TRANSNET NATIONAL PORTS AUTHORITY

(A division of Transnet Ltd)

ELECTRICAL ENGINEERING

SCOPE OF WORK NO. DHE. ISM-05-2021

SCOPE OF WORK FOR THE MAINTENANCE OF SCADA AND PLC SYSTEMS IN THE PORT OF DURBAN

This scope of work covers the requirements of TRANSNET NATIONAL PORTS AUTHORITY for the maintenance, fault finding and repair of SCADA and PLC systems as and when required.

THIS ISSUE SUPERSEDES ALL OTHER ISSUES OF SIMILAR TITLES AS DISTRIBUTED BY TRANSNET NATIONAL PORTS AUTHORITY

INDEX

1. SCOPE OF WORK

1.1 Maintain the existing Port of Durban SCADA and PLC systems, and when required assist with the maintenance of variable speed drives, instrumentation such as level, pressure and flow sensors, electric valve actuators, fibre networks and their associated media converters and managed switches, substation protection relays.

The maintenance of variable speed drives, instrumentation, electric valve actuators, fibre networks and their associated media converters, managed switches and protection relays is required as this equipment forms part of the automation of the various plant and substations located in the Port of Durban.

The maintenance will be by means of a monthly maintenance session of the SCADA and PLC systems and "as and when" callouts which occur mostly during normal working hours but could also be after hours. The maintenance is required for a period of thirty six (36) months.

2. CONTRACTOR RESPONSIBILITIES

2.1 The contractor is required to visit site on a monthly basis to conduct a monthly maintenance session (see annexure "F") on the Port of Durban, SCADA and PLC systems and take corrective action on faults found. The contractor must provide a report on the monthly maintenance session as per the requirements detailed in annexure "F".

The contractor is also required to respond to call-outs from Transnet National Ports Authority (TNPA) to attend to faults whether software or equipment related, as directed by the TNPA representative during normal hours and after hours if called upon to do so. The faults could require travel to site or be resolved using remote desktop technology if available. Notification to this effect will be by means of an "order form"; annexure "B" or if after hours, verbally but which will then be followed by an annexure "B" as soon as normal working hours resume. The required response to the fault could be critical which requires a response within 1 hour, urgent which requires a response within 3 hours and normal which requires a response within 24 hours. After attending to a fault the contractor will provide TNPA with a report (annexure "C") on the fault, indicating the problem and the corrective action taken.

Before the contractor responds to a fault he must confirm with the TNPA representative that a technician from TNPA is available on site to assist with access and site specific information that may be required.

If the allotted time of the call out is exceeded then the contractor will be paid an hourly rate for the additional time spent on site rectifying the fault. See schedule of rates annexure "D".

Work that does not form part of the monthly maintenance session or "as and when" callouts, for example the upgrade of the SCADA or PLC system software will also be undertaken by the contractor.

Before such work goes ahead though the contractor will be provided with a breakdown of the work required and the contractor will be required to provide a detailed estimate

of the time that is needed to complete the work. All costs will be as per the labour rates provided in annexure "D"

2.2 With the maintenance of variable speed drives, instrumentation such as level, pressure and flow sensors, electric valve actuators, fibre networks and their associated media converters, managed switches and substation protection relays.

It is expected that the contractor will attempt to a resolve a fault on the above mentioned equipment first after which expert advice and assistance will be sort from a company that specializes in the equipment. The contractor will seek approval from TNPA before the expert company is called in to assist. The applicable Company and employee experience in the form of a CV will have to be submitted to TNPA before approval will be given. The company will be a subcontractor and will be required to submit the required health and safety documentation to the main contractor.

The callout procedure of the specialist company will be the same as per the callout procedure for the main contractor as detailed in 2.1 above for normal hours. The callout rates for each of the specialist companies is allowed for in Annexure "D".

The main contractor will be responsible for the quality of work and health and safety of the sub-contractor.

2.2 The contractor shall repair the equipment to the satisfaction of the TNPA representative and all work carried out shall be according to the TNPA System Platform and InTouch for system platform SCADA standards. All repaired equipment shall be thoroughly inspected and tested to ensure that it is fit for service. The contractor shall leave the equipment that was repaired in a sound state. If the fault requires the replacement of equipment then the spare part must be sought from the Port of Durban Power supplies and services depot.

2.3 Neither the system of operation, nor any control circuitry of the SCADA or PLC equipment shall be modified or altered in anyway during the execution of the work covered by this agreement without the consent of the TNPA representative. The contractor shall provide the TNPA representative with new circuit diagrams, drawings etc. in the event that changes are approved.

2.4 When changes are made to a PLC program as a result of a call out then TNPA must be provided with a backup copy of the new PLC program with the changes. The changes to the program must also be noted on the fault report with reasons why the program changes were made.

2.5 This contract does not include repairs or alterations to any part of the electric power supply point for the equipment. It is however the contractor's responsibility to report any obvious electrical supply defects to the TNPA representative.

2.6 The contractor will be required to guarantee the repair work undertaken for a period of 12 months after date of acceptance of the repair work by the TNPA representative. The contractor shall make good any defect, due to inferior workmanship, which may arise during that period.

2.7 The contractor or his representative when carrying out a maintenance session or attending to a fault not in the company of a TNPA representative, will when arriving and leaving site inform electrical control on 031 361 6660.

2.8 The contractor and his staff will be required to sign a confidentiality agreement with TNPA to obtain remote access to the Port of Durban SCADA network via a VPN connection to resolve faults remotely.

Note: Remote access to the Port of Durban SCADA and PLC systems for maintenance purposes should be possible during the required 36 maintenance period but TNPA does not guarantee remote access and the method mostly used to resolve SCADA or PLC faults is a site visit to the area of the Port of Durban where the SCADA or PLC system is located.

2.9 The contractor and his staff will be expected to transfer skills to the TNPA electrical engineering and maintenance staff. The transfer of skills will be mostly practical by nature and will occur when the contractor is on site to resolve issues. It is expected that the contractor will pass on all information asked of him that is within reason. Any prepared training on the SCADA and PLC systems installed in the various plant will be paid for by callout (as per annexure "D") but the contractor will be required to provide upfront the time required to undertake planning, preparation of training material and then delivery of the training. All prepared training material becomes the property of TNPA and will be provided in native and PDF format.

2.10 Payment will only be effected after the repair has been accepted by the TNPA representative and he or she has the contractors V.A.T. invoice and a copy of annexure "C" in their possession.

3. AUTOMATED SYSTEMS

3.1 At present TNPA has installed at a number of sites across the Port of Durban, Wonderware System Platform 2017 update 3, Schneider Premium and M340 PLC'S with Unity pro large software and Modicon Momentum and M340 remote I/O. A list of these sites with the equipment and software installed at each site is provided in annexure "E" of this document but please note that the call outs required are not limited to these sites only.

The System Platform servers are located at the Allan Dalton substation control room.

3.2 At the various sites there is other equipment installed that forms part of the automated systems and the equipment details is listed below:

3.2.1 Sand bypass plant

- Instrumentation – flow meters, pressure sensors, level sensors, density meter – (mostly Endress + Hauser)
- Electrically actuated valves – (Auma 3 phase)
- Variable speed drives – (Schneider Electric)
- Fibre networks
- Managed switches – (Cisco)

3.2.2 Ocean Terminal air-conditioning plant

- Instrumentation – flow meters, pressure sensors, level sensors – (various makes)
- Electrically actuated valves – (mostly Siemens)
- Variable speed drives – (Weg)
- Fibre networks
- Managed switches – (Cisco)

3.2.3 Port of Durban Standby generators

- Instrumentation – pressure sensors and level sensors – (various)
- Fibre networks
- Managed switches – (Cisco)
- Generator controllers – (Deep Sea)

3.2.4 Central Fire Installation (CFI)

- Instrumentation – flow meters, pressure sensors, level sensors – (Endress + Hauser)
- Electrically actuated valves – (Auma 3 phase)
- Fibre networks
- Managed switches – (Cisco)

3.2.5 Substations

- Protection relays – mostly General Electric
- Fibre networks
- Managed switches - Cisco

4. HEALTH AND SAFETY

4.1 The contractor will be required to send staff for induction training a requirement to work in the Port of Durban. The contractor will also have to submit a health and safety file the requirements of which are detailed in annexure "A" which is attached. The contractor must request from any sub-contractor all health and safety documents and insure their compliance on site as and when required.

5. RETURNABLE DOCUMENTS

(Company and system integrator qualifications and experience)

5.1 Company returnable documents

- Certificate from Schneider Electric or Wonderware or AVEVA or IS3 for the year 2020 or 2021 proving that the contractor is a certified or endorsed System Platform and InTouch for system platform integrator.

- Certificate from Schneider Electric or AVEVA or IS3 for the year 2020 or 2021 proving that the contractor is a EcoStructure Alliance (certified or master) partner.

- Company portfolio of experience for System Platform, InTouch for System Platform and Schneider electric PLC projects or maintenance contracts. The portfolio of experience must include the name of the Company as well as the contact details of a company representative (cell phone) for which the above work was undertaken for verification purposes. The type of work, project or maintenance and cost and duration must also be detailed. The more information provided the better.

5.2 System integrator returnable documents (a certified copy is required for each qualification for each of the three systems integrators)

- Certificate of qualification for a certified systems integrator for Wonderware or Schneider electric or AVEVA or IS3, application server for system platform, version 2017 or 2020,

- Certificate of qualification for a certified systems integrator for Wonderware or Schneider electric or AVEVA or IS3, InTouch for system platform version 2017 or 2020.

- Schneider electric or AVEVA or IS3, Ecostrxure Plant Certified – Control Systems certificate of qualification for 2019, 2020 or 2021

- The contractor must also submit a portfolio of experience for the three system integrators who will be undertaking the maintenance of the POD SCADA and PLC systems. The portfolio of experience must detail the permanent employees functions and their experience working with System Platform, InTouch for System Platform and Schneider electric PLC'S. The portfolio of experience must detail the type of work completed, project or maintenance and cost and duration. The more information provided the better.

Note: TNPA reserves the right to request the company certificates as mentioned in 5.1 above and the system integrator qualification certificates as listed in 5.2 above in year 2 and 3 of the 36 month maintenance period so as to ensure that the contractors company and system integrators keep their original equipment manufacturer certification.

6. SCHEDULE OF RATES FOR LABOUR AND INCREASE IN LABOUR RATES DUE TO INFLATION

6.1 Please note the schedule of rates for labour Annexure "D" only shows quantities for year 1 of the required thirty six (36) month maintenance period, please understand that those same quantities will be required for year 2 and 3.

6.2 An increase in the labour rate is allowed for in the second and third year of the required thirty six (36) month maintenance period. The labour rate increase for years 2 and 3 must be filled in on annexure "D". The increase in the labour rate for year 2 will be on year 1's labour rate and the increase in labour rate for year 3 will be on year 2's labour rate.

ANNEXURE "A"

CONTRACTOR'S COMPLIANCE FILE ASSESSMENT CHECKLIST

	Project Manager:	
	Project name:	
	Client:	
	Contractor Details:	

No.	Items	Approved	Not Approved
	CONTRACTORS OBLIGATIONS		
1	Principal Contractors/Contractors Organogram		
2	Letter Of Good Standing With Compensation Fund		
3	General Liability Insurance(Summary of Policy)		
3	Notification Letter Of Construction Work ~ Department Of Labour (If Applicable)		
4	Appointments(Inclusive of legal appointments)		
5	Contractor Induction: Employees And Visitors		
6	Principal Contractor's SHEQ Policy		
7	Health & Safety Plan		
8	Fall Protection Plan inclusive of Fall Protection Risk assessment(If Applicable)		
9	Risk Assessments (inclusive of action plan to manage controls)		
10	Method Statements		
11	Safe Operating Procedures		
12	Incidents / Accidents Register and Investigation Report Template		
13	Emergency Contact Telephone Numbers		
14	Contractor Site Emergency Plan(For Site establishment)		
15	Documented Proof Of Daily Toolbox Safety Talks/ DSTI		
16	Inspections Checklist		
17	All Registers		
18	Welfare Facilities arranged		
19	Electrical Compliance(COC)(If Applicable)		
20	Mandatory Agreement (TIMS Section 37(2) Agreement		

21	Communication Plan		
22	Training Records and Competency Certificates		
23	Staff Medical Certificates(Must correspond with Employee Personal Dossier)		
CLIENTS OBLIGATION			
24	Client SHE Specification		
25	Employee Personal Profile Dossier completed		
25	TNPA Induction certificate completed		
26	Induction Indemnity Form completed		
27	Induction Attendance Register		
28	List of legal Permits and Authorisation completed		
29	Pre-site Hand over Inspection Checklist		
30	Site access certificate completed		
COVID 19 REQUIREMENTS			
1.	Covid 19 Risk assessment		
2.	Covid 19 Risk assessment Action plan		
3.	Contractor Covid 19 induction Training		
4.	Covid 19 Communication plan (Attendance registers DOL Directive 479, Risk assessment, etc.)		
5.	Appointment of Covid 19 Manager/Representative		
6.	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).		
7.	Covid 19 Registers and Checklists		

CONTRACTOR'S COMPLIANCE FILE REVIEW			
Date	Print Full Name	Designation	Signature
		Risk Specialist	
Status			
Approved			
Not Approved			
Reasons for not approving			

ANNEXURE "B"

SCADA, PLC CALL OUT FORM

TRANSNET NATIONAL PORTS AUTHORITY REF. NO. _____

DATE: _____ TIME: _____

CONTRACTORS REF. NO. _____

ADDRESSED TO: _____ FAX NO: N/A_____

RESPONSE CATEGORY (Circle):

A – Critical (Respond same day within 1 hours)
B – Urgent (Respond same day within 3 hours)
C – Normal (Respond within 24 hours or later)

THE FOLLOWING SCADA / PLC EQUIPMENT REQUIRES REPAIR/SERVICE:-

LOCALITY: _____

CONTACT PERSON: _____ TEL **NO: _____**

DESCRIPTION OF FAULT:

SIGNATURE: **_____**

G DE KLERK

FAX NO: 3618310 PHONE NO: 3618675 E MAIL grant.deklerk@transnet.net

ANNEXURE "C"

SCADA, PLC CALL-OUT/SERVICE ATTENDANCE REPORT

TRANSNET NATIONAL PORTS AUTHORITY REF. NO.: _____

TO: TNPA REPRESENTATIVE (G S DE KLERK) **Fax No: 361 8310**

Phone: 361 8675

TIME AND DATE OF CALL-OUT/SERVICE:_____

TIME SPENT ON THE CALLOUT:_____

LOCALITY: _____

REPAIRS CARRIED OUT:

_____

_____

_____

_____

TRANSPORT:

_____

_____

TECHNICIAN: NAME: (print) _____

SIGNATURE: _____

ANNEXURE "D"

SCHEDULE OF RATES FOR LABOUR

Note. Please read section 6.1 and 6.2 of the scope of works before completing this schedule of rates for labour.

YEAR 1

Item	Item description	Units	Hours allowed per callout	Qty	Rate	Total
1	Systems integrator cost per call out Monday to Friday 08H00 to 17H00 including travel	hours	3	22		
2	Systems integrator labour rate per hour Monday to Friday 08H00 to 17H00	hours	N/A	22		
3	Systems integrator cost per call out after hours (weekends, public holidays and Mondays to Fridays 17H00 to 08H00) including travel	hours	3	8		
4	Systems integrator labour rate per hour after hours (weekends, public holidays and Mondays to Fridays 17H00 to 08H00)	hours	N/A	8		
5	Systems integrator cost per call out Monday to Friday 08H00 to 17H00 when using remote desktop to resolve the fault (when access to the network is available)	hours	1	24		
6	Monthly maintenance of SCADA and PLC system including report	each	16 (2 days)	11		
7	Variable speed drive technician cost per call out Monday to Friday 08H00 to 17H00 including travel	hours	3	3		
8	Instrumentation technician cost per call out Monday to Friday 08H00 to 17H00 including travel	hours	3	3		
9	Electric valve actuator technician cost per call out Monday to Friday 08H00 to 17H00 including travel	hours	3	3		
10	Fiber technician cost per call out Monday to Friday 08H00 to 17H00 including travel	hours	3	3		
11	Network technician cost per call out Monday to Friday 08H00 to 17H00 including travel	hours	3	3		
12	Protection engineer cost per call out Monday to Friday 08H00 to 17H00 including travel	hours	3	3		
13.	**YEAR 1 TOTAL COST FOR LABOUR AS LISTED IN ITEMS 1 – 12 ABOVE**					

ALLOWING FOR INFLATION OF LABOUR COSTS DURING YEARS 2 AND 3 OF THE 36 MONTHS

A	Cost for labour year 1 as per line item 13 above				
B	Cost for labour year 2 = (Year 1 labour cost as shown in line item A above + inflation increase)				
B1	***Insert percentage increase applied for inflation in B above***				
C	Cost for labour year 3 = (Year 2 labour cost as shown in line item B above + inflation increase)				
C1	***Insert percentage increase applied for inflation in C above***				
D	Health and safety file	each	N/A	1	

E	**Total cost for labour for 36 months including inflation increases for years 2 and 3 = Year 1 labour cost + Year 2 labour cost + Year 3 labour cost + cost for Health and safety file**	

ANNEXURE "E"

SCADA AND PLC INSTALLATION SITES IN THE PORT OF DURBAN

1. OCEAN TERMINAL BUILDING (T JETTY)

1.1 Room 214 NDM OTB view 01	System platform 2017 update 3
1.2 Room 234 NDM OTB view 02	System platform 2017 update 3
1.3 Room 229 NDM OTB view 03	System platform 2017 update 3
1.4 Room 229 NDM OTB view 04	System platform 2017 update 3
1.5 Air-conditioning plant room	System platform 2017 update 3

2. STANGER STREET SUBSTATION (PORT MAIN ENTRANCE)

2.1 Stanger street 33 kV substation	M340 PLC with Unity Pro large software version 13 (Generator control panel)
2.2 Stanger street 6.6 kV substation	M340 PLC with Unity Pro large software version 13 (Power factor bank control panel)

3. DURBAN HARBOUR INTAKE SUBSTATION (BAYHEAD RD)

3.1 Durban Harbour Intake substation 33 kV	M340 PLC with Unity Pro large software version 13 (Generator control panel)
3.2 Durban Harbour Intake substation 6.6 kV	M340 PLC with Unity Pro large software version 13 (Power factor bank control panel)

4. PIER 2 MAIN SUBSTATION (PIER 2)

4.1 Pier 2 11kV substation	M340 PLC with Unity Pro large software version 13 (Power factor bank control panel)

5. ALLAN DALTON SUBSTATION (PIER 1 ENTRANCE)

5.1 Allan Dalton 6.6kV substation	M340 PLC with Unity Pro large software version 13 (Power factor bank control panel)

5.2 Allan Dalton Generator 11kV substation	M340 PLC with Unity Pro large software version 13 (Power factor bank control panel)
5.3 Allan Dalton Generator control room	M340 PLC with Unity Pro large software version 13 (Power factor banks global control)
5.4 Allan Dalton Generator control room	Modicon Premium PLC, 2 x CPU'S with hot change-over with Unity Pro large software version 13
5.5 Allan Dalton Generator control room	Galaxy repository, Standby AOS, Historian & Wondeware information server
5.6 Allan Dalton Generator control room	NDM Development System platform System platform 2017 update 3

6. POWER SUPPLIES AND SERVICES DEPOT (1 KUWAIT RD FYNNLANDS)

6.1 Electrical control	System platform 2017 update 3
6.2 Air-conditioning department Supervisor's office	System platform 2017 update 3

7. ISLAND VIEW

7.1 CFI control room	System platform 2017 update 3. Modicon Premium PLC with hot standby and Unity Pro large software version 13, Modicon Momentum remote I/O
7.2 Bubble screen	M340 PLC with Unity Pro large software version 13
7.3 Berth 4 fire department office	System platform 2017 update 3
7.4 JBS building	System platform 2017 update 3

8. SAND BYPASS SYSTEM

7.1 Gantry control room	System platform System platform 2017 update 3.
7.2 Gantry MCC room	Modicon Premium PLC and Unity Pro Extra-large software version 11
7.2 MPS control room	System platform System platform 2017 update 3.

7.3 MPS MCC room	M340 remote I/O
7.4 HPU building	M340 remote I/O
7.5 BO pump station	System platform System platform 2017 update 3.

ANNEXURE "F"

PORT OF DURBAN SCADA AND PLC SYSTEMS MONTHLY MAINTENANCE SCHEDULE

The monthly maintenance of the SCADA and PLC systems is to take place on the Wednesday and Thursday of the last week of the month. The days allocated for the monthly maintenance can be moved on agreement between both parties (TNPA and contractor). The maintenance will be carried out at the Allan Dalton control room. Visits to the various plant sites could be required during the maintenance sessions.

The report covering all sections detailed below must be provided to the TNPA representative for review by the 5th day of the following month. All corrective action taken and still required must be clearly indicated.

The monthly maintenance schedule must include all activities as listed below but TNPA reserves the right to add additional items. The cost of the monthly maintenance will be based on an hourly rate as per Annexure "D". Sixteen hours (2 x 8 hours days) have been allowed per maintenance session.

1. SCADA AND PLC CHECKS AND DATA BACKUPS

1.1 WINDOWS SYSTEM

Complete a full bare metal recovery backup of the ArchestrA servers located at the Allan Dalton control room. The backups are to be loaded onto three separate external hard drives which TNPA will provide. The hard drives are in safe keeping with electrical control at the Fynnlands PSS depot, 1 Kuwait rd. Fill in the log book after all backups are completed.

1.2 ARCHESTRA

Complete a backup from the ArchestrA systems management console and on all ArchestrA objects from the integrated development environment.

1.3 TOP SERVER

Complete a backup of each top sever configuration file for every PC running top server.

1.4 PLC PROGRAMS FOR VARIOUS SITES

Test and ensure that the current PLC backups are equal with the present PLC programs running on the applicable site PC'S, as per annexure E. Make a backup of all PLC programs from the various sites to the Industrial PC on site at the Allan Dalton control room and the Galaxy repository server.

1.5 SCADA AND PLC SYSTEM CHECKS

Conduct the following checks and actions on all site PC'S and PLC'S as per annexure E;

- Create, check and update an excel spreadsheet with the SCADA and PLC software version and license. A copy to be provided to the client.
- Complete a check on the PC hard drive space especially the historian data files.
- Ensure that windows updates are disabled.
- Ensure that the antivirus program is active, has not expired and that all the required Wonderware exclusion are in place.
- Remove all unnecessary desktop shortcuts.
- Check and backup the Transnet folder structure (00. Data, 01. Security, 02. Licenses, 03. Backups, 04. Documents, 05. Software.

1.6 ARCHESTRA SCADA AND COMMUNICATION AUDIT

Conduct the following checks and actions;

- Complete a check on error logs on the system management consoles for all physical and virtual servers.
- Complete a Top server redundancy test from ArchestrA to ensure that fail over works for all applicable sites.
- Navigate the SCADA view station and ensure that objects and devices have healthy communication.
- Complete a check on the installation sites which have hot swappable PLC'S to ensure that a smooth changeover from PLC A to B takes place and visa-versa.

1.7 SCADA GRAPHICS

Conduct the following reviews;

- All SCADA graphics to ensure the graphic is a true representation of the physical plant. The review of the various substation graphics is especially important because the substation graphics change when changes to the substation networks are made.
- It is not only the graphic that is important but the colour representation of substation busbars, switchgear and cables on the graphic. For example red indicates the substation busbars, switchgear and cables are live and green or grey means the equipment is open or off.
- If any discrepancies are detected then those must be brought to the attention of TNPA and approval obtained before any changes are made to correct the graphic.

1.8 SCADA ACCESS AND SECURITY

Check the following SCADA user access and security;

- Check and update the SCADA user access list, remove all people not requiring access, to be done in conjunction with TNPA.
- Confirm that the SCADA access level that various users have is still required.
- Confirm that the various SCADA users only have access to the plant they are trained to operate.
- Conduct a two monthly change of the SCADA user password.
- Ensure that SCADA computer logons used by users is not the administrator user logon and password.
- Conduct a quarterly change of the SCADA computer administrator logon.
- Update the SCADA system with important security software patches, to be discussed with TNPA first.

ANNEXURE "G"

SCADA AND PLC SYSTEMS – TECHNICAL EVALUATION ELIGIBILITY AND TECHNICAL EVALUATION CRITERIA

1. TECHNICAL EVALUATION ELIGIBILITY CRITERIA

1.1	The contractor must have offices in the Durban area not more than 50 kilometres from the Port of Durban. Proof of physical business address must be submitted to prove this. This is to ensure that the fault response times required from the contractor can be met. The three systems integrators who will be evaluated in sections 2.5 to 2.7 below must be based full time at this local office.		Proof of business address submitted Yes/No

2. TECHNICAL EVALUATION CRITERIA

	CRITERIA	**REFERENCE**	**VALUE**
2.1	**Safety and health** **Safety and health (SHE) plan covering all requirements of the attached SHE specification.** **SHE plan score breakdown:** Excellent: The Service provider has developed a signed SHE Plan according to the Clients Specifications. Good: The Service provider has developed an unsigned SHE Plan according to the Clients Specifications. Satisfactory: The Service provider has developed a signed generic SHE Plan. Poor: The Service provider has developed a unsigned generic SHE Plan No response the applicable document was not submitted.	**Appendix H – Health and safety specification**	**10(Max)** 10 8 6 4 0
2.2	**Risk assessment** **Risk assessment score breakdown:** Excellent: The Service provider has developed a Signed Risk assessment by the Construction Manager/Supervisor using hierarchy of controls and SMART Principle and is based on the Method statement.	**Appendix H – Health and safety specification**	**10 (Max)** 10

	Good: The Service provider has developed and provided an unsigned Risk assessment by the Construction Manager/Supervisor using hierarchy of controls that is based on the Method statement. Satisfactory: The Service provider has developed and provided an unsigned Risk assessment by the Construction Manager/Supervisor that is based on the Method statement. Poor: The Service provider has developed and provided a generic unsigned Risk assessment by the Construction Manager/Supervisor that is not based on the Method statement. No response the applicable document was not submitted.		8 6 4 0
2.3	**Detailed methodology (Method Statement) on how work will be conducted.** **Method statement score breakdown:** Excellent: The Service provider has developed and provided a Signed Method statement/s for all Process/Activities by the Construction Manager/Supervisor including the hazards. Good: The Service provider has developed and provided an Unsigned Method statement/s for all Process/Activities by the Construction Manager/Supervisor including the hazards. Satisfactory: The Service provider has developed and provided an unsigned Method statement/s for all Process/Activities by the Construction Manager/Supervisor however it is not in logical sequence however has included hazards. Poor: The Service provider has developed and provided an unsigned Method statement/s for all Process/Activities by the Construction Manager/Supervisor however it is not in logical sequence and has not included the hazards. No response the applicable document was not submitted.	**Appendix H – Health and safety specification**	**10 (Max)** 10 8 6 4 0
2.4	**Company qualifications.** **The Contractors Company is registered as a certified or endorsed Schneider Electric or Wonderware or AVEVA or IS3 systems integrator and Schneider electrical Ecostruxture alliance partner (certified or master)**	**See section 5.1 of the scope of work**	**10 (Max)**

	The company is a certified or endorsed system integrator and has provided a certificate for the year 2020 or 2021 to prove this.		6
	The Company is a Schneider electric Ecostruxture Alliance partner (certified or master) and has provided a certificate for the year 2020 or 2021 to prove this.		4
	Company experience	**See section 5.1 of the scope of work**	**15 (Max)**
	The company has seven years of experience or more in projects and or maintenance contracts		15
	The company has five years of experience or more in projects and or maintenance contracts		12
	The company has three years of experience or more in projects and or maintenance contracts		9
	The company has two years of experience or more in projects and or maintenance contracts		6
	The company has one year of experience or more in projects and or maintenance contracts		3
	The company has no experience in projects and or maintenance contracts or no evidence of such was submitted.		0
2.5	**Systems integrator 1 – qualifications**	**See section 5.2 of scope of work**	**6 (Max)**
	Wonderware or Schneider electric or AVEVA or IS3 application server for system platform version 2017 or 2020, certificate of qualification submitted.		2
	Wonderware or Schneider electric or AVEVA or IS3 InTouch for system platform version 2017 or 2020 certificate of qualification submitted.		2
	Schneider Electric Ecostruxture Plant Certified - Control system certificate of qualification submitted.		2
2.5.1	**System integrator 1 - experience.**	**See section 5.2 of scope of work**	**9 (Max)**
	Has 5 or more years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's.		9
	Has 4 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's.		6
	Has 3 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's.		3

	Has 2 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has 1 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has no experience in working with System platform, Application Server, InTouch for system platform and Schneider electric PLC's or no evidence was submitted.		2 1 0
2.6	**Systems integrator 2 – qualifications** Wonderware or Schneider electric or AVEVA or IS3 application server for system platform version 2017 or 2020, certificate of qualification submitted. Wonderware or Schneider electric or AVEVA or IS3 InTouch for system platform version 2017 or 2020 certificate of qualification submitted. Schneider Electric Ecostruxture Plant Certified - Control System certificate of qualification submitted.	**See section 5.2 of scope of work**	**6 (Max)** 2 2 2
2.6.1	**System integrator 2 - experience.** Has 5 or more years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has 4 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has 3 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has 2 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has 1 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has no experience in working with System platform, Application Server, InTouch for system platform and Schneider electric PLC's or no evidence was submitted.	**See section 5.2 of scope of work**	**9 (Max)** 9 6 3 2 1 0
2.7	**Systems integrator 3 – qualifications** Wonderware or Schneider electric or AVEVA or IS3 application server for system platform version 2017 or 2020, certificate of qualification submitted.	**See section 5.2 of scope of work**	**6 (Max)** 2

	Wonderware or Schneider electric or AVEVA or IS3 InTouch for system platform version 2017 or 2020 certificate of qualification submitted. Schneider Electric Ecostruxture Plant Certified - Control System certificate of qualification submitted.		2 2
2.7.1	**System integrator 3 - experience.** Has 5 or more years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has 4 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has 3 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has 2 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has 1 years' experience in working with System platform, InTouch for system platform and Schneider electric PLC's. Has no experience in working with System platform, Application Server, InTouch for system platform and Schneider electric PLC's or no evidence was submitted..	**See section 5.2 of scope of work**	**9 (Max)** 9 6 3 2 1 0
	Total points		**100**

The above technical evaluation criteria is out of a hundred, 60 points are required to be technically compliant.