

## PART 3: SCOPE OF WORK

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## C3.1: EMPLOYER'S SERVICE INFORMATION

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# 1 Description of the service

## 1.1 Executive overview

This specification defines the technical requirements for overhauling Tube mills and Vertical spindle mills at Arnot power station. **NOTE: The final SOW for per mill will be determined by the condition of mills during inspections and agreed between Eskom and the Contractor.**

There are 03 Tube mills and 30 Vertical spindle mills installed at Arnot Power Station. This specification defines the technical requirements for the replacement of tube mills and vertical mills components during outages.

The purpose of this Works Information document is to ensure that the mills will be overhauled to specification and give reliable service when return to service

The contract will be divided into sub-sections. Section 1, Contractor will provide labor (manpower) for routine maintenance and reporting directly to *Employer's* Supervisor.

Section 2, *Contractor* will provide resources on "As and Required basis" meaning the *Contractor* will be provided with high level scope and *Contractor* must do inspections and give detailed scope and which will be agreed by both parties provide required resources (manpower, lifting equipment, tools, and all other requirements to enable the Contractor to fully execute the scope)the contractor will be provided with high level scope to perform scope and take full execution of the scope and quality mentorship. Eskom coordinator will advise where necessary when scope is executed and do the quality checks after each task completed.

## 1.2 Employer's requirements for the service

### 1.2.1 General Requirements

- The *Contractor* provides qualified labour to carry out the service.
- The *Contractor* provides tools, lifting equipment and Personal protective equipment has to carry out the work.
- *Contractor* ensures the safety of own personnel by complying with OHS Act No.85 of 1993 and its Regulations
- The *Contractor* shall compile a comprehensive data file for each task for acceptance by Eskom appointed Quality Controller and System Engineer.
- The *Contractor* shall compile a detailed quality plan including an Inspection and repairs for approval by Eskom System Engineer or Eskom appointed Quality Controller before commencing any work in the plant.
- The *Contractor* performs work within the specific period and to the acceptable standard.
- The *Contractor* perform quality control on own work as per pre-approved control plan.
- 

### 1.2.2 WORK TO BE PERFORMED BY THE CONTRACTOR AS AND WHEN REQUIRED

The *Contractor* must submit the full detailed scope and program and must be approved by the *Employer* prior to commencement with execution of each activity

The *Contractor* to note that resources must be planned to work around the clock (24 hours a day) as these activities normally is executed during planned scheduled services or breakdowns

#### 1.2.2.1 Tube mills – Unit 1

##### 1.2.2.1.1 Pinion and bearings replacement (72 hours duration)

- Remove and replace the bearings from the pinion shaft
- Remove and replace the pinion

- Inspect, remove, and replace the bearing housings
- Inspect/replace and grease drive train couplings
- Align the girth gear and pinion
- Align the drive train (pinion to gearbox, gearbox to motor, motor to inching gearbox)
- Drain and flush mill motor bearings
- Grease drive train couplings
- Pre-grease the girth gear and pinion
- Ensure that the spray pattern of grease on the gears is covering the teeth
- House keeping

#### **1.2.2.1.2 Main mill motor or gearbox replacement (36 Hours Duration)**

- Remove and replace main mill motor
- Remove and replace main mill gearbox
- Inspect and grease drive train couplings
- Align drive train from girth gear/pinion to inching gearbox

#### **1.2.2.1.3 Screw conveyor Replacement (24 Hours Duration)**

- Removal and replacement of the screw conveyor housings and bearings
- Removal and replacement of screw conveyor covers and seal air pipes
- Removal and replacement of the hot boxes
- Hotboxes inspection and repairs
- Removal and replacement of drive pins
- Removal and replacement of screw conveyor
- Remove and replace damper flaps
- House keeping

#### **1.2.2.1.4 Mill internal inspection and repairs (24 Hours Duration)**

- Open and close drum door
- Conduct inspection as per 3000 hrs service package, i.e. liners, screw conveyor.
- Drive pins and round sealing bar inspection and repairs
- Classifier inspection and cleaning
- Housekeeping

#### **1.2.2.1.5 Classifier inspection and replacement (40 Hours Duration)**

- Classifier removal and replacement
- Remove and replace raw coal pipes above classifier

#### **1.2.2.1.6 Inspection and replacement of Trunnion bearings (40 Hours Duration)**

- Removal and replacement of all Inspection covers and bearing housing
- Inspection and replacement of Non drive end and Drive end bearings
- Inspection and replacement of bearing housing breather
- Inspection and replacement of cooling oil spray bar nozzles
- Inspection and replacement of trunnion bearing housing inboard felt seal
- Inspect and replace felt seals

SUPPLY RESOURCES FOR SERVICES, REPLACEMENT OF COMPONENTS AND COMMISSIONING OF TUBE MILLS AND VERTICAL SPINDLE MILLS DURING NORMAL MAINTENANCE ON A FULL TIME BASIS AND OUTAGES ON AN "AS- AND- WHEN" REQUIRED BASIS FOR U1-U6 MILLS ON FOR A PERIOD OF 36 MONTHS AT ARNOT POWER STATION

- Inspect and replace trunnion seals
- Removal and replacement of trunnion jacking pumps –DE and Non-DE
- Inspect, repair and or replace trunnion carrier as well as sealing area.
- House Keeping

#### **1.2.2.1.7 Denco oil system inspection, cleaning, and repairs (48 Hours Duration)**

- Remove pipework, pump assemblies etc. on Denco tank
- Remove and high pressure clean denco tank
- Clean coolers and filters
- Replace Denco tank and all associated system
- Clean denco system spray nozzles
- Inspect/replace felt seals
- Housekeeping

#### **1.2.2.1.8 Screw conveyor Stub Shaft Replacement (48 Hours Duration)**

- Remove and replace Hot Box
- Remove and replace stuffing box
- Remove and replace screw conveyor bearing
- Remove and replace stub shaft and stub shaft housing

#### **1.2.2.1.9 Feeder inspections and repairs (72 Hours Duration)**

- Remove and replace Feeder bunker & feeder inlet chutes side walls
- Remove and replace hoppers
- Remove and replace inlet guide chute and guide plates
- Remove and replace wear lining on guide chute
- Remove and replace raw coal pipes between mill and feeder
- Removal, replacement tensioning and centred of feeder conveyor belt
- Inspect and repair front and rear doors
- Inspect, remove, and replace bearings protected
- Inspect, remove, and replace feeder Inlet dampers – (Knife gate)
- Inspect, remove, and replace belt scraper and motor
- House keeping

#### **1.2.2.1.10 Damper's inspection and repairs (24 Hrs Duration)**

- Inspect/replace inlet and outlet dampers in both cold and hot air system
- Stroke checking of dampers
- 

#### **1.2.2.1.11 Girth Gear Replacement (72 Hours Duration)**

- Removal of the existing girth gear and positioning of the new girth gear
- High pressure cleans all components and be grease free
- Final installation and alignment of the girth gear
- Removal of the pinion
- Installation of the pinion assembly
- Alignment of the drive train
- Replace mill components which include
  - Girth gear housing
  - Pinion cover seals
  - Housing covers
  - Girth gear grease system and Lube oil system
  - changing raw coal pipes
  - Service, Replacement of fabrication and welding components
  - Replacement of feeders
  - Box up the covers, guards, and installation of handrails
- House keeping

#### **1.2.2.1.12 Girth Gear assembly high Pressure Cleaner (48 Hours Duration)**

- Provide high pressure cleaning and resources to execute the task
- High pressure cleans the drum sound wood
- Remove girth gear and pinion casing cover
- High pressure clean girth gear and pinion assembly
- Perform lead and blues
- Replace girth gear grease seal
- Assembly girth gear and pinion cover
- Housekeeping including emptying of girth gear pans

#### **1.2.2.1.13 Coal chutes above feeder inspection and repairs (72 Hrs Duration)**

- Inspect, replace inlet and outlet dampers in both cold and hot air system
- Stroke checking of dampers

#### **1.2.2.1.14 Row Coal pipes inspections and Repairs (24 Hrs Duration)**

- Remove, inspect and repair/replace coal chutes underneath bunker down to top of classifier

#### **1.2.2.1.15 20 Ton rough Terrain Mobile Crane as and when required for a maximum of 40 days per outage**

#### **1.2.2.1.16 7 Ton Forklift as and when required per day**

### **1.2.2.2 Vertical Spindle all Mills Service Hrs from (U2 TO U6)**

#### **1.2.2.2.1 Mill Internal and external cleaning and Suction for test - as per 6000hrs Service**

#### **1.2.2.2.2 Feeder internal and external inspection and repairs - as per 6000hrs Service**

Inspect, Remove, and replace big and small square to round from the bunker to mill

- Inspect, Removal and replacement raw coal pipes from bunker to mill
- Inspect, Removal and replacement of sliding gates
- Inspect, Removal and replacement feeder internals (feeder table, feeder segments, feeder plough, feeder liners, feeder) to the required sizes
- Inspect, Removal and replacement of feeder shafts and bearings (feeder shaft assembly)
- Inspect, Removal and replacement of feeder gearboxes and motors verify alignment between the feeder gearbox and motor tolerance + - 0.05 MM
- Drain and replace feeder gearbox oil
- Service, Replacement of fabrication and welding components
- Inspect, Removal and replacement Square to rounds
- Inspect, Removal and replacement cones
- Inspect, Removal and replacement of reject box
- Inspect, Removal and replacement of step ladder and handrails
- Inspect, Removal and replacement of reducer pipes

SUPPLY RESOURCES FOR SERVICES, REPLACEMENT OF COMPONENTS AND COMMISSIONING OF TUBE MILLS AND VERTICAL SPINDLE MILLS DURING NORMAL MAINTENANCE ON A FULL TIME BASIS AND OUTAGES ON AN "AS- AND- WHEN" REQUIRED BASIS FOR U1-U6 MILLS ON FOR A PERIOD OF 36 MONTHS AT ARNOT POWER STATION

- Inspect, Removal and replacement of liners
- Inspect, Removal and replacement of mill platforms
- Inspect, Removal and replacement of veins inside classifier cone
- Repair grey coal bunker above feeder
- Inspect, removal of duplex damper
- Cut-off plate on raw coal pipes installation and removal
- Clean coal from raw coal pipes after closing of duplex damper and installation of cut-off plate
- Feeder body repairs
- Plough adjusting mechanism repairs and servicing
- Feeder doors gaskets and bracket fabrication and replacement
- Inspect and replace all feeder dampers, cylinders, links, shafts, flaps, and actuators
- Lockheed system inspection and repairs
- Feeder seal air pipes inspection and repairs
- Inspect, remove, and replace feeder shaft sprocket gear
- Feeder guards' fabrication and installation
- Panting of feeder external components
- Housekeeping

#### **1.2.2.2.3 Mill external inspection and repairs - as per 6000hrs Service**

- Inspect, Remove, and replace classifiers before and after refurbishment
- Inspect, Removal and replacement mill gearboxes and motors
- Alignment between mill motor and mill gearbox using laser machine tolerance + - 0.05 MM
- Inspect, Removal and replacement of mill covers
- Inspect, Removal and replacement of mill bodies
- Inspect, Removal and replacement all seal air pipes
- Inspect, Removal and replacement of trunnion arms
- Inspect, Removal and replacement of hydraulic cylinders and accumulators
- Inspect, Removal and replacement of all mill expansion joints
- Repairs on the impulse line
- Strip, assess and replace pipes, fittings, and valves on the impulse line
- PA flow impulse line both low pressure and high pressure
- Mill outlet impulse line
- PA outlet impulse line
- Unblocking, repair of venturi and impulse line repairs
- Removal overhauling and replacement of roller assembly

#### **1.2.2.2.4 Mill internal inspection and repairs - as per 6000hrs Service**

- Inspect, Remove, and replace mill table
- Mill table repairs
- Inspect, Remove, and replace mill internals
- Inspection and repairs on the mill ducting
- Inspect, Remove, and replace table segments



SUPPLY RESOURCES FOR SERVICES, REPLACEMENT OF COMPONENTS AND COMMISSIONING OF TUBE MILLS AND VERTICAL SPINDLE MILLS DURING NORMAL MAINTENANCE ON A FULL TIME BASIS AND OUTAGES ON AN "AS- AND- WHEN" REQUIRED BASIS FOR U1-U6 MILLS ON FOR A PERIOD OF 36 MONTHS AT ARNOT POWER STATION

- Inspect, Remove, and replace wall ring
- Inspect, Remove, and replace rotating throat
- Inspect, Remove, and replace set ring/dam ring
- Inspect, Remove, and replace mill body liner
- Inspect, Remove, and replace main table cone
- Inspect, Remove, and replace mill brushes
- Inspect, Remove and replace seals
- Hard facing of mill body
- Repair all mill body damaged holes
- -Remove, repair, and replace ducting's
- Reject boxes fabrication and replacement
- Inspect. Repair, replace and align all mill ducting doors
- Inspect, remove, and repair all expansion joints above the classifier and from the PA fan
- Remove and Replace mill trunnion rocker arms
- Housekeeping

#### **1.2.2.2.5 Mill hydraulic system inspection and repairs - as per 6000hrs Service**

- Removal and replacement hydraulic pumps and motors
- Removal and replacement hydraulic cabinets and drain oil
- Drain, clean tank and replacement hydraulic oil
- Removal and replacement of hydraulic pipes
- Removal and replacement of filters and breathers
- Replace hydraulic tank oil with **Castrol alpha sp 150**
- **Hydraulic power packs repairs (all components including door hinges)**

#### **1.2.2.2.6 Mill Gearbox Lube oil system inspection and repairs - as per 6000hrs Service**

- Inspect, Remove, and replace of gearbox lube oil pumps and motor
- Drain and replace mill gearbox oil **ENGEN Genger 320**
- Inspect, Remove, and replace of gearbox coolers
- Inspect, Remove, and replace of gearbox filter unit
- Inspect, Remove, and replace of gearbox unit
- Coupling replacement and alignment
- Housekeeping

#### **1.2.2.2.7 Mill dampers inspection and repairs - as per 6000hrs Service**

- Hot air damper inspection, repairs and or replacement
- Attempering damper inspection, repairs and or replacement

### Test and commissioning

- Impulse line test
- PA flow
- PA outlet
- Mill outlet
- Sanction for test and repair identified defects
- Repair defects identified during final mill test for performance testing department to carry on with clean air curve

### Spares Refurbishment

- Refurbish/fabricate mills spares on site, including but not limited to trunnion arms, roller assembly, square to round, raw coal pipe system, classifier vanes, mill table cones, reject boxes, PA ducting, mill gearbox lube oil system stand. Feeder door, cooling air door, and vibrator bracket
- mill cones, mill liners, sliding gates mill gearbox lube oil system

**NOTE:** It is imperative for a contractor to understand that the attached scope of work is a high-level scope and not inclusive of other maintenance activities.

### Site Crew for Normal Maintenance on Full time Basis

The *Contractor* to Provide Full Time Manpower Numbers as per Price List, they will be responsible for Routine Maintenance including but not limited to breakdowns in the plant. *Employers* Supervisor will be responsible for giving daily scheduled activities to the core crew as they will be Reporting to Maintenance Supervisors. The core crew will be working Normal Arnot working hours, 40 hours per week normal hours and overtime will be worked as per instruction from the Employers' Representative

### Additional Requirements

- After stripping and inspection of mill components, the *Contractor* must compile a detailed report confirming scope of work and send to the *Employer*. No work must be carried on before *Employer's* scope approval
- The *Contractor* shall comply with the OHSA and Regulations.
- The *Contractor* to provide all relevant material certificates.
- The *Contractor* to give the assurance that he has the required skills and equipment at his disposal to carry out the Scope of Work as defined in this document
- paint all mills components as per Eskom colours coding

## 1.3 Interpretation and terminology

The following abbreviations are used in this Service Information:

Abbreviation	Meaning given to the abbreviation
OBL	Outside battery limits
SOW	Scope of Work

SUPPLY RESOURCES FOR SERVICES, REPLACEMENT OF COMPONENTS AND COMMISSIONING OF TUBE MILLS AND VERTICAL SPINDLE MILLS DURING NORMAL MAINTENANCE ON A FULL TIME BASIS AND OUTAGES ON AN "AS- AND- WHEN" REQUIRED BASIS FOR U1-U6 MILLS ON FOR A PERIOD OF 36 MONTHS AT ARNOT POWER STATION

<b>OHSA</b>	<b>Occupational Health and Safety Act</b>
<b>ISO</b>	<b>International Organization for Standardization</b>
<b>PTW</b>	<b>Permit to work</b>
<b>QCP</b>	<b>Quality Control Plan</b>
<b>DE</b>	<b>Drive end</b>
<b>NDE</b>	<b>Non drive end</b>
<b>PPE</b>	<b>Personal protective equipment</b>
<b>SAF</b>	<b>Seal air fan</b>
<b>Brg</b>	<b>Bearings</b>
<b>NCR</b>	<b>Non-conformance Report</b>

## 2 Management strategy and start up.

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

The *Contractor* plan and executes the work and provides a detailed plan for each task after scope being approved by the *Employer*.

### 2.2 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Weekly on Mondays 09:00 at Arnot power station	Contract managers office	Contract manager, contractor, supervisor s
Overall contract progress and feedback	Monthly on Mondays 09:00 at Arnot power station	Contract managers office	<i>Employer, Contractor, and supervisors</i>

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

- *Contractor* must provide management team i.e. Supervisor, quality insurer (to perform quality checks, SHE Representative, evacuation warden and other management team as requested by *Employer* at that specific period
- The *Contractor* shall submit an organogram indicating the management structure and responsibilities to execute the Works in terms of this contract. The organogram shall include the names, qualifications, and experience of the staff members on milling plant in Eskom Generation.

### 2.4 Documentation control

- All procedures, work instructions, forms and all contractual communications must be controlled for the duration of the contract.
- 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 email itself.
- Inspections reports to be submitted within 24 hours after stripping and testing certificates must be summited together with the delivery note.

All communication must be done through *Employer's* Representative i.e. Contract Manager

## 2.5 Invoicing and payment

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 [invoiceseskomlocal@eskom.co.za](mailto:invoiceseskomlocal@eskom.co.za)

Financial Accounting  
Eskom Holdings SOC LTD  
Arnot Power Station  
Private Bag X2  
Rietkuil  
1097  
Mpumalanga

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; only for VAT registered contractor.

## 2.6 Contract change management

- Any changes or requirements will be discussed and agreed by both *Employer* and *Contractor* in writing before implementation
- All compensation events shall be submitted in writing with a full motivation and detailed cost breakdown.

## 2.7 Records of Defined Cost to be kept by the *Contractor*

The *Contractor* keeps accurate and complete books of accounts, records and other evidence relating to the actual cost. Records and accounts must reflect all work done on the contract. These are open to audit. All documentation is kept by the contractor for a period of three years following completion of this contract. This information must be always kept up to date.

## 2.8 Insurance provided by the *Employer*

- Insurance issues will be dealt with as per contract conditions

## 2.9 Training workshops and technology transfer

- *Employer* reserves the right to request training for its employees from the *Contractor* as and when required.

## 2.10 Design and supply of Equipment

### 2.10.1 Equipment

SUPPLY RESOURCES FOR SERVICES, REPLACEMENT OF COMPONENTS AND COMMISSIONING OF TUBE MILLS AND VERTICAL SPINDLE MILLS DURING NORMAL MAINTENANCE ON A FULL TIME BASIS AND OUTAGES ON AN "AS- AND- WHEN" REQUIRED BASIS FOR U1-U6 MILLS ON FOR A PERIOD OF 36 MONTHS AT ARNOT POWER STATION

- In cases where the *Employer* has supplied the *Contractor* with any equipment or special tools, it is the responsible of the *Contractor* to bring back *Employer's* equipment in a sound condition. Any damage to the equipment will be on *Contractor's* cost.

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

### **2.11.1 Equipment**

- In cases where the *Employer* has supplied the *Contractor* with any equipment or special tools, it is the responsible of the *Contractor* to bring back *Employer's* equipment in a sound condition. Any damage to the equipment will be on *Contractor's* cost

### **2.11.2 Information and other things**

- Quality documents and any other plant information requested by the *Employer* will remain the property of the *Employer* at the end of contract, unless otherwise stated.

## **2.12 Management of work done by Task Order**

- The Employer shall provide the applicable specifications with the works instruction of each task order.
- Contractor shall have available resources to execute activities as per the scope of work.
- Contractor shall respond to emergencies whenever required by the Employer.

Contractor shall comply with safety, environmental and legislative requirements

### 3 Health and safety, the environment and quality assurance

#### 3.1 Health and safety risk management

- Control of noise is through wearing hearing protection
- Dust, dust suppression or as the last resort issue dust mask
- Waste, put waste in the correct waste bin
- Water to be conserve, use as little as possible
- Adhere to all Eskom life saving rules

Minimum Health and Safety Requirement that the tenderers have to address and respond when submitting tender returnables

- Annexure B
- Health and Safety Plan
- Health and Safety costing
- Baseline Health and Safety Risk Assessment
- Valid Letter of good standing or equivalent
- SHE Policy
- Proof of SHE competency
- OHS Act 85 Of 1993 or a copy

The *Contractor* shall comply with the health and safety requirements contained in Annexure B.

#### 3.2 Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints stated in the Waste management procedure (ASEN 0008) and EH&S Incident management procedure 32-95

The *Contractor* shall further comply with all Arnot procedures and policies and all level 3 documentation and legislations which the station prescribes to.

#### 3.3 Quality assurance requirements

- The returnable in terms of Quality will be based on the Supplier Quality Management Specification 240-105658000. The supplier will submit the quality information that is relevant to them based on the selected category. Refer to document 240-105658000. In case where there are QCP (quality control plans) required also 3.2 and 5.1 of the document 240-105658000 will be applicable.

Employer has a right to issue an NCR should the Contract fails to meet the agreed target date or should the Contractor be unavailable when needed.

## 4 Procurement

### 4.1 People

#### 4.1.1 Minimum requirements of people employed

As part of SD&L, community development and social responsibility, local community must be the first preferences to be used for labour requirements, unless if the contractor can prove that the required skill is not available in the community. The contractor to ensure a minimum of 5 employees are authorised on plant safety regulation, forklift, overhead cranes use of labour from designated areas and industrial relations.

#### 4.1.2 BBBEE and preferencing scheme

Not applicable.

#### 4.1.3 Supplier Development, Localisation and Industrialisation formerly known as Accelerated Shared Growth Initiative – South Africa (ASGI-SA)

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

#### Mandatory Compliance for Contract Award

##### Skills Development

Eskom's Target			
Category	Number	Entry Level	Output
Technical	3	N3 or Matric	N6 /National Diploma Maintenance technicians
Suppliers Commitments			
Category	Number	Entry Level	Output

#### Mandatory Compliance for Contract Award

##### Local Procurement Content

Local Procurement Content" refers to value added in South Africa by South African resources. Where a single contract involves a combination of local and imported goods and/or services, the tender response must be separated into its components as per the Price Schedule included with the tender documents. Local procurement content is total spend minus the imported component.

Local Procurement Content	Eskom Target	Tenderer Proposal
	100%	



**SDL&I Penalty and Performance Security**

Eskom will apply a penalty of 2.5% of the Contract Value for failure to meet SDL&I obligations.

**One of the following options will apply for SDL&I performance security:**

- For the duration of the contract, Eskom will retain 2.5% of every invoice (excluding VAT) as security for the fulfilment of all SDL&I Obligations. The retained amounts shall only be released to the Contractor upon fulfilment of all SDL&I obligations at the end of the contract.
- Alternatively the Contractor shall submit a bond equivalent to 2.5% of the Contract Value and shall only be released to the Contractor upon fulfilment of all SDL&I Obligations.

Panels- Eskom will apply 2.5% retention on every invoice (excluding VAT) after all cumulative task orders awarded to the Contractor/Service Provider that have reached a stipulated threshold as security for the fulfilment of the SDL&I obligations.

*The agreed ASGI-SA Compliance Schedule will be inserted at contract award stage.*

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.

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**

**Mandatory Compliance for Contract Award**

**Subcontracting Requirements**

30% Subcontracting to a Qualifying Small Enterprise or Exempted Micro Enterprise that are 51% or more black owned.

### **4.2.2 Subcontract documentation, and assessment of subcontract tenders**

The subcontracting requirements are stipulated on the enquiry document.

### **4.2.3 Limitations on subcontracting**

The *Employer* may require that the *Contractor* must subcontract certain specialised work, or that the *Contractor* shall not subcontract more than a specified proportion of the whole of the contract.

### **4.2.4 Attendance on subcontractors**

Not applicable.

## **4.3 Plant and Materials**

### **4.3.1 Specifications**

The employer will provide specification and contractor must provide QCP before each activity comments

SUPPLY RESOURCES FOR SERVICES, REPLACEMENT OF COMPONENTS AND COMMISSIONING OF TUBE MILLS AND VERTICAL SPINDLE MILLS DURING NORMAL MAINTENANCE ON A FULL TIME BASIS AND OUTAGES ON AN "AS- AND- WHEN" REQUIRED BASIS FOR U1-U6 MILLS ON FOR A PERIOD OF 36 MONTHS AT ARNOT POWER STATION

#### **4.3.2 Correction of defects**

In case there is a defect due to contractor poor workmanship that may cause delays during unit return to service, contractor will be informed and must be available within 24hrs to repair such defects including none working days. Each Mills must be able to run for 1200Hrs without any defects

The contractor is responsible for repairing the defects occurred before 1200Hrs retched and all expenses occurred during the correction of defects will be from the contractor.

#### **4.3.3 Contractor's procurement of Plant and Materials**

Not applicable

#### **4.3.4 Tests and inspections before delivery**

##### **4.3.4.1 Description of tests and inspections**

- Quality Control Plan.

##### **4.3.4.2 Materials facilities and samples for tests and inspections**

- The Contractor shall provide, where applicable, the following:
- Material and pressure testing certificates

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

List any Plant and Materials which are to be provided by the *Employer*.

Site for offices

Spares

Telephone connection

Electricity and water

Ablution facility

#### **4.3.6 Cataloguing requirements by the *Contractor***

Not applicable.

## 5 Working on the Affected Property

The Power Station is situated approximately 50km from Middleburg

Altitude (Elevation above sea level)	1636 m
Mean annual barometer pressure	84, 0 kpa
Maximum ambient temperature	38 degrees Celsius
Minimum ambient temperature	6 degrees Celsius
Maximum relative humidity	79%
Minimum relative humidity	10%

Arnot Power Station is situated in a summer rainfall area with an average annual precipitation of about 650mm falling almost entirely during the months of October to April. The average rainfall per month generally exceeds 40 mm during this period, although drought periods do occur which can last for 20 days or longer. Drought periods occur most frequently during the months of October/November and March/April. December is statistically the highest rainfall month with an average monthly rainfall of about 125mm. July has the lowest rainfall with an average monthly rainfall of about 3 mm. approximately 85% of the annual rainfall occurs in the months between October and February. January is normally the hottest month with an average daily maximum temperature of 38°C with a minimum daily temperature in winter being about 6°C.

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

- No taking of pictures allowed on *Employer's* premises without prior approval or consent
- *Contractor* must attend induction before entering premises
- *Contractor* must make pre-arrangements before coming to *Employer's* site to allow *Employer* to make proper arrangements with Security. If no arrangements made, no access will be granted to the *Contractor*

In addition to the above there may be other restrictions once on the site, plus rules relating to roads, walkways, and the provision of barricades.

contractor must arrange with the employer for induction and access, maximum of two vehicles permits allowed and must be approved by employer.

### 5.2 People restrictions, hours of work, conduct and records

It is very important that the *Contractor* keeps records of his people working on the Affected Property, including those of his Subcontractors. State that the *Service Manager* shall have access to them at any time. These records may be needed when assessing compensation events. Only Contractor 's employees with valid permit will be allowed to site, *during* working hours Monday to Thursday 07:00 to 16: 15 and Friday 07:00 to 12:00 lunch time is 12:00 to 12:45

### 5.3 Health and safety facilities on the Affected Property

the contractor must comply with all safety requirements including PPE and compliance with lifesaving rules and OHSA

### 5.4 Environmental controls, fauna & flora

Not applicable.

### 5.5 Cooperating with and obtaining acceptance of Others

- Other contractors will be working at the milling plant area during test running.

## 5.6 Records of *Contractor's* Equipment

- The *Contractor* must declare and keep a record of all spares, tools or equipment that must be brought to site on arrival. Failure to do so may lead to forfeiting some of your belongings

## 5.7 Equipment provided by the *Employer*

Overhead crane machines from Platershop workshop to do spares e.g. Guillotine, Roller and Bending Machine

## 5.8 Site services and facilities

### 5.8.1 Provided by the *Employer*

The Employer will provide power, water, waste disposal, telephones connections, ablutions, fire protection in the plant and lighting (etc) on the affected property.

Contractor shall provide everything else necessary for providing the service.

Employer will provide spares for tube mills and vertical spindle spares

### 5.8.2 Provided by the *Contractor*

*Contractor* must provide transport for its employees, full protective equipment, accommodation, tools, and special tools. The personal protective equipment must have contractor's emblem for easy identification.

20 Ton TR rough Terrain Crane must be provided on as and when required basis

The contractor must provide daily timesheet and submit to the employer after every shift.

### Personal Protective Equipment

Leather gloves

Welding gloves

Approved dust mask for milling plant

Ear protection

Normal PPE including safety boots

Welding helmet

Normal approved helmet

Welding shoulder yoke

Welding spatter

Kneecaps

Welding face shield

Normal goggles and welding goggles

## 5.9 Control of noise, dust, water, and waste

*Contractor* must provide proper personal protective equipment, no employee will be allowed on site without proper protective equipment overalls, gloves, hard hat, safety boots /shoes, dust mask, ear protection, heat shields, eye protection etc.

## 5.10 Hook ups to existing works

All hook ups to existing structure in the plant shall be on to approved lifting beams and lifting points

## 5.11 Tests and inspections

### 5.11.1 Description of tests and inspections

Work performed by the *Contractor* or replaced components are to be inspected by Employee' representative before permit clearance during documentation signing off.

Work performed by the *Contractor* or replaced components will be inspected as per the quality control check sheet (QCP)

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Sanction for test and impulse line testing to be done per mill by the contractor and all identified defects to be repaired, verified by employer's representative together with performance and testing department for clean air curve test to be successful.

**Eskom will supply the following documentation to the contractor**

Work instructions where applicable

Specifications where applicable

Permit to work for the period of first 6 months

**The contractor shall submit the following documentation**

Detailed quality control check sheets to be approved by Eskom

Comprehensive data file for tube and vertical spindle mills for acceptance by Eskom

Permit to work authorisation after 6 months, minimum of 5 authorised responsible persons

**5.11.2 Materials facilities and samples for tests and inspections**

**The contractor shall provide where applicable the following:**

Alignment Certificates

Valid Lifting Equipment Test Certificates

**The Employer shall, where applicable and required, perform the following test:**

Clean air curves

PF sampling

Mill performance tests

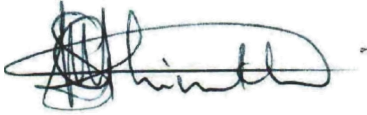
Instrument Calibration

## 6 List of drawings

### 6.1 Drawings issued by the *Employer*

Drawing number	Revision	Title
None	None	None

Signed by: SG Mthimkhulu  
Designation: Senior Engineer  
Dept: Boiler Engineering



Date: 10/05/2022