

PART C3: SCOPE OF SERVICE

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C3.1 EMPLOYER'S SERVICE INFORMATION

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1 Description of the *service*

1.1 Executive overview

The Port of Durban makes use of programmable energy meters, monitoring systems and fiber optic networks for the supervision of high voltage electrical network, protection systems and electricity/water billing of manual water meters for shipping water consumption. On monthly basis these systems require specialist maintenance, fault finding and/or reprogramming. These systems form an integral part of the overall financial cost allocation and cost recovery from both the private and internal Transnet clients. This service is critical for the accurate accounting of water and electricity in the Port of Durban.

In order to respond to metering and billing system faults, programming problems and execute repairs associated with Microsoft software technologies, it is essential that the port is able to quickly resolve such technical issues as and when they rise, thus minimizing the possibility of under or over recoveries of electricity and water from port clients. It is also imperative that these systems be subjected to independent review and audit on regular basis to ensure /verify full connectivity and integrity of the data and calculations used to recover operational cost from clients. The port has to annually adjust tariff increases and as such requires these specialists to assist with these adjustments.

This contract covers Transnet National Port Authority (TNPA) requirements with respect to monitoring and maintenance of Power Smart Web for Electricity and Water Billing system in the Port of Durban. The scope to be carried out by the *Contractor* includes but not limited to the items of work as summarized below:

- Monitor, maintain and ensure at all times that the Transnet National Ports Authority, Port of Durban electricity/water billing system (Server and Power Smart Web) is updated with the latest Power Smart OPC SERVER updates and new features.
- On a monthly basis run a diagnosis test and checks to verify the functionality of the server, power smart web and resolve any issues detected.
- Perform remote diagnosis on the server as and when required.
- Provide remote assistance through VPN.
- Provide onsite assistance with server configurations, metering communication, and programming of energy and water meters.
- Add and delete field devices on the server (electricity and water meters).

The *Contractor* shall comply with all relevant standard specifications applicable to this service, the standards includes but not limited to the ones listed below:

- NRS 057: Code of Practice for Electricity Metering
- South African Distribution Code of Metering, Version 6 of 2014
- IEC 60687: 2 – Alternating Current Static Watt-Hour Meters for Active Energy

1.2 Interpretation and terminology

The following abbreviations are used in this Service Information:

Abbreviation	Meaning given to the abbreviation
TNPA	Transnet National Port Authority
POD	Port of Durban
BBBEE	Broad Based Black Economic Empowerment
SHE	Safety, Health and Environmental
OHS Act	Occupational Health and Safety Act
SANS	South African National Standards
SABS	South African Bureau of Standards
IEC	International Electrotechnical Commission
SES	Standard Environmental Specification
QA	Quality Assurance
OPC	Open Platform Communication
VPN	Visual Private Network
PC	Personal Computer
POE	Power Over Ethernet
SQL	Structured Query Language

1.3 Employer's requirements for the service

1.3.1 Description of service on Power Smart Server

- 1.3.1.1 Monitor, maintain and ensure that the Transnet National Ports Authority, Port of Durban electricity and water billing server is updated with the latest OPC SERVER updates and new features.
- 1.3.1.2 Undertake monthly system analysis on the server to ensure functionality of the server and connectivity of the meters. System analysis shall include but limited to:
 - Communication Issues
 - Configuration Issues
 - And system backups
 - Power Smart OPC Primary Database
 - Power Smart Web Black Database
- 1.3.1.3 The *Contractor* shall have the ability to remotely diagnose problems or queries on the OPC Server. Such problems or queries should be attended to within the response time indicated on the order form, the time starts when the *Contractor* receives the notification of the problem from Transnet National Port Authority in the form of Annexure A.
- 1.3.1.4 The *Contractor* shall also be required add and delete field devices on the billing server due to infrastructure decommissioning or new developments within the port.

1.3.2 Description of service on Power Smart Web:

- 1.3.2.1 The *Contractor* shall ensure that the Transnet National Ports Authority, Port of Durban electricity and water billing system is updated with the latest Power Smart Web updates and new features.
- 1.3.2.2 Provide for an annual tariff configuration according to changes made by the electricity supply authority or TNPA internal requirements.

1.3.2.3 Undertake a monthly check on the Power Smart web electricity/water billing system to ensure functionality of the system.

1.3.2.4 Remotely diagnose problems or queries on OPC server/metering.

1.3.2.5 The *Contractor* may from time to time be required to come onsite to diagnose problems, configure/reconfigure the server, program or reprogram meters, however, the *Contractor* will be notified of such service in the form of Annexure A – Order Form. The *Contractor* is required to respond to such call-outs within the time indicated on the Order Form.

1.3.3 Description of meters and communication used in the PoD:

1.3.3.1 Landis + Gyr ZMD405CT44.2407 meter for the measurement of kWh, kvarh and kW or kVA in a three phase, three or four wire, 50 Hz network.

1.3.3.2 Meter Specification:

- Accuracy: Class 0.55 (kWh), Class 1.0 (kvarh)
- Voltage 3 x 58/100,..., 230/400V
- Current: -1/5A
- Tariffs: 24 Energy Registers
- 08 Total energy registers and 24 demand registers
- 04 Power Factor registers
- Other data: Instantaneous values
- Switching: Internal Clock
- Stored Values: 15 per register
- Load Profile: 14 Channels
- Inputs and Outputs: 5 Inputs, 6 Outputs contacts
- Data Output: LCD

1.3.3.3 Construction:

- Display: Programmable 8 digit liquid crystal display, display while un-powered
- Figure Height: 8 mm
- Housing: Projection Pattern
- Dimensions: H x 281.5 mm, W x 177 mm, D x 75 mm
- Construction: Anti-static, glass fibre re-enforced plastic

1.3.3.4 Communication modules used inside meters:

- Landis + Gyr CU-E22 communication module for use with base meter, the module communication protocols are Ethernet port and RS 485 port.
- Landis + Gyr CU-B2 communication module for use with the base meter, the module communication protocols are two RS 485 ports.

1.3.4 Call Out Procedure for both Remote and Onsite Assistance

1.3.4.1 The *Contractor* shall respond to call-outs for faults on Power Smart electricity/water billing systems, and carry out fault finding and the necessary repairs on the equipment as and when

required by TNPA subject to the terms and conditions and technical requirements hereinafter set out.

- 1.3.4.2 The call-out charge payable within 30 days after completion of each call-out to the satisfaction of the *Service Manager* or his duly authorised Transnet National Port Authority representative, shall be based on the labour cost and travelling cost per call-out for onsite assistance and for remote assistance it shall be labour cost only as specified in the Pricing Data.
- 1.3.4.3 No additional charges shall be raised for the provision of fault finding and repairs to the equipment in terms of this agreement. If it is evident that additional repairs/fault finding needs to be carried out when responding to a call out, then the procedure described in clause 1.3.5 of this document must be followed. The procedure must be read in conjunction with Annexure "A" and the Pricing Data.

1.3.5 Workmanship, Service and Repairs

- 1.3.5.1 The *service* offered by the *Contractor* and the workmanship shall be of the highest standard with all logged system faults being effectively resolved within the time allocated.
- 1.3.5.2 The *Contractor* is required to monitor, maintain and diagnose issues on the Port of Durban Power Smart suite of software's as per the requirements of this agreement and Service Information.
- 1.3.5.3 The *Contractor* shall respond to call-outs within the time indicated on the order form and the time period starts once the *Contractor* has been notified of the fault.
- 1.3.5.4 Once the fault has been resolved, the *Contractor* shall complete and submit "Annexure B" to the *Service Manager* or his duly authorised Transnet National Port Authority representative to enable testing of the system timeously.
- 1.3.5.5 Transnet National Ports Authority undertakes, during the term of this contract, not to allow or permit any unauthorized person(s) whomsoever (other than the *Contractor* or his duly authorized employees) to do any work whatsoever on the suite of software's covered by the terms of this agreement and for which the *Contractor* is responsible.
- 1.3.5.6 The *Contractor* shall resolve all logged faults to the satisfaction of the *Service Manager* or his duly authorised Transnet National Ports Authority representative.
- 1.3.5.7 Neither the system of operation, nor any software shall be replaced, changed or altered in anyway during the execution of the work covered by this agreement without the consent of the Transnet National Port Authority representative. The *Contractor* shall present to Transnet National Port Authority the required changes and benefit of the changes in the event that changes are required.
- 1.3.5.8 The *Contractor* shall rectify any malfunctions, due to incorrect system requirements, or poor practices, which may arise from the *Contractor's* work during the contract period.

2 Management strategy and start up

2.1 Management meetings

- 2.1.1 The *Contractor* will be required to attend review meetings relating to monitoring, maintenance, software, contract management and other issues that may arise from time to time. As far as is practicable, the *Contractor* will make all required persons available for these meetings.

- 2.1.2** Regular meetings of a general nature may be convened and chaired by the *Service Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	As and when required	Port of Durban/MS Teams	<i>Employer, Service Manager, Contractor and appropriate key persons</i>
Overall contract progress and feedback	As and when required	Port of Durban/MS Teams	<i>Service Manager and the Contractor</i>

- 2.1.3** Meetings of a specialist nature may be convened as specified elsewhere in this Service Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *service*. Records of these meetings are to be submitted to the *Service Manager* by the person convening the meeting within five days of the meeting.

- 2.1.4** All meetings are to be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register are not to be used for the purpose of confirming actions or instructions under the contract as these are to be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

2.2 Contractor's management, supervision and key people

- 2.2.1** The *Contractor* shall submit a detailed resource proposal. This shall, as minimum, include the quantity of staff (with reference to level of skill and formal training of each) and how/where they will be deployed and utilised under this contract.

2.2.2 Key Personnel:-

- 2.2.2.1** A schedule of key personnel shall be provided to the *Service Manager* at commencement of this Contract. For the full duration of this Contract, none of these persons will be replaced by a person of lesser ability or qualification.
- 2.2.2.2** The *Contractor* shall continuously ensure that all staff is suitable, able and competent for the duties required of them. The *Contractor* shall continuously ensure that the staff keeps abreast of the latest technology in smart metering and billing.

2.3 Documentation Control

- 2.3.1** The *Contractor's* documentation shall be issued to the *Service Manager*.
- 2.3.2** All contractual communications will be in the form of properly compiled letters or forms attached to e-mails and not as a message in the e-mail itself.

2.4 Invoicing and payment

- 2.4.1** Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Service Manager's* payment certificate.

2.4.2 The *Contractor* shall address the tax invoice to _Themba Mabaso_ and include on each invoice the following information:

- Name and address of the *Contractor* and the *Service Manager*;
- The contract number and title;
- Contractor's VAT registration number;
- The Employer's VAT registration number 4740101508;
- Description of *service* provided for each item invoiced based on the Price List;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;

2.5 Training workshops and technology transfer

2.5.1 The *Contractor* will perform on job training workshops when required as part of the *service*.

3 Health and safety, the environment and quality assurance

3.1 Health and safety risk management

3.1.1 All Occupation Health and Safety Act Regulations pertaining to the work being carried out must be adhered to including Transnet National Port Authority Health and Safety specifications attached to this Service Information. The *Contractor* shall be responsible for the precautions and measures to ensure the health and safety of all individuals on site.

3.1.2 The *Contractor* shall prepare, implement and administer the Health and Safety Management Plan. The Health and Safety Management Plan must provide a systematic method of managing hazards and implementing control measure.

3.1.3 The *Contractor* shall prepare and submit a Safety, Health and Environmental (SHE) file showing the *Contractor's* adherence to the OHS Act and all legislative requirements. The SHE plan prepared before award of work must be signed and approved by TNPA Legal & Compliance Department. Thereafter the Contractor shall be required to attend a safety induction. Documentation required includes;

- SHE Plan
- Method Statement
- Risk Assessment

3.1.4 The SHE File is to be kept on site whenever work is carried out. The file has to contain amongst others:

- Principal *Contractor's* Organogram
- Letter of Good Standing with Compensation Fund
- General Liability Insurance (Summary of Policy)
- Notification Letter of Construction Work ~ Department Of Labour (If Applicable)

- Appointments (Inclusive of legal appointments)
- *Contractor* Induction: Employees and Visitors
- Principal Contractor's SHEQ Policy
- Health & Safety Plan
- Fall Protection Plan inclusive of Fall Protection Risk assessment (If Applicable)
- Risk Assessment (inclusive of action plan to manage controls)
- Method Statements
- Safe Operating Procedures
- Incidents/ Accidents Register and Investigation Report Template
- Emergency Contact Telephone Numbers
- Contractor's Site Emergency Plan (For Site establishment)
- Documented Proof of Daily Toolbox Safety Talks/ DSTI
- Inspections Checklist
- All Registers
- Welfare Facilities arranged
- Electrical Compliance (COC) (If Applicable)
- Mandatory Agreement (TIMS Section 37(2) Agreement)

3.1.5 The Contractor shall include the following COVID-19 requirements on the SHE file:

- COVID-19 Risk Assessment
- COVID-19 Risk Assessment Action Plan
- Contractor's COVID-19 induction Training
- COVID-19 Communication Plan (Attendance Registers DOL Directive 479, Risk Assessment, etc.)
- Appointment of COVID-19 Manager/ Representative
- COVID 19 Operational Plan (include Return to work questionnaire, COVID 19 Reporting and investigation procedure, social distancing, Symptom screening procedure, sanitising and disinfecting procedures, Cloth masks and other PPE, Measures in respect of workplaces to which public have access, Ventilation, Hygiene and cleaning measures and Waste Management, and not limited to the above specifications).
- COVID 19 Registers and Checklists

3.1.6 *Contractor* shall be responsible for the supply and use of the following PPE:

- SABS approved Safety Protective and Occupational Footwear,
- SABS approved Acoustics - Hearing Protection,
- Eye protection - glasses, goggles and face shields as required,

- SABS approved Occupational Protective Helmets,
- Full length work clothes, long sleeved and long pants on the berth areas,
- Life jackets if working within 2m of the quay edge,
- Any specialized protective clothing which is standard work practice as referred to in their Contract.
- SABS approved and calibrated gas meters for confined spaces.

3.2 Quality Assurance requirements

- 3.2.1** All work must be executed in accordance with prevailing industry norms and standards relating to quality. Emphasis must be on improving system reliability.

4 Working on the Affected Property

4.1 Employer's site entry and security control, permits, and site regulations

- 4.1.1** The smart meters are installed in various precincts of the Port of Durban extending from Point precinct to Island View precinct. Access permits is required when entering any of the precincts, however, the *Contractor* will be provided with a permit by security control permit located at 45 Bay Terrace after undergoing a safety induction. TNPA will arrange with Cutler permit office for *Contractor's* to be issued with Island View permits, however, it is the *Contractor's* responsibility to pay for these permits.

- 4.1.2** The *Contractor* is required to provide his own transport to and from site. The access provided to the *Contractor* will include both vehicular and pedestrian access.

- 4.1.3** The *Contractor* shall comply with the following requirements of the *Employer*:

- All *Contractor's* personnel appointed for this project shall undergo a safety induction conducted by the *Service Manager* or his duly authorised TNPA representative before occupying any TNPA premises.
- All *Contractor's* personnel coming to site shall at all times wear their uniform bearing their Employer's name or colour code so as to be easily identifiable as being employed by the particular company concerned.
- The *Contractor's* personnel shall adhere to all the standard operating procedures for TNPA security to ensure compliance to the applicable standards and regulations (e.g. International Ship and Port Facility Security (ISPS) Code).
- The *Contractor's* personnel shall ensure compliance with National Ports Act and Port Rules.
- Adhere to the stipulated speed limits. The speed limit is strictly 30 km/h when driving inside the Port and reduced to 20 km/h in some specific operational areas.

4.1.4 Most of the sites at which smart metering equipment have been installed are mostly in substations and they are only accessible under the following conditions:

- Access to the Ports substations is restricted to people who are in possession of a “C” green certificate or letter of authority as detailed in the Transnet electrical safety instructions.
- Access to substations is possible through under direct supervision of person in possession of the required certification.

4.2 People restrictions, hours of work, conduct and records

4.2.1 Whenever the *Contractor* performance any work on site restrictions and hours of work may apply. It is very important that the *Contractor* keeps records of his people on site which the *Service Manager* or *Supervisor* have access to at any time. These records may be needed when assessing compensation events.

4.2.2 The *Contractor* shall comply with the following hours of work for his people whenever performing work on site:

The *Contractor* shall work in accordance to the TNPA working hours i.e. weekdays 08:00 – 16:00 for easy access to site unless in the event of an emergency.

4.3 Health and safety facilities on the Affected Property

- All health and safety matters associated with the works shall be dealt with in accordance with Occupational Health & Safety Act, 1993 (Act No. 85 of 1993) and the Transnet National Ports Authority Health and Safety Specifications which is attached to the Service Information.
- The *Contractor* shall prepare, implement and administer the *Contractor's* Health and Safety Management Plan (CHSMP). The Health and Safety Management Plan must provide a systematic method of managing hazards and implementing control measures.
- The *Contractor* shall prepare and submit a Safety, Health & Environmental File to the *Service Manager* for acceptance. The *Service Manager* will then submit the SHE file to the TNPA Legal & Compliance Department for approval before the commencement of the work.
- The *Contractor* performs the work and all activities within the Affected Property in accordance with the *Contractor's* Health and Safety Management Plan (CHSMP).

4.4 Cooperating with and obtaining acceptance of Others

4.4.1 Whenever the *Contractor* performs the work on site he shall co-operates with the *Employer* (including the agents of the *Employer*) who operates on site.

- 4.4.2** The *Contractor* performs the work and co-operates with Others, of whom the *Contractor* is to be notified once appointed by the *Employer*, who operates on site during the entire duration of the Contract period.

4.5 Equipment provided by the *Employer*

- 4.5.1** No Equipment will be provided by the Employer.

4.6 Site services and facilities

4.6.1 Provided by the *Employer*

No facilities will be provided by the *Employer* whenever the *Contractor* performs work on site. The *Contractor* may, however, make arrangements with the relevant *Service Manager* or Transnet personnel to make use of ablution facilities that might be on or near the site.

4.6.2 Provided by the *Contractor*

No facilities required for this project.

4.7 Completion, tests, inspections, commissioning and correction of Defects

- 4.7.1** On completion of any task the *Contractor* shall have done everything required on the Order Form (Annexure A). The *Service Manager* cannot certify Completion until all the work listed on the Order Form or in this Service Information has been done and is also free of Defects.

- 4.7.2** Every fault resolved, addition or modification to the system shall be comprehensively tested and commissioned as individual and integrated onto the overall system. Only after the system has been tested and commissioned will be accepted by *Service Manager*.

Service Manager: Themba Mabaso

Contact no: (031) 361 8712

ANNEXURE "A"

ORDER FORM

TRANSNET NATIONAL PORTS AUTHORITY REF. NO. _____

TRANSNET NATIONAL PORTS AUTHORITY P O:

DATE: _____ TIME: _____

SERVICE PROVIDER'S REF. NO. _____

ADDRESSED TO: _____ FAX NO: _____

RESPONSE CATEGORY (Tick):

☐ A☐ B☐ C

A – Critical (Respond same day within 4 hours)

B – Urgent (Respond same day within 8 hours)

C – Normal (Respond within 24 hours)

The following smart metering equipment requires repair/service:-

LOCALITY: _____ BUILDING NO: _____

CONTACT PERSON: _____ TEL NO: _____

DESCRIPTION OF FAULT:

SIGNATURE: _____

TNPA representative

FAX NO: 3618310

PHONE NO: 3618712

ANNEXURE "B"

SERVICE ATTENDANCE REPORT

SERVICE PROVIDER'S REF. NO: _____ **TRANSNET NATIONAL PORTS AUTHORITY REF. NO.:** _____

TO: TNPA REPRESENTATIVE

Fax No:

Phone: 361 8712

TIME AND DATE OF CALL-OUT/SERVICE _____

LOCALITY: _____ **BUILDING NO:** _____

REPAIRS CARRIED OUT:

TRANSPORT:

TECHNICIAN NAME: (print): _____ **SIGNATURE:** _____

BLDG. OCCUPIER: _____ **DATE:** _____ **TIME:** _____

PHONE: _____

ANNEXURE "C"

Monthly Monitoring Report

SEPARATELY ATTACHED

ANNEXURE "D"

TRANSNET NATIONAL PORTS AUTHORITY REPRESENTITIVES FOR THIS AGREEMENT

- | | | |
|---|------------------|---------------------|
| 1. T.W Mabaso | Tel 031 361 8712 | Mobile 060 546 7383 |
| E-mail themba.mabaso@transnet.net | | |
| 2. S Ngcobo | Tel 031 361 8828 | Mobile 071 519 5559 |
| E-mail sphelele.ngcobo@transnet.net | | |
| 3. G De Klerk | Tel 031 361 8675 | Mobile 083 708 0813 |
| E-mail grant.deklerk@transnet.net | | |

E-MAIL PRIORITY LIST

- | | |
|--------------------|--|
| 1. Mr T.W. Mabaso | E- mail themba.mabaso@transnet.net |
| 2. Mr S. Ngcobo | E- mail sphelele.ngcobo@transnet.net |
| 3. Mr Akash Tulsie | E- mail akash.tulsie@transnet.net |
| 4. Mr G De Klerk | E- mail grant.deklerk@transnet.net |