

THE HASHIMITE KINGDOM OF JORDAN  
NATIONAL ELECTRIC POWER CO.

P.O. BOX 2310

AMMAN 11181

المملكة الأردنية الهاشمية  
شركة الكهرباء الوطنية م.ع  
ص.ب 2310

عمان 11181



**TENDER NO. 35/ 2022**

**SUPPLY OF TEST EQUIPMENTS**

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- 1. Invitation To Tender.**
  - 2. Instructions To Tenderers.**
  - 3. Forms of Tender.**
  - 4. Conditions Of Contract.**
  - 5. Technical specification and drawings.**
  - 6. Technical Schedules.**
  - 7. Price Schedules.**
- 

**TENDERER:**

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**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

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# **SECTION 1**

**- INVITATION TO TENDER**

**- TENDER ACKNOWLEDGEMENT**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**INVITATION TO TENDER**

The National Electric Power Company (NEPCO) intends to have a loan and /or from NEPCO's own sources towards the cost of supply Test Equipment's as mentioned in the tables.

The National Electric Power Company hereby invites sealed Tenders from eligible Tenderers for design, manufacture, inspection, testing, packing for export, supply CPT Queen Alia International Airport (Q.A.I.A), Amman - Jordan, setting to Works and **warranty for a period of (24) months** from the date of receipt of last consignment at site or NEPCO warehouses.

Interested Eligible Tenderers may obtain further information at the office of:

National Electric Power Company  
PO Box 2310  
11181 Amman  
Jordan

Telephone: +(962) 6-5858615  
Telefax: +(962) 6-5818336

A complete set of Tender Documents may be purchased by any interested eligible Tenderer on application to the above and upon payment of a non-refundable fee of **JD 125 (one hundred Jordanian Dinars)**.

The enclosed Tender Acknowledgement should be returned to the National Electric Power Company.

Tenders must be delivered to The Tenders Committee (**in the form of two envelopes, one envelope for Technical and Financial offer and one envelope for Bid Bond**), National Electric Power Company at the above address not later than 14.00 noon Amman time on Monday 06/02/2023.

All Tenders must be accompanied by a Tender Guarantee in the amount of **JD 6960 (Six Thousand, Nine hundred and Sixty Jordanian Dinars)** in the form of a Bank Guarantee issued directly by an approved Bank located in Jordan and in the form provided in the Tender Documents.

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**TENDER ACKNOWLEDGEMENT**

National Electric Power Co  
P.O. Box 2310  
11181 Amman  
Jordan

Telefax: + (962) 6-5818336

Attention: The Managing Director,

Dear Sirs

**We the undersigned**

---

Acknowledge receipt of the Tender Documents for Tender Number (35/2022) comprising one copy of each of the following:

- Invitation for Tenders, Instructions to Tenderers, Conditions of Contract and Tender Forms.
- Technical Specification and Drawings.
- Technical Schedules.
- Price Schedules.

We wish to receive any further information concerning this Tender at the following address:

Name:

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Address:

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Our local agent in Jordan is:

Name:

---

Address:

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In case of not submitting this form to NEPCO before closing date, it is the Tenderer responsibility of not receiving correspondence, amendments to the tender, addendums... etc.

## **Section 2**

### **INSTRUCTIONS TO PERSONS TENDERING**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**INSTRUCTION TO PERSON TENDERING**

1. The Tender shall be made in one copy on the accompanying form of tender with all blanks therein and in all the Schedules duly filled up in ink and signed, The Tender price shall include all incidental and contingent expenses. In particular, the Form of Tender must be completed and signed without alteration.

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 bond document and shall be the sum total of all the amounts printed into and entered by the Tenderer upon the Schedule of Prices.

Should the Tenderer consider that he can offer any advantages to the purchaser by a modification to the Specification he may draw attention to such by an attached document stating the change in the amount of his Tender if such modification is accepted by the Purchaser, but the total entered on the Form of Tender shall be such as represents complete compliance with the bound document.

2. No alteration shall be made in the Form of Tender or in the Schedules there to except in filling up the blanks as directed, If any such alteration to be made or if these Instructions will not be 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.
3. The Tenderer shall submit with his Tender in order of the relevant clauses, a statement of any departures from the Specifications. 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 Specifications.
4. Although IEC Recommendations and British 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 they are substantially equivalent to the designated Standards and provided furthermore that the Tenderer submits for approval Specifications which he proposes to use.
5. References to brand names or catalogue 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.

6. 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 subcontract one or more of the main sections of the equipment and materials.
7. If the Tenderer has any doubt as to the meaning of any portion of the General Conditions or the Specifications or Drawings, he shall when submitting his Tender, set out in his covering letter the interpretation on which he relies.
8. 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.
9. The purchaser will not be responsible for, nor pay for, any expense or loss, which may be incurred by a Tenderer in the preparation of his Tender.
10. One copy of the Tender, and its accompanying documents, filled up as directed, together with the drawings called for must be enclosed in a secure envelope endorsed (Tender for Contract No.35/2022, should be submitted to the Managing Director, National Electric Power Company, P.O. Box 2310, Amman 11181 The HASHEMITE KINGDOM OF JORDAN, by the time stated in the covering letter.
11. No tender received after that time will be considered.
12. All correspondence in connection with this Tender and Contract and all matter accompanying the Tender which is relevant to its examination shall be in the English language and expressed in metric units.
13. The Tender is to be held open for acceptance or rejection for a validity period of **(90)** days from the time fixed for opening the Tenders.
14. A non-refundable fee of JD **(125 Jordanian Dinar)** will be charged for each set comprising one copy of the Tender Documents.
15. The Tender shall be accompanied by a Tender Bond in the form of a Bank Guarantee valid for at least 90 days from the time fixed to Tender closing date, or a certified cheque in favour of and payable to the Purchaser for a sum of **JD 6960 (Six Thousand, Nine hundred and Sixty Jordanian Dinars)** as guarantee of good faith.
16. This Bond is to be issued by any approved Bank in Jordan. The Bond will be returned to the unsuccessful Tenderer according to **Regulation No. (8) For the year 2022 Government Procurements Regulation**. 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.

- 17.** Tenders received prior to the time fixed for opening 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.
- 18.** 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.
- 19.** A) Any arithmetical error shall be corrected by a decision of the procurement committee and the bidder must be notified accordingly, provided that the arithmetical corrections are as follows:
1. In the event of a discrepancy between the unit price and the total amount, the unit price shall be adopted and the total price shall be corrected accordingly unless there is clear evidence that the decimal point is misplaced.
  2. If there is an error in the total amounts in the Bill of Quantities as a result of the addition and subtraction processes of the sub-totals, the subtotals shall be adopted and the total price shall be corrected accordingly.
  3. In the event of a discrepancy between the unit price, in figures and in writing, the unit price that mentioned in writing shall be adopted unless the procurement committee finds a basis for the adoption of the price mentioned in figures.
  4. If any bidder does not accept the correction of the errors after the analysis and evaluation, its submission shall be excluded and the bid bond shall be forfeited by a decision of the procurement committee.
  5. If the bidder has not priced one or more of the items in the works and technical services tendering, these unquoted items shall be considered to be loaded on the other items of the tender, and the bidder shall execute them free of charge, if the tender has been awarded to it, whether the bidder attaches or does not attach those items in the tender.
- B) Subject to the provisions of paragraph (a) of this Article, the basis for the examination of submissions included in the unified works contract for the construction projects shall be adopted.
- 20.** Where compliance with a specific Standard Specification is called for the Standard Specification used shall be that in force at the time of Tender.
- 21.** The successful Tenderer shall abide by the commercial and professional regulations as required by the Ministry of Industry & Trade, Engineering Association, Jordan contractor's association and other relevant Institutions in Jordan. (If applicable).
- 22.** The Tenderer may state the Tender Price in Jordanian Dinars. If, however, a portion of the Tenderers expenditure under the Contract is expected to be made in countries other than Jordan he may state a corresponding foreign currency portion of the Tender Price in the currencies of those other countries.
- 23.** Tender evaluation will be consistent with the terms and conditions set for in the Tender documents.

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.

- 24.** For comparison of all Tenders, the currency or currencies of the Tender Price for each Tender will be valued in terms of Jordan 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 of Tenders closing date unless there should be a change in the value of the currencies before the award is made. In the later case, the exchange rates prevailing at the time of the decision to notify the award to the successful Tenderer may be used.
- 25.** Stamp duty and award fees are payable on Jordanian Contracts according to Jordanian laws, it is the Contractor's responsibility to purchase legal stamps to the requisite amount depending on the Contract Value, these fees should be paid within 10 days of the date of LOA and before signing the contract to the Ministry of Finance, otherwise penalties will be imposed according to laws and regulations.

If the final contract price is increased during or after completion of the works, contractor shall pay extra stamp duty and award fees proportional to the amount of increase.

- 26.** Before signing the contract and within 28 days from date Letter of Award, the successful Tenderer shall furnish an irrevocable and unconditional Performance Bond of (15%) of the total contract price in the form given and in the same contract currency, and you are required to extend the validity of the Bid Bond until the Performance Bond has been established and accepted by NEPCO. The Performance Bond shall be valid for a period expiring at least one month after receipt of the last CONSIGNMENT at site or NEPCO warehouse and shall still enforce until submission of the maintenance Guarantee for the Guarantee Period.

Failure of the successful Tenderer to comply with the requirements of above Sub-Clause shall constitute sufficient grounds for the annulment of the award and forfeiture of the tender security, in which event the Employer may make the award to the next lowest evaluated Tenderer or call for new tenders.

If any variation order has been issued to increase the contract price during the contract duration, the contractor must increase the performance bond to the value of (15%) of the increased amount.

The contractor shall seek for releasing Performance Bond upon fully finalized all contractual terms required and submit of maintenance Guarantee.

- 27.** For overseas transport, the Contractor and his sub-contractors Suppliers and Manufacturers shall give priority to Jordan National Line Co., and to Arab shipping companies and their subsidiaries for, the shipping of goods, materials and Plant provided such companies ships call at the port of export. The Contractor shall also give priority to the Royal Jordanian Airlines for airfreight shipment and transport of personnel. Shipment by sea freight must be on direct and regular (liner) vessel less than 15 years old at the time of shipment. The vessel should be classified and in accordance with (ISM) code and should be a member in the P&I club

28. Any further information may be obtained on application in writing to:-

Managing Director  
National Electric Power Company,  
P.O. Box 2310, Amman, 11181  
The Hashemite Kingdom of Jordan.

29. The Contractor should print NEPCO Stock Code No. on the supplied Materials which can be obtained in due time.

30. The bid bond shall be submitted either by the supplier or by the vendor on behalf of supplier in condition that he is fully authorized by Power of attorney letter from the supplier.

31. Tenderer must submit country of origin and name of manufacturer for the offered goods.

32. Tenderer shall submit his offer based on single price.

33. Tenderer must fill the schedules of bill of quantities incorporated with breakdown prices of this tender.

34. Tenderer must complete the technical data sheets of this tender.

35. **Partial offers will be accepted.**

**36. Insurance:**

NEPCO undertakes to insure all the shipped materials and equipment's with local Jordanian companies against all risks from the time they leave the works until they are delivered at site or at NEPCO warehouse.

The contractor must provide full details of the material to be dispatched in good time for NEPCO to arrange for insurance before material is actually dispatched.

**37. Payments:**

Terms of payment for this contract will be strictly according to paragraph No.8 (Terms of Payment) of General Conditions of the Contract.

**38. Contract Incoterms:**

For execution of this contract, the chosen incoterms are as follows:

**“CPT Queen Alia International Airport (Q.A.I.A), Amman - Jordan Incoterms 2020”**

In case of locally manufactured materials and the awarding has been done into local Jordanian company the required delivery and prices will be assumed as (delivery to NEPCO Stores).

**39.** This document is subject to the provisions and instructions of the **Government Procurement Regulation No. (8) Of 2022.**

**40. Tenderers Eligibility and Qualification:**

In order to satisfy the requirements for eligible experience, the Tenderer shall provide documentary evidence to establish:

- A. That, in the case of a Tenderer offering to supply materials and equipment under the contract which the Tenderer does not manufacture or otherwise produce, the Tenderer has been duly authorised by the manufacturer or producer of the plant and equipment to supply them in the employer's country.
- B. Documentary evidence of the Tenderers qualification to perform the Contract and the Tenderer has the technical capacity and production capability necessary to perform the contract. In particular, it is required that:
  - The Tenderer shall provide documentation, certified by the owner (Reference List), to show that the Test Equipment's to be supplied, having the type, model and the same place of manufacture, is supplied to different countries within the last 10 years (2012 - 2021).
  - Reference List should conform the following:
    - Certified (signed and stamped) by the manufacturer In English language, printed officially and stamped,
    - Reference List shall show clearly the following:
      - a. Name of customer/company where equipment is installed.
      - b. Date of issuance.
      - c. Rating, capacity of related equipment.
  - Each equipment should have Calibration Certificate to verify the conformance of technical requirements with accepted accuracy, and should include the following:-
    - a. Name of customer/company and place of calibration.
    - b. Type, model and serial number for calibrated device.
    - c. Date of issuance of certificate.
    - d. All calibration results in **pass** conditions.
    - e. Certificates shall be signed and sealed by the testing laboratory.
    - f. Certificates shall be valid for minimum of one year.
- C. In the case of a Tenderer offering to supply plant and equipment submitting bids in the form of a Consortium or a Joint Venture. In such a case, the solicitation documents or the prequalification documents should provide for the following:
  - Documentary evidence of the Tenderers qualification to perform the Contract in which the qualifications of the bidders who grouped in the form of a Consortium or a Joint Venture are assessed, including criteria that can be met therefrom collectively, and the criteria to be met by each member of the Consortium or a Joint Venture individually.

- Submission of a duly certified Consortium or a Joint Venture agreement or a letter of intents from all members of the Consortium or a Joint Venture as part of the bid submitted, prequalification application or expression of interest in order to formally enter into the Consortium or a Joint Venture.
- Nominate the president of the Consortium or a Joint Venture by the members of the Consortium or a Joint Venture to be responsible for following up the procurement process procedures.
- All members of the Consortium or a Joint Venture shall be jointly and severally responsible for the execution of the contract.
- It is prohibited to withdraw any of the members after submitting the offers.

Failure to supply the required qualification documentation (i.e., equipment End User Certification & Tenderers qualifications documentation) to the satisfaction of the employer result in rejection of the tender.

# **Section 3**

## **FORMS**

- **Form of Tender**
- **Form of advance payment guarantee**
- **Form of tender Guarantee**
- **Form of Performance Guarantee**
- **Form of Maintenance Guarantee**
- **Declaration for Prohibited Payments**
- **Declaration for Other Payments**
- **Form of Request for Shipping Release**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**FORM OF TENDER**

Managing Director  
National electric Power Company,  
P.O. Box 2310,  
Amman, 11181  
The Hashemite Kingdom of Jordan.

Dear Sir,

1. Having examined the conditions of contract, Specifications and Schedules for the above Works, we, the undersigned, offer to manufacture, design, engineering, supply of works, and deliver the equipment described in the Specifications and Schedules and in accordance with the said Conditions of the Contract, for the sum of  
.....  
.....

Or such other sum as may be ascertained in accordance with the said Conditions.

2. We agree that this Tender shall be held open for acceptance or rejection for the validity period of **90** days from the date fixed for opening Tenders and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
3. Unless and until a formal Agreement is prepared and executed this Tender, together with your written acceptance thereof, shall constitute a binding Contract between us.
4. If our Tender is accepted, we will deliver to National Electric Power Company a performance Bond, according to clause No.26 instruction to person tendering.
5. We undertake if our Tender is accepted and on receipt of your acceptance to commence and manufacture works, and complete for delivery to Queen Alia International Airport (Q.A.I.A), the whole of the Works offered within **(....) days**. Calculated from the date of Letter of Award (i.e., commencement date), and to deliver on CPT Queen Alia International Airport (Q.A.I.A), Amman - Jordan the whole of the works offered within a further **(....) days**. (Anyhow all delivery dates will be in accordance with the required completion date of as specified for each substation).
6. We will provide details of the plant and materials to be shipped in good time for the National Electric Power Company to arrange for the Insurance.



7. A Guarantee Period will apply to each section of the Works for (24) months from the date of receipt of last consignment at site or NEPCO warehouse.
8. We understand that you are not bound to accept the lowest or any tender you may receive.

Date this ..... day of ..... 20 .....

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

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

.....

Address .....

Occupation.....

Telephone No:

Fax No. :

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**FORM OF ADVANCE PAYMENT GUARANTEE**

**GUARANTEE NO.**

*M/S., National Electric Power Co. (NEPCO)  
Amman – Jordan*

**NAME OF CONTRACT: NO. 35/2022 SUPPLY OF TEST EQUIPMENTS**

At the request of bank... (The Foreign Bank) and on behalf of M/S.....  
(The contractor Name and Address), we the.... (The Local Bank) issue in your favour our  
irrevocable and unconditional Advance Payment Guarantee No.....in the amount of (-----  
-----) (In words).

In this connection we ... (Local bank) hereby consider ourselves responsible for the  
unconditional payment to you or your authorized representatives of the above sum on your  
first Written demand in whole or in part notwithstanding any objections on the part of the  
above-named contractor and without any need for notarial warning or judicial proceedings.

This guarantee remains valid from the date of issue till its expiry date on .../.../.....  
unless it's extended or renewed upon your request within the guarantee validity.

**Bank (Local Bank)**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**FORM OF TENDER GUARANTEE**

To: M/S., NATIONAL ELECTRIC POWER COMPANY (NEPCO)

AMMAN – JORDAN.

**NAME OF CONTRACT: TENDER NO. 35/2022 SUPPLY OF TEST**  
**EQUIPMENTS**

WHEREAS (*Name of Tenderer*) (hereinafter called "the Tenderer") has submitted its Tender dated (*date of Tender*) for the performance of the above-named Contract (hereinafter called "the Tender").

At the request of \_\_\_\_\_ Bank (the *Foreign Bank*) and on behalf of M/S. \_\_\_\_\_ (*the Contractor Name and Address*), we \_\_\_\_\_ (*the Local Bank*) issue in your favour our irrevocable and unconditional Tender Guarantee

No. \_\_\_\_\_ in the amount of, **JD** ----- (-----  
----- (*in words*)).

This guarantee will remain in full force for a period of 180 days from the tender closing date, and any demand in respect thereof must reach the Bank not later than the above date.

**Bank (Local Bank)**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**FORM OF PERFORMANCE GUARANTEE**

*GUARANTEE NO.*

*M/S., Beneficiary*

*Amman – Jordan*

**NAME OF CONTRACT: TENDER NO. 35 /2022 SUPPLY OF TEST**  
**EQUIPMENTS**

**At the request of the Bank... (The Foreign Bank) and on behalf of M/S. (The contractor Name and Address), we ...(The Local Bank) issue in your favour our irrevocable and unconditional performance guarantees No...xxx... In the amount of (XXX) (in words).**

In this connection we.... **(local bank)** hereby consider ourselves responsible for the unconditional payment to you or your authorized representatives of the above sum on your first written demand in whole or in part notwithstanding any objections on the part of the above named contractor and without any need for notarial warning or judicial proceedings.

This guarantee remains valid from the date of issuance until its expiry date on (.....) and it shall be automatically renewed for consecutive periods; each period for three months, and it will not be cancelled unless our bank received an official letter duly issued and signed by you attached with original guarantee and all related original amendments and or extensions.

**Bank (Local Bank)**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**FORM OF MAINTENANCE GUARANTEE**

**GUARANTEE NO.**

*M/S., Beneficiary*  
*Amman – Jordan*

**NAME OF CONTRACT: TENDER NO. 35 /2022 SUPPLY OF TEST**  
**EQUIPMENTS**

At the request of bank (The Foreign Bank) and on behalf of M/S...  
(The contractor Name and Address), we the... (The Local Bank) issue in your favour our  
irrevocable and unconditional **maintenance guarantee** No.....in the amount of (XXXX) (In  
words).

In this connection we ... (**Local bank**) hereby consider ourselves responsible for the  
unconditional payment to you or your authorized representatives of the above sum on your  
first Written demand in whole or in part notwithstanding any objections on the part of the  
above-named contractor and without any need for notarial warning or judicial proceedings.

This guarantee remains valid from the date of issue till its expiry date on .../.../.....  
unless it's extended or renewed upon your request within the guarantee validity.

**BANK (LOCAL BANK)**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**FORM OF DECLARATION FOR PROHIBITED PAYMENTS \***

(i) We, the undersigned, -----  
-----

declare that we have read and comprehended the provisions under Item 14 of General Condition of the Contract related to this Contract and in compliance with this clause; we enclose a declaration properly signed and sealed representing and warranting to The Employer that no direct or indirect commissions, consulting fees, agent fees, Tender fees or other payments, and no inducements or the giving of anything of value (collectively referred to as "Prohibited Payments"), have been made or promised to be made, directly or indirectly, by or on behalf of the Contractor, its sub-Contractor and its or their Employees, agents or representatives, to The Employer, including without limitation any official, employee, agent or representative (whether or not acting in an official capacity) of The Employer, in connection with the solicitation, bidding, negotiation, award or performance of this Contract; and (ii) hereby covenants and agrees that no Prohibited Payments shall be made or promised to be made, directly or indirectly, by or on behalf, of Contractor, its sub-Contracts and its or their employees, agents or representatives, to any official, employee, agent or representative (whether or not acting in an official capacity) of The Employer in connection with the amendment, modification, renewal, extension or performance of this Contract.

Tenderers Name-----  
Name of authorized signatory  
-----

**Signature**  
-----

**Seal** -----

**\* The Tenderer is required to submit a declaration for other payments in a separate envelope whether such payments have been paid or not and the offers of all Contractors that do not include such a declaration will be rejected.**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**FORM OF DECLARATION FOR OTHER PAYMENTS \***

(i) We, the undersigned, -----

-----  
declare that we have read and comprehended the provisions under Item 15 of General Condition of the Contract related to this contract and in compliance with this sub-clause; we enclose a declaration properly signed and sealed disclosing any and all direct or indirect commissions, consulting fees, agent fees, tender fees or other payments, or inducements or the giving of anything of value (collectively referred to as "Other Payments") to third parties other than any official, employee, agent or representative (whether or not acting in an official capacity) of The Employer, including without limitation a detailed description of the basis therefore, made or to be made, directly or indirectly, by or on behalf of Contractor, its subcontractors, and its or their employees, agents or representatives, in connection with the solicitation, bidding, negotiation, award or performance of this Contract; and (ii) hereby covenants and agrees promptly to disclose to The Employer in writing the existence of any Third Party Payments including without limitation, a detailed description of the basis therefore, upon the earliest to occur of Contractor making or being obligated to make, any such Third Party Payments.

**Contractor's Name**

-----

**Name of authorized signatory**

-----

**Signature**

-----

**Seal** -----

**\* The Tenderer is required to submit a declaration for other payments in a separate envelope whether such payments have been paid or not and the offers of all Contractors that do not include such a declaration will be rejected.**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**FORM OF REQUEST FOR SHIPPING RELEASE**

**REQUEST FOR SHIPPING RELEASE**

**TENDER NO. 35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

Request No:

Date:

To: **National Electric Power company**

Your contract reference:

Our contract reference:

We would be pleased to receive your shipping release.

<u>Manufacturer</u>	<u>Equipment</u>	<u>Qty.</u>	<u>Total No. Of Packages</u>
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CONTRACTOR SIGNATURE

RECORD PURPOSE ONLY

Local Release No:

Date:

Yours faithfully,



**SECTION 4**  
**GENERAL CONDITIONS OF CONTRACT**

**GENERAL CONDITIONS OF CONTRACT**  
**FOR THE SUPPLY AND DELIVERY OF MATERIALS BASED ON**  
**UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE**  
**PUBLICATION REF.: ME/ 188**  
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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 the "National Electric Power Company" hereinafter called "NEPCO", and shall include NEPCO legal personal representatives and duly appointed Engineers.

The "Engineer" shall mean the "National Electric Power Company" or persons for the time being or from time to time duly appointed in writing by the purchaser to act as Engineer for the purpose of the Contract.

The words "approved" and "approval" where used in these Conditions or in the specification shall mean "approved by" and "approval of" the purchaser respectively.

The "Vendor" shall mean the "Contractor" whose Tender has been accepted by the Purchaser and shall include the Vendor's (Contractor's) legal personal representatives, successors and permitted assigns.

"F.O.B Price" shall mean the cost of the equipment delivered free on board of 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 or CFR 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 dispatched in good time for NEPCO to arrange for Marine Insurance before the material is actually dispatched.

2. **FORMATION OF CONTRACT:**

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

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

2.3 Power To Vary The Work

No alterations, 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 from fulfilling any of his obligations or guarantees under the Contract, he shall notify the Purchaser thereof in writing, and the Purchaser shall decide forthwith whether or not the same shall be carried out, and if the Purchaser confirms his instructions, the Contractor's obligations and guarantees 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 variations, 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 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 variation shall, except with the 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.

## 2.4 Precedence:

In the event of any discrepancy or contradiction between the provisions of the Conditions of Contract and of the Specification, the Conditions of Contract shall take precedence.

## 2.5 Prices

2.5.1 The Tender calls for firm prices for the definite works.

2.5.2 Provisional items may or may not in whole or in part be purchased by the Purchaser under the Contract.

## 3. Drawings And Descriptive Documents

3.1 The weights, dimensions, capacities, prices, performance ratings and other data included in catalogues, prospectuses, circulars, advertisements, illustrated matter and price lists constitute an approximate guide.

These data shall not be binding save to the extent that they are by reference expressly included in the Contract.

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

a) If it is expressly so agreed, or.

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

3.3 Any drawings or technical documents intended for use in the construction of the plant 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 third party.

### 3.4 Drawing Guidelines for Contract Drawings

All drawing shall confirm to the following:

1) All drawings are to be prepared on the international sizes as described in BSI BS EN ISO 5457. They are to be of "A" series.

DESIGNATION	SHEET SIZE
<b>A 0</b>	<b>814 x 1189</b>
<b>A1</b>	<b>594x841</b>
<b>A2</b>	<b>420x594</b>
<b>A3</b>	<b>297x420</b>
<b>A4</b>	<b>210x297</b>

- 2) The NEPCO title block must be added to all drawings produced for the Contract. The block may be reduced in size, depending on sheet size, The NEPCO drawing number must appear in bottom right hand corner of drawing, the drawings must also include the Contractor's / Consultant's title block adjacent to NEPCO title block.
- 3) Each drawing to have its own individual number. For schedules, a drawing number to be given and then sheet 1 of x sheets.
- 4) All descriptive information must be entered in NEPCO title block. All drawings must contain NEPCO drawing numbers as so described and issued by NEPCO.
- 5) The title block should contain the following:
  1. Revision block as NEPCO requirement.
  2. Name of subject i.e. power station, substation, equipment.
  3. Nature of drawing i.e. site layout, general arrangement, single line diagram.
  4. Any other information or notes.
  5. Dimensions to be in MM or M.
  6. Scale i.e. 1:50, 1:1000.
  7. Contract No. i.e. **35 /2022**
  8. DRG. No. NEPCO drawing numbers that allocated by NEPCO.
  9. Rev. to contain latest revision number.
  10. Title block for Contractor/Consultant.
  11. Graphical bar scales where required, not required for single line diagrams or reinforced concrete details.
- 6) Drawing sheet should be laid out according to NEPCO requirement.
- 7) Scales to be in multiples of 1:5, 1:10.
- 8) All information to be stenciled on drawings, block capital letters should be used throughout. No freehand printing on drawing except for "revision or hold" cloud.

- 9)
  1. Revisions must be lettered and indicated block provided, all revisions to be checked and approved by Engineer.
  2. Revisions must be interred and highlighted by pencilling cloud around the part revised on the reverse side of the tracing sheet as shown rev. b
  3. Vague descriptions of revisions such as "general revisions" should be avoided. Revisions should be specific. No matter how small the revisions, it should be recorded.
- 10) Notes, reference drawing, and legends should be recorded on drawing, if key plan and north point is required, then apply NEPCO requirement.
- 11) Example of drawing title blocks and titles should be submitted to NEPCO for approval before commencement of drawings.
- 12) On completion of contract, the final drawings submitted to NEPCO are to be marked "as built" dated and signed, The drawings must be accompanied by a complete drawing schedule, listing all the drawings in the order of the NEPCO Numbers. The drawings schedule should be in the region of A3 or A4 size.

#### **4. Packing Of Materials And Shipping Marks:**

- 4.1 All materials, equipment and goods shall be very well packed, in seaworthy containers and/or wooden cases, etc. These should protect the material during shipping, handling, unloading, and for a reasonable period of storage at Queen Alia International Airport (Q.A.I.A) and later storage at NEPCO central stores.

Packing for indoor materials should be done in such a 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, drawings showing the erection markings of the item concerned shall be placed inside the case.

NEPCO will supply the successful Tenderer with a drawing of its shipping Mark for utilization.

All packing cases, crates, barrels and drums shall remain the property of the purchaser.

**5. Inspection And Tests: (NOT APPLICABLE)**

- 5.1 The contractor is required to provide all facilities to enable the employer's representatives (Two Persons for one week) to carry out the necessary inspection and testing. The costs of all tests during manufacture and preparation of test records including airfares, hotel accommodations, transport, and all meals are to be borne by the contractor. In case of failure of test all costs of repeated trips of the employer's representatives will be borne by the contractor. The performance of any such inspections and tests in the presence of the purchaser and /or an independent testing authority does not relieve the contractor from his contractual obligations.
- 5.2 If as a result of such inspection and checking the purchaser shall be of the opinion that any materials or parts are defective or not in accordance with the contract, he shall state in writing his objections and the reasons therefore.
- 5.3 Testing instruments shall be approved and shall, if required by the employer's representative, be calibrated by the national physical laboratory or such other body as may be approved, at the expense of the contractor.
- 5.4 Acceptance tests will be carried out and, unless otherwise agreed, will be made at the vendor's works instruments, if 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 plant is manufactured.
- 5.5 The vendor shall give to the purchaser sufficient notice of the tests to permit the purchaser's representative to attend. If the purchaser is not represented at the tests, the test report shall be communicated by the vendor to the purchaser and shall be accepted as accurate by the purchaser. After completion of the FAT the vendor is required to send complete test report with request for shipping release.  
  
The purchaser will check test report/test results and if accepted a shipping release certificate will be issued within 10 days from the receipt of the report/shipping release request.
- 5.6 If on any test (other than a test on site, where tests on site are provided for in the contract) the plant shall be found to be defective or not in accordance with the contract, the vendor shall be with all speed make good the defect or ensure that the plant complies with the contract thereafter, if the purchaser so requires, the test shall be repeated.
- 5.7 Unless otherwise agreed, the vendor shall bear all the expenses of tests carried out in his works.
- 5.8 If the contract provides for tests on site, the terms and conditions governing such tests shall be such as may be specially agreed between the parties.
- 5.9 In case of third party testing the contractor will conduct all required tests by the employer through the appointed third party testing company of the list attached hereto all costs for a/m tests will be incurred by the contractor.

**6. Passing Of Risk:**

6.1 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 (INCOTERM) of the International Chamber of Commerce in force at the date of the formation of the Contract.

**7. Delivery:**

7.1 **Unless otherwise agreed the delivery period (CPT Queen Alia International Airport (Q.A.I.A), Amman - Jordan) should be within (180) days from the commencement date (i.e., Letter of Award).**

7.2 Should delay in delivery be caused by any of the circumstances mentioned in Clause 10 or by an act or omission of the Purchaser and whether such cause occur before or after the time or extended time for delivery, there shall be granted subject to the provisions of paragraph 7.5 hereof such extension of the delivery period as is reasonable having regard to all the circumstances of the case.

7.3 If a fixed time for delivery is provided for in the Contract and the Vendor fails to deliver within such time or any extension thereof granted under paragraph 2 hereof, the purchaser shall be entitled, on giving to the Vendor within a reasonable time notice in writing, to claim a reduction of the price payable under the Contract. Such reduction 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 reduction of ten percent. Such reduction shall be allowed when a payment becomes due on or after delivery. Save as provided in paragraph 7.5 hereof, such reduction of price shall be to the exclusion of any other remedy of the purchaser in respect of the Vendor's failure to deliver as aforesaid.

7.4 If the time for delivery mentioned in the Contract is an estimate only, either party may after the expiration of two thirds of such estimated time require the other party in writing to agree on 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 (90) days from the formation of the Contract.

If in either case the parties fail to agree, either party may have recourse to arbitration, in accordance with the provisions of Clause 13, to determine a reasonable time for delivery and the time so determined shall be deemed to be the fixed time for delivery provided for in the Contract and paragraph 3 hereof shall apply accordingly.



- 7.5 If any portion of the plant in respect of which the purchaser has become entitled to the maximum reduction 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 time 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 plant 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 plant as could not in consequence of the Vendor's failure be put to the use intended.
- 7.6 If the purchaser fails to accept delivery on due date he shall nevertheless make any payment conditional in delivery as if the plant had been delivered. The Vendor shall arrange for the storage of the plant at the risk and cost of the purchaser, If required by the purchaser, the Vendor shall insure the plant 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 plant shall not be borne by the purchaser.
- 7.7 Unless the failure of the purchaser is due to any of the circumstances mentioned in Clause 9, the Vendor may require the purchaser by notice in writing to accept delivery within a 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 plant 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 plant, the delivery of which has not been accepted.

## **8. Terms of Payment:**

- 8.1 Subject to any deductions which the purchaser may be authorized to make under the contract, or subject to any additions or deductions provided for under clause 2.3 above, the contractor shall be entitled strictly to payment as follows:-
- (100%) of contract value will be paid within (60) days after the arrival of materials at site or NEPCO warehouse against the following documents:
    - 1- Receipt of an invoice in one original and four copies for the correct amount.
    - 2- Packing list in one original plus four copies.
    - 3- Certificate of origin in one original and four copies.

- 4- Airway of lading – three negotiable, four non-negotiable.
- 5- Receiving report issued and signed by NEPCO committee as evidence that the material has been received at site or NEPCO warehouse in satisfactory condition.
- 6- Interim payment certificate issued and signed by NEPCO.
- 7- Submitting of maintenance bond of 5% of the total contract amount the in the form given and in the same contract currency.

**Submission of shipping Documents & Invoices:**

Shipping documents must be submitted early for clearance purposes.

Shipping documents shall be submitted to the bank if payment made by CAD or LC. If payment is through bank transfer the shipping documents shall be submitted directly to NEPCO as specified.

**Shipment:**

Shipment by sea freight must be on direct and regular (liner) vessel less than 15 years old at the time of shipment. The vessel shall be classified and certified in accordance with the (ISM) code and shall be a member in the P&I club.

The Social Insurance Clearance Certificate, clearing from tax authorities evidencing the payment of Labor Income taxes due under the laws of the H.K.J, release of lien, and customs regularization of all imported shipments, must be submitted with the Contractor's invoice upon the issuance of final Acceptance Certificate.

The release of liens must be signed by the Contractor and all Subcontractors performing work at the site.

If the Contract has been terminated the claim for termination costs shall be accompanied by:

- 1) Written justification by Contractor supporting in detail the claimed charge.
- 2) Either written concurrence by the Employer to the Contractor's claim or a certified copy of an arbitration award.

If the Contractor claims payment for suspension of the works the claim for suspension costs shall be accompanied by:

- 1) Written justification by the Contractor supporting in detail the claimed charge.
- 2) Either written concurrence by the Employer to the Contractor's claim or a certified copy of an arbitration award.

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

## 9. Guarantee:

- 9.1 Subject as hereinafter set out, the Vendor undertakes to remedy any defect resulting from faulty design, materials or workmanship.
- 9.2 This liability is limited to defects which appear during the period (hereinafter called the Guarantee period) of **(24) months after receipt of last consignment at site or NEPCO warehouses.**
- 9.3 In fixing this period due account has been taken of the time normally required for transport as contemplated in the Contract.
- 9.4 In respect of such parts (whether of the Vendor's own manufacture or not) of the plant as are expressly mentioned in the Contract. The Guarantee Period shall be such other period (if any) as specified in respect of each of such parts.
- 9.5 In order to be able to avail himself of his rights under this clause the purchaser shall notify the Vendor in writing without delay of any defects that have appeared and shall give him every opportunity of inspecting and remedying them.
- 9.6 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 properly repaired or a part in replacement thereof shall be deemed to be a fulfillment by the Vendor of his obligations under this paragraph in respect of such defective part.

- 9.7 The guarantee Period is based on the continuous use of the plant in service for 24 hours every day.
- 9.8 The Vendor shall bear all the costs and risks of the transport of defective parts or equipment's and their replacements.
- 9.9 Where, in pursuance of paragraph 7 hereof, repairs are required to be effected on site, the conditions covering the attendance of the Vendor's representatives on site shall be such as may be specially agreed between the parties.
- 9.10 Defective parts replaced in accordance with this Clause shall be placed at the disposal of the Vendor.
- 9.11 If the Vendor refuses to fulfil his obligations under this Clause or fails to proceed with due diligence after being required to do so, the purchaser may proceed to do the necessary work at the Vendor's risk and expense.
- 9.12 The Vendor's liability does not apply to defects arising out of materials provided, or out of a design stipulated, by the purchaser.
- 9.13 The Vendor's liability shall apply only to defects that appear 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 Plant has passed in accordance with Clause 6. In particular it does not cover defects arising from the purchaser's faulty maintenance or erection, or from alterations carried out without the Vendor's consent in writing, or from repairs carried out improperly by the purchaser, nor does it cover normal deterioration.
- 9.14 Save as in this Clause expressed, the Vendor shall be under no liability in respect of defects after the risk in the plant 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 circumstances of the case that the Vendor has been guilty of gross misconduct.
- 9.15 "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.
- 9.16 A fresh guarantee period equal to that stated in paragraph 2 hereof shall apply, under the same terms and condition as those application to the original plant, to part supplied in replacement of defective part or to part renewed in pursuance of this clause this provision shall not apply to the remaining part of

the plant, the guarantee period of which shall be extended only by a period equal to the period during which the plant is out of action as a result of defect covered by this clause.

**10. Relief's:**

- 10.1 The following shall be considered as cases of relief if they intervene after the formation of the Contract and impede its performance. Industrial disputes and any other circumstances (e.g. fire, mobilization, requisition, embargo, currency restrictions, insurrection, shortage of transport, general shortage of materials and restriction in the use of power) when such other circumstances are beyond the control of the parties.
- 10.2 The party wishing to claim relief by reason of any of the said circumstances shall notify the other party in writing without delay on the intervention and on the cessation thereof.
- 10.3 The effects of the said circumstances so far as they affect the timely performance of their obligations by the parties, are defined in Clauses 7 and 8. Save as provided in paragraphs 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 party without requiring the consent of any court.
- 10.4 If the Contract is terminated in accordance with paragraph 3 hereof, the division of the expenses incurred in respect of the Contract shall be determined by agreement between the parties.
- 10.5 In default of agreement, it shall be determined by the arbitrator which party has been prevented from performing his obligations and that party shall bear the whole of the said expenses. Where the purchaser is required to bear the whole of the expenses and has before termination of the Contract paid to the Vendor more than the amount of the Vendor's expenses, the purchaser shall be entitled to recover the excess.  
  
If the arbitrator determines that both parties have been prevented from performing their obligations, he shall apportion the said expenses between the parties in such manner as to him seems fair and reasonable, having regard to all the circumstances of the case.
- 10.6 For the purposes of this Clause "expenses" means actual out-of-pocket expenses reasonably incurred, after both parties shall have mitigated their losses as far as possible. Provided that as respects plant delivered to the purchaser the Vendor's expenses shall be deemed to be that part of the price payable under the Contract which is properly attributable thereto.

**11. Limitation Of Damages:**

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

**12. Rights At Termination:**

- 12.1 Termination of the contract, from whatever cause arising, shall be without prejudice to the rights of the parties occurred under the Contract up to the time of termination.

**13. Arbitration And Law Applicable:**

- 13.1 If any dispute, question or controversy shall arise between the Purchaser and the Contractor concerning this Contract the matter in dispute shall be referred to an arbitration committee composed of three (3) arbitrators. One arbitrator shall be nominated by the Purchaser and one by the Contractor, and the third arbitrator shall be appointed by both parties.

If either party fails to appoint his arbitrator within one month of the appointment of the arbitrator by the other party, or if the two parties fail to agree on the third arbitrator within two months of the date of the request to refer the dispute to arbitration, such arbitrator shall be appointed by the president of the highest Court in Jordan at the request of either or both parties.

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

**14. Declaration for Prohibited Payments**

- A. The tenderer shall represent and warrant to The Employer in the Declaration for Prohibited Payments attached to this Tender, that no direct or indirect commissions, consulting fees, Tender fees or other payments, and no inducements or the giving of anything of value, (collectively referred to as "Prohibited Payments"), have been made or promised to be made, directly or indirectly, by or on behalf of the Contractor, its sub-Contractors and its or their employees, agents or representatives, to The Employer including without limitation any official, employee, agent or representative (whether or not acting in an official capacity) of The Employer, in connection with the solicitation, bidding,

negotiation, award or performance of this Contract; and hereby covenants and agrees that no Prohibited Payments shall be made or promised to be made, directly or indirectly, by or on behalf of the Contractor, its sub-Contractors and its or their employees, agents or representatives, to any official, employee, agent or representative (whether or not acting in an official capacity) of The Employer in connection with the amendment, modification, renewal, extension or performance of this Contract.

- B. In the event of any violation or breach of the provisions of paragraph A of this clause, The Employer at its sole option and discretion shall take all or any of the following Actions: (i) terminate the Contract; and /or (ii) deduct from all or any payments due to the Contractor under this Contract an amount equal to two times the amount of any Prohibited Payment; and/or (iii) demand that the Contractor pay forthwith to the Employer, which demand the Contractor hereby irrevocably agrees to honour, an amount equal to two times the amount of any Prohibited Payment, it being the intention, subject to paragraph D below, that the aggregate of all amounts to which The Employer is entitled under paragraph B shall not exceed the amount which is two times the amount of all Prohibited Payments.
- C. The Tenderer agrees that provisions substantially similar (but in no event less restrictive) to paragraphs A and B above shall be incorporated by the Contractor in all agreements with the Contractor's Sub-Contractors, suppliers or contractors arising out of or relating to this Contract, and which provisions shall also expressly provide that the same may, at The Employers sole discretion, be enforced directly by The Employer. The Tenderer further agrees promptly to supply to The Employer true and complete copies of such agreements, forthwith upon entering into by the Contractor of such agreements.
- D. The rights and remedies of The Employer under this clause are in addition to and not in derogation of any other rights The Employer may have under applicable law or regulations.
- E. This clause shall survive the termination of the Contract.

**15. Declaration for other Payments**

- A. The Tenderer shall fully disclose in the Declaration for Other Payments attached to this Tender any and all direct or indirect commissions, consulting fees, agent fees, tenders fees or other payments, or inducements or the giving of anything of value (collectively referred to as "Other Payments") to third parties other than any official employee, worker, representative or agent of The Employer, including without limitation a detailed description of the basis therefore, made or to be made, directly or indirectly, by or on behalf of the

Contractor, its sub-contractors and its or their employees, agents or representatives, in connection with the solicitation, bidding, negotiation, award or performance of this Contract, and hereby covenants and agrees promptly to disclose to The Employer in writing the existence of any Third Party Payments including without limitation, a detailed description of the basis therefore, upon the earliest to occur of the Contractor making or being obligated to make, any such Third Party Payments.

- B. In the event of any violation or breach of the provisions of paragraph A of this clause, The Employer at its sole option and discretion shall take all or any of the following Actions: (i) terminate the Contract; and /or (ii) deduct from all or any payments due to the Contractor under this Contract an amount equal to two times the amount of any Third Party Payments; and/or (iii) demand that the Contractor pay forthwith to the Employer, which demand the Contractor hereby irrevocably agrees to honour, an amount equal to two times the amount of any Third Party Payments, it being the intention, subject to paragraph D below, that the aggregate of all amounts to which The Employer is entitled under paragraph B shall not exceed the amount which is two times the amount of all Third Party Payments.
- C. The Tenderer agrees that provisions substantially similar (but in no event less restrictive) to paragraphs A and B above shall be incorporated by the Contractor in all agreements with the Contractor's Sub-Contractors, suppliers or Contractor arising out of or relating to this Contract, and shall also expressly provide that the same may, at The Employers sole discretion, be enforced directly by The Employer. The Contractor further agrees promptly to supply to The Employer true and complete copies of such agreements, together with evidence of their inclusion in such agreements, forthwith upon entering into by the Contractor of such agreements.
- D. Nothing in this Section shall expressly or impliedly make lawful or permissible any Third Party Payments that are otherwise prohibited under applicable law or regulations. The rights and remedies of The Employer under this clause are in addition to and not in derogation of any other rights The Employer may have under applicable law or regulations.

This clause shall survive the termination of the Contract.

## **16. Force Majeure:**

- 16.1 A Party's failure or delay in performing any of its obligations under this Contract will not be deemed a breach of this Contract to the extent that such failure or delay is directly due to any Force Majeure Event.



- 16.2 For the purposes of this Clause, “Force Majeure Event” means an event or situation beyond the control of a Party that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of a Party. Such events may include, but are not limited to, acts of a Party in its, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 16.3 If a Force Majeure Event arises, the affected Party shall promptly notify the other Party in writing of such condition and the cause thereof. Unless otherwise directed by the other party in writing, the affected Party shall continue to perform its obligations under the Contract as far as is reasonably practicable, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure Event.

# **Section 5**

## **Technical Specifications**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**1. GENERAL CLAUSES**

**1.1. Scope of work**

This Specification provides for the design, manufacture, packing for export, supply CPT Queen Alia International Airport (Q.A.I.A), Amman - Jordan, setting to work at site within 180 days and warranty for a period of 24 calendar months from the date of receipt the last consignment of Test Equipment's at NEPCO warehouses.

**1.2. Quantity Required**

<b>Test Equipment</b>	<b>Quantity</b>
<b>C.B Opening &amp; Closing Time Test Set</b>	<b>3</b>
<b>SF6 Analyzer</b>	<b>3</b>
<b>Portable Energy Meter Tester*</b>	<b>1</b>
<b>High Voltage Cable Fault Locator*</b>	<b>1</b>
<b>Tan Delta Test Set</b>	<b>2</b>

**1.3. Partial Offers will be accepted.**

**1.4. General particulars and guarantees**

The Contract Works shall comply with the general particulars and guarantees specified in the Schedules.

The Contractor shall be responsible for any discrepancies, errors or omissions in the particulars and guarantees, whether or not such particulars and guarantees have been approved by the Engineer.

The operation, software & technical manuals should be supplied both as hardcopies & CDs.

**1.5. Compliance with Specification**

Notwithstanding any description, drawings or illustrations which may have been submitted with the tender, all details other than those shown in the Schedule of Departures from the Specification will be deemed to be in

accordance with the Specification and the standard specifications and codes referred to therein.

No departures from the Specification, except those shown in the Schedule of Departures and approved by the Employer, shall be made without the written approval of the Engineer.

#### **1.6. Variance with Conditions of Contract**

In the event of there being any inconsistency between the provisions of this Specification and the Conditions of Contract, the provisions of the Conditions of Contract shall prevail and shall be considered as incorporated in the Contract.

#### **1.7. Places of manufacture**

The manufacturer and places of manufacture of the various portions of the Contract Works shall be stated in the Schedules.

#### **1.8. Dates for completion**

The dates of readiness for delivery and completion of the various Sections of the Contract Works shall be as stated in the Schedules.

#### **1.9. Language and system of units**

The English language shall be used in all written communications between the Employer the Engineer and the Contractor with respect to the services to be rendered and with respect to all documents and drawings procured or prepared by the Contractor pertaining to the work, unless otherwise agreed by the Engineer.

It is required that all equipment labels or plates and the Operating and Maintenance Instructions be written in English.

The design features of all equipment shall be based on the SI system of units.

#### **1.10. Compliance with regulations**

All apparatus and material supplied, and all work carried out shall comply in all respects with such of the requirements of the Regulations and Acts in force in the country of the Employer as are applicable to the Contract Works and with any other applicable regulations to which the Employer is subject.

#### **1.11. Fire precaution**

All apparatus, connections and cabling shall be designed and arranged to minimize the risk of fire and any damage which might be caused in the event of fire.

#### **1.12. Standards**

The contractor shall provide one copy of the latest standards (IEC, BS, ANSI, DIN or other applicable standards) which are applicable to this contract to the Employer.

## **Section 6**

### **Technical Schedules**

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**SCHEDULE A.1**

**TECHNICAL SPECIFICATION FOR C.B OPENING & CLOSING TIME**  
**TEST SET**

(Information to be submitted with tender)

ITEM No.	DESCRIPTION REQUIRED	OFFERED
1.0	<b>Circuit Breaker Opening &amp; Closing Time Test Set</b>	
1.1	<b>Measurement Time Resolution: 0.5ms</b>	
1.2	<b>Measurement Time Accuracy: <math>\leq 2\%</math></b>	
1.3	<b>Input Channels: 6 channels for CB Main Contacts</b>	
1.4	<b>CB Sequence: C,O,CO,OC,OCO</b>	
1.5	<b>Close/Open Command Contact: 125Vdc/25A</b>	
1.6	<b>Pulse Delay: Adjustable up to 500ms</b>	
1.7	<b>Time Measurement Range: 0.1-1000ms</b>	
1.8	<b>Input Operation Voltage: 230Vac, 50Hz</b>	
1.9	<b>Operation: shall be operate stand-alone (without Laptop), Shall be contain LCD Display</b>	
1.10	<b>Test Report: Movable to (PC or USB memory) OR can be printed via device printer OR can be shown on device display.</b>	
1.11	<b>Testing Method: Dynamic contact resistance must be available.</b>	
1.12	<b>Testing cable for CB main contact: Minimum 8 meter with clamp.</b>	
1.13	<b>Communication Cable: USB OR RS232</b>	
1.14	<b>Hard Case is Mandatory</b>	
1.15	<b>Operating Temperature: 0 - 45°C</b>	
	<b>Test Equipment must contain the following functions:</b>	
	– Status indicator, Start & stop condition, Start function	

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**SCHEDULE A.2**

**TECHNICAL SPECIFICATION FOR SF6 ANALYZER**

(Information to be submitted with tender)

ITEM No.	DESCRIPTION REQUIRED	OFFERED
<b>2.0</b>	<b>SF6 Analyzer</b>	
<b>2.1</b>	<b>Multi-function Measuring Device determine up to six measuring parameters with one sample contain:</b>	
	– SF6 Volume Percentage (%)	
	– HF Concentration (ppm)	
	– Moisture Concentration (H <sub>2</sub> O Dew Point)	
	– H <sub>2</sub> S Concentration (ppm)	
	– SO <sub>2</sub> Concentration (ppm)	
	– CO Concentration (ppm)	
<b>2.2</b>	<b>Hard Case is Mandatory</b>	
<b>2.3</b>	<b>Input Operation Voltage: 230Vac, 50Hz</b>	
<b>2.4</b>	<b>Battery Operated Device: Min. 2 hour</b>	
<b>2.5</b>	<b>Operating Temperature: 0 - 40°C</b>	
<b>2.6</b>	<b>Operation: shall be operate stand-alone (without Laptop), Shall be contain LCD Display</b>	
<b>2.7</b>	<b>Max. Inlet pressure: 35 bar</b>	
<b>2.8</b>	<b>Max. Outlet for gas cylinder: 10 bar (Compressor)</b>	
<b>2.9</b>	<b>Inlet/Outlet For Gas: Quick Coupling &amp; Self Sealing</b>	
<b>2.10</b>	<b>Communication Interface: USB OR RS232 OR LAN</b>	
<b>2.11</b>	<b>Flow Measuring Rate: 20 Liter/hour</b>	
<b>2.12</b>	<b>Number of Measured Values: Min 100 Readings</b>	
<b>2.13</b>	<b>Connection Hose with 6 meter minimum. DN8 &amp; DN20 Coupling</b>	

<b>2.14</b>	<b>SF6 Percentage Sensor</b>	
	- Measurement Principle: Sound Velocity	
	- Measurement Range: 0-100%	
	- Resolution & Accuracy: 0.5% , ±1%	
<b>2.15</b>	<b>Moisture Concentration (H<sub>2</sub>O Dew Point)</b>	
	- Measurement Principle: Dew Point Measurement	
	- Measurement Range: -60 to +20°C	
	- Resolution: 1°C,	
	- Accuracy: ±2%(-40 to +20), ±4% (-60 to -40)	
<b>2.16</b>	<b>H<sub>2</sub>S Concentration (ppm)</b>	
	- Measurement Principle: Electrochemical	
	- Measurement Range: 0 – 100 ppm	
	- Resolution: 0.5ppm	
	- Accuracy: ±3%	
<b>2.17</b>	<b>SO<sub>2</sub> Concentration</b>	
	- Measurement Principle: Electrochemical	
	- Measurement Range: 0 – 100 ppm	
	- Resolution: 1ppm	
	- Accuracy: ±3%	
<b>2.18</b>	<b>CO Concentration</b>	
	- Measurement Principle: Electrochemical	
	- Measurement Range: 0 – 500 ppm	
	- Resolution: 0.5ppm	
	- Accuracy: ±3%	
<b>2.19</b>	<b>HF Concentration</b>	
	- Measurement Principle: Electrochemical	
	- Measurement Range: 0 – 10 ppm	
	- Resolution: 0.5ppm	
	- Accuracy: ±3%	
<b>2.20</b>	<b>Test Equipment must contain the following functions:</b>	
	- Status indicator, Start & stop condition, Start function	



**NATIONAL ELECTRIC POWER COMPANY**

**TENDER NO.35 /2022**

**SUPPLY OF TEST EQUIPMENTS**

**TECHNICAL SPECIFICATION FOR PORTABLE ENERGY METER  
TESTER**

**Application**

Three-phase portable consist of power source and reference standard meter source voltage up to 500 V and current up to 12 A for high accuracy meters class (0.2S).

The required equipment shall have power full and three-phase current and voltage source and all test values are generated absolutely synthetically with a high degree of accuracy and stability with following features:

- Three-phase portable precision type source with single-phase mains supply.
- Full metering auto test (accuracy test, register test) via computer or keypad.
- Current and voltage source facilities can be selected independently
- Large screen color display with graphical user interface
- Indication of load values, vector diagram and waveform
- Current, voltage and phase shift are adjustable to high accuracy individual per phase.
- CT ratio test current transformers ratio test up to 3000 A
- Data transfer and communication via USB/ETHERNET port
- Data storage on internal or removable memory card.

**SCHEDULE A.3**

(Information to be submitted with tender)

<b>ITEM No.</b>	<b>DESCRIPTION REQUIRED</b>	<b>OFFERED</b>
<b>3.0</b>	<b>3-PHASE PORTABLE ENERGY METER TESTER</b>	
<b>Technical specification Power source</b>		
<b>3.1</b>	<b>Test voltage output (Phase – Neutral): 3 x 0 V ... 500 V with at least 3 internal ranges</b>	
<b>3.2</b>	<b>Resolution for voltage: 0.01 %</b>	
<b>3.3</b>	<b>Resistive load in voltage circuit: 0.1 capacitive ... 1 ... 0</b>	
<b>3.4</b>	<b>Voltage deviation from 0 – max. load: 0.01 %</b>	
<b>3.5</b>	<b>Setting accuracy of the voltage: ≤0.02 % / Range</b>	

3.6	Distortion factor of the voltage: $\leq \pm 0.2\%$ ; also in case of nonlinear load with crest factor up to 2	
3.7	Test current output: 3 x 1 mA ... 120 A with at least 6 internal ranges	
3.8	Resolution for current: 0.01 %	
3.9	Resistive load in current circuit: 1 ... 0.1 inductive	
3.10	Current deviation from 0 – max. load: 0.01 %	
3.11	Phase angle: 0° ... 360°	
3.12	Resolution of the phase angle: 0.01°	
3.13	Setting accuracy for phase angle: 0.1°	
3.14	Test frequency range: 45 Hz ... 65 Hz	
3.15	Resolution of the frequency: 0.01 Hz	
3.16	Efficiency of the amplifier to avoid unnecessary heat generation: Better 85 %	
<b>Reference standard</b>		
3.17	Voltage range: 0 V ... 500 V	
3.18	Error for voltage: $\leq \pm 0.02\%$ (related to the measured value)	
3.19	Current range: 0.003 A ... 120 A	
3.20	Error for current: $\leq \pm 0.02\%$ (related to the measured value)	
3.21	Test frequency: 45 ... 65 Hz	
3.22	Error for active power/energy: $\leq \pm 0.02\%$ related to apparent power	
3.23	Error for reactive power/energy: $\leq \pm 0.02\%$ related to apparent power	
3.24	Error for apparent power/energy: $\leq \pm 0.02\%$	
3.25	Nominal frequency of the power proportional output / More than 20 kHz to avoid any waiting time	
3.26	Measurement modes: - 4 wire active - 4 wire reactive true/cross connected - 3 wire active - 3 wire reactive true/cross connected 60°/90° - 2 wire active/reactive	

<b>Mechanics</b>		
3.27	<b>Material: Aluminum profile to avoid corrosion</b>	
3.28	<b>Quick acting connectors: For single and three phase meters; (CT operated and whole current)</b>	
3.29	<b>+ Continuous current: 100 A</b>	
3.30	<b>+ Max. current for 5 min: 120 A</b>	
3.31	<b>Number of scanning head inputs equipped with suitable numbers of scanning heads 2 scanning heads &amp; 2 adjustable frames</b>	
3.32	<b>Scanning heads: Able to detect marks from LED`s from digital electronic meters with different color meter LED`s</b>	
3.33	<b>Scanning head adjustment: In height and depth head by head and in depth all together via suitable frame</b>	
3.34	<b>Number of error displays: 2</b>	
3.35	<b>Resolution of the error displays: X.X %, X.XX % or X.XXX % (selectable by software)</b>	
3.36	<b>Showing pulses of reference standard and unit under test</b>	
<b>Operation</b>		
3.37	<p><b>Personal computer: The computer (laptop PC) must comply with the requirements of the metering test equipment program with high performance during operation and according to the following minimum specifications:</b></p> <ul style="list-style-type: none"> <li>- Core I7 (11 gen)</li> <li>- RAM 16 GB.</li> <li>- HDD 512 GB + SSD 512 GB.</li> <li>- Display LED FHD 15.6 inch.</li> <li>- Graphic Card: 4GB minimum</li> </ul>	

3.38	<p><b><u>Hardware:</u></b></p> <ul style="list-style-type: none"> <li>- The communication between pc &amp; test device must be stable via USB / Ethernet port.</li> <li>- Metering test device gives status information, if secondary circuit is open or close by LED and disconnect test device safety &amp; directly</li> <li>- 2 pulse inputs for slow and fast pulses for testing of modern meters as well as other working standards.</li> <li>- Factory rest function.</li> </ul>	
3.39	<p><b><u>Software:</u></b></p> <ul style="list-style-type: none"> <li>- Automatic test runs in the areas of meter verification, acceptance and certification .</li> <li>- Semi-automatic adjustment test runs .</li> <li>- Archiving and data processing routine</li> <li>- Control and communication programmes, working together with the power source and reference standard and meter error evaluation system</li> <li>- Test Report Mask Generator with user defined format ( i.e. Utility test report form)</li> <li>- Definition of user access right</li> <li>- Test Report generator for independent reporting in certification and sample measurements .</li> <li>- Control of energy register and maximum demand Energy register tests</li> <li>- The resulting additional error should be also recorded on the test certificate .</li> <li>- Start and no-load measurements in both energy directions in form of an attribute test, pass (+), fail (-)</li> <li>- Meters with identical circuit connection and rating should be tested together .</li> <li>- Manual operation mode</li> <li>- Actual values and vectorial diagram can be displayed on PC Display</li> </ul>	

<b>3.40</b>	<b>Actual value display showing following values :</b> <ul style="list-style-type: none"> <li>- Test voltage U1, U2, U3</li> <li>- Test voltage U12, U23, U31</li> <li>- 3 test current I1, I2, I3</li> <li>- Individual active, reactive, apparent power per phase.</li> <li>- Total active, reactive, apparent power of the system.</li> <li>- Frequency.</li> <li>- Phase angle between voltage/current in degrees.</li> </ul>	
<b>Accessories</b>		
<b>3.41</b>	<b>Voltage &amp; Current leads: 20 voltage &amp; Current leads</b>	
<b>3.42</b>	<b>Primary &amp; Secondary Current Clamps: Suitable for CT test Ratio at high voltage side</b>	
<b>3.43</b>	<b>Suitable test probs and quick connectors / connection leads to test (2) meters at the same time ,Pin connectors , Banana connectors, Isolated crocodile connectors</b>	
<b>3.44</b>	<b>Communication cable with PC-laptop: 2 set</b>	
<b>General</b>		
<b>3.45</b>	<b>Auxiliary power supply: 88VACmin ... 264 VACmax / 47 ... 63 Hz</b> <b>Protection: Switch off supply at &gt; 276 VAC</b>	
<b>3.46</b>	<b>Housing: Hard Case</b>	
<b>3.47</b>	<b>Operation temperature: -10 °C ... +50 °C</b>	
<b>3.48</b>	<b>Storage temperature: -20 °C ... +60 °C</b>	
<b>3.49</b>	<b>Safety CE certified</b>	
<b>3.50</b>	<b>Isolation protection: IEC 61010-1:2010</b>	
<b>3.51</b>	<b>Measurement Category: 300V CAT III, 600V CAT</b>	
<b>3.52</b>	<b>Degree of protection: IP- 68 (housing closed)</b> <b>IP- 40 (housing open)</b>	
<b>Software &amp; documentations:</b>		
<b>3.53</b>	<b>All necessary software licenses to run the test equipment from pc/laptop to be supplied.</b>	

<b>3.54</b>	<b>Hard &amp; soft copy of operational &amp; user manual detailed functional description manuals and troubleshooting manual to be supplied in English language</b>	
<b>Local Training Site:</b>		
<b>3.55</b>	<b>Three days training on local site at least from authorized person from the supplier.</b>	
<b>Optional items</b>		
<b>3.56</b>	<b>Generation of harmonics (up to 31st)</b>	
<b>3.57</b>	<b>Generation of ripple control signals</b>	
<b>3.58</b>	<b>Generation of type test signals (such as harmonics, voltage dip, voltage interruptions, voltage interruption one cycle, phase fired Waveform, period packets, etc.) for tests reg.</b>	

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**TECHNICAL SPECIFICATION FOR HIGH VOLTAGE CABLE FAULT LOCATOR**

**Application:**

Three phase fully automatic Cable Fault Location Equipment that suitable for locating fault on low, medium & high voltage Power Cables up to 132 KV Complete with all materials and accessories for efficient and trouble free operation.

The system should support cable fault location and all type of cable testing and diagnostic for installation, commissioning and maintenance testing in accordance with the valid IEC 60060-3, IEC 60502 standards and regulations. It should be suitable for complete range of cable types and their accessories in all voltage range up to 132 KV.

**SCHEDULE A.4**

(Information to be submitted with tender)

ITEM No.	DESCRIPTION REQUIRED	OFFERED
1.0	High Voltage Cable Fault Locator	
<b>1. Functions Required</b>		
1.2	Surge High Voltage (DC): 0 up to 30 KV I <sub>max</sub> : 50mA @30KV	
1.3	Burning Voltage: 0 up to 30 KV I <sub>max</sub> : 50mA @30KV	
1.4	Cable sheath test: 0 to 10KV I: 0-5mA / Single Pulse Pulse Sequence: 10/min (as minimum)	
1.5	Surge mode pin pointing: Magnetic-Acoustic-Audio Frequency Acoustic gain: 0-30dB Magnetic gain:0-40dBh Acoustic Bandwidth: 1Hz- 2KHz Propagation time: 0-50ms	
1.6	Pre-location methods: TDR, ICE, ARM, & DECAY	

1.7	<b>TDR: pulse width:20ns-1 ms</b> <b>Sampling rate: 400Mhz</b> <b>Display range: 10m-1000m @80m/μs</b> <b>Resolution: 0.1m</b> <b>Accuracy: 0.1% of measurement result</b> <b>Propagation velocity factor v/2: 20-150 m/μs</b>	
1.8	<b>Impulse Current Method (ICE):</b> <b>Locating High-Resistive faults and breakdown faults</b>	
1.9	<b>Decay Method:</b> <b>Location breakdown faults with high voltage.</b> <b>Location fault distance by reflection waves.</b>	
<b>2. General</b>		
2.1	<b>Input Operation Voltage: (200-230)Vac, (45-55)Hz</b>	
2.2	<b>Operation: shall be operate stand-alone (without Laptop), Shall be contain LCD Display</b> <b>Using more than one device to carry out the required functions is accepted, but it shall be not exceed three devices (each have display and can connect to PC).</b>	
2.3	<b>Test Report: Movable to (PC or USB memory) OR can be printed via device printer OR can be shown on device display.</b>	
2.4	<b>Protection Class: min. IP20</b>	
2.5	<b>Operating Temperature: 0 - 50°C</b>	
2.6	<b>Safety CE certified</b>	
2.7	<b>Equipment must discharge the cables and demagnetize it after each injection</b>	
<b>3. Accessories</b>		
3.1	<b>Testing cables: Minimum 20 meters with clamp for High Voltage Testing, power cord, &amp; earth probe.</b> <b>20 meters for TDR in reel drum</b>	
3.2	<b>Communication Cable: USB OR RS232 / 2set</b>	



3.3	Head phones via Bluetooth interface for pinpointing acoustic mode.	
3.4	Hard Case is Mandatory, Device shall be Portable	
3.5	Emergency Stop switch shall be provided.	
3.6	Test Equipment must contain the following functions:	
	– Status indicator, Start & stop condition, Start function	
<b>4. Software &amp; documentations:</b>		
4.1	All necessary software licenses to run the test equipment from pc/laptop (Windows Compatibility)	
4.2	Hard & soft copy of operational & user manual detailed functional description manuals and troubleshooting manual to be supplied in English language	
<b>5. Local Training Site:</b>		
5.1	At least three days training on local site from authorized person.	

**NATIONAL ELECTRIC POWER COMPANY**  
**TENDER NO.35 /2022**  
**SUPPLY OF TEST EQUIPMENTS**

**TECHNICAL SPECIFICATION FOR TAN DELTA TEST SET**

**Application:**

Tan Delta or Dissipation Factor test set is an excellent diagnostic test that provides an indication as to the quality of the dielectric insulation used in electrical apparatus. By analyzing the dielectric losses in the insulation, this device can provide the testing engineer with a versatile high voltage diagnostic system that is suitable for testing Power Transformers, Current Transformers, Bushings, and different types of cables such as XLPE, EPR, PE and PILC.

**SCHEDULE A.5**

(Information to be submitted with tender)

ITEM No.	DESCRIPTION REQUIRED	OFFERED
1.0	<b>Tan Delta Test Set</b>	
1.1	<b>Output Voltage:</b> - 0-10 KV AC - Accuracy: $\pm 1\% + 10V$	
1.2	<b>Output Frequency:</b> 45-55Hz	
1.3	<b>Test Results:</b> - Tan Delta - Capacitance, (Accuracy: $\pm 1\% + 2$ PF, Resolution: 0.01 PF) - Power Fator, (Accuracy: $\pm 1\% + 0.01$ )	
1.4	<b>High Voltage Connections</b> - By Clamps	
1.5	<b>Test Template:</b> - Three Phase Transformer Testing - Bushings with test tap	

1.6	<b>Test mode:</b> <ul style="list-style-type: none"> <li>- UST Mode</li> <li>- GST Mode</li> </ul>	
1.7	<b>Cable Connections Diagram shall be drawn on the device</b>	
1.8	<b>Size and weight:</b> <ul style="list-style-type: none"> <li>- Must be Portable.</li> </ul>	
1.9	<b>Test Report:</b> <ul style="list-style-type: none"> <li>- Must be Automatically Generated and Movable to PC or USB Memory and can be printed or shown on display.</li> </ul>	
1.10	<b>Protection methods:</b> <ul style="list-style-type: none"> <li>- Device shall be protected from output short circuit or any wrong connections by using (MCB, Thermal cutouts, or any other methods).</li> </ul>	
1.11	<b>Operations:</b> <ul style="list-style-type: none"> <li>- Device Must Discharge and Demagnetize after each injection and make an alarm when a wrong connection is make.</li> </ul>	
1.12	<b>Input Operation Voltage:</b> <ul style="list-style-type: none"> <li>- (200-230)Vac</li> <li>- (45-55) Hz</li> </ul>	
1.13	<b>Operation:</b> <ul style="list-style-type: none"> <li>- Device shall be operate stand-alone (without Laptop), It shall be contain LCD Display.</li> </ul>	
1.14	<b>Testing cable:</b> <ul style="list-style-type: none"> <li>- Minimum 8 meter with clamp.</li> </ul>	
1.15	<b>Communication Cable:</b> <ul style="list-style-type: none"> <li>- USB OR RS232</li> </ul>	
1.16	<b>Hard Case is Mandatory</b>	
1.17	<b>Operating Temperature: 0 - 45°C</b>	

1.18	<b>Test Equipment must contain the following functions:</b> - Status indicator, Start & stop condition, Start function	
1.19	All necessary software licenses to run the test equipment from pc/laptop (Windows Compatibility) shall be supplied	
1.20	Hard & soft copy of operational & user manual detailed functional description manuals and troubleshooting manual shall be supplied in English language.	

**NATIONAL ELECTRIC POWER COMPANY**  
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**SCHEDULE B**

**MANUFACTURE AND DELIVERY DATES**

This schedule shall be completed by tenderer to show the time, calculated from the date of award of contract in which he guarantees to dispatch the equipment.

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>MANUFACTURE DATE</b>	<b>DELIVERY DATE CPT(Q.A.I.A)</b>
1	<b>Circuit Breaker Opening &amp; Closing Time Test Set</b>		
2	<b>SF6 Analyzer</b>		
3	<b>Portable Energy Meter Tester</b>		
4	<b>High Voltage Cable Fault Locator</b>		
5	<b>Tan Delta Test Set</b>		

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**SCHEDULE C**

**DEVIATIONS OR EXCEPTIONS TO THE TENDER DOCUMENTS**

Tenderers shall enter below all deviations from the Tender documents in sequential order. In the absence of any listed deviation it is deemed that the Tender document requirements are fully complied with.

<b>Clause No. in the Tender Document</b>	<b>Deviation</b>

The Tenderer hereby confirms that, except for the deviations listed in this schedule, this proposal is fully in compliance with the Tender Documents.

Tenderer's signature and Stamp:

Date

## **Section 7**

### **Price Schedules**

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**SCHEDULE D**

**QUANTITIES AND PRICE OF EQUIPMENT**

The prices entered below for the item, whether or the item is fully described, shall include everything necessary to provide the equipment complete and in working order in accordance with the provisions of the contract.

The following schedule shall be filled-in completely and without omissions by the tenderers and their manner and break-down may not be changed, however, this schedule may be supplemented by extra sheets, should that be necessary.

ITEM	Description	Qty	Unit	Price	
				Currency	
				Unit price CPT (Q.A.I.A)	Total price CPT (Q.A.I.A)
1	C.B Opening & Closing Time Test Set	3	Set		
2	SF6 Analyzer	3	Set		
3	Portable Energy Meter Tester*	1	Set		
4	High Voltage Cable Fault Locator*	1	Set		
5	Tan Delta Test Set	2	set		
<b>TOTAL PRICE FOR THE EQUIPMENT</b>					

**Total Price for the Equipment CPT (Q.A.I.A) Say (in words):**

.....  
 .....

- The above price shall appear on the Form of Tender.
- Note: The total Tender price should be filled the Form of Tender.

**\*Price shall contain training as mentioned in schedule A.3 & A.4**