Maintenance, monitoring and testing of the Det-Tronics, Kentec and Inert Gas Safety systems and the provision of spares "as- and- when" required to support the Fire and Gas Alarm systems installed at Arnot Power Station as per SANS10139 and NFPA72

PART 3: SCOPE OF WORK

C3.1: EMPLOYER'S SERVICE INFORMATION

Contents

When the document is complete, insert a 'Table of Contents'. To do this go to: Insert, → Reference, → Index and tables → Table of Contents. Three levels and the title (but not the subtitle) may be shown if the formats used in this template are retained.

Otherwise insert list of contents manually.

1 Description of the *service*

1.1 Executive overview

This contract is for the provision of maintenance services which includes maintaining, monitoring and testing of the Det-Tronics, Kenteck and Inert gas fire-extinguishing systems to support the Fire and Gas Alarm systems installed at Arnot Power Station as per SANS10139, NFPA72 and Eskom Standard.

The current installed based system is being expanded at present, this maintenance services to cater for the full system once completed on a permanent basis for the duration of this contract.

The service is to make provision for spares, emergency services, system certification, and any other requests from the *Employer* on an as and when required basis for all sections of Det-Tronics, Kenteck Inert gas fire-extinguishing systems

1.2 *Employer*'s requirements for the *service*

In compliance with SANS10139, NFPA72, Manufacturer's recommendations and Eskom standards (240-54937454, 240-56737448), the following maintenance plan is proposed to ensure:

- Compliance with approved design documents
- System operation is in accordance with design documents
- Periodic inspections to assure that obvious damages or changes are identified and repaired
- Periodic testing to statistically assure operational reliability

1.2.1 Test and Inspections

Refer to section 6.1 of this document for detailed activities provided for in this service

1. Description of tests and inspections to be carried out by the *Contractor*
2. Details of material, facilities and samples for testing provided by the *Contractor*
3. Details of any testing or inspection which is to be carried out before delivery of material
4. Records to be kept by the *Contractor* and submitted to *Employer* submitted on a weekly basis
5. Task order programme – to be developed jointly with the *Employer*

1.2.2 Maintenance, Planning and Scheduling

The *Contractor* will take note of all F&G equipment which is subject to 12 months defects liability period after the final handover or hot commissioning. The maintenance team will take responsibility to ensure validity of the defects liability where applicable.

Planning, scheduling and recording of all F&G system history and maintenance activities will be done by the via the *Employer's* SAP System. Where history needs to be captured, defect will be raised on the SAP system and the history will be captured accordingly.

The *Contractor* will assist in the development of and necessary task schedules / work packages with the *Employers* Planning department

The *Employer's* Plant Safety Regulation (PSR) will be adhered to at all times. Plant Safety Regulation (PSR) and Authorised Supervisor courses are being presented on site for Eskom's account. It is expected of the *Contractor's* service technicians to obtain these necessary authorisations.

1.2.3 Routine maintenance

Routine maintenance comprises scheduled inspection, testing and maintenance programs to ensure operational integrity and condition and to identify and address visible faults. All defects or potential failures will be recorded as per requirement of SANS 10139/NFPA 72 logbook and SAP system. Performance of F&G system in operation is monitored to verify correct operation of the system. The scheduled inspections will be limited to the totalled installed system.

All defects or potential failures should then be recorded and corrective actions will be planned according to the defect priority. Where Plant Safety Regulations, permit to work is required, the work will be planned with Production Department. Plant F&G system performance is monitored and optimized when . All routine maintenance will be done according to Original Equipment Manufacturer‘s instructions or according to the EOM Maintenance manuals.

1.2.4 Preventative Maintenance

In preventative maintenance, equipment is checked and calibrated before failures occur. Inspection assumes a crucial role in preventive maintenance strategies. The frequency of maintenance activities is pre-determined by schedules as per OEM recommendation or according to the EOM Maintenance manuals.
. The *Contractor* will follow the preventative maintenance procedures to prevent potential breakdowns or failures of equipment. All history will be captured on work orders provided by the *Employer*.

1.2.4.1 Condition based maintenance/ monitoring

Condition based maintenance refers to maintenance based on the actual condition of a device or component. Maintenance is not performed according to fixed preventive schedules but rather when certain changes in characteristics are noted.
It enables the monitoring of the plant physical condition and potential failure modes of the equipment. Good record keeping is necessary to identify repetitive problems, and the problem areas with the highest potential impact.

1.2.5 Breakdowns / Corrective maintenance

This refers to Emergency breakdowns requiring immediate action to be taken. It is a corrective maintenance (retro-active strategy) whereby action is only taken when a system or component failure has occurred. The *Contractor* will arrange for all the resources (available manpower, available spares) required to attend to the breakdown.

In addition to the repair of the F&G system breakdown, the *Contractor* will also conduct a thorough inspection in order to determine the cause of the failure relying extensively on the system “event tracking” and event logging features of the system. Where necessary, the *Contractor* will recommend corrective actions to the Service Manager and issue a root cause analysis report for Eskom’s record.

1.2.5.1 Breakdowns/corrective maintenance after hours

The *Contractor* will be required to respond within reasonable time if called out after hours or during a weekend. Agreed overtime and travel rate will apply

The *Contractor* will be expected to avail the required resource within the following response time criteria’s

- Critical system failures are responded to within 12 hours of notification.
- Non critical failures are responded to within 24 hours of notification.

1.2.6 Planned maintenance

The main objective of the service contract is to maintain the F&G system as a whole to the required level of integrity and ensure 100 percent availability and it must also meet the design requirements, performance criteria and optimization requirements if any. The *Contractor* will perform all the work according to the scope of work for the specific areas within the duration of the planned maintenance. Before proceeding with any maintenance testing, all persons and facilities receiving alarms, supervisory or trouble signals and all areas shall be notified of the planned activities to prevent unnecessary response.

The *Contractor* will ensure that all defects are corrected and that the F&G Alarm system is available when the service period has ended with the no impact on production and business performance.

1.2.6.1 Fault finding

The *Contractor* will be required to do fault finding on F&G system and the *Contractor* supplied equipment's. Once the fault condition on the equipment has been identified, the *Contractor* will make necessary arrangement to rectify the problem according to the priority of the area in question. Furthermore, the *Contractor* will lead fault-finding & problem solving activities, finding solutions & implementing them.

1.2.7 Frequency

To ensure that each of the devices is within its listed and marked sensitivity range, a frequency regime per the manufacturer's specification will be established and maintained. In zones or in areas where nuisance alarms show any increase over the previous period, calibration tests will be performed, and calibration certificate will be required. If the testing frequency is varied, records of nuisance alarms and subsequent trends of alarms will be maintained to optimize on the testing frequency.

1.2.8 System administration on HMI / Safety F&G Alarm system

- Administrative tasks
- Database integrity
- Implementation of patches / updates
- Proof system disaster recovery procedures.
- Yearly / monthly / weekly / daily Back-Up
- Administer user accounts /passwords.
- Proof and check network integrity
- Software / Hardware Modifications implementation.
- Managing of recourses availability (I/O, timers, flags, cycle times)
- Insure Integrity in software design and functional group areas
- Security of Network LAN.
- Download of Diagnostic, Investigation depots from process computers.

Check archiving status and space availability.
Check status for Master/ Redundancy chop over.
Fault finding and analysing of diagnostic files
Clean computers inside and outside.
Clean and maintain printers
Clean and maintain Screens and Keyboards in Computer/Control rooms
Check and maintain log files
Check and clear all F&G related alarms.
Fault finding and replacement of appropriate modules on system
Maintenance on building fire panel system and associated hardware and software (including back-ups)
Spares Management and Support

It is a requirement that the system administrator conduct bi-annual or when required system health assessments and repairs this will be done on separate task order applying hourly rates as per C2 TSC Pricing Data Option A (estimated durations/cost for budget purposes)

1.2.9 System spares

Refer to *C2 TSC Pricing Data Option A*

- Whatever spares that are available for maintenance services will be free issued and not form part of any Task Order. The Contractor must at the Contractors cost on provision/delivery of the equipment required, provide a spare per unit. A spares list with the required part numbers,etc must be provided by the Contractor as well.

- With acceptance of the Service Agreement an assessment to be conducted on all defective and critical spares. This will be purchased on a Task Order to ensure minimum level of critical spares available

- Any software updates, product software upgrades and annual licence fees to be included in the price list

1.2.10 Training

1.2.10.1 On-the-job training

The *Contractor's* site personnel will make them-selves available to provide "on-the-job" type training on the F&G Alarm systems included as part of the service to the various categories of the Employer's technical and operating staff for the duration of the service. Training provided by the *Contractor* will be directly applicable to the actual equipment supplied on site. The proof of training or certificate of the Employers personnel will be required before the system hand over.

1.2.10.2 Formal certified training

Formal certified training will form part of the service as listed by SAQCC Fire and associated training documentation for the following categories:

- Det-Tronics,
- Kenteck
- SCADA (Android)

C&I Engineering and Maintenance departments will require two employees each to be certified as competent on the systems listed above.

1.3 Interpretation and terminology

If required include here definitions additional to those used in the *conditions of contract* which are required only for the purpose of making the Service Information easier to draft and read. Also list abbreviations used and provide a full interpretation of each one, for example:

The following abbreviations are used in this Service Information:

Abbreviation	**Meaning given to the abbreviation**
OBL	Outside battery limits
SAP	**System Administrative Program**
F&G	**Fire and Gas**

PSR	**Plant Safety Regulation**
ODTR	**Optical Time Domain Reflectometer**

2 Management strategy and start up.

2.1 The *Contractor*'s plan for the *service*

The Contractor to submit a plan indicating the dates/ frequency on when maintenance activities are intended to be conducted. Any special requirements should be highlighted in this plan and be submitted with the maintenance manuals which shall include the maintenance check sheets for each frequency of maintenance

2.2 Management meetings

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

Title and purpose Title and purpose	Approximate time & interval	Location	Attendance by:
Risk registers and compensation events	Weekly on Wednesday	C&I Maintenance	*Employer*, *Contractor*
Overall contract progress and feedback	Weekly on Wednesday	C&I Maintenance	*Employer*, *Contractor* and Engineering

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 shall be submitted to the *Service Manager* by the person convening the meeting within five days of the meeting.

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

2.3 *Contractor*'s management, supervision and key people

State any additional constraining requirements on *Contractor*'s supervision and key people that are not already stated in other sections such as for Health and Safety. This section could be used to solicit an organogramme from the *Contractor* showing his people and their lines of authority / communication. This would be essential if the *Contractor* is a Joint Venture.

2.4 Provision of bonds and guarantees

Not applicable.

2.5 Documentation control

The Eskom SAP system and SANS 10139 requirements will be utilised for documentation control and record purposes,

This will be supported by the different appendixes mentioned elsewhere in this document.

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.

2.6 Invoicing and payment

The Z clauses make reference to invoicing procedures stated here in this Service Information. Also include a list of information which is to be shown on an invoice.

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.

The *Contractor* shall address the tax invoice to

_____

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;
- (add other as required)

Add procedures for invoice submission and payment (e. g. electronic payment instructions)

2.7 Contract change management

Not Applicable

2.8 Records of Defined Cost to be kept by the *Contractor*

Not Applicable

2.9 Insurance provided by the *Employer*

A hard copy of the insurance policy can be made available on request. In the event of claims or any insurance issue please contact Dhevlen SBisetty @ 011 800 2714

2.10 Training workshops and technology transfer

The *Contractor* will conduct "on-the-job" training on acceptance of the service to all four Operating shifts and technical staff involved with the system and repeat on request.

The *Contractor* will conduct on acceptance of the service formal certified training and repeat on final year of service

2.11 Design and supply of Equipment

Not applicable

2.12 Things provided at the end of the *service period* for the *Employer*'s use

2.12.1 Equipment

Documents necessary to confirm compliance with the Eskom requirements must be provided (Commissioning, handover, performance certificates and handover data books).

2.12.2 Information and other things

None

2.13 Management of work done by Task Order

The *Service Manager* may at any time instruct the *Contractor* orally, followed up in writing, to carry out work which is of an emergency nature. Scope of work to be carried out must be clearly defined and in line with Eskom requirements….The Engineer may be required to approve such works before it can be executed.The Contractor shall issue a quote for the emergency work to the *Service Manager* for this work before the end of the next business day. The *Service Manager will then create the order for the task and send the task order assessment.*

Within 14 days of Task Completion, the Contractor shall submit to the *Service Manager* a detailed technical report for every completed Task Order. This report shall include all technical information and data produced for the Task Order and a technical evaluation on findings from the work done with recommendations for future action by the Parties and other information the *Service Manager* may require.

The prices for each item of work within the service shall be those on the Price List.

3 Health and safety, the environment and quality assurance

3.1 Health and safety risk management

The *Contractor* shall comply with the health and safety requirements contained in document ASSF 00005 Annexure A to this Service Information.

SAFETY NOTIFICATION ARNOT POWER STATION GMR 2.1

The following serves as a compliance and notification instruction with reference to the OSHACT, Act 85 of 1993 and any amendments thereto; BCEA and LRA of South Africa.

All safety related incidents (Category A, B&C; Fire Incidents; Usage of Fire Extinguishers and Near misses) shall be immediately notified to the ARNOT Power Station Safety Risk Management Personnel.

During working on elevated positions all personnel, including scaffolders to use Safety Harness, which they shall attach onto Lifelines or secure as per the Contractors Fall Protection Plan, which each Contractor shall have written and available on site for perusal, as and when required.

All Safety Harnesses shall comply with SABS EN 362:1992; 363:1992; 362:1992; 365:1992364:1992 Codes of Practice.

In terms of Section 16.1 of the OSHACT, “Every chief executive officer shall as far as is reasonably practicable ensure that the duties of his Employer as contemplated in this Act, are properly discharged.” Basically every employee, permanent/temporary/part-time/sub-contracted onto the ARNOT Site shall be treated as an “employee” in terms of the Act whilst under your “direct supervision and care”.

All employees as stated in 5 above have a right to “free issue” safety equipment, this shall include arc flash PPE for category 2, 2a and 4 if work has to done in any HV boards, these shall be supplied to them prior to commencement of work. The equipment shall comply too the relevant SABS standards and shall be in proper working condition, clean and undamaged whilst working on the ARNOT Site.

All employees shall do PSR and ORHVS training (Eskom regulations) and plant specific training at ARNOT and have a personal file with the required documents in. Once the file is in order they shall undergo a pre-test and if found competent shall go to the test committee who will then declare them competent to take out permits for tasks carried out at ARNOT. (Some of the courses to be done are working at heights, confined space entry, risk assessment, arc flash protective clothing and hazardous chemical substances in confined spaces)

In terms of the BCEA and LRA all employees shall be afforded a fair minimum wage, including allowances for meals and transport, if not provided, which has been agreed and set by the relevant Bargaining Councils, which form part of the Acts.

All Contractor employees entering the ARNOT Power Station site shall be medically fit. A full medical examination shall have been carried out by a Registered Occupational Health Worker who shall issue a certificate confirming the medical fitness of the employee. The examination shall consist of an eye test, heart function, lung function, chest x-ray, blood pressure, hearing function, previous occupational injuries, epilepsy, allergies, asthma and verification of work in elevated/confined spaces. Basically a full evaluation (a Red Ticket) shall be done and only those that pass these examinations shall be allowed to work on ARNOT Power Station.

In terms of Section 8.2 & 18.3 of the OSHACT, Employers shall ensure that employees working at ARNOT Power Station are trained in the hazards associated with the tasks and the precautionary measures are taken in the interest of health and safety. The responsibility of shall include compliance and adherence to the Eskom Plant Safety Regulations, Permit to Work System and Emergency Care.

All Contractor s to ensure that the ARNOT Emergency Alarm is activated for serious injuries and the injured shall not be 'moved' by the Contractors staff unless in a condition which threatens the injured or other parties life. Movement of injured persons (employees) shall be done by a trained First Aider, who shall be at the site at all times during the work phase.

All Contractors shall send a Safety Officer/Representative to all Safety Meetings arranged by the Power Station.

Safety Officers shall be at site or as reasonably practical to ensure that all hazards risks are identified and corrective action is taken.

All Employers shall ensure that any employee disregarding a safety instruction is not allowed to be a risk to the Contractor, ARNOT Power Station or other parties whilst on this site. The appropriate disciplinary action shall be taken against these employees.

The Contractor shall have daily Toolbox talks, periodic site inspections, job observations, risk assessments, safety equipment checks and safety talks with all employees.

Safety Induction will be done by the Power Station on prior arrangements but is not the minimum requirement. Induction and hazards training shall be done by the Contractor.

In term of Section 37.2 of the OSHACT, you the Contractor will ensure compliance with all requirements of the OSHACT and any instruction/notification that enhances those requirements.

All Contractors to ensure that a Safety Manual is completed prior to working on site and the relevant appointees are fully conversant with their responsibilities are trained / competent in those requirements, training proof is available and appropriate re-training is done.

Contractors to ensure that all staff, whether permanent/non-permanent/supplied by Labour Broker are competent in their relevant disciplines that they are employed/contracted in and all proof of training, experience, etc. is available and is current. Appropriate re-training shall have been done.

Due to all staff being under the "direct supervision and control" of yourself, they shall and will be treated as an 'employee', as defined in the OSHACT, Act 85 of 1993.

All equipment, welding panels, compressors, pneumatic tools, electrical equipment shall comply with a relevant SABS Code of Practice and all documentation related to this shall be made available as and when required, except for welding panels which shall only be connected by ARNOT Electrical Department with a Certificate of Compliance submitted prior to request. All pneumatic tools shall have had an inspection covering condition of pressure components, including piping, bolting, spring loaded bolts, safety devices and controls. A certificate must be issued by the hire company to the Main/Sub-Contractor confirming the tool is in a good and acceptable working condition. Proof of inspections must be issued by Hire Company to lesser prior to bringing onto ARNOT Power Station Site.

COMPLIANCE TO 5 IDENTIFIED CARDINAL RULES:

RULE 1: OPEN, ISOLATE, TEST, EARTH, BOND, AND/OR INSULATE BEFORE TOUCH

(That is, any plant operating above 1 000 V)

No person may work on any electrical network unless:

he/she is trained and authorised as competent for the task to be done;

a pre-task risk assessment to identify all risks and hazards has been conducted prior to any work commencing;

an equipotential zone is created for each worker on the job site by earthing, bonding, and/or insulating according to approved procedures;

all conducting material is connected together, all staff on site wear electrical safety shoes, and insulating techniques are applied according to standards; and

the authorised person (team leader) has certified and shown all team members that the apparatus is safe to work on.

RULE 2: HOOK UP AT HEIGHTS

Working at height is defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into.

No person may work at height where there is a risk of falling unless:

a pre-task risk assessment to identify all risks and hazards has been conducted prior to commencing any work at height;

He / she is appropriately trained;

He / she is appropriately secured during ascending and descending; and

He / she are using an approved fall arrest system where applicable.

RULE 3: BUCKLE UP

No person may drive any vehicle on Eskom business and/or on Eskom premises:

unless the driver and all passengers are wearing seat belts.

RULE 4: BE SOBER

No person is allowed to work under the influence of drugs and alcohol.

"Under the influence" means the use of alcohol, drugs, and/or a controlled substance to the extent that:

the individual's faculties are in any way impaired by the consumption or use of the substances; or

the individual is unable to perform in a safe, productive manner; or

the individual has a level of any such substance in his/her body that corresponds to or exceeds accepted medical/legal standards; or

the individual has a level of alcohol in his/her body that is greater than 0.02% blood alcohol concentration.

This includes any level of an illegal substance in the body, irrespective of when the substance was used.

RULE 5: ENSURE THAT YOU HAVE A PERMIT TO WORK

Where an authorisation limitation exists, no person shall work without the required Permit to Work (PTW), which is governed by the Plant Safety Regulations, Operating Regulations for High Voltage Systems (ORHVS) etc.

No plant is to be returned to service without the cancellation of all permits on that plant in accordance with procedure.

NB: in the case of live work, a "live work declaration form" is to be completed by the authorised person who is the person responsible for the safe execution of work according to relevant standards and procedures.

Please ensure that these rules are understood and communicated with the urgency that they deserve. If any of these rules are unclear or the consequences not understood, please do not hesitate to discuss it with Eskom.

We would like to continue our current partnership and therefore urge your support in the implementation and upholding of these rules.

The *Contractor* shall comply with the health and safety requirements contained in to this Service Information.

3.2 Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints stated in Annexure A

Environmental management

Environmental - In terms of the National Environmental Management Act, section 28 “Every person who causes has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring”.

The Contractor/supplier shall conform to the station Environmental Management System (ISO 14001:2015) and applicable procedures. This includes the following:

- The Eskom’s SHEQ Policy (32-727)
- Emergency Preparedness Procedure
- Waste Management Procedure
- And other station Environmental Management System procedure

Environmental requirements

The *Contractor* ensures that all goods, services or *works* supplied in terms of the Contract conform to all applicable environmental legislation.

The management and staff at Arnot Power Station are committed to generate low cost power without compromising its responsibility towards the natural environment. Arnot Power Station management has decided to implement and align its environmental management system in compliance with SABS ISO 14001:2015 as a means of managing impacts to and ensuring continual improvement of the environment in which it operates.

The Contractor need to comply with ISO 14001 on environmental management.

The environmental policy for Arnot Power Station is set out below:

We are committed to sustainable development and will actively work to reduce the impact on the natural environment resulting from the power generation process.
We commit to continual improvement in our performance and aspire to minimum harm to people and the environment

Whenever we conduct our business, we will:
Develop, implement and maintain an environmental management system that is consistent with internationally recognised standards.
Effectively and efficiently manage the natural resources required to generate electrical power
Comply with the requirements of environmental legislation and adhere to Eskom’s corporate policies and procedures on environmental management;
Set and achieve targets that include preventing pollution, to address our environmental aspects and impacts
Develop our people and provide resources to meet our targets
Communicate and engage with our employees, clients, regulatory authorities and suppliers to build relationships based on integrity, honesty, openness and involvement to meet the requirements of this policy
Increase environmental sensitivity and awareness among station management, employees and the community and achieve active involvement of all parties, with respect to environmental matters

And promote Arnot Power Station and Eskom as environmentally responsible organisations to outside parties

We will review and report our progress regularly and ensure this policy remains relevant to the needs of our stakeholders. We will be satisfied when we achieve our targets toward minimum harm to people and the environment, and are valued by our clients and the communities in which we work

3.3 Quality assurance requirements

Contractors are to demonstrate compliance to the relevant SABS ISO 9000-1994, series quality standard.

It should be noted that all documents submitted as demonstration of compliance to the quality requirements of the enquiry are properly authorised by the tenderer's executive management.

Before Plant is placed in service the *Contractor* is to certify that it is in a suitable and safe condition. Eskom Engineer or Quality Engineer must review the plant to insure it complies with Eskom requirements and all defects are cleared. Eskom is to carry out quality assurance and control in parallel with the Contractor
The *Contractor* shall comply with the environmental criteria

4 Procurement

There is a cross reference from the core clause 11.2(6) definition of Disallowed Cost to the Service Information regarding procurement procedures. This part of the Service Information MUST include any such procedures to be able to administer Disallowed Cost.

4.1 People

4.1.1 Minimum requirements of people employed

The *Contractor's* site personnel will be registered with SAQCC Fire under the following categories:

- Fire Detection – Serviceman
- Gas Suppression – Commissioner

4.1.2 BBBEE and preferencing scheme

The Contractor must be BEEE compliant. The copy of the certificate will be required.

4.1.3 Accelerated Shared Growth Initiative – South Africa (ASGI-SA)

If the ASGI-SA requirements are to be included in this contract specify constraints which *Contractor* must comply with after contract award in regard to any ASGI-SA requirements. The ASGI-SA Compliance Schedule completed in the returnable tender schedules is reproduced here. If ASGI-SA does not apply, delete this paragraph.

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Accelerated and Shared Growth Initiative - South Africa in accordance with and as provided for in the *Contractor*'s ASGI-SA Compliance Schedule stated below

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[Insert the agreed ASGI-SA Compliance Schedule here]

The *Contractor* shall keep accurate records and provide the *Service Manager* with reports on the *Contractor*'s actual delivery against the above stated ASGI-SA criteria. [Elaborate on access to and format of records and frequency of submission etc.]

The *Contractor*'s failure to comply with his ASGI-SA obligations constitutes substantial failure on the part of the *Contractor* to comply with his obligations under this contract.

4.2 Subcontracting

4.2.1 Preferred subcontractors

Not applicable.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

Not applicable.

4.2.3 Limitations on subcontracting

Not applicable

4.2.4 Attendance on subcontractors

Not applicable.

4.3 Plant and Materials

4.3.1 Specifications

SPECIFICATION	REVISION	SPECIFICATION DESCRIPTION
NFPA 72	2010	NATIONAL FIRE ALARM AND SIGNALING CODE
NFPA 2001	2008	STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
NFPA 75	2009	PROTECTION OF INFORMATION TECHNOLOGY EQUIPMENT
SANS10139	2007	FIRE DETECTION AND ALARM SYSTEMS FOR BUILDINGS
SANS246	2004	CODE OF PRACTICE FOR FIRE PROTECTION FOR ELECTRONIC EQUIPMENT INSTALLATIONS
SANS530 – 9	2010	FIRE DETECTION ALARM SYSTEM FOR BUILDING PART 9 EMERGENCY VOICE COMMUNICATION SYSTEMS
SANS7240 – 16	2008	FIRE DETECTION ALARM SYSTEM SOUND SYSTEM CONTROL AND INDICATING EQUIPMENT
SANS7240 – 19	2008	FIRE DETECTION ALARM SYSTEM DESIGN INSTALL COM AND SERVICE OF SOUND SYSTEMS FOR EMERGENCY PURPOSES
ISO 7240 – 28	2008	FIRE PROTECTION CONTROL EQUIPMENT
SANS50054 – 1	2009	FIRE DETECTION AND FIRE ALARM SYSTEMS INTRODUCTION
SANS50054 – 2	1997	FIRE DETECTION AND FIRE ALARM SYSTEMS CONTROL AND INDICATING EQUIPMENT
SANS50054 – 3	2001	FIRE DETECTION AND FIRE ALARM SYSTEMS FIRE ALARM DEVICE SOUNDERS
SANS50054 – 4	1997	FIRE DETECTION AND FIRE ALARM SYSTEMS POWER SUPPLY EQUIPMENT
SANS50054 – 5	2000	FIRE DETECTION AND FIRE ALARM SYSTEMS HEAT DETECTORS AND POINT DETECTORS
SANS50054 – 7	2000	FIRE DETECTION AND FIRE ALARM SYSTEMS SMOKE DETECTORS- SCATTERED OR TRANSMITTED LIGHT ISOLATION
SANS50054 – 10	2010	FIRE DETECTION AND FIRE ALARM SYSTEMS FLAME DETECTORS – POINT DETECTORS
SANS50054 – 11	2001	FIRE DETECTION AND FIRE ALARM SYSTEMS CALL POINTS
SANS50054 – 12	2010	FIRE DETECTION AND FIRE ALARM SYSTEMS LINE DETECTORS OPTICAL LIGHT BEAM
SANS50054 – 20	2009	FIRE DETECTION AND FIRE ALARM SYSTEMS ASPIRATING SMOKE DETECTORS

SANS10400 – T	2011	THE APPLICATION OF NATIONAL BUILDING REGULATION – T FIRE PROTECTION
00-000	0	ESKOM SERVER ROOMS AND DATA CENTERS STANDARD
32-124	0	ESKOM FIRE RISK MANAGEMENT
054 393	2	EARTHING STANDARD PART 1 TO 6
200-11757	0	EARTHING AND LIGHTNING PROTECTION
200-11764	0	LIGHTING AND SMALL POWER INSTALLATION
200-11768	0	STATION CABLING AND RACKING STANDARD
474-1325	1	DESIGN REVIEW PROCEDURE
36-471	0	MANAGEMENT OF EMERGENCY PREPAREDNESS.
36-574	0	CONTROL SYSTEM COMPUTER EQUIPMENT HABITATS REQUIREMENTS
36-726	4	LIST OF APPROVED ELECTRONIC DEVICES TO BE USED ON ESKOM POWER STATIONS
36-776	0	ENVIRONMENTAL CONDITIONS FOR PROCESS CONTROL EQUIPMENT USED AT POWER STATIONS
36-813	0	SPECIFICATION FOR VENTED, FLOODED LEAD ACID CELLS
36-815	0	SPECIFICATION FOR BATTERY CHARGERS
36-817	0	STATIC UNINTERRUPTABLE POWER SUPPLIES
36-943	0	ENGINEERING DRAWING OFFICE AND DOCUMENTATION STANDARD
36-944	0	GENERAL DRAWING STANDARD WORK INSTRUCTION
36-945	0	WORKS INSTRUCTION FOR (P&ID,PFD,PPFD,SFD),HYDRALIC AND PNEUMATIC DRAWING
36-946	0	WORKS INSTRUCTION FOR ELECTRICAL DRAWING AND DOCUMENTATION
36-947	0	WORKS INSTRUCTION FOR CONTROL AND INSTRUMENTATION DRAWINGS AND DOCUMENTATION
36-980	0	FIRE DETECTION GUIDELINE ESKOM

4.3.2 Correction of defects

All attempts shall be made to fix defective Plant and Materials. If all fails, the item may be replaced with a new one. Then if defects are not rectified within the defect's liability period, Eskom must appoint a new Contractor to rectify such detects and claim the cost thereof from the existing Contractor

4.3.3 *Contractor*'s procurement of Plant and Materials

Any extended warranty on any item shall be transferred to be in favour of the *Employer* as well. Specific examples are, Dell Servers.

4.3.4 Tests and inspections before delivery

Not applicable

4.3.5 Plant & Materials provided "free issue" by the *Employer*

All *Plant and Materials* in stock at Arnot Power Station stores will be free issued

4.3.6 Cataloguing requirements by the *Contractor*

State whether cataloguing is applicable, if it is, reference the requirements for cataloguing that need to be satisfied by the *Contractor* (consult Procurement Instruction Number 1 of 2018 – Incorporating Cataloguing into the Procurement Environment, Unique Identifier 240-1289988974).

5 Working on the Affected Property

This part of the Service Information addresses constraints, facilities, services and rules applicable to the *Contractor* whilst he is doing work on the Affected Property.

5.1 *Employer*'s site entry and security control, permits, and site regulations

All Site access is controlled through the designated access gate.

The *Contractor* is informed of the access procedures through Site regulations and that such procedures may change depending on the prevailing security situation.

The *Contractor* shall provide and install barricades and warning devices to ensure that equipment and persons are not exposed to danger or to prevent access to dangerous areas.

All welding, flame cutting and grinding work shall be properly screened to protect persons from arc flashes or eye injuries.

All grating shall be covered with an adequate protective screening when welding or flame cutting in the vicinity is undertaken strictly with the *Employer's* Directive ASSF 00005.

All vehicles must be driven with due consideration for personnel and property. A maximum speed limit of 40 kilometres per hour will be adhered to on the premises at all times.

The *Employer* follows an accident prevention policy that includes the investigation of all accidents involving personnel and property. This is done with the intention of introducing control measures to prevent a recurrence of the same incidents. The *Contractor* is expected to co-operate fully to achieve this objective. The *Project Manager* must be informed within 24 hours of any injuries or damage to property or equipment.

This report does not relieve the *Contractor* of his legal obligation to report certain incidents to the Department of Labour, or to keep records in terms of the Occupational Health and Safety Act, and Compensation for Occupational Injuries and Diseases Act.

5.2 People restrictions, hours of work, conduct and records

The *Contractor* will be required to work the same hours as the *Employer's* employees. Monday to Thursday 07h00 to 16h15 with a necessary required lunch break. Fridays we work from 07h00 to 12h00. If these times change the *Contractor* will be required to adjust as well.

The *Contractor* keeps records of his people working on the Affected Property, including those of his Subcontractors. The Service Manager shall have access to them at any time. These records may be needed when assessing compensation events.

5.3 Health and safety facilities on the Affected Property

Medical facilities are available on site for emergencies only.

5.4 Environmental controls, fauna & flora

Not applicable

5.5 Cooperating with and obtaining acceptance of Others

The *Contractor* is to make his own assessment of, and allow in his Program for those access problems due to confined and restricted areas, existing structures and Plant, etc. which may be encountered and no extra payment or claim of any kind is allowed on account of difficulties of access to the Works or for the requirement of working adjacent to or in the same area as other *Contractor's* operations or providing reasonable access to and interfacing with other *Contractors.*

5.6 Records of *Contractor*'s Equipment

Not applicable

5.7 Equipment provided by the *Employer*

Overhead crane facilities are available in the event of lifting requirements. The *Employer* will provide all scaffolding when required

5.8 Site services and facilities

5.8.1 Provided by the *Employer*

Contractor's **Yard**
A site for the *Contractor's* yard is provided by the *Employer*. A written request, indicating the *Contractor's* requirements in locality and area of storage, office and Work Shop sites is submitted to the *Service Manager* as soon as possible after the Contract Date.

Potable water
Potable water for construction purposes is also available free of charge. Any installation is for the *Contractor's* account.

Meals
Meals on site for *Contractor's* personnel are not available.

Sanitary Facilities
Sanitary facilities are provided by the *Employer*.

General
The *Contractor* is to comply with all Site regulations and instructions. The onus is on the *Contractor* to ensure his familiarity with the Employer's Site regulations and inspections.

Fire Protection
The Contractor is to comply with requirements of Eskom Standard NWS 1494 Revision 4 "Fire prevention and protection of *Contractor's* premises on Engineering Sites" and of Site Regulations pertaining fire protection. (NWS1494 Revision 4).

Fire Precautions
Any tampering with the *Employer's* fire equipment is strictly forbidden. All exit doors, fire escape routes, walkways, stairways and stair landings must be kept free of obstruction, and not to be used for work or storage at any time. Firefighting equipment must remain accessible at all times.

Plant Safety Regulations
The *Employer* shall on request from the *Contractor* isolate required plant from all sources of danger as described in the Plant Safety Regulations. The *Contractor* shall conform to all rules and regulations applicable to Plant Safety and shall complete the Workman's Declaration Book prior to working on the plant.

Induction training to employees
No person will be issued with an access permit without proof that the person did attend the local Arnot Power Station induction course.

A one-day access permit will be issued for persons attending the induction course. It is the *Contractor's* responsibility to arrange with the *Project Manager* one week in advance for a course booking.

Supply of construction power

Conditions of supply for Erection
In order to comply with the Electrical Installation Regulations under the Occupational Health and Safety Act, no 85 of 1993 the following requirements are met before electricity is supplied it is expected that the *Contractor* is in possession of a valid certificate of compliance. Your electrical installation is inspected and tested by an accredited person to ensure that it complies with the requirements of the Occupational Health and Safety Act, 1993 and the code of Practice for wiring of premises, SABS 0142. After you have obtained the certificate of compliance, the *Employer* is to inspect your electrical installation and if satisfied, it is connected and supplied from the construction power supply.

The *Contractor* provides at his own expense all temporary wiring and cabling to lead power from the *Employer's* supply points, to where it is required, maintain same and remove on completion. These points of supply are the points designated by the *Project Manager*.

Warning:

Phase rotation may change during power supply breaks. *Contractors* are responsible to check rotation of their Equipment before recommencing work.

Application for supply
A standard 'Application for Power" form is completed and submitted to the *Project Manager* at least two weeks before a power supply is required. The *Employer* guarantees the continuity of power supply for a minimum 26 out of 30 days.

Cost of supply
There is no charge for electricity used for construction purposes and no connection fee is levied for the point of supply.

5.8.2 Provided by the *Contractor*

The *Contractor* provides, erects and maintains for own use, adequate size office accommodation and stores together with such drainage, lighting, heating and hot and cold water services as may be required in the area designated by the *Service Manager*.

The *Contractor* is to dismantle and clear off Site all such temporary structures and associated foundations and infrastructure

5.9 Control of noise, dust, water and waste

Refuse Disposal

The Contractor is responsible to keep the work area clean of any rubble.
All waste introduced and/or produced on the Employer's premises by the Contractor for this contract, is handled in accordance with the minimum requirements for the Handling and Disposal of Hazardous Waste in terms of Government Legislation as proclaimed by the Department of Water Affairs and Forestry Act 1994 Ref: ISBN0621 - 16296-5.

The Employer provides colour coded bins for refuse disposal.
The Employer empties these bins.
Contractor keeps the work area clean of any rubble, and to places all refuse into the bins provided.
The Contractor ensures that all workers under his control strictly adhere to the correct use of refuse

5.10 Hook ups to existing works

Not applicable for this Service Contract

5.11 Tests and inspections

5.11.1 Description of tests and inspections

1. Description of tests and inspections to be carried out by the *Contractor*
2. Details of material, facilities and samples for testing provided by the *Contractor*
3. Details of any testing or inspection which is to be carried out before delivery of material
4. Records to be kept by the *Contractor* and submitted to *Employer* submitted on a weekly basis
5. Task order programme – to be developed jointly with the *Employer*

5.11.2 Materials facilities and samples for tests and inspections

Not applicable

6 List of drawings

6.1 Drawings issued by the *Employer*

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

Drawing number	Revision	Title
240-54937454	3	Inspection, Testing and Maintenance of Fire Protection Systems Standard
240-56737654	3	Inspection, Testing and Maintenance of Fire Detection Systems Standard