

52ST.305



## TENDER FORM

The Chairman – Tender Opening Committee  
PNG Power Ltd  
P. O. Box 1105  
BOROKO 111 NCD  
Papua New Guinea  
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Fax: (675) 3250791  
Email: [supplyhelpdesk@pngpower.com.pg](mailto:supplyhelpdesk@pngpower.com.pg)

We (Full name of company).....  
.....  
.....  
.....

hereby tender for the undermentioned goods and services subject to the conditions of tendering and at the prices quoted in the scheduled therein

**TENDER No.** 54/2019

**CLOSING AT** 4.00 PM FRIDAY 13<sup>TH</sup> SEPTEMBER 2019

**FOR** ELECTRICAL WORKS TO SUIT THE NEW WORKSTATIONS SET UP AT LEVEL THREE (3) GENERATION TRANSMISSION AND DISTRIBUTION BUSINESS UNIT AT PNG POWER Ltd - NATIONAL OFFICE - HOHOLA, NATIONAL CAPITAL DISTRICT.

**National Office Re-Modeling Electrical Scopes of Works****1) Introduction**

This specification summarizes the standard of workmanship, quality of materials, project supervision, scope of works, and general requirement and conditions that are relevant which shall be adapted to carry-out all associated electrical wiring and installation of equipment on the proposed re-modeling of the National Office workstations and installation of additional 36 Pole Sub-Distribution Board. This works and scope will only cover Level 03.

All wiring and related electrical works must be carried in accordance with, AS/NZS 3000:2017 SAA Wiring Rules and PPL/TC 4<sup>th</sup> Edition 2016

- 2) **Electrical Works:** Replace existing 12 Pole Sub-Distribution Board with a new 36 Pole and installation of new sub-mains, circuit breakers, cable and associated electrical fittings
- 2.1) The following does not limit the client/contractor to fully perform the necessary task required to appropriately achieve the main aim of the scope.
- 2.2) Upgrade the existing 12 Pole Sub-board to a new 36 Pole Distribution Board and install a 35.00 mm<sup>2</sup>, 4 Core+ECC, PVC/PVC Sheathed, Orange Circular cable to connect from the existing 60 Pole DB to the new 36 Pole DB. Preferred type Distribution Board Make: EATON/QUICKLAG and same Circuit Breakers to suit chase.
- 2.3) The existing 100 Amps CB used on the 12 Pole Sub-Board as a main CB/Isolator will be retained and installed on the 60 Pole MDB to feed the new 36 Pole Sub-Board.
- 2.4) All existing circuits to be retained on the existing 60 Pole Main Distribution board and existing circuits disconnected from the 12 Pole Sub-Distribution board to be re-connected on the new 36 Pole Distribution Board.
- 2.5) Cable trays with covers to be installed and all existing cables enclosed in conduits and ducts origination from the Distribution Boards to be neatly laid on the trays and securely tied down.

- 2.6) If metal cable trays are utilized, all such metal frame must be bonded to earth.
  - 2.7) All cable joint connections must be done in an approved method and enclosed in approved type PVC junction boxes.
  - 2.8) Carryout mandatory electrical integrity tests and record all results, the results are to be made available during tests and handed over to the Electrical Inspector after all works is completed and commissioned
  - 2.9) Test and commission the new Sub-Board with PPL representatives and project supervisor present.
  - 2.10) All Switch Boards and circuit breakers must be labeled on both the MDB and the Sub-Board. A label sheet must be provided and left on the Switchboard.
  - 2.11) Safety and housekeeping must be maintained at all times during the period of the project and all disconnected and removed cables and fitting remain the property of PNG Power and must not be removed from site.
  - 2.12) The contractor during site inspection shall determine the length of the cables, cable trays and circuit breakers including associated works. They shall provide detailed itemized material list, cost and project plan with timelines to achieve this scope of works.
- 3) **Electrical Works:** Identification of GPO and lighting circuits, Installation of additional GPO circuits, power socket-outlets, light fittings, cables and associated fixtures.
- 3.1) The following does not limit the client/contractor to fully perform the necessary task required to appropriately achieve the main aim of the scope
  - 3.2) Identify all power socket-outlet circuits on the MDB and trace to the final sub-circuits/individual power socket-outlets. A Standard 10A power socket-outlet circuit must consist of maximum 20 points and must be protected by a16A circuit breaker.
  - 3.3) If there is a need to install any new GPO circuits, the circuit breakers to be used must be of the same type that are currently in use on the MDB.

- 3.4) Disconnect and remove existing cables and install new cables and re-route neatly to suit locations of down poles for each group of workstations.
- 3.5) Method of Installation of cables shall be on cable trays or enclosed in conduits or trunks when originating from the MDB and must be segregated from all data and communication cables. All cables originating from the Distribution Switchboards to the final sub-circuits must be laid neatly on cable trays or in trunks along the corridors above in the ceiling and must tee-off to the drop-poles. Cable trays must be fixed to the concrete ceiling or suspended from the concrete ceiling and not placed on the suspended ceiling frame system.
- 3.6) Cables installed in the ceiling must be neatly suspended above the ceiling and tied on catenary wire. All cable joint connections and termination in the ceiling must be done in approved type PVC junction boxes and suspended in air.
- 3.7) Method of installation of cables from the ceiling down to the workstations shall be enclosed in approved type drop poles.
- 3.8) Supply of power socket-outlets must be of approved type and to be installed and fitted in accordance with general wiring practices.
- 3.9) Installation of additional light fittings will only be done in consultation with PPL properties Officers, only if required.
- 3.10) All works to be carried out in consultation with respective PPL personnel.
- 3.11) Any disruption of existing infrastructure or services to the building or level must be communicated to PPL Officer responsible before works is carried out.
- 3.12) Carryout mandatory electrical integrity tests and record all results, the results are to be made available during tests and handed over to the Inspector after all works is completed and commissioned.
- 3.13) All circuits must be systematically arranged in zones and circuit breakers labeled on the MDB and on the faceplate of individual power socket-outlets.
- 3.14) Test and commission the new wiring with PPL representatives and project supervisor present.
- 3.15) All works must be planned and arranged in a manner that will require minimum disruption to PPL operations during normal working hours. The electrical works must be planned in a systematic approach so as to allow works to be carried out in zones

with particular attention to be focused on the workstation arrangements.

- 3.16) All power socket outlets must be labeled and the labels must indicate the designated MDB and circuit breaker numbers.
- 3.17) If metal cable trays are utilized, all such metal frame must be bonded to earth.
- 3.18) Safety and housekeeping must be maintained at all times during the period of the project and all disconnected and removed cables and fitting remain the property of PNG Power and must not be removed from site.
- 3.19) The contractor during site inspection shall determine the length of the cables, cable trays and number of power outlet sockets including associated works. They shall provide detailed itemized material list, cost and project plan with timelines to achieve this scope of works.

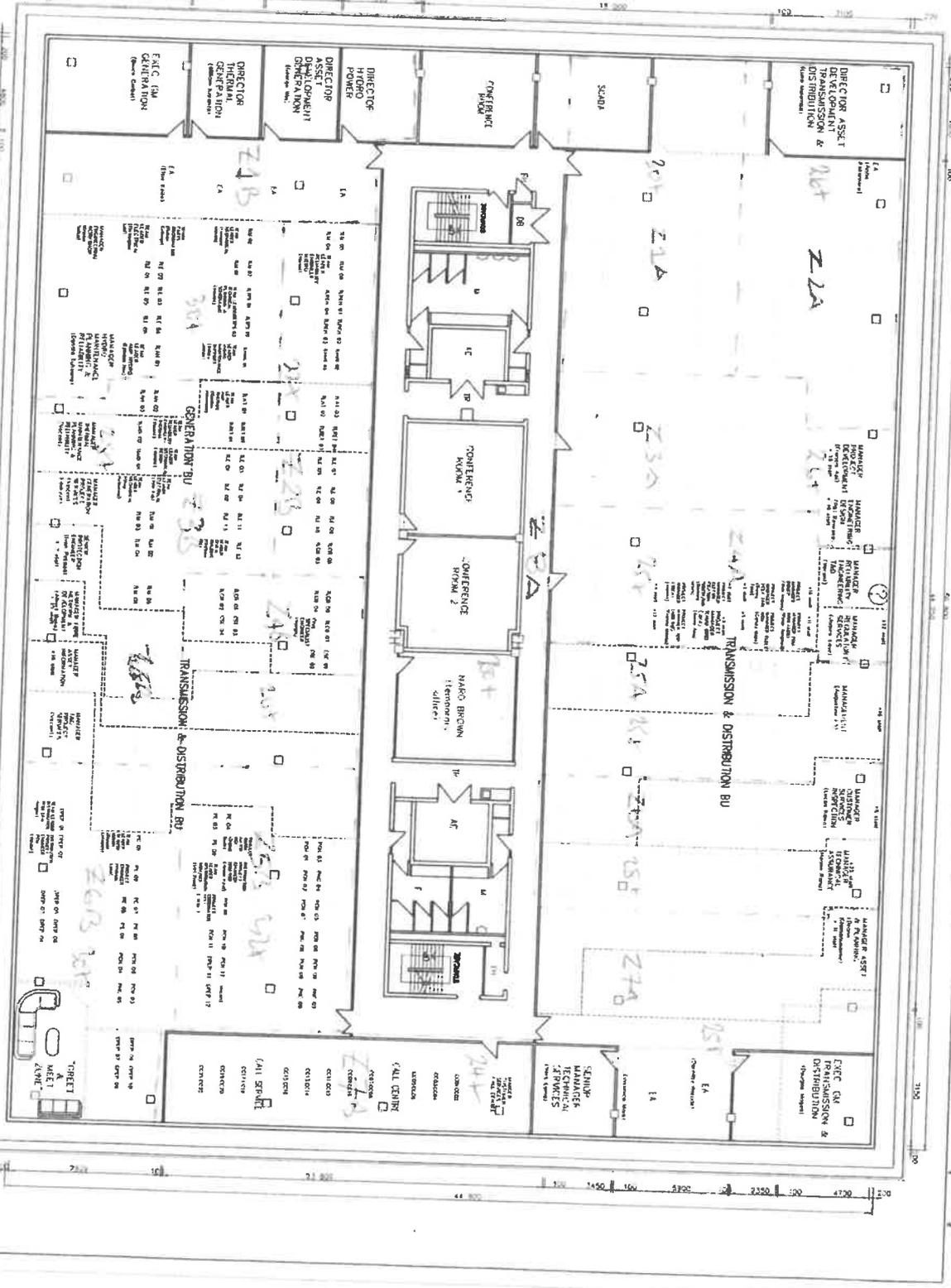
.....End of Scope.....

Complied By: Jerry Maine	Signature: 	Date: 14/08/19
Checked By: Mary Wamugl	Signature: 	Date: 14/08/19
Approved By: Lucas Kawo	Signature: 	Date: 15/08/19
Approved By: Gorethy Nongkas	Signature: 	Date: 14/08/2019



LEGEND	
OFF	OFFICE
MR	MEETING ROOM
SR	STORE ROOM
M	MALE
F	FEMALE
M/F	MALE AND FEMALE
AC	AIR CONDITION
FH	FIRE HOSE
TR	TEA ROOM
CR	CONTROL ROOM
DB	DISTRIBUTION BOARD

- BUSINESS UNITS & GROUPS**
- 1. TRANSMISSION & DISTRIBUTION BU
    - ASSET DEVELOPMENT MGMT
    - ASSET MANAGEMENT PLANNING
    - EFFICIENCY SERVICES INSPECTION
    - ELECTRICAL & CONTROL PROJECT SOUTH/ANGI
    - ENGINEERING DESIGN
    - FIBRE NETWORK / SCADA
    - HEALTHY TARIFF PROJECT
    - PM SYSTEM CONTROL
    - PROJECT SUPPORT SERVICES
    - RAWD GRID PROJECT
    - REGULATORY SERVICES
    - RELIABILITY ENGINEERING
    - SCADA PROJECT
    - SYSTEM CONTROL
    - T&D PROJECT SERVICES
    - TECHNICAL ASSISTANCE
    - TECHNICAL SERVICES
    - TRANSMISSION & DISTRIBUTION MGMT
  - 2. GENERATION
    - ASSET DEVELOPMENT GENERATION
    - GENERATION MANAGEMENT
    - MAINTENANCE PROJECT SERVICES
    - PLANNING PROJECT SERVICES
    - RELIABILITY ENGINEERING
    - TECHNICAL ASSISTANCE
    - TECHNICAL SERVICES
    - TRANSMISSION & DISTRIBUTION MGMT



Client/Owner/Author/Date	Rev.	Revision	By	CHK'd	Date
CUSTOMER: PNG POWER LTD					
Drawn					
Checked					
Finalized					
Approved					



Drawn	Checked	Finalized	Approved

SECTION 12 ALLOTMENT 01 - HOBOLA, PORT MORESBY.  
PNG POWER NATIONAL OFFICE BUILDING - PROPOSED  
LEVEL THREE (03) SITTING ARRANGEMENT PLAN

Location	Title	Number	Person
	A1	M	

SCALE 1 : 200

01 OF 04

DATE: 2013.10.23

*Handwritten signature/initials*