Eskom National Transmission Company South Africa ™	**Evaluation Criteria**	**NTCSA**

Title**: Technical Evaluation Criteria for DC Tools and Testing Equipment**

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1 Introduction

This report provides and overview of the National Transmission Company of South Africa's technical evaluation criteria to be used when evaluating the tender proposals for DC tools and testing equipment for the use in Secondary Plant Grids.

The report defines the 'Desktop Evaluation, 'Practical Evaluation', and 'Deemed Offer Risk(s)' criteria that will be used to evaluate responses to the enquiry.

2 Supporting Clauses

2.1 Scope

This report defines the technical evaluation criteria relating to a commercial enquiry for the supply of DC testing equipment to be used in the NTCSA Grids Secondary plant including Telecommunication sites.

2.2 Purpose

The purpose of this tender technical evaluation criteria is to outline the Evaluation Criteria and TET member responsibilities for tender technical evaluation. The technical evaluation criteria serves as a basis for the tender technical evaluation process.

2.3 Applicability

This report may be applied throughout National Transmission Company South Africa SOC Ltd Reg No 2021/539129/30, particularly Apollo & Centralised Services Secondary Plant DC Sections.

2.4 Effective date

This document shall be effective from the authorisation date.

2.5 Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.5.1 Normative

User Requirement Specification for DC production equipment

240-48929482: Tender Technical Evaluation Procedure

ISO 9001 Quality Management Systems

2.5.2 Informative

1. 240-91177160: DC Technician Tools, Test Equipment and Accessories.
2. 240-61182045: Maintenance Engineering Standard for Batteries and Chargers
3. 240-118705836: Maintenance of Batteries
4. 240-51999453: Standard Specification for Valve Regulated-Regulated Lead Acid Cells.
5. ISO 15212-1: Oscillation-type density meters – Laboratory instruments
6. IEC 61326-1:2005, Electrical equipment for measurement, control and laboratory use — EMC requirements — Part 1: General requirements
7. IEC 61010-1:2001, Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 1: General requirements

2.6 Definitions

2.6.1 General

Definition	Explanation
Eskom evaluation team	The persons appointed by Eskom to perform the evaluation of tender submissions in line with Eskom's requirements.
Normative	Documents that shall be read in conjunction with this report and are binding on Tenderers.

2.7 Abbreviations

Abbreviation	Explanation
DC	Direct Current
SG	Specific gravity
LCD	Liquid Crystal Display
IrDA	Infrared Data Association
RMS	Root Mean Square
OEM	Original Equipment Manufacturer
NETD	Noise Equivalent Temperature Difference
NTCSA	National Transmission Company of South Africa
IP54	Protection class: Dust and splash proof.

2.8 Roles and Responsibilities

The responsibility to implement this document lies with all parties within Eskom and its subsidiaries that are directly affected by it, especially those responsible for procuring the DC testing equipment.

It is proposed that:

- Apollo & CS and/or NTCSA's Grids shall utilise this report as a basis for the technical evaluation process.
- Tenderers shall note the evaluation criteria as laid out in this report and submit tenders in compliance to the stipulated requirements.

2.9 Process for Monitoring

Not applicable.

2.10 Related/Supporting Documents

Not applicable.

3 Tender Technical Evaluation Procedure

3.1 Technical Evaluation Criteria

Any actions undertaken by the Tenderer as a consequence of the tendering process remains the tenderer's responsibility and shall not be transferred as a liability unto Eskom.

If the bidder fails to achieve the defined thresholds, as set out in the different stages, then the submission will be deemed non-compliant and will be removed from further evaluation.

The evaluation process has two stages with the corresponding minimum score (threshold) required for a bid to be deemed compliant are:

a) Desktop Evaluation Criteria which requires >75% compliance threshold.

b) Practical demonstration which requires >75% compliance threshold.

c) Deemed offer Risks which should at least be acceptable.

The Table 3-1 below indicates the list of DC testing equipment required for personnel to perform their operational tasks of which the specific requirement for each item is detailed on the user requirement specification for DC production equipment document.

Table 3-1: DC test/production equipment list

No	Item	Description
1.	Battery Data Logger	Test instrument to measure and record battery and cell voltages.
2.	Digital Density meter	Handheld measuring and recording instrument for electrolyte SG and temperature of flooded lead acid battery.

No	Item	Description
3.	Conductance or Impedance tester	Battery state of health tester for lead acid batteries.
4.	Hydrometer	Analogue hydrometer for vented lead acid battery.
5.	Constant Current Battery discharge test unit	Electronic load bank unit for 50V, 110V and 220V DC system.
6.	Digital Multimeter	Handheld multimeter with high accuracy to measure various electrical properties.
7.	Digital Clamp-on meter	Handheld digital clamp on meter to measure current and other electrical properties.
8.	Digital Four Channel Oscilloscope meter	Oscilloscope meter with four galvanic isolated channels.
9.	DC earth fault locator	DC earth fault locator/tester. Usable on load.
10.	Infrared Thermometer	Digital laser thermometer to measure temperature on battery cells
11.	Thermal Image Scanner/Camera	Thermal scanner or camera to spot hot connection on battery connectors and installation.
12.	Battery lifting equipment	Portable lifting pallet jack or stacker.

3.1.1 Stage 1 - DESKTOP Evaluation Criteria

The relevant A & B Technical Schedules in Annex A pertaining to the proposed products, shall be completed in English, signed, and submitted, together with the Compliance Checklist for Technical Schedules A & B in Annex B shall also be completed, signed, and submitted. Submissions that obtain a minimum pass mark of 75% for the Desktop Evaluation Criteria will proceed to the Practical Demonstration.

Table 3-2: Desktop Evaluation Criteria

	Desktop Evaluation Criteria Description	Criteria Weighting (%)	Actual Score (%)	Comments
1.	A & B Technical Schedules (Annex A)	60		
2.	Compliance Checklist for A & B Technical specifications (Annex B)	40		
Subtotal		**100**		
Threshold		**75**		

3.1.2 Stage 2 – Practical Evaluation Criteria

The practical evaluation will include a physical demonstration of the Battery Data Logger, Digital Density meter, Battery Conductance/Impedance meter, Hydrometer, Constant Current Battery discharge test units, Digital multimeter, Digital Clamp-on meter, Digital Four Channel Oscilloscope meter, DC earth fault locator, Infrared Thermometer, Thermal Image Scanner/Camera and Battery lifting equipment. Details of the test criteria will be provided to suppliers that have progressed to the Practical Evaluation stage, prior to the practical evaluation date.

The demonstration shall be done by the local representative of the tenderer. All suppliers will be given the same product to test and the same allocated time.

The supplier will be responsible for any damage of the product. Eskom will only provide limited support.

An NTCSA's technical panel will evaluate the demonstration which will form a substantial part of the technical compliance assessment. Suppliers to indicate the time requirement for each of the test functionality listed in Table 3-3 to Table 3-11 where the functionality tests are separated into subcategories. The practical evaluation will comprise of functionality tests with respective weightings as defined in Table 3 2 to Table 3 5. The NTCSA's evaluation team will score each item, listing their reasoning. Scores assigned by the Eskom evaluation team will not be shared with tenderers during the evaluation.

The NTCSA's technical team reserves the right not to proceed with the Practical evaluation if required.

Table 3-3: **Functionality Test for the** B**attery** D**ata** L**ogger**

Number	Demonstration	Weighting (%)
1	Demonstrate the use of the Battery Data Logger	20
2	Demonstrate the interface with a digital density meter for data transfer	20
3	Demonstrate the data management software for data recording and analysis	40
4	Demonstrate cell voltage, temperature, and specific gravity recording capability	20

Table 3-4: Functionality test for the Digital Density meter

Number	Demonstration	Weighting (%)
1	Demonstrate the use of the Digital Density meter	40
2	Bluetooth or IrDA interface for data download.	20
3	Sample ID configuration.	20

4	Identification of results outside recommended specified limits: 1,235 kg/l to 1,255 kg/l.	20

Table 3-5: Functionality Test for Conductance of Impedance meter

Number	Demonstration	Weighting (%)
1	Demonstrate the use of the Conductance or Impedance meter	50
2	Voltage and Conductance accuracy of +/-2% across test range.	20
3	Capable to test conductance of any battery or cell up to the maximum capacity of 4000 Ah.	10
4	Wireless battery monitoring capability.	10
5	Capability of downloading data to a local computer with applicable software.	10

Table 3-6: Functionality Test for the Hydrometer

Number	Demonstration	Weighting (%)
1	Accuracy of ±0.005kg/l reference and a range of 1.100 kg/l up to 1.300 kg/l	20
2	The length of 265 mm with diameters of 21,5 mm and 28,5 mm.	20
3	Extension hose made of rubber, with a minimum length and diameter of 100 mm and 7 mm respectively.	30
4	Calibrated at a reference temperature of 25ºC	30

Table 3-7: Battery Discharge Test units

Number	Demonstration	Weighting (%)
1	50VDC drawing a constant current of 300A minimum, ranging up to 1000A.	20
2	110V drawing a constant current of 200A minimum.	10
3	220V drawing a constant current of 200A minimum.	10
4	Supported with PC software for real-time data monitoring and analysis.	20
5	Compatible with wireless battery monitoring system devices and USB port for data transfer.	10
6	Current, voltage, capacity, time, and alarm parameters setting configuration.	20

7	Ability to connect with external slave units, coupled with control wires for instantaneous trip from a master unit.	10

Table 3-8: Digital Four Channel Oscilloscope Meter

Number	Demonstration	Weighting (%)
1	Four independent floating isolated channels rated up to 1000 V.	20
2	Safety category CAT III 1000 V / CAT IV 600 V.	10
3	DC voltage accuracy of ±0.5%.	20
4	USB port for data transfer and supported with software application to compare data.	30
5	Trend plotting and recorder function.	20

Table 3-9: DC earth fault locator

Number	Demonstration	Weighting (%)
1	Signal analyzer range of 50 VDC, 110 VDC and 220 VDC system for substation application.	20
2	Wireless communication between the signal analyzer and signal detector.	20
3	Forward or reverse direction indication with an arrow for ground fault detection.	10
4	Clamp jaw size of 30 mm minimum.	20
5	Both online and offline testing capability without causing a trip of circuit breakers.	30

Table 3-10: Thermal Image Scanner / Camera

Number	Demonstration	Weighting (%)
1	Field of view minimum angle of 30º.	20
2	Detector resolution of 320 x 240 (76,800pixels).	20
3	Thermal sensitivity (NETD) less than 50mK.	30
4	Fixed focus with minimum focus distance of 0.5 m.	10
5	Spectral range of 8 µm to 14 µm.	10

Table 3-11: Battery Lifting Equipment

Number	Demonstration	Weighting (%)
1	Electric operated lifting jack.	40
2	Minimum 500 kg capacity.	40
3	Minimum lifting height of 1300 mm	20

Each item will be assigned a score by the NTCSA's evaluation team using the below Table 3-12. The score for each item will be multiplied by its weight to obtain the total score per item.

Table 3-12: Scoring of items for the Practical Evaluation

Criteria	Score
Fully Compliant • Meet technical requirements, • Technical Schedules A & B and Compliance Checklist for Schedules A & B submitted and signed, • Passed practical evaluation	3
Partially Compliant (minor deviations) • Does not meet all the technical requirements and/or, • Unacceptable technical risk(s) /deviations and/or, • No supporting documents provided	1
Non-compliant (major deviation) • Unacceptable technical risks, and/or • Not meeting technical requirements, and/or • Non-responsive, and/or • Over inflated pricing	0

3.1.3 Stage 3 – Deemed Off Risk

NTCSA's evaluation team shall compile a report summarising risks associated with any aspect of the offer:

- noted during the Desktop Evaluation,

- noted during the Practical Demonstration,
- noted during a review of any pricing anomalies that cannot be acceptably clarified,
- noted during a review of the tender's response to Annex A & B,

This report shall be used to determine and motivate whether the risk is deemed low / acceptable / high and will serve as input to the recommendation as to whether the offer should be technically accepted as shown in Table 3-13 below.

Table 3-13: Deemed Off Risk(s) Evaluation

Criteria	Score	Comments
Deemed Off Risk (s)		
Threshold	**Acceptable**	

4 Acceptance

This document has been seen and accepted by:

Name	Designation
Nelson Mayisela	DC Workshop Manager – Apollo & CS Secondary Plant
Anthea Solomon	Secondary plant Middle Manager - Apollo & CS

5 Revisions

Not applicable.

6 Development Team

The following people were involved in the development of this document:

- David Maganelwa

7 Acknowledgements

Not applicable.

Appendix A – Offered Product/s

The Supplier shall complete the table below in English, clearly indicating which product/s they are tendering for. This annexure shall be signed and submitted as part of the tender returnable. The corresponding AB Schedule shall be completed, signed, and submitted as a tender returnable.

Nr	Test Equipment/ Tools		State which test equipment/product(s) is offered.	Supplier's Comment (Y/N) – comment
1.	Battery Data Logger			
2.	Digital Density meter			
3.	Conductance/Impedance meter			
4.	Hydrometer			
5.	Constant Current Battery discharge test unit	50VDC ≥300A		
		110VDC ≥200A		
		220VDC ≥200A		
6.	Digital Multimeter			
7.	Digital Clamp-on meter			
8.	Digital Four Channel Oscilloscope meter			
9.	DC earth fault locator			
10.	Infrared Thermometer			
11.	Thermal Image Scanner/Camera			
12.	Battery lifting equipment			

Name of Company: _____

Name and Surname of company Representative: _____

Signature: _____

Date: _____

Appendix B – Schedule A&B: Schedule of technical compliance

This must be completed by providing technical details of tendered equipment and Tenderer's statement of compliance or non-compliance. The Tenderers statement of compliance (Schedule B) must be supported by additional information of a concise reference to the relevant submitted documents (e.g., file number, section number, page number, paragraph number). A failure to support the clause with the relevant reference will result in non-compliance.

Table A.1: Schedule for technical compliance

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.	**DC Test Equipment Requirements**			
3.1	**Battery Data Logger**			
3.1.a)	The maximum measurement voltage range shall be up to ±600 V with a resolution of 1 mV.	State Compliance & Provide Evidence		
3.1.b)	Equipment configured for wireless data transfer and interface with an external digital density meter via Bluetooth communication or IrDA.	State Compliance & Provide Evidence		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.1.c)	Must have a battery data management software for data recording and analysis.	State Compliance & Provide Evidence		
3.1.d)	The accuracy level shall be less than 1% of a reading value.	State Compliance & Provide Evidence		
3.1.e)	Cell voltage, temperature, and SG recording capability.	State Compliance & Provide Evidence		
3.2	**Digital Density Meter**			
3.2.a)	Capable to measure density, specific gravity of lead acid and nickel cadmium batteries.	State Compliance & Provide Evidence		
3.2.b)	Bluetooth or IrDA interface for data download.	State Compliance & Provide Evidence		
3.2.c)	Configured for Specific Gravity measurement of electrolyte at 25°C.	State Compliance & Provide Evidence		
3.2.d)	Minimum of 1000 measured results recorded.	State Compliance & Provide Evidence		
3.2.e)	Sample ID configuration.	State Compliance & Provide Evidence		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.2.f)	IP54 protection class: Dust and splash proof and ISO 15212:1 compliant	State Compliance & Provide Evidence		
3.2.g)	Identification of results outside recommended specified limits: 1,235 kg/l to 1,255 kg/l.	State Compliance & Provide Evidence		
3.3	**Battery state of health tester (Conductance or Impedance meter)**			
3.3.a)	Voltage and Conductance accuracy of +/-2% across test range.	State Compliance & Provide Evidence		
3.3.b)	Capable to test conductance of any battery or cell up to the maximum capacity of 4000 Ah	State Compliance & Provide Evidence		
3.3.c)	Pin type probes set.	State Compliance & Provide Evidence		
3.3.d)	Test data storage of 240 test results or more.	State Compliance & Provide Evidence		
3.3.e)	Wireless battery monitoring capability.	State Compliance & Provide Evidence		
3.3.f)	Capability of downloading data to a local computer with applicable software.	State Compliance & Provide Evidence		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.4	**Hydrometer**			
3.4.a)	The device shall be calibrated at a reference temperature of 25 °C.	State Compliance & Provide Evidence		
3.4.b)	The accuracy of the hydrometer shall be within ± 0,005 kg/l of the sub-standard reference, over the range of 1,100 kg/l to 1,300 kg/l.	State Compliance & Provide Evidence		
3.4.c)	The length shall be 265mm with diameters of 21,5 mm and 28,5 mm.	State Compliance & Provide Evidence		
3.4.d)	The material and form shall comply to an approved analogue hydrometer standard on document 240-51999453.	State Compliance & Provide Evidence		
3.4.e)	In addition, the hydrometer should come with an extension hose made of rubber, with a minimum length and diameter of 100 mm and 7 mm respectively.	State Compliance & Provide Evidence		
3.5	**Constant Current Battery Discharge Test Units: 50 VDC, 110 VDC and 220 VDC**			
3.5.a)	The 50 VDC: battery discharge unit shall draw a constant current with a minimum of 300 A ranging up to a maximum of 1000 A where possible.	State Compliance & Provide Evidence		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.5.b)	The 110 VDC: battery discharge test unit shall draw a constant current of 200 A minimum.	State Compliance & Provide Evidence		
3.5.c)	The 220 VDC: battery discharge test unit shall draw a constant current of 200 A minimum.	State Compliance & Provide Evidence		
3.5.d)	Discharge current accuracy shall be ±1% with a decimal resolution of 0.1 A.	State Compliance & Provide Evidence		
3.5.e)	Current, voltage, capacity, time, and alarm parameters setting configuration.	State Compliance & Provide Evidence		
3.5.f)	Ability to connect with external slave units, coupled with control wires for instantaneous trip from a master unit.	State Compliance & Provide Evidence		
3.5.g)	Parameters settings display screen.	State Compliance & Provide		
3.5.h)	Provided with an external clamp-on, current feedback probe.	State Compliance & Provide		
3.5.i)	Supported with PC software for real-time data monitoring and analysis.	State Compliance & Provide		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.5.j)	PC communication port to download data for report compilation	State Compliance & Provide		
3.5.k)	Compatible with wireless battery monitoring system devices and USB port for data transfer.	State Compliance & Provide		
3.5.l)	Spark free terminals including fully insulated cables and clamp jaws.	State Compliance & Provide		
3.5.m)	Provided with transport case with wheels.	State Compliance & Provide		
3.5.n)	Battery discharge test units shall be compliant to IEC 61010-1:2001 standard for general electrical safety requirements.	State Compliance & Provide		
3.6	**Digital Multimeter**			
3.6.a)	DC and AC voltage range and resolution of 50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 500.00 V and 1000 V.	State Compliance & Provide		
3.6.b)	DC and AC voltage basic accuracy of 0.025% and 0.4% respectively.	State Compliance & Provide		
3.6.c)	DC mV resolution of 1 µV.	State Compliance & Provide		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.6.d)	Event logging with up to 15000 recordings.	State Compliance & Provide		
3.6.e)	Wireless and PC connectivity compatible.	State Compliance & Provide		
3.6.f)	Provided with a soft carry case and accessories including magnetic hanger.	State Compliance & Provide		
3.6.g)	Auto/touch hold.	State Compliance & Provide		
3.6.h)	Multiple readings display on screen.	State Compliance & Provide		
3.6.i)	At least 1 meter drop shock absorbent as per IEC 61010-1:2001.	State Compliance & Provide		
3.7	**Digital Clamp-on Meter**			
3.7.a)	DC and AC current measurement up to 2000 A true rms value.	State Compliance & Provide		
3.7.b)	DC and AC voltage measurement up to 1000 V.	State Compliance & Provide		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.7.c)	Accuracy of 1.5% of DC current reading value.	State Compliance & Provide		
3.7.d)	Large jaw capacity with a minimum of 58mm suitable for large or multiple conductors.	State Compliance & Provide		
3.7.e)	At least 1 meter drop shock absorbent as per IEC 61010-1:2001.	State Compliance & Provide		
3.7.f)	Provided with a soft carry case and accessories.	State Compliance & Provide		
3.8	**Digital Four Channel Oscilloscope Meter**			
3.8.a)	Four independent floating isolated channels rated up to 1000V.	State Compliance & Provide		
3.8.b)	Safety category CAT III 1000 V / CAT IV 600 V.	State Compliance & Provide		
3.8.c)	Minimum bandwidth of 100 MHz	State Compliance & Provide		
3.8.d)	DC voltage accuracy of ±0.5%.	State Compliance & Provide		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.8.e)	Real-time sample rate of minimum 1.25 GS/s.	State Compliance & Provide		
3.8.f)	Trend plotting and recorder function.	State Compliance & Provide		
3.8.g)	Glitch capture of 8 ns.	State Compliance & Provide		
3.8.h)	USB port for data transfer and supported with software application to compare data.	State Compliance & Provide		
3.8.i)	Provided with accessories inside a carry case including hanging strap and supporting components.	State Compliance & Provide		
3.9	**DC earth fault locator**			
3.9.a)	Signal analyzer range of 50 VDC, 110 VDC and 220 VDC system for substation application.	State Compliance & Provide		
3.9.b)	Both online and offline testing capability without causing a trip of circuit breakers.	State Compliance & Provide		
3.9.c)	Low frequency output not more than 10 Hz.	State Compliance & Provide		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.9.d)	Current detect sensitivity of ≥ 0.5 mA.	State Compliance & Provide		
3.9.e)	Output current range ±100 mA.	State Compliance & Provide		
3.9.f)	Wireless communication between the signal analyzer and signal detector.	State Compliance & Provide		
3.9.g)	Forward or reverse direction indication with an arrow for ground fault detection.	State Compliance & Provide		
3.9.h)	Clamp jaw size of 30mm minimum.	State Compliance & Provide		
3.9.i)	Provided with case and necessary supporting accessories	State Compliance & Provide		
3.10	**Infrared Thermometer**			
3.10.a)	Dual laser infrared for improved accuracy.	State Compliance & Provide		
3.10.b)	Accuracy of ±1% temperature measurement.	State Compliance & Provide		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.10.c)	Display resolution of 0.1ºC.	State Compliance & Provide		
3.10.d)	Distance to spot ratio minimum of 12:1.	State Compliance & Provide		
3.10.e)	Backlight LCD display.	State Compliance & Provide		
3.10.f)	Up to 3 meters drop shock absorbent as per IEC 61010-1:2001.	State Compliance & Provide		
3.11	**Thermal Image Scanner / Camera**			
3.11.a)	Field of view minimum angle of 30º.	State Compliance & Provide		
3.11.b)	Detector resolution of 320 x 240 (76,800pixels).	State Compliance & Provide		
3.11.c)	Thermal sensitivity (NETD) less than 50mK.	State Compliance & Provide		
3.11.d)	Accuracy of ±2ºC or ±2%.	State Compliance & Provide		

Spec. clause number	Description	Schedule A: Eskom's minimum technical requirements	Schedule B: Supplier's statements of compliance (Y/N)	Supplier's Reference/Comment (Supporting evidence)
3.11.e)	Fixed focus with minimum focus distance of 0.5 m.	State Compliance & Provide		
3.11.f)	Spectral range of 8 µm to 14 µm.	State Compliance & Provide		
3.12	**Battery lifting equipment**			
3.12.a)	Minimum 500 kg capacity.	State Compliance & Provide		
3.12.b)	Electric operated lifting jack.	State Compliance & Provide		
3.12.c)	Minimum lifting height of 1300 mm.	State Compliance & Provide		