# SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION

#### AT

### STATE LIFE BUILDING – 9 & 11, KARACHI

RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022

### **TECHNICAL BID**



## SUPPLY, INSTALLATION, COMMISSIONING AND TESTING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION AT STATE LIFE BUILDING NO. 9 & 11, KARACHI.

RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022

#### **POST QUALIFICATION DOCUMENTS**

Real Estate Division, 5<sup>th</sup> Floor, State Life Building – 9, Dr. Ziauddin Ahmed Road, Karachi. Ph: 021-99202877

### POST QUALIFICATION DOCUMENTS RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022

## SUPPLY, INSTALLATION, COMMISSIONING AND TESTING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) PANEL FOR SUB-STATION AT STATE LIFE BUILDING NO. 9 & 11, KARACHI.

#### INSTRUCTIONS FOR THE POST QUALIFICATION

All Tenderers desiring to quality for this contract should complete the post qualification documents.

All inquiries related to this document and or / post qualification forms should be addressed in writing to:

#### **Assistant Manager**

State Life Insurance Corporation of Pakistan, Real Estate Division, 5th Floor, State Life Building No. 9, Dr. Ziauddin Ahmed Road, Karachi. 021-99202877

#### **BASIC CONDITIONS FOR POST - QUALIFICATION**

- 1. Information supplied by the bidders for the post qualification statement must apply to the company named on the statement. The substitution of background information pertinent to post qualification will not be considered for another company related to the applicant company through a "Group Ownership". Contracts will be awarded only to the post qualified companies.
- 2. The SLIC will review the information supplied by the firms for post qualifications. Financial Bids of only those tenderers which pass the Post Qualification process will be opened in the presence of tenderer's representative who chooses to attend at a time to be determined later. The Financial Bid Documents of the Tenderers who fail to post qualify shall be returned to them unopened (As per single stage two envelope procedure of PPRA Rules)
- **3.** Firms applying for post-qualification individually are advised that any variation of constitution or membership from that put forward in response to this notice, without prior approval of the SLIC may result in disqualification of the firm of any tender it may submit.
- 4. The response to this notice' must be sufficiently detailed to convince the SLIC that the firms applying for registration have the experience as well as the technical administration and financial qualifications necessary for the execution of the subject works and they must prove that they have carried out similar works.

- **5.** Firms submitting post qualification applications may be required during the review process to make personal presentation of their qualifications to the SLIC. If so, the authorized representative of the firm will be required to be present.
- **6.** All post qualification statement documentation including financial statement, auditor's report and bank references shall be in English Language (a legally attested copy shall be required with the post qualification forms).
- **7.** Firm shall submit copies of the following certificates/information with Technical Bid:
  - i. Pakistan Engineering Council (Except C-6).
  - ii. License to Electrical Contractor (Electric Inspector Govt. of Sindh)
  - iii. GST Registration Certificate.
  - iv. SST Registration Certificate from SRB.
  - v. NTN Number
  - vi. Company Profile
  - vii. The bidder must supply the equipment manufactured by original manufacturer and must provide OEM (Original Equipment Manufacturer) Certificate with Technical Bid.

#### **RETURN TO:**

#### **Assistant Manager**

State Life Insurance Corporation of Pakistan, Real Estate Division, 5th Floor, State Life Building No. 9, Dr. Ziauddin Ahmed Road, Karachi. 021-99202877

| Please | comp | lete t | he f  | fol | lowing: |
|--------|------|--------|-------|-----|---------|
| ricase | COMP | ictc t | 110 1 | OI  |         |

| 1. | a.       | SUBMITTED BY   |       |
|----|----------|--|-------|
|    | b.       | REGISTERED ADDRESS   |       |
|    |          |  |       |
| 2. | COMPA    | PANY INFORMATION   |       |
|    | a.       | FULL/FIRM NAME OF THE COMPANY  |       |
|    | b.       | REGISTERED OFFICE ADDRESS  |       |
|    | c.       | DESCRIPTION OF COMPANY FIRM  |       |
|    | d.       | TELEPHONE NUMBER   |       |
|    | e.       | E-MAILFAX  |       |
|    | f.       | CONTRACT'S NAME/ TITLE   |       |
|    | g.       | NAME OF PRESENT EXECUTIVE DIRECTOR AND THEIR POSITION  |       |
|    |          | IN THE COMPANY WITH BIO-DATA   |       |
|    |          | OPY OF MEMORANDUM AND ARTICLE OF ASSOCIATION OR PARTNERSHIF<br>R IS APPLICABLE.  | DEED, |
| 3. | ORGAN    | ANIZATION AND FINANCIAL DATA:  |       |
|    | a.<br>b. | TYPE OF BUSINESS ORGANIZATION (CORPORATION JOINT VENTURE PARTN IF JOINT VENTURE, NAMES OF THE JOINT VENTURE PARTNERS WITH LEADING PARTNER      |       |
|    | c.<br>d. | IF PARTNERSHIP, NAME OF THE PARTNERS WITH POSITION HELD BY EACH IF CORPORATION PROVIDE THE NAME AND THE TITLE OF PRINCIPALS (PFPRESIDENT, ETC) |       |
|    |          | WHEN INCORPORATED WHERE COUNTRY STA  | ΛTE   |

| e. | DATE BUSINESS FOUNDED |
|----|-----------------------|

- f. UNDER PRESENT MANAGEMENT SINCE ......
- g. ATTACH THE LAST THREE (03) YEARS AUDITED FINANCIAL STATEMENT OF YOUR COMPANY.

If joint venture, financial statement of each firm must be submitted. No statements will be considered unless they are attested and unless certified as being audited by an independent Public Accounting Firm

#### 4. PERFORMANCE RECORD

- a. Please provide a brief resume of works completed by your firm in the last five years including all jobs involving similar nature of works (see attached Form) / Performa. (Documentary evidence as LOA must be attached)
- b. List of Projects currently in progress of similar nature of works. (see attached form) / Performa. (Documentary evidence as LOA must be attached)

#### 5. ORGANIZATION

a. What is the size of your permanent, employees?

DATE DUCINECC EQUINDED

- b. Provide organization chart of your firm indicate lines of communication and reporting responsibility.
- c. Detail of key technical staff with their qualification and experience including of those who would be deputed for the proposed project.
- d. Name of Bankers to the organization with Account Number and address. Bankers report on the credit worthiness of the organization must accompany under a sealed cover.

#### 6. LITIGATION ETC.

Provide detail of all cases: Present and past under dispute or litigation/arbitration.

| 7.     | LIST O         | F REFERENCES:  |
|--------|----------------|--|
|        | a.             | From Clients (attach certificate).   |
|        | 1.<br>2.<br>3. |  |
| 8.     | CERTI          | FICATION- SIGNATURE  |
|        | by cert        | fy to the best of my knowledge that the information hereby submitted in this orrect. |
| NAME   |                | :  |
| TITLE  |                | <u>:</u>   |
| SIGNAT | TURE           | :  |
| DATE   |                | ·  |

SEAL

#### POST QUALIFICATION FORM - 1

List Previous Experience of Similar Nature of Works (For Past Five Years)

RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022

| NAME OF<br>PROJECT &<br>LOCATION | ADDRESS | TYPE OF<br>CONTRACT/<br>PERIOD OF<br>CONTRACT | (INDICATE | STATE ANY<br>PENALTIES,<br>CLAIMS,<br>ARBITRATION | WODK | CARRIED OUT ALONG OR IN PARTNERSHIP (IF IN PARTNERSHIP STATE SHARE & NAME OF PARTNER) | START<br>DATE | DATE OF<br>COMPLETION |
|----------------------------------|---------|---|-----------|---|------|---|---------------|-----------------------|
|                                  |         |   |           |   |      |   |               |                       |
|                                  |         |   |           |   |      |   |               |                       |
|                                  |         |   |           |   |      |   |               |                       |

STATE LIFE INSURANCE CORPORATION OF PAKISTAN POST QUALIFICATION BROCHURE

#### POST QUALIFICATION FORM - 2

List All Projects of Similar Nature, Which Your Firm Has Under Way At This Time.

RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022

| NAME OF<br>PROJECT<br>&<br>LOCATION | FULL<br>NAME &<br>ADDRESS<br>OF<br>CLIENT | TYPE OF<br>CONTRACT/<br>PERIOD OF<br>CONTRACT | CONTRACT VALUE (INDICATE CURRENCY IN PAK RS. ONLY) | STATE AY<br>PENALTIES,<br>CLAIMS,<br>ARBITRATION | TYPE<br>OF<br>WORK | CARRIED OUT ALONG OR IN PARTNERSHIP (IF IN PARTNERSHIP STATE SHARE & NAME OF PARTNER) | START<br>DATE | EXPECTED<br>DATE OF<br>COMPLETION |
|-------------------------------------|---|---|--|--|--------------------|---|---------------|-----------------------------------|
|                                     |   |   |  |  |                    |   |               |                                   |
|                                     |   |   |  |  |                    |   |               |                                   |

STATE LIFE INSURANCE CORPORATION OF PAKISTAN POST QUALIFICATION BROCHURE

#### **CRITERIA EVALUATION / POST-QUALIFICATION**

### SUPPLY INSTALLATION, TESTING AND COMMISSIONING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION AT

#### STATE LIFE BUILDING NO. 9 & 11, KARACHI.

RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022

#### **MANDATORY**

- i. GST, Professional Tax Certificate
- ii. NTN & SST Certificate issued by Revenue Board Sindh Sales Tax Registration.
- iii. PEC Certificate (Except C-6).
- iii. Electrical Contractor License from Electric Inspector Govt. of Sindh.
- **iv.** Affidavit on stamp paper that the firm/company is not blacklisted by any Govt./Semi Govt./MNCs & Private Organization.
- **v.** The equipment must be OEM factory assembled with documentary evidence.

| A. | COMPANY PROF  | TILE:               |          | Page<br>Number | Marks |
|----|---|---------------------|----------|----------------|-------|
|    | i. The company established before m   | nore than 10 Years  |          |                |       |
|    | Marks (Full)  ii. The company established within 1 to per year)                               | o 10 Years (01 Mark | 10 Marks |                |       |
| B. | SIMILAR ELECTRICAL PROJECTS HANDLE  | ED                  |          |                |       |
|    | 05 Marks per Contract (At Least Rs. 2 Million (Documentary evidence like LOA or contattached) |                     | 25 Marks |                |       |
| C. | SIMILAR ELECTRICAL PROJECTS IN PROG   | RESS                |          |                |       |
|    | 05 Marks per Contract (At Least Rs. 2 Million   |                     |          |                |       |
|    | (Documentary evidence like LOA or contract copy must be   25 Marks                            |                     |          |                |       |
|    | attached)   |                     |          |                |       |
| D. | TECHNICAL STAFF:  |                     |          |                |       |
|    | i. Professional Engineers   | 02 Marks each       |          |                |       |
|    | ii. Registered Engineers  | 01 Marks each       | 15 Marks |                |       |
|    | iii. B. Tech  | 01Marks each        |          |                |       |
| E. | CERTIFICATES  |                     |          |                |       |
|    | ISO Certificate   | 05 Marks            |          |                |       |
|    | Account Maintenance Certificate   | 05 Marks            | 10 Marks |                |       |
| F. | FINANCIAL POSITION:   |                     |          |                |       |
|    | Total Volume (Average Turnover for the last   | three years)        | 15 Marks |                |       |
|    | For each 03 Million,  | 2.5 Marks           | 15 Marks |                |       |
|    | TOTAL SCORE   |                     |          |                |       |

**Note:** Minimum Qualifying / Passing - Marks = 60

LOA = Letter of Award

#### **SPECIFICATION OF MV PANEL**

#### 1. **SCOPE OF WORK:**

#### MV VCB TYPE PANEL / BOARD

- i. The work under this section consists of supplying, testing, connecting and commissioning of all material and services of MV Panel/Board as specified herein or stated on the quotation drawings and in the Bill of Quantities.
- ii. The supplier shall discuss the electrical layout with the consultant and co-ordinate at site with other services for exact route, location and position of the electrical lines and equipment.
- iii. The MV Panel/Board with accessories shall also comply with the general specifications for Electrical Works and with other relevant provisions of the quotation document.

#### 2. **GENERAL**:

The MV Panel/Board shall be sheet steel fabricated, cubical type, totally enclosed, dust tight and vermin proof. It shall be complete in all respect with material and accessories, OEM factory assembled, type tested and finished according to the specifications and to the normal requirements.

The switchboard shall be suitable for front operation only and shall:

- Be suitable for addition of units, on either side, in future.
- Be provided with adequate clearance from live parts so that flash over cannot be caused by switching surges, vermin, pests, etc.
- **>** Be designed for flush mounting of all instruments on the front side.
- Have all incoming and outgoing connections from the bottom.
- Have the components mounted so as to facilitate ease of maintenance from the front.
- Have provision for lamp test, alarm test, alarm accept and reset facility.
- Be mounted on cable trenches having their own supporting structure of angular or U steel profiles.
- Have bus bar chamber and instrument chamber protected according to International Protection Classification IP4X.

- Be provided with anti-condensate heater, controlled automatically through adjustable humidistat for maintaining required safe operating condition inside the panel and also avoid condensation. The heater shall also be manually operable and provided with protective miniatures circuit breaker and ON indication lamp. A panel light inside Instrument compartment must be placed with a door limit switch.
- ➤ Be equipped with an Energy Analyser as specified in Clause 4.7

#### 3. <u>APPLICABLE STANDARDS / CODES:</u>

The latest edition of the following standards and codes shall be applicable for the materials within the scope of this section;

BS 3245 - Bus bar BS 37 - Meters

IEC 62271-100 - High voltage A/C circuit breaker IEC 185

**Current transformers** 

IEC 186 & BS 3941 - Potential transformer

#### 4. <u>MATERIAL:</u> MV SWITCHBOARD

- The switchboard shall be fabricated with angle –iron framework, welded, grinded, finished and clad with 12 SWG sheet steel, IP4x with Cassette-type breaker, LSC-2B Classified with PM. Cubicles should be suitably divided into compartments each for Busbar, CT/PT, Breaker and Instrumentation. Each compartment should be segregated through earthed metal panels and should incorporate independent pressure relief flaps on each Cable, Circuit Breaker and Busbar Compartments. Panel/Board must be designed enabling high performance and user-friendly operation.
- The Panel/Board should be designed for front access to minimize space requirements. Functional design of each cubicle should provide an easy access to separate compartments within the cubicle, to facilitate access for installation, inspection and testing.

- The design should ensure effective Internal Arc Containment IAC qualification AFL, Internal arc kA -1 s in the likely event of a major fault occurring within the panel. The gases should be expelled at the top of the cubicle to improve the safety of the operations personnel. All operations to be performed from the front with the door closed. Operations should be simple and logical, with clear status indications of all functions.
- The Panel/Board shall be supplied complete with foundation bolts and other installation materials as recommended by the manufacturer. Proper size cable clamping channels shall be provided for fixing required size of 15 KV XLPE cable. Adequate number of eyebolts shall be provided to facilitate handling and lifting.
- An earth bar of appropriate cross section shall-be provided and connected to the body of all sections of the switchboards. The external earth terminal shall be provided for main earth connection. The doors shall be grounded by flexible strap of copper braids.
- The control cabling inside the switchboard shall be suitably numbered and harnessed by means of straps or cords. All indicating, selecting and control equipment shall be suitably arranged and clearly labeled with indelible labels, indicating the rating and designation of fuses, switches etc. The name plates shall be provided on the front of panel for each circuit and component which is accessible from outside. The nameplates shall be of stainless steel with engraved equipment designation having minimum width of 5 mm. Other labeling on the switchboard such as danger

signs, voltage and switchboard / panel identification shall be sufficient size to be legible from a distance of 5 meters.

All metal work of the switchboard shall be cleaned down to bare shining metal phosphate and the surfaces chemically prepared for power coating. Then these shall be coated with powder of colour RAL 7032 and then baked in oven. The thickness of powder coating shall not be less than 120 microns.

#### **CAPACITY AND BASIC DATA**

The switchboard shall be designed to conform to the following requirements.

Rated current : 630 Amps
Rated nominal voltage : 11 kV
Rated maximum voltage : 12 kV

Power frequency withstand voltage : 28 kV for 1 minute

Rated short circuit capacity : 350 MVA at 11 kV for one second

#### **RATED BREAKING CURRENTS (1 SECOND RATING)**

a. Symmetrical : 11 kA

b. Asymmetrical : 25 kA

Rated making current : 2.55 times rated symmetrical breaking current. Operating duty : B-3' – MB-3' – MB Impulse withstands voltage

Control voltage : 95 kV

a. Indication / metering : 110 volt A.C from secondary of P.T.

b. Tripping voltage : Series tripping or 110 volts D.C. from capacity

trip unit

#### **INTERLOCKING**

Any interlocking if required inside the MV Panel/Board and between MV Switchboard and other equipment shall be provided as stated on the drawings.

#### **BUS-BARS**

The bus-bars shall be made of high conductivity electrolytic copper and shall be completely insulated and mechanically braced to safety withstand the stresses due to short time momentary current under the fault conditions. Copper must be imported and tin plated. The phase identification of bus bars shall be by colours applied (red, yellow and blue). It should be properly insulated with heat shrink sleeves.

**SEAL & SIGNATURE OF ELECTRICAL CONTRACTOR** 

The size of busbar should be based on 45 degree centigrade ambient temperature at rated current. The clearance shall not be reduced on account of the bus bar insulation or the phase barriers.

#### **CIRCUIT BREAKER**

The circuit breakers shall be triple pole, with drawable cassette type; with arc interruption in vacuum. The operating characteristics and technical data shall be as given in art. 4.1.1. of this section. It should be maintenance free, cassette type compact design, with no-free standing pole column. It should have high mechanical protection through pole envelope.

The circuit breaker shall have trip free, direct acting motorized operated drive mechanism or manually operated drive mechanism [unless noted otherwise]. For manual operation a handle shall be provided. Interlocking device shall be provided such that the breaker can be closed only when it is in fully plugged in or fully withdraw position, and withdrawal of circuit breaker is only possible in the open or isolated position. Safety shutters shall be provided which will automatically cover the live contact as the circuit breaker is withdrawn. Other interlocks as essentially required safe and proper operation circuit breaker shall be provided. The circuit breaker phases shall be separated by barriers of approved heat resisting, non-tracking insulating material.

A triple pole-grounding switch shall be provided for cable and bus bars earthing, complete with mechanism for interlocking, it with the circuit breaker and the roll out truck, and mechanical indication to show the position of grounding switch. The grounding switch shall be rated to safety carry the fault current due to inadvertent closing of supply circuit breaker and also for making duty on the fault.

The circuit breaker shall have automatic, mechanically operated 'ON' and 'OFF' position indication. Luminous indications shall be provided with 'ON', 'OFF' and 'TRIPPED' position. Additional indication lamps a shown on the drawings shall also be furnished. The circuit breakers shall be provided with ON-OFF push buttons.

Each circuit breaker shall be provided with at least three normally closed and three normally open potential free auxiliary contacts rated for 10 Amps, 230 VAC. Provision shall be made for remote indication of the circuit breakers position/status.

A test position shall also be provided to facilitate testing operation of circuit breaker manually and by protective relays. Test socket with plug shall be provided for testing the relays.

The circuit breakers shall be complete with necessary secondary wiring with ferrules to indicate the circuit. Protection shall also be provided for all control circuits.

#### **GROUNDING SWITCH**

A triple pole grounding switch shall be provided for cable and bus bar earthing and shall be rated to safely carry the fault current due to inadvertent closing of supply circuit breaker and also for making duty on a fault.

#### **CURRENT TRANSFORMERS**

Each circuit breaker shall be provided with current transformers having following ratings and characteristics.

Type : Cast resin

Number : Three single phase units

Burden : Suitable for load of protection and instrumentation circuits.

Accuracy : 5 P 10 for protection and 1.0 for measuring with security factor 5.

Duty : For operating relays and instruments.

CT ratio : As shown on tender drawings.

No. of cores : 1 or 2 as required and as shown on tender drawings.

Rating and : As shown on drawing and/or Specification in Article 4.1.1.

requirement

Rated dynamic current: 2.55 times rated symmetrical short circuit current.

#### POTENTIAL TRANSFORMERS

Potential transformers (PT) shall be provided as shown on the quotation drawings and having the following ratings and characteristics.

Type : Cast resin

Number : Three single phase units

Burden : Suitable for load of protection and instrumentation circuits.

Accuracy : Class 0.5

Duty : For operating relays and instruments.

Each PT shall be designed to have two independent secondary windings of specified ratio for connection in star or open delta.

Voltage ratio : 11 kV / 110 V - 110 V

Rated voltage factor: 1.2 continuous and 1.5 for 30 seconds.

Rating & insulation : As shown on drawings and / or specifications.

requirement

#### PROTECTIVE RELAYS

The circuit breakers shall be provided with inverse definite minimum time non-directional over current relays for phase and earth fault protection. Relay should be flush mounted, self/dual powered which provides protection against Earth Fault, Short Circuit and Over Current. It should have up to 5 last fault records and 100 events accessible via communication port RS485, along with CBF Function. The relay shall have the following common characteristics, unless otherwise specifically mentioned:

#### Phase fault over current Setting range

Inverse : 50-200% of CT secondary rating

Instantaneous : 200-800% of CT secondary rating. The Instantaneous elements

shall also have infinity setting to block their operation, if

necessary.

Ground fault : 20-80% of CT secondary rating with instantaneous element as

for phase fault unit.

Time setting range : 0 - 1 second

Connection : 5 Amps secondary of CT

Auxiliary supply : 110 VDC from capacitor trip units in each Tripping breaker

panel.

Indication / control : 110 VAC from secondary pf PT.

Heaters and audible : 220 VAC from secondary L.T. switchboard. alarm.

Auxiliary contacts : Provision for remote indication and / or as required.

#### **CAPACITOR SHUNT TRIP UNIT**

In case series tripping is not provided, then each circuit breaker in the three panel and single panel H.T. switchboard shall be provided with 110 volts direct current trip coils, which will be supplied power through the capacitor trip units. The trip coils shall be fed through the relay contacts and the 'OFF' push button. The capacitor trip unit will be fed from 110 volts secondary of potential transformer. The capacitor trip unit shall be suitable for performing two successive tripping operations carried out within five minutes. Every circuit breaker shall be provided with a separate capacitor trip unit.

#### **METERS & SELECTOR SWITCHES**

The meter to be provided on three Panel and single panel H.T. switchboard are shown on drawings and shall be as specified below:

#### **AMMETER AND VOLTMETER**

The ammeter and voltmeter shall be, flush mounted, moving iron spring controlled having front dimension of 96 x 96 mm. Voltmeter shall have measuring range of 0-15 kV and ammeters measuring range shall be as per CT Ratio. Ammeters and voltmeters shall conform to B.S.S. accuracy class 1.0 and suitable for connection to the secondary of PTs and CTs installed on the switchboard.

#### SELECTOR SWITCHES

Ammeter selector switch shall be R-Y-B-OFF and voltmeter selector switch RY-YB-BR-OFF. The selector switches shall be complete with front plate and operating lever.

#### **ENERGY ANALYSER**

The Energy Analyser should measure currents and voltages and report in real time the rms values for all three phases and neutral. In addition, the energy analyser must calculate Power Factor, Real Power, Reactive Power, Apparent Power, Energy Values, Demand Values, Max Demand Values, THD, etc. It should have a RS485 port for communications with monitoring and control system through MODBUS-RTU communication protocol. It must have an LED on the back side, displaying status of off/on and communication. It should have a large back lit LCD display, displaying Type of measurement, Alarm indicator, maintenance icon, bar graph, units, value, phase, THD, min & max values.

#### **ALARM INDICATION**

On occurrence of any fault in the system and subsequent tripping of circuit breakers, audio alarm shall be provided on the three panel and single panel H.T. switchboard, push buttons shall be provided on MV panel for independent resetting of the audio alarm and fault indicating lamp. At least two potential free contacts rated 10 Amps AC or DC shall be available for remote connection.

**SEAL & SIGNATURE OF ELECTRICAL CONTRACTOR** 

## TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION AT STATE LIFE BUILDING #. 9 & 11 KARACHI

RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022

#### 1. **GENERAL TERMS**:

- 1.1. Tender is invited for Supply, Installation, Testing and Commissioning of 11 KV Incoming cum outgoing panel as per attached B.O.Q at State Life Building #. 9 & 11 located at Karachi.
- 1.2. Tender shall be submitted in a sealed envelope. Tender documents (all papers) must be signed and stamped to signify the acceptance of tender's conditions.
- 1.3. Technical services and operating conditions for achieving the performance shall be the responsibility of the Tenderer.
- 1.4. The successful supplier will be required to submit the schedule of supply and installation within Seven (07) Days from the acceptable Letter of Award.
- 1.5. Tender without Bid Security will be rejected.
- 1.6. Any conditional Tender will not be accepted and will be liable to rejection.
- 1.7. Contractor has to clean the site in every respect from unused material, debris and tools on completion of work.
- 1.8. All the works to be carried out under the direct supervision of Electrical Section (Real Estate) Principal Office, Karachi.
- 1.9. Payment to be made as per actual work done.
- 1.10. State Life Insurance Corporation of Pakistan will not be responsible for any loss to life or theft of tool / equipment or consumable material and will not accept any claim, liabilities or compensation.

#### 2. <u>PRE-BID VISI</u>T:

Tenderers are requested to visit the site before submission of Tenders/Bids and ensure that their offers are completed in all respect and that all terms & conditions mentioned in this document shall be strictly complied with. Tenderer must ensure/study the specification, schedules and B.O.Q as are attached with offer to avoid any debate/discussion/dispute during/after execution of work.

No TA/DA will be given to Tenderers for Pre-Bid Visit.

#### 3. PRICES AND ESCALATION:

- 1. Quoted price shall be inclusive all applicable Taxes GST, Transportation, Insurance, Octari, loading, unloading, lifting and fixing of equipment at Site, as specified in the Tender.
- 2. No price escalation claim will be entertained in any reason due to change in Taxes, Levy, Wages, Currencies fluctuation or any other change announced by the Central Government / Provincial Government or any local Authority.

#### 4. **MODE OF PAYMENT:**

- 1. 15% advance against schedule Bank Guarantee.
- 2. 50% will be made after delivery at site.
- 3. 30% after completion of job.
- 4. 05% Retention Money will be released after defect liability (i.e., Two (02) years) completion of work.

#### 5. **DEFECT LIABILITY PERIOD:**

- 1. Defect liability period shall be started after completion of work for two years
- 2. The contractor will replace the components if not found according to specification or found defective due to faulty design, material or workmanship or being non-genuine.
- 3. Cost of removal, rechecking and cartage charges for defective materials sent back to place of manufacturing, be borne by the contractor.

#### 6. **DELIVERY AND EXECUTION PERIOD:**

The contractor shall furnish a completion certificate that the work has been completed and genuine materials/parts supplied strictly confirm to the specification as laid down in the contract.

The Contractor shall Supply, Repair/Replace install the component within One Hundred fifty (150) Days from the date of commencement of work.

#### 7. LIQUIDATED DAMAGES:

Failure to execute the work within the stipulated time will render him liable to payment of liquidated damages at the rate of 0.02% of contract price per day or part thereof, of delay subject to max. to 10% of Contract amount.

#### 8. **SIGNING OF CONTRACT AGREEMENT:**

- 1. Upon acceptance of the tender the supplier shall execute with the State Life Insurance Corporation of Pakistan a proper agreement on judicial stamp paper of containing certain terms and conditions in the form prescribed by the State Life Insurance Corporation of Pakistan within Seven (07) days from the acceptance of Letter of Award.
- 2. The contract shall be Governed and interpreted in all respects in accordance with the Law of Pakistan.
- 3. State Life Insurance Corporation of Pakistan reserves the right to reject any or all offers, as per provisions of PPRA Rules.
- 4. In case of any dispute, Divisional Head (Real Estate) State Life, is the final arbitrary authority to settle the matter and it will be liable to accept the decision by both parties.

#### 9. FACTORY ACCEPTANCE TEST

The bidder must arrange the factory acceptance test with the State Life representatives before the delivery of equipment at Site. All the costs associated with factory inspection test including travel, food, loading will borne by Contractor.

## TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 11 VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION AT STATE LIFE BUILDING #. 9 & 11 KARACHI

### RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022 SPECIAL CONDITIONS

| 1.  | Bid Security                        | Rs. 325,000/- in the form of pay order / bank guarantee by schedule bank in favour of M/s. "State Life Insurance Corporation of Pakistan   |  |  |  |  |  |  |
|-----|-------------------------------------|--|--|--|--|--|--|--|
| 2.  | Release of Bid Security             | <ul><li>a. To unsuccessful Tenderer after award of work.</li><li>b. To successful Tenderer upon completion of work</li></ul>   |  |  |  |  |  |  |
| 3.  | Forfeiture of Bid Security          | <ul><li>a. If the bid is withdrawn after opening.</li><li>b. If the bidder does not accept letter of award or refuse of enter in contract</li></ul>  |  |  |  |  |  |  |
|     | Date and time of opening of Tender. | <ul> <li>a. Submission of bid on 14-12-2022 at 11:00 AM.</li> <li>b. Opening of bid on 14-12-2022 at 11:30 AM.</li> </ul>  |  |  |  |  |  |  |
| 4.  | Date of Commencement of Work        | Seven (07) days from the date of award of work.  |  |  |  |  |  |  |
| 5.  | Time of Completion                  | One Fifty (150) Days from the date of commencement of work   |  |  |  |  |  |  |
| 6.  | Liquidated Damages                  | 0.02% of the contract price per day (maximum 10% of contract amount)   |  |  |  |  |  |  |
| 7.  | Maintenance Period                  | Twenty-four (24) months from date of certificate of completion of works.   |  |  |  |  |  |  |
| 8.  | Bid/Tender validity period          | Five (05) Months   |  |  |  |  |  |  |
| 9.  | Method of Payment                   | 15% advance on <b>Bank Guarantee</b> 50% will be made after delivery at site. 30% after completion of job. 05% Retention Money   |  |  |  |  |  |  |
| 10. | Retention Money                     | 05% (Five percent) of the certified amount   |  |  |  |  |  |  |
| 11. | Release of retention money          | Upon completion of maintenance period  |  |  |  |  |  |  |
| 12. | Payment of income tax               | All prevailing government taxes (federal & provincial) including income tax, GST, super tax, sales tax, S.S.T, etc. payable by the contractor should be included in the quoted prices of each item in the bill of quantity. (No Additional payment shall be entertained) |  |  |  |  |  |  |

### STATE LIFE INSURANCE CORPORATION OF PAKISTAN REAL ESTATE DIVISION

## INVITATION OF TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) FOR SUBSTATION AT STATE LIFE BUILDING #. 9 & 11,

#### KARACHI

RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022

FINANCIAL BID DOCUMENTS

### FINANCIAL BID

REAL ESTATE DIVISION

5th Floor, State Life Building #. 9,
Dr. Ziauddin Ahmed Road,
Karachi

#### **BILL OF QUANTITIES**

#### TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION AT STATE LIFE BUILDING #. 9 & 11, KARACHI

| Sr. #. |                               | Description   |    | Qty. | Unit | Rate (Rs.) | Amount (Rs.) |
|--------|-------------------------------|---|----|------|------|------------|--------------|
| 01.    | paint<br>brea<br>resp<br>comp | oly and providing of 11 kV Cassette type VCB incoming MV Parameter 20 KA rating for protection and metering with power and MS Steel Sheet 14 SWG, busbar components cirker wiring & ready to install/floor mounted complete in ect as per KE specification and assembled in OEM factory prising with <b>Trolley for Circuit Breaker</b> (02 Nos.) One for eding. (One Panel for SLB-11) | 02 | Nos. |      |            |              |
|        |                               | VCB 630 Ampere, 20 KA 50 Hz, 3 Phase Manual, W-coil 0.5A, Insulation level 12/28/75KV   | 01 |      |      |            |              |
|        | 02.                           | CT's 100/5/5A for protection and metering FICO, Schneider, Siemens .  | 03 |      |      |            |              |
|        | 03.                           | PT's single pole, <u>11000/110V</u> FICO, Schneider, Siemens 3 3  | 03 |      |      |            |              |
|        | 04.                           | O/C, SC & E/F relay with + PT Volts Siemens, Schneider  | 01 |      |      |            |              |
|        | 05.                           | Combined type electronic KWh, KW and KVARh Meter with MD1   | 01 |      |      |            |              |
|        | 06.                           | Ammeter with selector switch  | 01 |      |      |            |              |
|        | 07.                           | Voltmeter with selector switch  | 01 |      |      |            |              |
|        | 08.                           | Indication lamp + MCBs (Set)  | 01 |      |      |            |              |
|        | 09.                           | Earthing switch   | 01 |      |      |            |              |
|        | 10.                           | Anti-condensation Heater + Thermostat   | 02 |      |      |            |              |
|        | 11.                           | Capacitive Voltage Indicator  | 01 |      |      |            |              |
|        | <b>12.</b>                    | Housing   | 01 |      |      |            |              |
|        | <b>13.</b>                    | Control MCB's (Set)   |    |      |      |            |              |
|        | 14.                           | Any masonry work if required.   | 01 |      |      |            |              |

#### **BILL OF QUANTITIES**

## TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION AT STATE LIFE BUILDING #. 9 & 11, KARACHI

| Sr. #.      |   | Description   |   | Qty. | Unit | Rate (Rs.) | Amount (Rs.) |
|-------------|---|---|---|------|------|------------|--------------|
| Sr. #.  02. | 630 Steel read spec for S 01. 02. 03. 04. 05. 06. 07. 08. 09. | Ampere 20 KA rating for protection with powder paint and Sheet 14 SWG, busbar components circuit breaker wiring to install/floor mounted complete in all respect as perification and assembled in OEM factory and comprising. (*ILB-09*).  VCB 630 Ampere, 20 KA 50 Hz, 3 Phase Manual, W-coil 0.5A, Insulation level 12/28/75KV  CT's 50/5A for protection FICO, Schneider, Siemens.  O/C, SC & E/F relay Siemens, Schneider  Ammeter with selector switch  Indication lamp + MCBs (Set)  Earthing switch  Anti-condensation Heater + Thermostat  Capacitive Voltage Indicator  Housing  Control MCB's (Set) | MS g & KE rwo  01  03  01  01  01  01  02  01  01  01 | 02   | Nos. | Rate (Rs.) | Amount (Rs.) |
|             | 11.   | Any masonry work if required.   | 01  |      |      |            |              |

#### **BILL OF QUANTITIES**

## TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION AT STATE LIFE BUILDING #. 9 & 11, KARACHI

| Sr. #. |      | Description  |       | Qty. | Unit  | Rate (Rs.) | Amount (Rs.) |
|--------|------|--|-------|------|-------|------------|--------------|
| 03.    |      | oly and providing of 11 kV Cassette Type VCB outgoing MV P   |       |      |       |            |              |
|        |      | Ampere 20 KA rating for protection with powder paint and   |       |      |       |            |              |
|        |      | Sheet 14 SWG, busbar components circuit breaker wiring   | _     |      |       |            |              |
|        |      | y to install/floor mounted complete in all respect as per<br>ification and assembled in OEM factory and comprising. (    |       | 02   | Nos.  |            |              |
|        | -    | LB-11).  | 1 000 | 02   | 1103. |            |              |
|        |      | VCB 630 Ampere, 20 KA 50 Hz, 3 Phase Manual, W-coil 0.5A, Insulation level 12/28/75KV                                    | 01    |      |       |            |              |
|        | 02.  | CT's 75/5A for protection FICO, Schneider, Siemens.  | 03    |      |       |            |              |
|        | 03.  | O/C, SC & E/F relay Siemens, Schneider   | 01    |      |       |            |              |
|        | 04.  | Ammeter with selector switch   | 01    |      |       |            |              |
|        | 05.  | Indication lamp + MCBs (Set)   | 01    |      |       |            |              |
|        | 06.  | Earthing switch  | 01    |      |       |            |              |
|        | 07.  | Anti-condensation Heater + Thermostat  | 02    |      |       |            |              |
|        | 08.  | Capacitive Voltage Indicator   | 01    |      |       |            |              |
|        | 09.  | Housing  | 01    |      |       |            |              |
|        | 10.  | Control MCB's (Set)  | 01    |      |       |            |              |
|        | 11.  | Any masonry work if required.  | 01    |      |       |            |              |
| 04.    | Supp | oly, installation Testing & Commissioning of 3 Core 300 sq.  | .mm   |      |       |            |              |
|        |      | V, XLPE insulated copper tape screened steel wire armou  |       |      |       |            |              |
|        |      | per conductor cables laid direct in ground or in MV cable tre  | nch,  | 00   | N/4   |            |              |
| 05     |      | alled on surface or on trav/ladder completed in all respect.  5kV cable termination kits suitable for 3 core, 300 sq. mm | 15    | 90   | Mtr.  |            |              |
| 0.5    |      | able and installed at:   | , 13  |      |       |            |              |
|        | a    |  |       | 6    | Jobs  |            |              |
|        | b    |  |       | 2    | Jobs  |            |              |
|        | C    |  |       | 1    | Job   |            |              |
|        | (    | d) 500kVA Power distribution Transformer   |       | 1    | Job   |            |              |

### BILL OF QUANTITIES TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF

#### 11 KV VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION AT

#### STATE LIFE BUILDING #. 9 & 11, KARACHI

| Sr. #. | Description  | Qty.       | Unit | Rate (Rs.) | Amount (Rs.) |
|--------|--|------------|------|------------|--------------|
| 06.    | Installation testing & commissioning of above Panel with incoming/outgoing cables, existing earth & with dismantling (any crane work will be included) of existing OCB Panel | 01<br>Job. |      |            |              |
| 07.    | Salvage value of exiting OCB Panel of SLB-09 & SLB-11 (-)  | 06         | Nos. |            | Rs.          |
|        | Total Amount (Inclusive of all Taxes)  |            |      |            |              |

| Rupees in Word |
|----------------|
|----------------|

- i. The bidder must attach the datasheet/Technical Catalogue of equipment with the financial bid documents
- **ii.** Contractor will supply, install, commission & test all material & equipment as per manufacturer's specifications / procedure. The cost quoted by him shall be inclusive of labor, transportation, material, all applicable taxes, profit etc.
- **iii.** The equipment's of MV Panel shall be from the list of manufacturers attached at Annex- A or their equivalent.
- **iv.** The contractor has to procure material from authorized partner/distributor with documentary evidence.

| SEAL & SIGNATURE OF ELECTRICAL C | ONTRACTOR |
|----------------------------------|-----------|

#### TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 11 KV VCB (VACUUM CIRCUIT BREAKER) PANELS FOR SUB-STATION AT STATE LIFE BUILDING #. 9 & 11, KARACHI

RE-TENDER NO. PEN/RE/EW/KHI/DEC/4911/2022

#### VCB Panel Manufacturer

- 1. Siemens
- 2. Schneider

Note: Contractor/bidder can quote for any other brand which meets the specification and can obtain equivalency certificate from manufacturer.

#### **Cable Panel Manufacturer**

- 1. **Pakistan Cables**
- 2. Pioneer Cable
- **Universal Cable** 3.
- AGE 4.

**Note:** Contractor/bidder can quote for any other brand which meets the specification and can obtain equivalency certificate from manufacturer.

#### Cable Termination Manufacturer

- 1. Raychem (Germany)
- 2. 3 M (USA)

**Note:** Contractor/bidder can quote for any other brand which meets the specification and can obtain equivalency certificate from manufacturer.

SEAL & SIGNATURE OF ELECTRICAL CONTRACTOR