ) KV, Impulse withstand voltage (1.2 / 50  $\mu$ s) wave peak (170) KV, and Power frequencies withstand voltage 70 KV.
3. VT with ratio (33/ $\sqrt{3}$ : 0.110/ $\sqrt{3}$ ) KV, in accordance with IEC 61869-3 with an accuracy class of 0.5 s.
4. The VT's are to be suitable for 3-phase metering applications and the output shall not be less than **25 VA / phase**. The yellow phase secondary winding is to be earthed through a removable link.
5. Voltage transformers shall be suitable for the operation of metering equipment and, shall be in accordance with IEC 61869-3 the rated voltage factor is 1.2 and class 0.5 s accuracy, all voltage transformers shall have an output rating adequate to cater for the burdens connected to them. For single-phase voltage transformers, both ends of each secondary winding shall be brought out to insulated links.
6. For single-phase units, separate earth links for each secondary winding shall be provided. Each of the neutral leads shall be connected together at a single point and earthed as close as possible to the voltage transformers. Voltage transformers secondary windings shall be earthed at the terminal box through a link, which can be removed for insulation testing. Secondary circuits of voltage transformers shall not be paralleled.
7. The terminal must be capable to be sealed by sealing wire.

|                                                  |             |
|--------------------------------------------------|-------------|
| 1. Transformations ratio                         | 36kV / 110V |
| 2. Rated output                                  | 25VA/phase  |
| 3. Accuracy Class                                | 0.5s        |
| 4. Rated Voltage Factor                          | 1.2         |
| 5. Rated time                                    | Continuous  |
| 6. Impulse withstand voltage                     | 170kV       |
| 10. Power frequency<br>withstand voltage (1min.) | 70kV        |

## **RATING NAME PLATE MARKING**

Ratings and data of the Transformers shall be provided in the nameplate (Aluminum /Stainless steel / Brass nameplate), which shall be weather and corrosion proof. The Name plate shall be securely attached to the side of the Transformer, and showing the following information indelibly marked in English.

1. Manufacturer's identification and Country of Origin.
2. Serial number and type designation, (Serial Number printed in bar-code 128 Type-C (IDECO will provide the manufacturer with the serial numbers)
1. IDECO Purchase Order Number.
2. Year of Manufacture.
3. Total Weight
4. Rated primary and secondary Ratio.
5. Rated frequency.
6. Rated output and the corresponding accuracy class of transformer.
7. Rated highest equipment voltage and the insulation level.
8. Rated short-time current (I<sub>th</sub>.) in kA and the rated time expressed.
9. Class of insulation.
10. Tender Number and stock code.
11. Accuracy Class
12. Detailed Transformation Ratio. (The ratios of the metering unit must be stated in the nameplate each one with its connection points on the terminal.
13. Connection Diagram.
14. QR code contain the following message shall be printed on (metallic) plateplate of materials

IDECO Tender No. 47/2021

Stock code xxxx xxxxx will be provided.

Manufacturer name

Manufacturing date

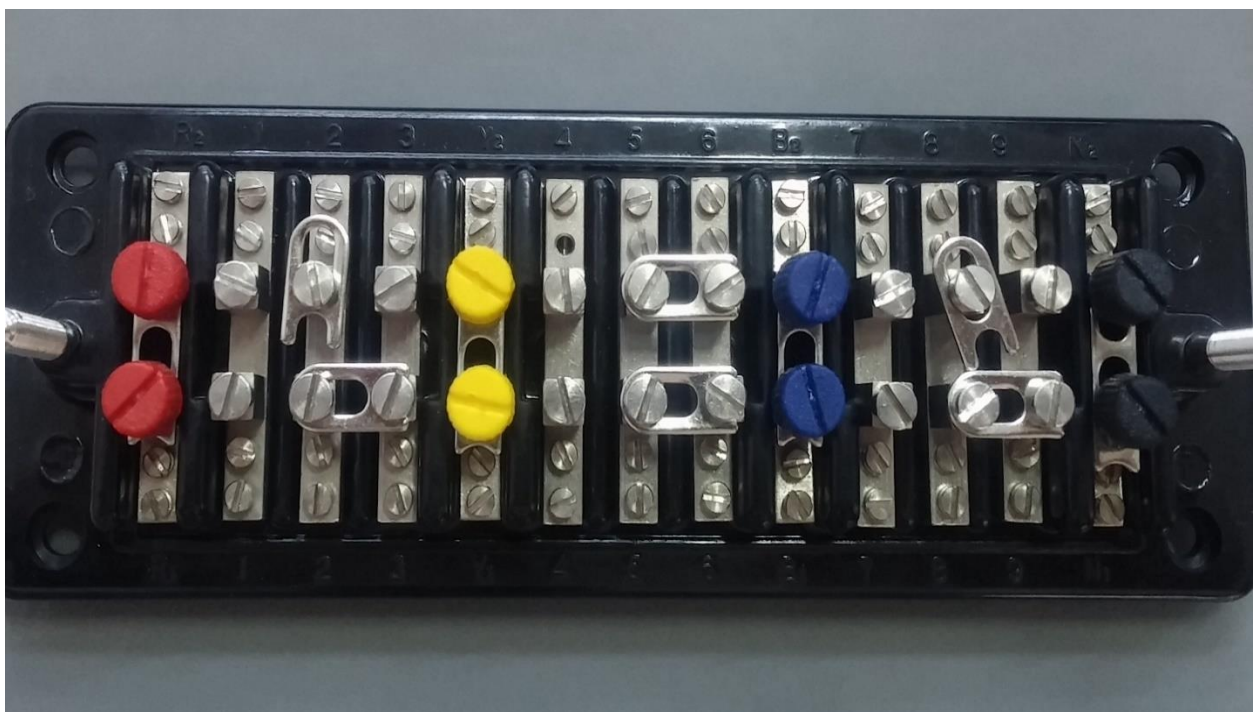
Ratio

## **Test Terminal Block.**

1. Test terminal blocks should be 10 nodes, consisting of four voltage nodes and tow nodes for each CT.

|    |           |           |    |           |           |    |           |           |    |
|----|-----------|-----------|----|-----------|-----------|----|-----------|-----------|----|
| 1  | 2         | 3         | 4  | 5         | 6         | 7  | 8         | 9         | 10 |
| V1 | CT1<br>S1 | CT1<br>S2 | V2 | CT2<br>S1 | CT2<br>S2 | V3 | CT3<br>S1 | CT3<br>S2 | Vn |

2. Current shorting links must be designed to prevent unintentional shorting.
3. The terminal shall support copper and aluminum wires.
4. The terminal shall support 3 phase 4 wire with neutral line.
5. The terminal shall support wires with range from 1.5 mm to 4 mm.
6. The terminal shall have the same or similar design as in the attached images.
7. The cover shall be transparent and able to be sealed with two seals.
8. The cover must prevent any attempts to access the connection inside or tamper with it.
9. The terminal shall have spaces with plastic isolator between each node.
10. Voltage rating :1000V
11. Current rating :50A
12. Coloring the voltage nodes (R Y B) is preferred



## **SCHEDULE (4)**

### **TECHNICAL PARTICULARS AND GUARANTEES**

The contractor should complete the schedule at the time of Tendering and particulars, guarantees values entered will be binding.

| <b><u>Item</u></b>          | <b><u>Description</u></b>                                                             | <b><u>Unit</u></b> | <b><u>Offered</u></b> |
|-----------------------------|---------------------------------------------------------------------------------------|--------------------|-----------------------|
| <b><u>Metering unit</u></b> |                                                                                       |                    |                       |
| 1.                          | Thickness of material used for unit                                                   | mm                 |                       |
| 2.                          | Overall unit dimensions (DxWxH)                                                       | mm                 |                       |
| 3.                          | Degree of protection for unit                                                         | IP                 |                       |
| 4.                          | Gross weight of unit including internal equipment's                                   | Kg                 |                       |
| 5.                          | Total creepage distance for polymeric insulators (Creepage distance of the insulator) | mm                 |                       |
| 6.                          | Color of the unit                                                                     |                    |                       |

| <u>Item</u>                 | <u>Description</u>                                                                                                                                                                                                                                                                              | <u>Unit</u> | <u>Offered</u> |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|
| <u>Current transformers</u> |                                                                                                                                                                                                                                                                                                 |             |                |
| 1.                          | Type of insulation                                                                                                                                                                                                                                                                              |             |                |
| 2.                          | Ratio<br>Primary Side (A)<br>Secondary Side (A)                                                                                                                                                                                                                                                 |             |                |
| 3.                          | Current transformers burden                                                                                                                                                                                                                                                                     | VA          |                |
| 4.                          | Class of current transformers                                                                                                                                                                                                                                                                   |             |                |
| 5.                          | <b>Rated insulation level</b> <ul style="list-style-type: none"> <li>- 1.2/50 microsecond impulse withstand outage KV (Peak)</li> <li>- One min. dry power frequency withstand voltage KV (rms)</li> <li>- one min power frequency withstand Voltage (wet) on primary Side. KV (rms)</li> </ul> |             |                |
| 6.                          | Power frequency over voltage withstand Requirements for secondary winding.                                                                                                                                                                                                                      | KV          |                |
| 7.                          | Rated short time thermal current ( $I_{th}$ ) of current transformers                                                                                                                                                                                                                           | A           |                |

|     |                                                                                                                                                                             |          |  |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--|
| 8.  | Rated short time dynamic current ( $I_{dyn}$ ) of current transformers                                                                                                      | A        |  |
| 9.  | Instrument security factor ( $F_s$ )                                                                                                                                        |          |  |
| 10. | Class of insulation for CT                                                                                                                                                  |          |  |
| 11. | Weight of CT                                                                                                                                                                | Kg       |  |
| 12. | Knee voltage ( $E_k$ ) for the CT                                                                                                                                           | V        |  |
| 13. | Secondary CT Resistance ( $R_{CT}$ )                                                                                                                                        | $\Omega$ |  |
| 14. | Characteristics <ul style="list-style-type: none"> <li>- Ratio &amp; Phase angle Error.</li> <li>- Magnetization curve</li> <li>- Ratio correction factor curves</li> </ul> |          |  |
| 15. | Overall dimensions                                                                                                                                                          |          |  |
| 16. | Protected Creepage distance                                                                                                                                                 | mm       |  |
| 17. | type/model & Country of Origin                                                                                                                                              |          |  |
| 18. | Special features (if any)                                                                                                                                                   |          |  |

| Item                        | Description                                                                                                                                                                                                                       | Unit | Offered |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|
| <u>Voltage transformers</u> |                                                                                                                                                                                                                                   |      |         |
| 1.                          | Type of insulation                                                                                                                                                                                                                |      |         |
| 2.                          | Voltage transform burden                                                                                                                                                                                                          | VA   |         |
| 3.                          | Class of voltage transformers                                                                                                                                                                                                     |      |         |
| 4.                          | Voltage transform ratio<br>Primary Side (A)<br>Secondary Side (A)                                                                                                                                                                 |      |         |
| 5.                          | Insulation level for VT<br>- 1.2/50 microsecond impulse withstand<br>outage KV (Peak)<br>- One min. dry power frequency<br>withstand voltage KV (rms)<br>- one min power frequency<br>withstand voltage (wet) on<br>Primary side. | KV   |         |
| 6.                          | Power frequency over voltage<br>withstand requirements for secondary<br>winding.                                                                                                                                                  |      |         |
| 7.                          | 1 min power frequency withstand<br>Test voltage on secondary side.                                                                                                                                                                |      |         |
| 8.                          | Characteristics<br>- Ratio & Phase angle error.<br>- Magnetization curve<br>- Ratio correction factor curves                                                                                                                      |      |         |
| 9.                          | Class of insulation for VT                                                                                                                                                                                                        |      |         |

|     |                                                                                                                                                                                                      |     |  |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| 10. | Voltage factor, 30sec. of VT                                                                                                                                                                         |     |  |
| 11. | Weight of VT                                                                                                                                                                                         | Kg  |  |
| 12. | Overall dimensions                                                                                                                                                                                   |     |  |
| 13. | Secondary winding resistance at 75 °C                                                                                                                                                                | ohm |  |
| 14. | Rated dynamic peak current                                                                                                                                                                           | KA  |  |
| 15. | Creepage distance of the insulator                                                                                                                                                                   | mm  |  |
| 16. | Protected Creepage distance                                                                                                                                                                          | mm  |  |
| 17. | Service conditions :<br>Such as indoor or outdoor temperature conditions, altitude, humidity, suitability for exposure to steam, vapor, fumes, explosive gases, excessive dust, salt air etc. should |     |  |
| 18. | type/model & Country of Origin                                                                                                                                                                       |     |  |
| 19. | Special features (if any)                                                                                                                                                                            |     |  |

| <b><u>Item</u></b> | <b><u>Description/ Test Terminal Block</u></b> | <b><u>Unit</u></b> | <b><u>Offered</u></b> |
|--------------------|------------------------------------------------|--------------------|-----------------------|
| 44                 | Test Terminal Block specifications             |                    |                       |
| 45                 | No. of Test Terminal Block ways                |                    |                       |
| 46                 | Voltage terminals                              |                    |                       |
| 47                 | Current terminals                              |                    |                       |
| 48                 | Holes of sealing's                             |                    |                       |

**Non-Compliance Schedule for metering unit.**

On this schedule, the bidder shall provide a list of non-compliance with this specification, Documenting the effects that such noncompliance is likely to have on the equipment's life and operating characteristics. Each non-compliance shall be referred to the relevant specification clause.

| Clause | Non Compliance |
|--------|----------------|
|        |                |
|        |                |
|        |                |
|        |                |
|        |                |
|        |                |
|        |                |

- **MANUFACTURING EXPERIENCE**

Manufacturer should have a minimum of five years' experience for manufacturing of Metering Current and Voltage Transformers. The manufacturer should submit proof documents such as supply records, the name of the purchasers, quantity sold, and the year of sale to prove that they have supplied the Metering Current and Voltage Transformers to minimum of three Electricity Utilities internationally during last five years

## **INSPECTION AND TESTING**

### **A- CURRENT & VOLTAGE TRANSFORMERS:**

- IEC 61869-2:2012 Instrument Transformers Part 1: Current Transformers
- IEC 61869-3:2011 Instrument Transformers Part 2: Inductive Voltage Transformers
- IEC 61869-4:2013 Instrument Transformers Part 3: Combined Transformers
- IEC 60044-1.

#### **Current transformers:**

##### **1- Routine tests**

1. Verification of terminal markings.
2. Power – frequency withstand test on primary winding.
3. Partial discharge measurement.
4. Power frequency withstand test on secondary windings.
5. Power frequency withstand test between sections.
6. Inter turn over voltage test.
7. Determination of errors at rated burden with currents of 10%, 20%, 100%, and 120% rated current.
8. Type tests
  - **Certificates:** The tenderer must provide IDECO with Type Test Certificate from well-known international third party lab which accredit by ILAC organization and the certificate should be valid and in English language.

## **Voltage transformers:**

### 15- Routine tests

- Verification of terminal markings.
- Power- frequency voltage withstand test on the primary terminals.
- Partial discharge measurements.
- Power-frequency voltage withstand test on secondary terminals.
- Power – frequency voltage withstand test between sections.
- Determinations of errors (accuracy test for phase angle and ratio errors).
- Measurement of primary and secondary winding resistance.
- Pressure test for the enclosure.
- Enclosure tightness test at ambient temperature.

### 16- Type tests

2. **Certificates:** The tenderer must provide IDECO with Type Test Certificate from well-known international third party lab which accredit by ILAC organization and the certificate should be valid and in English language.

## B- INSTRUMENT AND SECONDARY WIRING

All instruments shall withstand and satisfactorily comply with the tests specified in the appropriate IEC recommendation.

## C- METERING UNIT

The dimensional requirement of the units shall be checked and the stability and panel strength shall be tested.

### **DRAWINGS, CATALOGUES AND REQUIREMENTS**

The Tenderer must submit with his offer all the following:

1. Drawing showing the full constructional detail with dimensions of and all associated accessories.
2. Literature describing the operational features of the equipment
3. Constructional features, materials used for components and relevant technical literature.
4. Magnetization and core loss curves.
5. Performance certificate with regard to manufacture, supply and utilization of the metering transformers of similar type and design quoted.
6. Manufacturing experience: Manufacturer should have a minimum of five years' experience for manufacturing of Metering Current and Voltage Transformers. The manufacturer should submit proof documents such as supply records, the name of the purchasers, quantity sold, and the year of sale to prove that they have supplied the Metering Current and Voltage Transformers to minimum of three Electricity Utilities internationally during last five years.
7. Completed Guaranteed Schedule of Particulars.
8. Complete dimensional drawings and Drawing of mounting details.
9. Installation and maintenance instructions.
10. Copy of type test report.
11. The test certificates shall clearly identify the equipment concerned, showing the manufacturer's identity, type No. and basic parameters, and shall be from an internationally recognized independent testing authority acceptable to the purchaser.
12. The Test Certificates and Performance Curves of the Type Test performed conforming to the IEC 61869-4:2013. The test certificates shall clearly identify the

equipment concerned, showing the manufacturer's identity, type No. and basic parameters. The tenderer must provide IDECO with Type Test Certificate from well-known international third party lab which accredit by ILAC organization and the certificate should be valid and in English language.

**RATING NAME PLATE MARKING (completely metering units):**

Ratings and data of the Transformers shall be provided in the nameplate (Aluminum /Stainless steel / Brass nameplate), which shall be weather and corrosion proof. The Name plate shall be securely attached to the side of the (lower part) Current / Voltage Transformers so that it could be easily read from the ground level when it is installed at a height of 2.5 m from the ground level, and showing the following information indelibly marked in English.

1. Manufacturer's identification and Country of Origin.
2. Serial number and type designation,( Serial Number printed in bar-code 128 Type-C (IDECO will provide the manufacturer with the serial numbers)
3. IDECO Purchase Order Number.
4. Year of Manufacture.
5. Total Weight
6. Rated primary and secondary currents.
7. Rated primary and secondary Voltage.
8. Rated frequency.
9. Rated output and the corresponding accuracy class of current transformer.
10. Rated output and the corresponding accuracy class of voltage transformer.
11. Rated highest equipment voltage and the insulation level.
12. Rated short-time current (I<sub>th</sub>.) in kA and the rated time expressed.
13. Class of insulation.
14. Tender Number and stock code.
15. Detailed Transformation Ratio. (The ratios of the metering unit must be stated in the nameplate each one with its connection points on the terminal.
16. Measuring Unit Class.

17. Connection Diagram.

18. QR code contain the following message shall be printed on (metallic) plate of materials

IDECO Tender No. 47/2021

Stock code xxxx    xxxxx will be provided.

Manufacturer name

Manufacturing date

Ratio

NOTE: every device in the metering unit should have a name plate contain all information for the device and QR contain all information

### **Labels**

1. Each incoming and outgoing circuit as well as the metering compartment shall be provided with a designation label.
2. The MV metering compartment shall be labelled as "METERING COMPARTMENT".
3. The label shall be 75 mm x 50 mm and shall be constructed of insulating material.
4. The label shall be mounted on the side of the cable box that would be facing the front when the unit is installed and shall screw into position.

## 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, **and the tenderer shall submit two offers (option (1) and option (2) mentioned in schedule price no. (7&8).**
2. The manufacturer has **shall** print on suitable metal name plate for the required materials the following message :
  - IDECO Contract No. **(47/2021)**. Purchase order No. ( ).
  - Stock code as seen in the invitation to tender table no.2 – page (3).
  - manufacture name
  - manufacturing date
  - Serial number
  - Country of origin.
  - QR code contains the above message.
3. Maintenance instructions: Where the equipment / materials supplied are subject to maintenance during service the manufacturer shall submit for approval a draft of the recommended maintenance instructions. After approval the supplier shall supply any further copies required by the Engineer. These maintenance instructions shall be provided before the taking over of any part of the equipment.
4. Catalogues: a set of the manufacturer's catalogues shall be attached to the tender.
5. The manufacturer shall to submit with his offer reference list for his product for the last ten years ago.
6. The required materials in each purchase order shall be inspected by two IDECO's engineers in the country of origin of the required materials, and all related Inspection Costs (Visa, Air Tickets, Hotel, Accommodation, Transportation, etc.) of at least (2) IDECO representative engineers, at the manufacturer factory, to ensure the proper handling and operation of the supplied materials shall be borne by the contractor.
7. When the visit to a factory for evaluation purposes before signing the agreement is required, the tenderer must do all necessary arrangement for this visit; the related cost of visit by IDECO team will be borne by the manufacturer.
8. The material safety data sheet (MSDS) of all equipment / materials is required to be submitted with the offer.
9. The contractor shall nominate third party laboratory and cost of inspection by third party as shown in **Schedule No. 9**, in case the attendance of ideco engineers is not applicable due to any reason.
10. PCB'S test shall be conducted in IDECO laboratory, and based on the test results, the required transformers will be approved or not.
11. The technical drawing approval shall be submitted during 7 days from order letter date, any delay in this period from contractor side, the delivery period will start after 7 days from order letter. (In case the contractor offered delivery period from order letter date and drawing approval).
12. **The purchaser has the complete right to reply on contractor's clarifications during 7 days, and during this period there is not exemption from incurred penalty for the event.**

13. 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.
14. Euro one certificate shall be submitted during clearance process, in case the country of origin of the required materials from Europe countries.
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.



#### **16. INSPECTION AND TESTING(FAT)**

The metering units shall be tested and inspected in country of origin by IDECO engineers.

The inspection process consists (Visa, Air Tickets, Good Hotel, Accommodation, Transportation, etc.) for representative engineers at the manufacturer house.

The cost of (FAT) must be stated in the tender offer separately for each item and per engineer. In addition, the cost of (FAT) could be merged for the same manufacturer in case of awarding more than one item on the same manufacturer.

The Bidder shall make necessary arrangements for pre-shipment inspection by an inspector sent by the IDECO to carry out in his presence the necessary acceptance test of the equipment offered. Some of the tests as per of IEC Standard 61869-4:2013 shall be selected as the acceptance tests.

17. **The required materials shall be inspected by calibrated equipment test by authorized party.**

## 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 (5)

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

## Manufacturing and Delivery

- ✓ Below schedule shall be completed by the tenderer and the periods entered shall be binding on the contractor. All periods entered below are to be in weeks and relate to the placing of the contract. Material shall be shipped uniformly throughout the contract.
- ✓ The tenderer shall determine the minimum value per each purchase order, and determine the number of times purchase orders can be delivered within two years. And the priority will be given to tenderer who minimize the purchase order value and maximize the number of purchase orders.

### Schedule 6 (Manufacturing & Delivery)

| <b>Required</b>                                                                      | <b><u>Data for<br/>item (1)</u><br/>33KV RMU –<br/>Two Tee-Off</b> | <b><u>Data for<br/>item (2)</u><br/>33KV RMU –<br/>One-Off<br/><u>indoor</u></b> | <b><u>Data for<br/>item (3)</u><br/>33KV RMU –<br/>One-Off<br/><u>outdoor</u></b> | <b><u>Data for<br/>item (4)</u><br/><u>33kv</u><br/><u>measuring</u><br/><u>units</u></b> |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Manufacturer                                                                         |                                                                    |                                                                                  |                                                                                   |                                                                                           |
| Manufacturing Place                                                                  |                                                                    |                                                                                  |                                                                                   |                                                                                           |
| Inspection Place                                                                     |                                                                    |                                                                                  |                                                                                   |                                                                                           |
| No. of purchase orders within 2<br>years                                             |                                                                    |                                                                                  |                                                                                   |                                                                                           |
| Manufacturing Period and<br>Delivery<br>( week) to ..... from<br>purchase order date |                                                                    |                                                                                  |                                                                                   |                                                                                           |
| Minimum quantity per each<br>purchase order.                                         |                                                                    |                                                                                  |                                                                                   |                                                                                           |
| Maximum quantity per each<br>purchase order                                          |                                                                    |                                                                                  |                                                                                   |                                                                                           |

## Price Summary – Option No. (7)

- 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.
- transportation obligations shall be indicated by **putting a tick** at the proper following choice:  
☐ CFR - Aqaba Port      ☐ CPT- Amman Customs      ☐ CPT- IDECO Stores
- IDECO Company is not exempted from custom duties, sales taxes, import license fees and any other tariffs.
- The tenderer is required to fill in the below table for **quoted price** based on the fixed price for required materials, and the offered price shall valid during two years.

### Schedule (5)

| No. | Quantity (PCS) Within 2 years | Material                                                                                                                                                                                                         | Unit Price<br>Currency ..... | Total Price<br>Currency ..... |
|-----|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------|
| 1.  | 7                             | Indoor type Rated 33kV, Extensible, Motorized, very compact-sized, vacuum type interrupter, Ring Main Unit, with two rated <b>630</b> A main switch-disconnector and two rated <b>630</b> A Tee-Off fuse switch. |                              |                               |
| 1.1 | 7                             | DC batteries 24V DC and charger 240 V AC/24V DC for item No.1.                                                                                                                                                   |                              |                               |
| 1.2 | 7                             | Single Phase Voltage Transformer with ratio $(33/\sqrt{3}: 0.4/\sqrt{3})$ KV for item No.1                                                                                                                       |                              |                               |
| 2   | 2                             | Indoor type Rated 33kV, Extensible, Motorized, very compact-sized, vacuum type interrupter, Ring Main Unit, with two rated <b>630</b> A main switch-disconnector and One rated <b>630</b> A Tee-Off fuse switch. |                              |                               |
| 2.1 | 2                             | DC batteries 24V DC and charger 240 V AC/24V DC for item No.2.                                                                                                                                                   |                              |                               |
| 2.2 | 2                             | Single Phase Voltage Transformer with ratio $(33/\sqrt{3}: 0.4/\sqrt{3})$ Kv for item No.2                                                                                                                       |                              |                               |
| 3.  | 5                             | Outdoor type Rated 33kV, Extensible, Motorized, very                                                                                                                                                             |                              |                               |

|                                                      |    |                                                                                                                                                              |  |  |
|------------------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|                                                      |    | compact-sized, vacuum type interrupter, Ring Main Unit, with two rated <b>630</b> A main switch-disconnector and One rated <b>630</b> A Tee-Off fuse switch. |  |  |
| 3.1                                                  | 5  | DC batteries 24V DC and charger 240 V AC/24V DC for item No.3.                                                                                               |  |  |
| 3.2                                                  | 5  | Single Phase Voltage Transformer with ratio $(33/\sqrt{3}:0.4/\sqrt{3})$ KV for item No.3                                                                    |  |  |
| 4                                                    | 14 | Indoor type Rated 33 KV metering unit pad mounted included 2 current transformers with ratio 50/5 A and three voltage transformer 33kv/110v.                 |  |  |
| <b><u>Total Contract Price (<i>in words</i>)</u></b> |    |                                                                                                                                                              |  |  |

Name(s) of Sureties:

Name(s) and Address of Tenderer:

Tele / Fax:

Answer Back Code:

Signature:

Position of Signatory:

## Price Summary – Option No. (8)

- 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.
- transportation obligations shall be indicated by **putting a tick** at the proper following choice:  
☐ CFR - Aqaba Port      ☐ CPT- Amman Customs      ☐ CPT- IDECO Stores
- IDECO Company is not exempted from custom duties, sales taxes, import license fees and any other tariffs.
- The tenderer is required to fill in the below table for **quoted price** based on the fixed price for required materials, and the offered price shall valid during two years.

### Schedule (6)

| No. | Quantity (PCS) Within 2 years | Material                                                                                                                                                                                                                                                                                                                                                                        | Unit Price<br>Currency ..... | Total Price<br>Currency ..... |
|-----|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------|
| 1.  | 7                             | Indoor type Rated 33kV, Extensible, Motorized, very compact-sized, vacuum type interrupter, Ring Main Unit, with two rated <b>630</b> A main switch-disconnector and two rated <b>630</b> A Tee-Off fuse switches <u>with two measuring units(50/5)A embedded in Tee-Off Fuse Switch side.( the same specification of RMU and measuring unit mentioned in tender document).</u> |                              |                               |
| 1.1 | 7                             | DC batteries 24V DC and charger 240 V AC/24V DC for item No.1.                                                                                                                                                                                                                                                                                                                  |                              |                               |
| 1.2 | 7                             | Single Phase Voltage Transformer with ratio $(33/\sqrt{3}: 0.4/\sqrt{3})$ KV for item No.1                                                                                                                                                                                                                                                                                      |                              |                               |
| 2.  | 2                             | Indoor type Rated 33kV, Extensible, Motorized, very compact-sized, vacuum type interrupter, Ring Main Unit, with two rated <b>630</b> A main switch-disconnector and One rated <b>630</b> A Tee-Off fuse switch.                                                                                                                                                                |                              |                               |
| 2.1 | 2                             | DC batteries 24V DC and charger 240 V AC/24V DC for item No.2.                                                                                                                                                                                                                                                                                                                  |                              |                               |

|                                                      |   |                                                                                                                                                                                                     |  |  |
|------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 2.2                                                  | 2 | Single Phase Voltage Transformer with ratio (33/√3: 0.4/√3) Kv for item No.2                                                                                                                        |  |  |
| 3.                                                   | 5 | Outdoor type Rated 33kV, Extensible, Motorized, very compact-sized, vacuum type interrupter, Ring Main Unit, with two rated 630 A main switch-disconnector and One rated 630 A Tee-Off fuse switch. |  |  |
| 3.1                                                  | 5 | DC batteries 24V DC and charger 240 V AC/24V DC for item No.3.                                                                                                                                      |  |  |
| 3.2                                                  | 5 | Single Phase Voltage Transformer with ratio (33/√3: 0.4/√3) Kv for item No.3                                                                                                                        |  |  |
| <b><u>Total Contract Price (<i>in words</i>)</u></b> |   |                                                                                                                                                                                                     |  |  |

Name(s) of Sureties:

Name(s) and Address of Tenderer:

Tele / Fax:

Answer Back Code:

Signature:

Position of Signatory:

## Inspection Details

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

### Schedule No.9

| NO. | Description                                                                                 | Cost |
|-----|---------------------------------------------------------------------------------------------|------|
| 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.                                       |      |
| 6   | Third party for inspection                                                                  |      |
| 6.1 | Third party name                                                                            |      |
| 6.2 | Inspection cost by third party                                                              |      |

## Main Offer details

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

### Schedule No.10

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

## **Tender Agreement Summary**

**Tender No. (47/2021)**

Dear Sir;

1. Having examined the conditions of Contract, specification and schedule for the above Works, the undersigned, offer to manufacture, supply, work, test, and deliver the said works described in the specification and schedules and in accordance with the said conditions of contract, for the sum of .....or such other sum as may be ascertained in accordance with the said conditions.
2. We agree that this tender shall be held open for acceptance or rejection for the validity period of **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 Ibid District Electricity and we will provide details of the materials to be shipped in good time for Ibid District Electricity to arrange for the said marine insurance.
7. A guarantee Period will apply to each section of the works of fifteen months from the date of dispatch ex-works or twelve months from the date of setting to work whichever shall be the later.
8. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this .....day of     /     / 2022.

Signature.....in the capacity of .....

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

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