**RESERVE BANK OF FIJI**

# REQUEST FOR TENDER

**Lift Switchboard Upgrade**

Requirement Specification Document

## A. OBJECTIVE

1. The objective of this project is to:
    a. Supply, install and replace the outdated lift switchboard with a compliant and safe electrical distribution system.
    b. Provide dedicated power to three lifts and the house circuits.
    c. Ensure compliance with Lock-Out Tag-Out (LOTO) procedures and include surge protection devices (SPD).
    d. Support future scalability and maintain reliable operation of the lift system.

## B. INTRODUCTION

2. This document defines the requirements for upgrading the electrical distribution system for a group of three Otis Gen2 lifts. The current switchboard, installed in the 1980s, no longer complies with modern electrical standards and needs to be replaced to ensure compliance with AS/NZS 3000 standards, safe operating procedures and to protect the lift equipment.
3. As part of OTIS pending items to permanently connect the three lifts to the switchboard, RBF is required to upgrade the Lift room switchboard with modern circuit breakers as per the AS/NZS 3000standard.
4. The new system will support three lifts, house circuits, will provide provisions for monitoring, compliance with LOTO (Lock-Out Tag-Out) procedures, and surge protection.
5. The main distribution board (MDB) will remain at its existing location Tower 14 Lift room, with a new sub mains cable running to a new Sub-Distribution Board (SDB) at a location nominated by the lift vendor in the Tower 13 plant room.

## C. SYSTEM OVERVIEW

6. Existing Condition:
   The current Lift room distribution board is old, non-compliant, and lacks the capability for modern load management, monitoring, surge protection and safe operational procedures like LOTO.
7. Lift Power rating:
    a. Motor rating: 23.4kW
    b. Mains Power rating: 24.7kW
    c. Max Demand: 55Amps
8. New Installation:
    a. MDB: The main distribution board which will remain at the existing location T14 Lift room.
    b. SDB: A new sub-distribution board will be installed at a location nominated by the lift vendor in T13 Plant room
    c. Submains: cable from MDB to SDB.

## D. SCOPE OF WORKS

9. The scope of work comprises the removal of the existing lift room switchboard, supply, installation, testing and commissioning of the new switchboards.
10. This shall include all necessary work required to implement the intent and meaning of this scope of works and specification.
11. Whether or not the words "supply and install" appear in this scope and specification, unless clearly excluded, all items of equipment for the complete installation are required and shall be supplied and installed.
12. Inspection
    a. The bidders must carry out the inspection of the existing layout.
    b. Inspection to be carried out at T14 lift room and T13 Plant room.
    c. Inspection includes:
        i. Noting Supply mains incoming
        ii. Trace and draw the existing single line diagram for design reference
        iii. Check cable routes from T14 to T13 plant room
        iv. Document all existing details of the lift switchboard.
        v. Take note of logistical and installation challenges.
13. Removal of the existing Lift switchboard
    a. Plan for removal must be provided prior to the removal of the switchboard. Once approved, the switchboard can be removed as per schedule.
    b. The switchboard removal should be planned with minimum disturbance to the daily business of all building occupants.
14. Supply and install switchboards and accessories as per the electrical specification.
    a. The Main distribution board (MDB) will be installed at the existing lift switchboard location T14 Lift room, housing an MCB chassis and house circuits.
    b. The second switchboard Sub Distribution Board (SDB) will be installed at T13 plant room housing a MCCB chassis, Surge protection and electrical power meter for monitoring.
    c. Supply and install a submain cable from MDB to SPD.
15. The selected contractor to arrange the disposal of the existing switchboard.

## E. ELECTRICAL DESIGN SPECIFICATIONS

16. Main Incoming Supply
    a. Cable Type: 50 mm² Mineral Insulated Copper Clad (MICC) PVC copper cable
    b. Current Capacity: 200 A

17. Main Distribution Board (MDB)
    a. Switchboard
        i. Colour to match the existing switchboard.
        ii. Able to house
            1. A Molded Case Circuit Breaker (MCCB) as the main switch.
            2. A Miniature Circuit Breaker (MCB) Chassis and its chassis isolator/breaker.
        iii. Switchboard door to be lockable.
        iv. Include Escutcheon covers with handles. (material milky Perspex).
        v. Cable entry and exit will be cable gland or Adapters.

vi. Cable gromet to be used for wiring between switchboard compartments.
vii. Have a switchboard schedule.

b. MCCB Main Switch/breaker at MDB
   i. Type: 3P MCCB.
   ii. Rating: 200 A.
   iii. Adjustable thermal-magnetic trip.
   iv. Lock-out/tag-out (LOTO) compatible.
   v. This board supply power to Sub-Distribution Board (SDB) & the MCB chassis in the same board.

c. MCB Chassis
   i. Quantity – 1.
   ii. To accommodate the existing circuits on the panel.
      1. A Total of 13 circuits:
         a. Single phase – 11
         b. Three phase – 1
         c. Two Phase – 1
   iii. Chassis to have its own main switch/breaker MCB rated at 63Amps three phase.
   iv. Chassis to be an 18 way and rated minimum 200 amps.
   v. Earth and neutral bars to match number of chassis poles.

d. Circuit breakers
   i. RCBO Type A protection.
   ii. C Type Tripping Curve.
   iii. Circuit breakers and Chassis to be of the same brand and Circuit break must fit the chassis.

18. Lift Distribution (SDB)

a. Switchboard
   i. Colour to match the existing switchboard.
   ii. Able to house:
      1. MCCB main switch.
      2. Chassis.
      3. Surge Protection Device
      4. Multifunctional energy analyser meter.
      5. Breakers for monitoring
      6. Current transformers for monitoring.
   iii. Switchboard door to be lockable.
   iv. Include Escutcheon covers with handles. (material milky Perspex)
   v. Have a switchboard schedule.

b. MCCB Main Switch/breaker at SDB
   i. Type: 3P MCCB.
   ii. Rating: 200 A
   iii. Adjustable thermal-magnetic trip.
   iv. Lock-out/tag-out (LOTO) compatible.
   v. Include Auxiliary contacts for breaker status monitoring.
   vi. Supply power to the MCCB chassis in the same board, an energy meter and Surge protection device.

c. Chassis:
   i. MCCB chassis.
   ii. Rated at 650 Amps.

iii. Able to accommodate 4× MCCBs three phase (one spare).
iv. A Total of 3 - three phase circuits:
1. Lift 1
2. Lift 2
3. Lift 3

d. Lift Circuit Breakers:
i. 3× MCCBs (3P), each rated as per lift load rating in section C.
ii. Adjustable thermal-magnetic trip.
iii. Auxiliary contact for breaker status monitoring.
iv. Reserved 4th MCCB slot for future use or spare.

19. Sub mains cable from MDB to SDB
a. Cable type
i. XLPE material or MICC cable
b. Conduct Material
i. Copper.
c. Conduct size
i. Capable to cater 200Amps.

20. Power meter
a. Voltage measurements:
i. Capable to monitor the voltages of the installation
ii. 3 phases, 4 wire system
b. Current measurements
i. 4 current channels via external CT with 5A secondary.
c. Current Transformer:
i. Able to fit and properly mounted inside the switchboard
ii. 5A as the secondary
iii. Sized for 200Amps capacity
iv. Split core type for easy installation and replacement
d. Measurement Function:
i. Voltage
ii. Current
iii. Kilowatts
iv. Kvar
v. kWh
vi. Power factor
vii. Frequency
viii. Harmonics
e. Digital Inputs
i. Minimum 5 input for breaker status monitoring.
f. Communication Ports
i. Ethernet (RJ45)
g. Protocol Supported:
i. Modbus TCP/IP for BMS integration
ii. BACnet/IP
h. Mounting
i. Panel door flush mount or DIN rail

## F. OTHER TECHNICAL REQUIREMENTS

21. Surge Protection Device (SPD):

a. A surge protection device must be included at the SDB to protect the system from voltage spikes and transient surges.

22. LOTO Provisions:
    a. Lockable main switches and MCCB breakers at both the MDB and SDB.
    b. Visible isolation points for easy lock-out/tag-out procedures.
23. IP-rated Enclosures:
    a. Enclosures must be rated appropriately to withstand environmental conditions and allow for future system expansion.
24. Compliance:
    a. All installations must comply with AS/NZS 3000 standards, AS/NZS 3010 for electrical installations of lifts, and relevant local regulations.

## G. TESTING & COMMISSIONING

25. Testing:
    a. Insulation resistance testing
    b. Continuity and polarity checks
    c. Load testing
26. Commissioning Report:
    a. A full commissioning report will be required, including verification of system functionality, monitoring capabilities, and load management features.

## H. PRELIMINARY AND GENERAL

27. Tenderer to inform himself fully:
    a. Each Tenderer must inspect and examine the site, its surroundings, and shall satisfy himself before submitting his tender and nature of the works and materials necessary for the completion of the Works, and the means of access to the site, the availability, conditions and rates of pay of labour and in general shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his Tender.
    b. Each Tenderer must make all allowances he deems necessary to ensure the Works are completed within one weekend.
    c. If a Tenderer has any doubt as to the meaning of any portion of the Works, he shall, when submitting his tender include a statement of the interpretation upon which he relies and upon which his tender has been prepared and submitted.
    d. The Tenderers are to strictly comply with the tender documents.
    e. Tenderers also have the chance to propose an alternative solution to the design specifications that is economical for RBF.
28. Temporary services & conveniences:
    a. The Contractor shall be able to use water and electrical services in the existing premises during the construction of the works. Sanitary services will be provided by RBF.
    b. RBF will provide all power and water necessary for the construction and amenities for all Contractors, free of charge. These services are located close to the area of work and the Contractor shall keep all services in a clean and tidy state.
    c. The Contractor shall bring their cleaning equipment, this includes vacuum, dustpan and brooms.

29. Protection in general
    a. Care shall be taken to protect all existing services, plant, furniture, doors, paintwork and other features from any damage. The Contractor shall be liable for any damage to the building structure or components.

## I. SITE INSPECTION ARRANGEMENT:

30. Site inspection: **Between 16th – 27th June 2025.**
31. Interested bidders are encouraged to attend the site visit and thoroughly assess the existing system.
32. Interested parties must confirm attendance or request technical information by contacting:

| | |
|---|---|
| Name: | Mervyn Wesley |
| Contact: | 9988027 |
| Email: | mervyn@rbf.gov.fj |

## J. PROPOSAL SUBMISSION DEADLINE

33. The proposal will be open for 30 days from the date of notification.
34. All submissions must be received no later than 14th July 2025 at 4pm local time.
35. Incomplete and late submissions will not be considered.
36. Any extension to the submission period will be communicated formally before the closing date.

## K. SUBMISSION REQUIREMENTS

37. Interested vendors must submit their proposals by 14th July 2025 at local time and e-mailed to the Board Secretary, Ms Subrina Hanif on subrina@rbf.gov.fj and Manager General Administration Services, Ms Melania Tamaue on melania@rbf.gov.fj .

    Proposal format:

    - **Cover Letter**
    - **Company Profile and Relevant Experience**
    - **Technical Approach and Methodology**
    - **Proposed Work Plan and Timeline**
    - **Cost Proposal and Payment Schedule**
    - **References and Past Project Examples**
    - **Including administrative requirements**

38. All proposals must be submitted in **PDF format**. Late or incomplete proposals will not be considered.

## L. ADMINISTRATIVE REQUIREMENTS

39. The Vendor should provide the following valid documents in their proposal submissions:
    - Valid Tax compliance certificate.

- Valid FNPF compliance certificate.
- Public liability cover.
- Insurance cover.
- Completed Trade Summary.

## M. PAYMENT TERMS

40. All prices should be FJD and VIP.
41. The RFP Bid must remain valid for 60 days.
42. Provisional Tax of 5% will be deducted for any contract over $1000 per annum.
43. For overseas companies who does not have any office/business locally, 15% withholding tax will be deducted from the contract amount.

## N. TENDER PROCESS

44. The steps below provide a brief outline of the Reserve Bank of Fiji's RFP process.
    - Interested vendors can liaise with the Reserve Bank of Fiji to clarify any issues before submitting their tenders.
    - Vendors must submit tenders within the time specified.
    - Analysis of the submitted tender will be done by the Reserve Bank of Fiji.
    - Clarification of tender items, if necessary.
    - Awarding of tender
    - Meeting with selected vendor regarding project delivery and preparation of the contract terms and conditions
    - Contract Signing.

## O. SELECTION PROCESS

45. Tender may not necessarily be awarded to the lowest bidder. The Bank, when analyzing the proposal, will keep in mind the delivery and support services provided by the chosen company.

# P. TRADE SUMMARY

Below is the Trade Summary which all vendors are required to fill.

Name of the Company: _____

Period of the Entire Project: _____

Workmanship Warranty: _____

Product Warranty:_____

| No. | Description | Project Cost (VIP) |
|---|---|---|
| 1. | **Supply of Main Distribution Board as per electrical specification** | |
| 2. | **Supply of Sub Distribution Board as per electrical specification.** | |
| 3. | **Installation of Main Distribution Board as per electrical specification** | |
| 4. | **Installation of Sub Distribution Board as per electrical specification.** | |
| | | |
| | **VAT at 15%** | |
| | **Total Tender Price (VAT Inclusive) FJD** | |