ANNEX II + III : TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title: Supply of 11kv Transformers and Switchgear for Overhead to Underground Conversion

Publication reference: 138-848

Columns 1-2 should be completed by the Contracting Authority
Columns 3-4 should be completed by the tenderer
Column 5 is reserved for the evaluation committee

Annex III - the Contractor's technical offer

The tenderers are requested to complete the template on the next pages:

- Column 2 is completed by the Contracting Authority shows the required specifications (not to be modified by the tenderer),
- Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words “compliant” or “yes” are not sufficient)
- Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offered specifications.

Background Information

Project Description: Retro Fit Overhead to Underground Conversion:

Niue Power is currently undertaking a project to replace the ageing 11 kv and LV overhead network with Underground Cabling and new Pad Mounted Transformers and Switchgear.

The works will involve the following works:

- Installation of HV and LV Cables along the route of the existing overhead Power Network.
- Installing replacement Pad Mounted Transformers and 11kV Switch Gear and Distribution Pillars.
- Upgrade of Streetlights to LEDs.

The Tender is for the <u>Supply of Transformers and Switchgear only</u> as Niue Power Corporation (NPC) will install and commission the equipment utilizing Staff, Plant, Equipment and Resources.

In preparation for the Transformer and Switchgear installations NPC have completed the following tasks:

1. Installation of approximately 6 kms of HV/LV Cables laid along the route of overhead lines and into position where the Transformers, Switchgear and distribution pillars are to be located. See image below of the trenching work already carried with cables laid.

2. Concrete Culverts are now installed at the locations where the Transformers and Switchgear are to be situated and Cables have been laid into position. See image below.

The Culvert Foot Print is as follows:

Length 2000mm x Width 1200mm x Depth 1000mm. Cable Entry/Exit holes on the Lid of Culvert will be inserted based on the successful Tenders submission in line with the footprint of the design of Equipment. (Holes will be cut into culvert top to suit prior to installation).

Shipping / Transportation

- Niue receives sea freight via Ship approximately once a Month. The current Company providing this service to Niue is Matsons located :
  96 Beachcroft Ave, Onehunga, Auckland, New Zealand. (+64 9 622 1016)
- All equipment must be transported in 20 Foot Containers and be secured adequately for Sea Freight. Niue has facilities to manage maximum 20 T Containers at the Port of Alofi, Niue.
- The successful Supplier must contact Niue Customs and Quarantine for guidance to ensure all current export/import/Fumigation requirements are considered and adhered to. It is the sole responsibility of the Successful Tenderer to ensure that all requirements are considered and conformed to.
- Include all transportation, freight, Insurance and associated costs within the offer.

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1 - Transformers	**5 pieces of 3 Phase 50 kVA 11kV/415 RTE Transformers with HV Inserts for 6 x Elastimold Type Terminations.(**Cable Jointing Kit :ABB Elastimold Part Number for Terminations 156 LR Deadbreak 200 AMP 15.2 KVL- G Max) • T-Blade sectionalizing switch (RTE Isolating Switch) • 2 x set of 3 Phase 200A Bushing wells, one set for incoming cables, the other set for outgoing cables, Inserts and Elbows to be supplied for 35-50mm 3 x 1 Core XLPE 11kv Cable.(Suitable for Cable Jointing Kit : ABB Elastimold Part Number for Terminations 156 LR Deadbreak 200 AMP 15.2 KVL- G Max) • LV freestanding galvanised frame with a Formica panel • Low Voltage cabling to the top side of the MCB's • 1 x 63A 3 pole MCB, 3x 63Amp MCB's, 1x25Amp MCB all mounted on a formica panel. • MDI and CT set, installed between the transformer and the MCB's. • A combined earth/neutral bar on the LV switchgear frame • Transformer to be enclosed in suitable Cabinet			

	coated with heavy duty paint surface treatment specifically designed for Tropical Areas and exposure to the Coastal elements.			
2 - Transformers	**2 pieces of 3 Phase 200 kVA 11kV/415V Transformers with HV Inserts for 6 x Elastimold Type Terminations.** • 2 x set of 3 Phase 200A Bushing wells, one set for incoming cables, the other set for outgoing cables, Inserts and Elbows to be supplied for 35-50mm 3 x 1 Core XLPE 11kv Cable.(Suitable for Cable Jointing Kit : ABB Elastimold Part Number for Terminations 156 LR Deadbreak 200 AMP 15.2 KVL- G Max) • LV freestanding galvanised frame with a Formica panel • Low Voltage cabling to the top side of the MCB's • 1 x 63A 3 pole MCB, 3x 63Amp MCB's, 1x25Amp MCB all mounted on a formica panel. • MDI and CT set, installed between the transformer and the MCB's. • A combined earth/neutral bar on the LV switchgear frame • Transformer to be enclosed in suitable Cabinet coated with heavy duty paint surface treatment specifically designed for Tropical Areas and exposure to the Coastal elements			
3 - Transformers	**1 piece of 3 Phase 200 kVA 11kV/415V Transformer. (Sole Use Transformer)**			

	• 1 set of 3 Phase 200A Bushing wells, one set for incoming cables, the other set for outgoing cables, Inserts and Elbows to be supplied for 35-50mm 3 x 1 Core XLPE 11kv Cable.(Suitable for Cable Jointing Kit : ABB Elastimold Part Number for Terminations 156 LR Deadbreak 200 AMP 15.2 KVL- G Max) • LV freestanding galvanised frame with a Formica panel • Low Voltage cabling to the top side of the MCB's • 1 x 63A 3 pole MCB, 3x 63Amp MCB's, 1x25Amp MCB all mounted on a formica panel. • MDI and CT set, installed between the transformer and the MCB's. • A combined earth/neutral bar on the LV switchgear frame • Transformer to be enclosed in suitable Cabinet coated with heavy duty paint surface treatment specifically designed for Tropical Areas and exposure to the Coastal elements.			
4 - Transformers	a. RTE Transformers to be supplied with Insulated Switching Stick Suitable for HV Switching and keyed alike padlocks where required to lock off / operate the switch and also locks for securing the doors. b. Include brackets for mounting direct to a Concrete Slab or Culvert Arrangement.			

	c. Advise of any relevant Quality Management Processes or Standards the equipment is constructed or manufactured in accordance. d. Successful vendor to provide warranty Period of 12 Months from Receipt of Goods. 5 year Warranty for Paint Treatments. Vendor accepts the transportation and freight costs associated with faulty goods return to vendors dispatch for repairs under warranty items.			
5 - Switchgear	**Design, Manufacture and Supply of 11kv Switch Configurations for new Underground LV/HV Cable Installation located on Niue.** • 5 pieces of 2 + 2 (Fused) HV 11 kV Switchgear. • 1 pieces of 3 + 1 (Fused) HV 11 kV Switchgear. • 1 piece of 2 + 1 (Fused) HV 11 kV Switchgear. a. Switchgear to be enclosed in suitable Cabinet coated with heavy duty paint surface treatment specifically designed for Tropical Areas and exposure coastal elements. b. Switchgear to be supplied with its own Operating Handle and keyed alike padlocks where required to lock off / operate the switch and also locks for securing the doors. c. Include brackets for mounting direct to a Concrete Slab or Culvert Arrangement. d. Advise of any relevant Quality Management Processes or Standards the equipment is			

	constructed or manufactured in accordance. e. Switchgear to be inclusive of all Cable Accessories / kits suitable for 35-50mm XPLE HV 3 x 1 Cable terminations. Including Joint Kits, Lugs, Earth Bar arrangement and Cable Entry Glands suitable for 35mm to 50mm XPLE 3 Core Cables. f. Successful vendor to provide warranty Period of 12 Months from Receipt of Goods. Vendor accepts the transportation and freight costs associated with faulty goods return to vendors dispatch for repairs under warranty items. g. Data Sheets for proposed equipment to be submitted for evaluation. h. Provide details on any Cathodic Protection that may be available with the equipment supplied.			