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SCOPE OF WORKS

Project Title: **CONSTRUCTION OF PAD FOUNDATIONS AND FENCING FOR LOW VOLTAGE AUTOMATIC DISTRIBUTION VAR COMPENSATORS**

Project Locations: **GORDONS INDUSTRIAL AREA, BOROKO FEEDER 2**

Document prepared by:

A handwritten signature in blue ink, appearing to be "V. Limbia", with the date "10th / 04 / 2017" written next to it.

Victor Limbia - Project Coordinator

Date:

Endorsed by:

A handwritten signature in blue ink, appearing to be "B. Hoga", with the date "11th of April 2017" written below it.

Bruce Hoga - Project Manager

Date: 11th of April 2017

File Ref. No:

1. GENERAL SCOPE

This scope of works (SoW) governs the construction of pad foundations and fencing required for Low Voltage Automatic Distribution VAR Compensators. This project comprises of the Clearing/Grubbing of the site, Earth Works and Concrete Works for the Distribution VAR Compensator foundation pads that will be located at the base of each pole mounted transformers at seven different locations listed below;

1.1	Ruta Place	TX 167
1.2	Ahuia Street	TX 165
1.3	Frangipani Street	TX 90
1.4	Poinciana Street	TX 89
1.5	Varahe Street	TX 87
1.6	Varahe Street	TX 84
1.7	Ago Street	TX 86

The scope precisely demarcates the responsibilities of the bidding contractor & PNG Power Ltd and also includes the terms and conditions to which the contractor shall adhere to in performing the works describe herein.

A comprehensive terms & conditions of contract including contractual obligations will be provided to the successful bidder of this project upon completion of the Bid evaluation process and notification of contract award.

The project is expected to be completed within the project schedule as allocated. Any project time variation shall seek prior approval from the Project Coordinator and relevant stakeholders.

A 60% mobilization payment of the Total project value shall be made available for work to commence subsequently upon contract issuance whilst 40% will be as retention and shall be made payable upon successful completion of the project. No claims for any variations will be accepted unless agreed otherwise.

2. STANDARDS

All work shall be carried out in accordance to PNGs 1002 1982, and suitable PNG Power Ltd requirements where applicable.

Any modifications or alterations to suit the existing requirement shall only by authorized by the PPL Project Coordinator with endorsement & approval from Project Manager.

3. SCOPE DETAILS

CONTRACTOR'S REQUIREMENTS

3.1 PRELIMINARY

Conduct a mutual site inspection with PPL at the transformer locations to determine suitable site for the construction of the recommended LV Automatic Distribution VAR compensator pad foundations and spike fencing with reference to respective dimensions and specifications provided on the drawings issued.

Subsequently, the contractor is then required to furnish a price bid within Ten (7) working days for the Installation including associated works.

The price bid should be accompanied with:

- 3.1.1 A Comprehensive Project Management Plan
- 3.1.2 A Construction Schedule of all related works
- 3.1.3 List of Skilled & Unskilled Personnel
- 3.1.4 List of required Equipment & Accessories
- 3.1.5 Schedule break up of implementation costs

3.2 METHODOLOGY

The selected contractor is then responsible to:

- 3.2.1 Clear, grab and strip the top soil for the VAR Compensator Pad as directed by the PPL Coordinator.
- 3.2.2 Excavate, supply and backfill excavated foundation area with suitable materials specified in the bid drawings.
- 3.2.3 Construct pad foundations as per the construction drawings supplied by PPL or as approved by the PPL Project Coordinator.
- 3.2.4 Excavate cable trenches a maximum length of 5m and maximum depth of 750mm and width of 200mm as directed by the PPL Coordinator.
- 3.2.5 Install 2x 100NB 10m steel pole for cable support as directed by the PPL Project Coordinator
- 3.2.6 Construct and fabricate where necessary spike fencing as per directions from PPL Project Coordinator after the installation of the distribution VAR compensators.
- 3.2.7 Detailed instruction on the work required is supplied on the relevant drawings.
- 3.2.8 Install earth rods and cables as directed by PPL Project Coordinator
- 3.2.9 Upon completion of Construction, the designated contractor shall advise the PPL Project Coordinator for joint job inspection before final approval will be given by PPL.

PNG POWER LIMITED'S REQUIREMENTS

3.3 PRELIMINARY

- 3.3.1 PPL will liaise with NCDC for Clearance to implement the project
- 3.3.2 PPL will carry out a joint site inspection with the contractor to determine the identified sites for installation of the foundation pads and spike fencing.
- 3.3.3 PPL will provide the approved construction drawings for foundation pads and spike fencing.
- 3.3.4 PPL shall do a bid evaluation of the contractor's bid.

3.3.5 PPL shall prepare & furnish the Terms & Conditions of Contract.

3.3.6 PPL shall coordinate the project implementation for the construction of foundation pads and fencing for LV Distribution VAR Compensators.

4 CONTRACTUAL TEAM REQUIREMENTS

4.1 The Selected Contractor shall provide skilled and certified expertise to undertake the project within the given schedule.

4.2 The Selected Contractor shall be supervised by PPL Project Coordinator.

4.3 The Selected Contractor shall select its nominated representative to participate in project meetings.

4.4 The Selected Contractor shall provide weekly progressive updates

5 TOOLS & EQUIPMENT

5.1 All tools and equipment required to complete the project shall be provided by the contractor unless otherwise additional specialised tools are required & recommended by the PPL Project Coordinator to complete the project/task specified.

5.2 All miscellaneous materials & consumables shall be provided by the selected contractor unless otherwise specified and recommended by the PPL Project Coordinator and approved by Project Manager.

6 MATERIALS

6.1 PPL shall supply ready mix Mesh wires and tie wires for the concrete foundations of the pad.

6.2 PPL shall supply 2 x 100NB steel poles for the cable support.

6.3 PPL will supply pre-fabricated 3m length of picket fencing, post and gate accessories.

6.4 The contractor is required to supply the bollard and piers as per specifications on the drawings supplied.

6.5 The contractor will supply concrete for the base of the cable support steel poles and the fencing posts.

6.6 All other materials required will be supplied by the contractor.

7 DRAWINGS

7.1 All works to be undertaken herein this SoW shall be guided by the conceptual design provided by the PPL Project Team.

7.2 All guided directions shall be acknowledged by PPL Project Coordinator.

7.3 Any alterations or modifications to the design arrangement shall be approved by the PPL Project Coordinator and shall be properly documented and circulated amongst all stakeholders.

8 PROJECT COMPLETION

- 8.1** The Project shall be completed meeting the entire PPL requirement and delivered within 3 months from the initial award of the contract.
- 8.2** The selected contractor shall ensure proper handover is effected and that PPL is satisfied with the completion of the project.
- 8.3** The selected contractor shall ensure that any time & cost variations **MUST** be verified and/or certified by PPL Project Coordinator to warrant project completion.
- 8.4** The selected contractor shall give prior notice to the PPL Project Coordinator to witness inspection of completed works. The PPL Project Coordinator will acknowledge completion of installation when all works are deemed satisfactory.

9 SITE STORAGE AND SAFETY

- 9.1** The selected contractor shall ensure all tools, equipment and unused materials are removed from project site and are safely stored away to proper assigned storage location.
- 9.2** The selected contractor and PPL shall conduct a risk assessment on the project prior to the commencement of any work.
- 9.3** The selected contractor shall ensure the work site is safe & clear for access and operation before leaving the project site.

10 NOTES TO CONTRACTOR

- 10.1** The contractor is required to prepare and furnish a bid proposal for the construction of these seven pad foundations and fencing.
- 10.2** It is essential to complete this work as soon as possible.
- 10.3** This SOW is for bidding purposes only and is not considered as an award of contract.

11 ATTACHMENT

- 11.1** 225kVAR Standard Easement SS 4/3-1-pg1
- 11.2** 225kVAR Standard Easement SS 4/3-1-pg2
- 11.3** 225kVAR Standard Easement PPL_VAR Fencing Details SS 4/3-2 pg1
- 11.4** 225kVAR Standard Easement PPL_VAR Fencing Details SS 4/3-2 pg2
- 11.5** GIS Map of Boroko Feeder 2

I acknowledge, read and fully understood the details for the SoW specified herein and will provide a bid proposal for the above mentioned work as detailed.

Contractor Representative:

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Name:	Signature:	Position Title	Date

For & on-behalf of:
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