



**Call off contract NO. (91/2017)
(37 pages)
For second time**

Two years call - off contract for supply of

Multi-Channel Isolated Smart Energy Meter for Distribution Board.

Tenderer:

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

Tender document cost = 350 JD.



List of Contents

No.	Description	Page
1	Cover Page	1
2	List of Contents	2
3	Invitation to Tender	3
4	General Conditions	4
5	Tendering Instructions	13
6	General requirements	17
7	Inspection and Testing	21
8	Form of Bid Bond	22
9	Form of Performance Bond	23
10	Technical specifications	24-30
11	Departures from technical specifications	31
12	Manufacturing and testing	32
13	Special requirements	33
14	Reference List	34
15	Recommended Spare Parts for Meters	35
16	Price Summary and Delivery	36
17	Tender Agreement Summary	37

Invitation to call - off contract for second time
NO. (91/2017)

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 August 27, 2017**

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 tender shall be submitted in three separated envelopes, one for technical offer, one for commercial offer, and one for the bid bond. The three envelopes shall be contained in a sealed envelope or archive box, and the contractor shall write the tender number and his contact information on each envelope and deliver the offer to tenders secretary office located in financial department – general manager building not later than **2 pm (local time) due August 27, 2017.**

No.	Quantity (Pcs)	Material Description	Stock Code
1	110	16 channel Isolated Smart Energy Meter for Distribution Board.	
2	923	24 channel Isolated Smart Energy Meter for Distribution Board.	
3	760	32 channel Isolated Smart Energy Meter for Distribution Board.	
4	207	40 channel Isolated Smart Energy Meter for Distribution Board.	
5		Software for multi-channel meters in this tender (Option 1)	
6		software for all metering systems from all vendors (Option 2)	

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 effected by the purchaser. The contractor must provide full details of the material to be shipped in good time for IDECO to arrange for Marine Insurance before the material is actually shipped.

"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 and 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, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

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

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

10. Payment:

10.1. Terms of Payment:

1. The company prefers to deal with the supplier on an open account basis, and the payment to be made for each purchase order as the following:

- a.** The supplier has to send the following documents: (Invoice origin + five copies), (Certificate of origin + five copies), (Bill of lading 3-negotiable + 5 non-negotiable), (Test certificate (where applicable) + 6 copies), to IDECO company/ financial department, and those document shall be legalized for shipping purposes.
- b.** 100% of Payment will be released within 2 weeks after the receipt of goods and acceptance at IDECO stores and those documents shall be legalized for shipping.

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 2 weeks after receipt of goods at IDECO's stores, and those documents shall be legalized for shipping.

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

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

- 10.4.** If delivery has been made before payment of the whole sum payable under the contract, material delivered shall, to the extent permitted by the law of the country where the plant is situated after delivery, remain the property of the Vendor until such payment has been effected. If such law does not permit the Vendor to retain the property in the material, the Vendor shall be entitled to the benefit of such other rights in respect thereof as such law permits him to retain. The purchaser shall give the Vendor any assistance in taking any measures required to protect the Vendor's right of proper or such other rights as aforesaid.
- 10.5.** A payment conditional on the fulfillment of an obligation by the Vendor shall not be due until such obligation has been fulfilled, unless the failure of the purchaser is due to an act or omission of the purchaser.
- 10.6.** If the purchaser delays in making any payment, the Vendor may postpone the fulfillment of his own obligations until such payment is made, unless the failure of the purchaser is due to an act or omission of the Vendor.
- 10.7.** If delay by the purchaser in making any payment is due to one of the circumstances mentioned in clause 10, the Vendor shall not be entitled to any interest on the sum due.
- 10.8.** Save as aforesaid, if the purchaser delays in making any payment, the Vendor shall on giving to purchaser within a reasonable time notice in writing be entitled, and without requiring the consent of any court, to terminate the contract and thereupon to recover from the purchaser the amount of his loss up to the value of the material, the payment for which has been unreasonably delayed.

11. Guarantee:

- 11.1.** Subject as hereinafter set out; the Vendor undertakes to remedy any defect resulting from faulty design, materials or workmanship.
- 11.2.** This liability is limited to defects which appear during the period (hereinafter called the Guarantee Period) of fifteen months from date of dispatch ex-works or twelve months from the date of setting to work whichever shall be the later.
- 11.3.** In fixing this period due account has been taken of the time normally required for transport as contemplated in the contract.
- 11.4.** In respect of such parts (whether of the Vendor's own manufacture or not) of the material as are expressly mentioned in the contract, the Guarantee Period shall be such other period (if any) as is specified in respect of each of such parts.
- 11.5.** The Guarantee period shall start from the later of the dates mentioned in paragraph 2 above. If however dispatch ex-works is delayed for a period in excess of three months due to a cause beyond the control of the Vendor the Guarantee Period shall not extend beyond eighteen month from the date the material was ready for dispatch ex-works.
- 11.6.** The Guarantee period is based on the continuous use of the material in service for 24 hours every day.
- 11.7.** A fresh Guarantee Period equal to that stated in paragraph 2 hereof shall apply, under the same terms and conditions as those applicable to the original material, to parts supplied in

replacement of defective parts or to parts renewed in pursuance of this clause. This provision shall not apply to the remaining parts of material, the Guarantee Period of which shall be extended only by a period equal to the period during which the material is out of action as result of a defect covered by this clause.

- 11.8.** In order to be able to avail himself of his rights under this clause the purchaser shall notify the Vendor in writing without delay of any defects that have appeared and shall give him every opportunity of inspecting and remedying them.
- 11.9.** On receipt of such notification the Vendor shall remedy the defect forthwith and at his own expense. Save where the nature of the defect is such that it is appropriate to effect repairs on site, the purchaser shall return to the Vendor any part in which a defect covered by this clause has appeared, for repair or replacement by the Vendor, and in such case the delivery to the purchaser of such part properly repaired or a part in replacement thereof shall be deemed to be a fulfillment by the Vendor of his obligations under this paragraph in respect of such defective part.
- 11.10.** The Vendor shall bear all the costs and risks of the transport of defective parts or equipment and their replacements.
- 11.11.** Where, in pursuance of paragraph 9 hereof, repairs are required to be effected on site, the conditions covering the attendance of the Vendor's representatives on site shall be such as may be specially agreed between the parties.
- 11.12.** Defective parts replaced according to this clause shall be placed at the disposal of the Vendor.
- 11.13.** If the Vendor refuses to fulfill his obligations under this clause or fails to proceed with due diligence after being required so to do, the purchaser may proceed to do the necessary work at the Vendor's risk and expense, provided that he does so in a reasonable manner.
- 11.14.** The Vendor's liability does not apply to defects arising out of materials provided, or out of a design stipulated, by the purchaser.
- 11.15.** The Vendor's liability shall apply only to defect that appears under the conditions of operation provided for by the contract and under proper use. It does not cover defects due to causes arising after the risk in the material has passed in accordance with clause 6. In particular it does not cover defects arising from the purchaser's faulty maintenance or erection, or from alterations carried out without the Vendor's consent in writing, or from repairs carried out improperly by the purchaser, nor does it cover normal deterioration.
- 11.16.** Save as in this clause expresses, the Vendor shall be under no liability in respect of defects after the risk in the material has passed in accordance with clause 6, even if such defects are due to causes existing before the risk so passed. It is expressly agreed that the purchaser shall have no claim in respect of personal injury or of damage to property not the subject matter of the contract or of loss of profit unless it is shown from the circumstances of the case that the Vendor has been guilty of gross misconduct.
- 11.17.** The vendor is required to transport all the defective or not in accordance materials, from our stores within a month from date of notification. All costs and expenses of transportation shall be borne by the vendor. Unless otherwise agreed. IDECO has the right to deal with the

defective materials in a proper way.

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

12. Relief:

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

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

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

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

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

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

13. Limitation of Damages:

13.1. Where either party is liable in damages to the other these shall not exceed the damage which the party in default could reasonably have foreseen at the time of the formation of the contract.

13.2. The party who sets up a breach of the contract shall be under a duty to take all necessary measures to mitigate the loss which has occurred provided that he can do so without unreasonable inconvenience or cost. Should he fail to do so, the party guilty of the breach may claim a reduction in the damages.

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

15. Arbitration and Law Applicable:

15.1. Any dispute, question or controversy shall arise between the purchaser and the contractor concerning this contract the matter in dispute shall be referred to an arbitration committee composed of three (3) arbitrators. One arbitrator shall be nominated by the purchaser and one by the contractor, and the third arbitrator shall be appointed by both parties. If either party fails to appoint his arbitrator within one month of the appointment of the arbitrator by the other party, or if the two parties fail to agree on the third arbitrator within two months of the date of the request to refer the dispute to arbitration, such arbitrator shall be appointed by the president of the highest court in Jordan at the request of either or both parties.

15.2. The decision of the arbitrators shall be final and binding on both the purchaser and the contractor. Any such reference shall conform to the statutory enactment or regulation governing arbitration as may be in force in Jordan at the time. The assessment of costs incidental to the reference and award respectively shall be at the discretion of the arbitration committee.

16. Ordering Procedures and Delivery Period.

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

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

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

16.4. The contractor shall determine the minimum and maximum value/quantity 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.

17. 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 technical offer, attached to tender document, filled up as directed, together with the drawings, catalogs, and relevant documents called for, must be enclosed in a secure envelope endorsed **(Technical offer for Call-off contract) No. (91/2017)**.
3. One copy of the commercial offer, and the tender document, filled up as directed, together with the relevant documents called for, must be enclosed in a secure envelope endorsed **(Commercial offer for Call-off contract) No. (91/2017)**.
4. The bid bond must be enclosed in a secure envelope endorsed **(Bid bond for Call-off contract) No. (91/2017)**.
5. All envelopes mentioned in clues 2, 3&4 of tendering instruction must be combined in a sealed envelope or sealed archive box endorsed **(Offer for Tender) No. (91/2017)**. But bearing no other mark from which the identity of the tenderer can be ascertained.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
- 12. 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.
- 13. 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.
- 14. Tenderer must submit country of origin and name of manufacturer for the offered goods.
- 15. The foreign bidders who participate in this tender must submit their bids through a registered local agent or through their registered office in Jordan.
- 16. 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.
- 17. If samples were not re-claimed by the tenderer within 60 days from date of order all samples shall remain the property of the purchaser.
- 18. 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.
- 19. 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.
- 20. 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.
- 21. Tender price shall include all incidental and contingent expenses.
- 22. The tender shall be accompanied by a tender bond in the form of a Bank Guarantee valid for at least 120 days from the time fixed for closing date of tender, or certified check in favor of and payable to the purchaser for a sum of.....as a guarantee of good faith. This bond is to be issued by any approved bank in Jordan. The bond will be returned to the unsuccessful tenderer within 120 days from the time fixed for opening the tenders or at such earlier time as a tender shall have been accepted by the purchaser. In the case of the successful

tenderer, the bond will, subject to the conditions of contract, be returned as soon as a formal contract agreement and a performance bond have been entered into.

- 23. 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 (15) days from date of the final awarded letter for purchase order.**
- 24. The performance bond for each call-off purchase order should be valid for period of (15) months from the date of the purchase order.**
- 25. If the contractor fails for any reason to submit the required performance bond within (15) 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.**
- 26. 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.**
- 27. 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.**
- 28. 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.**
- 29. 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.**
- 30. 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.**
- 31. 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.**

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

General Requirements Standards and Regulations

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

1. Design and Construction:

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

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

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

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

2. Compliance with Standards:

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

3. Statutory Regulations

The materials, 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 (91/2017).

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.

Irbid District Electricity Co.

Form of Bid Bond

Tender No. (91/2017)

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. (91/2017)

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.**

❖ **Climate Particulars:**

The following is applicable unless otherwise is mentioned:

- | | |
|---|----------------------------|
| a. Maximum Ambient Temperature | 50 C ⁰ |
| b. Minimum Ambient Temperature | -10 C ⁰ |
| c. Design temperature | 80 C ⁰ |
| d. Maximum daily range of air temperature | 20 C ⁰ |
| e. Maximum Wind Pressure | 700 n/m ² |
| f. Ice Thickness | 10 mm. |
| g. Snow Falls | 1-4 days – 30 cm. |
| h. Site altitude | 0-1400m ASL |
| i. Average annual rainfall | 40cm during November–April |
| j. Relative humidity in the range | 30 to 60%. |
| k. Average number of thunder storms | 15 days / year |
| l. Prevailing wind winter average daily approximately 5-8 m/s, with gust up to 30 m/s. | |
| m. Summer wind average afternoon 10-13 m/s, during morning generally light and variable, gust speed up to 30 m/s. | |

❖ **Power System Particulars:**

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

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
Neutral point Earthing	Solid	Resistance	Resistance
Conductor arrangement	Vertical	Horizontal	Horizontal

➤ **Multi-Channel Isolated Smart Energy Meter for Distribution Board.**

a) Reference Standard:

- International Standard specifications IEC 62052/53, IEC 61000-4-30, IEC 61000-4-7, IEC 61000-4-15 or any equivalent specification.
- EN 61000-3-2 limits for harmonic emissions
- EN 61000-3-3 limits of voltage changes, voltage fluctuations and flicker.
- IEC 61000-4-2 electrostatic discharge.

b) The meter shall be at least **Class S** for indoor and outdoor domestic applications with:

1. Frequency 50 Hz
2. Relative Humidity up to 90 %.
3. Electromagnetic Compatibility of 15kV according to IEC61000-4-2.
4. Electromagnetic RF Fields 80MHz-2GHz, typical 30 V/m according to IEC61000-4-3
5. Fast Transient Burst 4 kV for main circuits, 2 kV for auxiliary circuits, according to IEC61000-4-5
6. Insulation strength of 4kVAC at 50Hz for 1 minute.
7. Insulation strength Pulse Voltage 1.2/50microsec, 8kV main circuits, 6 kV auxiliary circuits according to IEC 62052-11
8. Impulse withstands voltage of 10kV.

c) The required energy meters shall be used in energy management metering for multi-point power solutions, and applicable to automatically provides metering, demand, and energy readings and logging.

d) The input for current channels could be current, voltage or both. If the input is current then it should not exceed 5A. If the input is voltage then it should not exceed 12V. At any case the meter input should be adjusted to match the CT output.

e) The required energy meters shall monitor different circuits according to the classified number of circuits in schedule 5. The meter should have common voltage measurements for all circuits (3 phase + neutral + optional ground). The current measurement for each circuit should include (3 phases + neutral). The required energy meter shall be designed to be easily installed into existing distribution boards, and shall be for outdoor applications.

f) The required meters shall be capable to measure and report the following parameters:

- Voltages per phase.
- Current per phase for each feeder.
- P, Q, S, frequency and power factor, per phase and total for each feeder.
- Energy per phase and total for each feeder.

- THD V, THD I, voltage and current harmonics up to 50th order per phase and total for each feeder.
- Voltage quality according to EN50160 (THD V, Flicker , unbalance, harmonics)
- Voltage events according to EN50160 (dip, swell, interruption)
- The sampling rate should be at least 200ms (10 period basis) according to IEC 61000-4-30

g) The stored measured data could be extracted locally from the meter by Ethernet connection as required connection and USB as optional connection. The extracted data should be easily converted to excel format.

h) The format of the downloaded data shouldn't include any TEXT after any INTEGER (Example: power factor = 0.9 ± *not* 0.9 Inductive or 0.9 Capacitive)

i) Monitoring and data storage: the required meters shall collect and store data, accessible in real time.

j) The meter shall have an internal memory to save the data for at least 8760 hours with 1 second resolution for all measured parameters. The memory should be extendable by SD card with at least 8GB capacity.

k) Standard communication platforms: the required meters shall be capable to be connected with communication ports RS-485 Port and Ethernet TCP/IP, dial – up modem (GPRS modem) and optical fiber modem.

l) The tenderer/mmanufacturer of the offered meters shall supply proof that he has been manufacturing meters similar to those specified in this document, for at least 10 years. The Tenderer shall submit with his offer a list of supply Authorities using similar meters to those offered as references and the current re-certification period required by law in the country of manufacturer. The Tenderer shall also submit evidence that the meters can be expected to operate for at least 25 years and remain within limits of error of $\pm 1\%$ during that time. This has to be confirmed by an official certificate/letter from an Official Institute like OFGEM/GB, or similar.

➤ **Software for multi-channel meters in this tender (Option 1):**

- a. Central server software set for remote monitoring and controlling should be centrally installed and meter's software shall be user-friendly.
- b. The software module could be upgraded frequently without extra charges while Irbid District Electricity Co. (IDECO) owns all software management properties. The software shall be submitted with its user manual along with the sample which should be submitted with the offer.

- c. The software has to work from central location (servers) reading data from all meters in the current tender simultaneously and automatically.
- d. The software has to be scalable for different amount of devices (up to thousands) and upgradable to get more data in the future.
- e. The software has to provide data to multiple users in multiple views/ways
- f. Data has to be downloaded from the device automatically and simultaneously
- g. Data retrieval has to access both real-time values and historical values
- h. All data available on the metering device has to be retrieved
- i. Data retrieval has to operate using different communication media (Ethernet, optical, 3G etc.)
- j. The software has to be able to deal with the data archive to be flexible to hold from thousands to millions measured values for years
- k. Data archive has to be able to take any kind of data (trends, real-time values, PQ events, waveforms, PQ data etc.)
- l. Data archive has to be based on Windows Server PC architecture
- m. Data archive size has to be easily extendable in the future by end user (by adding more discs for example)
- n. Data archive has to be able to make backups
- o. System has to provide tools to visualize and provide the data in multiple ways
- p. Multiple users have to access the data using different user rights
- q. Required visualization patterns are:
 - 1. Real-time values and trends for selected time period
 - 2. Trends of historical values for selected periods of time
 - 3. Accumulated energies (hourly/monthly)
 - 4. FFT graph (harmonics spectra)
 - 5. Events captured by devices (waveforms)
 - 6. PQ events
 - 7. Full power quality analysis according to EN50160 and latest standards
 - 8. Overall PQ analysis results over multiple devices/locations
 - 9. Grid overview screens
- r. Simple application for configuration & integration of new device has to be provided

➤ **Software for all metering systems from different vendors (Option 2):**

- a. Central server software set for remote monitoring and controlling should be centrally installed and meter's software shall be user-friendly.
- b. The software has to simulate data from many disparate vendors, with different meters brands.
- c. The software module could be upgraded frequently without extra charges while Irbid District Electricity Co. (IDECO) owns all software management properties. The software shall be submitted with its user manual along with the sample which should be submitted with the offer.
- d. The software has to work from central location (servers) reading data from all meters simultaneously and automatically.
- e. The software has to be scalable for different amount of devices (up to thousands) and upgradable to get more data in the future.
- f. The software has to be able to accept new device functionality (new types of data)
- g. The software has to communicate using standard protocols
- h. The software has to be accessible using programming API
- i. The software has to provide data to multiple clients in multiple views/ways
- j. Data has to be downloaded from the device automatically and simultaneously
- k. Data retrieval has to access both real-time values and historical values
- l. All data available on the metering device has to be retrieved
- m. Data retrieval has to operate using different communication media (Ethernet, optical, 3G etc.)
- n. Data retrieval has to be user configurable, so new quantities/device features can be integrated later.
- o. Data retrieval has to be able to run on different PCs (out of central archive) in multiple installations allowing parallel and concurrent service of different sets of devices.
- p. Data retrieval has to be able to buffer all retrieved data locally in case of central archive maintenance
- q. The software has to be able to deal with the data archive to be flexible to hold from thousands to millions measured values for years
- r. Data archive has to be able to take any kind of data (trends, real-time values, PQ events, waveforms, PQ data etc.)

- s. Data archive has to be based on Windows Server PC architecture
- t. Data archive size has to be easily extendable in the future by end user (by adding more discs for example)
- u. Data archive has to be able to be extended to accept new quantities/features in the future
- v. Data archive has to be able to make backups
- w. System has to provide architecture, which enables modelling of metering devices, their quantities, parameters and features
- x. Each device type has to be described as a model of parameters (configuration settings, voltage level etc.), measured quantities (real-time values, historical values, harmonics, events, energies, PQ data etc.) and calculated quantities (for example sum of energies daily/monthly)
- y. Each installed meter has to be accessible in the system as an instance of proper model providing all the data (measured values from archive, parameters etc.)
- z. System has to provide tools to visualize and provide the data in multiple ways
 - aa. Data visualization has to be accessible using web-browser
 - bb. Multiple users have to access the data using different user rights
 - cc. Required visualization patterns are:
 1. Real-time values and trends for selected time period
 2. Trends of historical values for selected periods of time
 3. Accumulated energies (hourly/monthly)
 4. FFT graph (harmonics spectra)
 5. Events captured by devices (waveforms)
 6. PQ events
 7. Full power quality analysis according to EN50160 and latest standards
 8. Overall PQ analysis results over multiple devices/locations
 9. Grid overview screens
 - dd. All patterns have to have possibility to be updated/changed by end user
 - ee. End users must have ability to create and configure new patterns/screens with any selected data, graphical components (images, lines, boxes etc.), graphs, indicators, tables, gauges, ability of visually signaling data states (blinking or different colors)
 - ff. EXCEL Integration:
 1. MS EXCEL plugin has to be able to access and read any data archive value(s) over selected time period (real-time and historical values) on user request

- 2. Pre-defined Excel sheets to be provided (historical data, event details, PQ evaluation)
- gg. Software API with full documentation has to be provided both for data archive API access and for data modelling API access, the API can be later implemented into end-user apps
- hh. Simple application for configuration & integration of new device has to be provided
- ii. Future integration of new features from the devices has to be possible
- jj. System has to be open for future extension of additional data sources of different type (OPC, RDBMS etc.)
- kk. System has to be open for future extension of additional data consumers/integrators (Business Analytics, SharePoint, SAP etc.)

Additional in technical specifications:

- 1. The meter should have two temperature sensors (two channels for temperature sensing), the sensors should be installed outdoor.**
- 2. The meter should have an additional channel to measure the earth current.**
- 3. The above mentioned channels are required to be included in all meters regardless of number of channels for phase currents and voltages.**

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. Further to the acceptable payment terms mentioned in the general conditions, the supplier is recommended to comply with the open account method of payment within 4 weeks from the material acceptance by our stores, which will be highly appreciated and awarded.
 2. The cost of spare parts if applicable shall be embedded in the unit price without being separated alone. In a way giving the total price once with spare parts cost, and once without the price of spare parts.
 3. The manufacturer has to print IDECO Contract No. **(91 /2017)** along with the stock code corresponding to the certain material as seen in the Stock Code in the invitation of tender page 3. And shall print **QR code** contains (stock code, manufacture name, manufacture date, serial number).
 4. Operating and maintenance instructions: Four (4) copies in English of running and maintenance instructions shall be supplied covering all parts of the material and these shall be submitted three months prior to the completion date.
 5. Spare Parts: The contractor shall, upon request, deliver spare parts subject to wear and tear, and others recommended by the contractor as necessary for three years of continuous operation of the material. In the schedule of spares the contractor shall state the spares which he recommends, bearing in mind the remoteness of the site, with individual quantities, C&F prices. A separate list of spares which the contractor considers necessary for three years maintenance of the material shall be included in the schedule of the spares. The contractor shall state in the schedule of the deliveries the period required by him for the delivery of the spares from the date of the purchaser's order. The prices of spare parts shall be fixed during the whole period of the contract up to the date of the taking-over certificate, if any spares should be ordered after that date the price might be adjusted. The purchaser may order all or any of the spares so recommended at his discretion. All spares supplied shall be strictly interchangeable with the parts for which they are intended to be replacements and shall be treated and packed for long storage under the climatic conditions prevailing at the site. Each spare shall be clearly marked or labeled on the outside of its packing with its description and purpose and, when more than one spare is packed in a single case or other container, a general description of its contents is to be shown on the outside of such case or container and a detailed list enclosed inside. All cases, containers and other packages must be suitably marked and numbered for purposes of identification.
 6. Same as mentioned in the previous technical specifications, No further special Requirements.
 7. The material safety data sheet (MSDS) of all equipment / materials is required to be submitted with the offer.
 8. The supplier shall bear all the expenses of tests which may be required from Jordan customs to ensure the compliance of local and imported products to technical regulations and other related technical documents.
 9. All Inspection Costs (Visa, Air Tickets, Hotel, Accommodation, Transportation, etc.) of at least (2) IDECO representative engineers, at the manufacturer house, to ensure the proper handling and operation of the supplied materials is required. And contractor is to handle all related costs.
 10. **The request of the rest of quantities after the first order is subjected to the performance and quality of the delivered items.**

Departures from Technical Specifications
Schedule No. (1)

The Tenderer shall list the standard specifications to which the main items of tendered equipment are designed and manufactured.

Equipment	National standard	English title

Schedule (2)

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 1 (Manufacturing & Delivery)

Required	<u>Data for item (1)</u> 16 channel Isolated Smart Energy Meter	<u>Date for item (2)</u> 24 channel Isolated Smart Energy Meter	<u>Data for item (3)</u> 32 channel Isolated Smart Energy Meter	<u>Data for item (4)</u> 40 channel Isolated Smart Energy Meter
Manufacturer				
Manufacturing Place				
Inspection Place				
No. of purchase orders within 2 years				
Manufacturing Period and Delivery (week) to from purchase order date				
Minimum quantity per each purchase order. (USD)				
Maximum quantity per each purchase order (USD)				

SCHEDULE (3)
REFERENCE LIST

PURCHASER	COUNTRY OF PURCHASER	DATE OF DELIVERY	ORDERD QUANTITY	PURCHASER CONTACT ADDRESS

SCHEDULE (4)

RECOMMENDED SPARE PARTS FOR METERS

Quantities and descriptions of spare parts and maintenance equipment recommended by the tenderer for the requirements of the meters stated in schedule for a period of ten years, acceptance of which shall be at the option of the employer.

No.	Description of spare parts recommended	Quantity Offered

Price Summary and Delivery

- The tenderer shall enter in the appropriate columns of this schedule the prices at which each item will be supplied. Prices shall include shipment and delivery to the selected destination seen below based on the following selected transportation obligations.
- The first order will be at least 300 units which should be delivered before December 2017.
- The other quantities will be delivered during 2018 after evaluating the performance and quality of delivered items in 2017.
- IDECO Company is not exempted from custom duties, sales taxes, import license fees and any other tariffs.
- Delivery period shall be expressed **in weeks**, it's recommended to start from the order awarding date. Transportation obligations shall be indicated as below:

() CFR - Aqaba Port

() CPT- Amman Customs

() CPT- IDECO Stores

Schedule No. (5) (Price Summary)

No.	QNT Y (PC s)	Material	Delivery Period	Currency	Unit Price	Total Price
1	110	16 channel Isolated Smart Energy Meter for Distribution Board.				
2	923	24 channel Isolated Smart Energy Meter for Distribution Board.				
3	760	32 channel Isolated Smart Energy Meter for Distribution Board.				
4	207	40 channel Isolated Smart Energy Meter for Distribution Board.				
5		Software for multi-channel meters in this tender (Option 1)				
6		software for all metering systems from all vendors (Option 2)				
Cost for Providing Sureties or Bonds IF ANY						
<u>Total Contract Price (in words):</u>						

Name(s) of Sureties:

Name(s) and Address of Tenderer:

Tele / Fax:

Answer Back Code:

Signature:

Position of Signatory:

Tender Agreement Summary

Tender No. **(91 /2017)**

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 ofor such other sum as may be ascertained in accordance with the said conditions.
2. We agree that this tender shall be held open for acceptance or rejection for the validity period of **120 days** from the date fixed for opening tenders and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
3. Unless and until a formal agreement is prepared and executed, this tender, together with your written acceptance thereof, shall constitute a binding contract between us.
4. If our tender is accepted, we will deliver to Irbid District Electricity Co. Ltd. Within **(15) days** of being called upon to do so a performance bond by bank or insurance company (to be approved in either case by the purchaser) to be jointly and severally bound with us in a sum equal to **10%** of the value of the contract. The form of the performance bond will be as attached hereto. We propose the following Bank or insurance company as surety (or sureties) in this respect:-
.....
5. We undertake if our tender is accepted and on receipt of your acceptance to commence and manufacture, works test, and complete for delivery **ex-works** the whole of the Works offered within (.....) weeks calculated from the date of written acceptance of the tender, and to deliver on the dock at **Aqaba**, 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 thisday of / / **2017**.

Signature.....in the capacity of

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

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