



Eskom

Report

Technology

Title: **TECHNICAL EVALUATION
CRITERIA FOR DMR HANDHELD
RADIOS**

Unique Identifier: **240-152929516**

Alternative Reference Number: **N/A**

Area of Applicability: **Engineering**

Documentation Type: **Report**

Revision: **1**

Total Pages: **7**

Next Review Date: **N/A**

Disclosure Classification: **Controlled
Disclosure**

Compiled by

**Jacques Schutte
Senior Engineer**

Date: 16/03/2020

Functional Responsibility

**Cornelius Naidoo
Telecommunications T&S
Manager PTM&C**

Date: 16/3/2020

Authorized by

**Richard McCurrach
PTM&C Engineering
Manager**

Date: 19/3/2020

Content

	Page
1. Introduction	3
2. Supporting clauses	3
2.1 Scope	3
2.1.1 Purpose	3
2.1.2 Applicability	3
2.2 Normative/informative references	3
2.2.1 Normative	3
2.2.2 Informative	3
2.3 Definitions	3
2.3.1 General	3
2.3.2 Disclosure classification	3
2.4 Abbreviations	3
2.5 Roles and responsibilities	4
2.6 Process for monitoring	4
2.7 Related/supporting documents	4
3. Technical tender evaluation procedure	4
3.1 Mandatory evaluation	4
3.2 Desktop evaluation	5
3.3 Practical evaluation	5
3.4 Objective evaluation	6
4. Authorization	6
5. Revisions	6
6. Development team	7
7. Acknowledgements	7

Tables

Table 1: Mandatory evaluation	4
Table 2: Desktop evaluation	5
Table 3: Practical evaluation	5
Table 4: Objective evaluation	6

1. Introduction

This document covers the technical evaluation criteria for the DMR handheld radio enquiry.

2. Supporting clauses

2.1 Scope

2.1.1 Purpose

The document contains the technical evaluation criteria to be used for evaluating the tender submissions for the DMR handheld radio enquiry. The criteria consist of the mandatory technical requirements, functional evaluation criteria and the objective criteria for the enquiry.

2.1.2 Applicability

This document shall apply throughout Eskom Holdings Limited, its divisions, subsidiaries and entities wherein Eskom has a controlling interest.

2.2 Normative/informative references

Parties using this document shall apply the most recent edition of the following documents

2.2.1 Normative

- [1] 240-82858472 Telecommunications analogue and DMR handheld radio specification.
- [2] ISO 9001 Quality management systems
- [3] 32-1034 Eskom procurement and supply chain management procedure

2.2.2 Informative

None

2.3 Definitions

2.3.1 General

Definition	Description
Submission	The tender in accordance with the requirements of the enquiry
Technical evaluator	End-users, technical experts nominated by the end-user and Divisional technical functionaries with the necessary technical expertise.

2.3.2 Disclosure classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

2.4 Abbreviations

Abbreviation	Description
DMR	Digital Mobile Radio
MHz	Mega-Hertz
OEM	Original Equipment Manufacturer

ESKOM COPYRIGHT PROTECTED

2.5 Roles and responsibilities

Not applicable.

2.6 Process for monitoring

Not applicable.

2.7 Related/supporting documents

Not applicable.

3. Technical tender evaluation procedure

The assessments are performed to assess the tenderer's capability to enter into a contract with Eskom with respect to a specific product or service and meet Eskom's requirements.

This report and any actions that are listed or recommended as a result of the assessments are by no means a confirmation or guarantee that any contract will be entered into by Eskom.

Any actions undertaken by the tenderer as a consequence of this report is for the tenderer's account. Any liability for the said actions undertaken by the tenderer is not transferrable to Eskom in any way.

The assessment team has no authority or responsibility in the decision taken by Eskom with respect to contracting for a product or service.

Any statements, intentions and/or actions expressed by the assessment team during the assessment and after the assessment should not be interpreted as the awarding of a contract and does not constitute any liability to Eskom with regards to contract placement or post-contract performance guarantees.

The evaluation method has four main parts: Mandatory evaluation, Desktop evaluation, Practical evaluation and the Objective evaluation. **The Technical Evaluation tables (Table 2 to Table 4) below will be used to evaluate Analogue and DMR equipment tendered as listed in the specification, 240-82858472 (Annex A).**

3.1 Mandatory evaluation

This evaluation exercise is performed by the Eskom evaluating representatives. This part of the evaluation starts when submissions are opened for the first time. It begins with the evaluation of the Mandatory criteria (Table1), then proceeds to the Desktop Evaluations (section 4.2).

The Eskom evaluating representatives will go through the details of the returnable submissions that are required and will ensure that the Mandatory criteria are met. Where submissions are evaluated as a "No" on any of the Mandatory criteria, the tenderer will not be able to proceed to the Desktop Evaluation and therefore will fail the technical evaluation.

Table 1: Mandatory evaluation

Item	Criteria	Comply	Comments
1.1	Submission of Technical Schedule A from the Technical specification 240- 82858472 (Written in English)		
1.2	Equipment tendered must operate in the frequency ranges: VHF: 136 – 174 MHz UHF: 400 – 420 MHz		
1.3	Tendered equipment must be certified by the DMR Association Certificates must also be provided.		
1.4	ICASA Type Approval certificates for all RF equipment tendered.		

ESKOM COPYRIGHT PROTECTED

3.2 Desktop evaluation

Submissions that pass the Mandatory criteria will proceed to the Desktop Evaluation where a score will be allocated to the 148 items listed on the Technical Schedule A (Annex A in 240-82858472 specification). Items that are non-compliant or no information is supplied will receive a 0 score, items that are partially compliant will receive a score of 1 and fully compliant items will receive a score of 2. A threshold of 90% is required for the tenderer to pass the Desktop evaluation as indicated in Table 2 and only then proceed to the Practical evaluation (section 4.3).

Table 2: Desktop evaluation

Item	Criteria	Score %	Actual	Comments
2.1	Compliance with Technical Schedule A in the Technical specification 240-82858472 (Full compliance = 148 x 2 = 296 points (i.e. 100%)). Therefore to pass the Desktop evaluation a total of 266 points out of the maximum 296 need to be scored.	100		
	Subtotal	100		
	Threshold	90		

3.3 Practical evaluation

This evaluation exercise is performed by the Eskom evaluating representatives at a venue stipulated by Eskom (Will be confirmed when notice is given for the practical evaluation). This will entail a sample evaluation and routine testing. This part of the evaluation is performed on the basis of assessing a sample of the DMR handheld radio to check and confirm compliance to the Technical Schedule A (Annex A in 240-82858472 specification) completed by the tenderer in the Desktop Evaluation.

Eskom will provide a demo DMR network at an Eskom site. The tenderer will be required to configure the mobile radios to demonstrate that they can operate in the following modes DMR Tier 3, DMR Tier 2, DMR Tier 1, analogue conventional and MPT1327. Items that are non-compliant will receive a 0 score, items that are partially compliant will receive a score of 1 and fully compliant items will receive a score of 2. Testing at the tenderers premises should also be arranged and facilitated by the tenderer. The tenderer will be given 6 weeks' notice to arrange and for the practical testing to take place.

A threshold of 92% is required for the tenderer to pass the Practical Evaluation (Table 3) and proceed to the Objective criteria (section 4.4).

Note that the Eskom technical evaluation team is not compelled to test all of the 145 items in the Technical Schedule A (Annex A in 240-82858472 specification). The percentage to pass the item/line 3.1 stated in Table 3 will still apply to the sample/portion tested.

Table 3: Practical evaluation

Item	Criteria	Score %	Actual	Comments
3.1	Checking the DMR network's compliance to the Technical Schedule A in the Technical specification 240-96839384 completed by the supplier. Example should all 148 items in 240-82858472 specification be tested: Full compliance = 148 x 2 = 296 points (i.e. 100%). Therefore to pass this item (3.1) a total of 266 points (90%) out of the maximum 296 need to be scored, which will equate to a total of 72% (90% Of 80%) for this item (3.1).	80		

ESKOM COPYRIGHT PROTECTED

Item	Criteria	Score %	Actual	Comments
3.2	Interoperability testing with the current terminal network equipment that Eskom utilizes and using conventional analogue configuration on the DMR equipment. This item (3.2) can only receive a score of 0% or 15%.	15		
3.3	The numbering (addressing) must be compatible to Eskom installed network. The radios must be capable of supporting MPT1327/1343 and Nokia ANN. Therefore all sent and received calls are displayed with the correct number (CLI – Calling Line Identification). This item (3.3) can only receive a score of 0% or 5%.	5		
	Subtotal	100		
	Threshold	92		

3.4 Objective evaluation

This evaluation exercise is performed by the Eskom evaluating representatives after the tenderer has passed the Mandatory evaluation, Desktop evaluation and Practical evaluations. This part of the evaluation is evaluated according to the Objective criteria listed in Table 4. The tenderer needs to provide all the criteria listed in Table 4 to pass the evaluation. Commercial can negotiate with the tenderers on the date when the tenderers will provide the required criteria information before the contract is awarded.

Table 4: Objective evaluation

Item	Criteria	Provided	Comments
4.1	Equipment drawings and technical specification manuals provided and in English.		
4.2	Supplier to provide a list of spares and must indicate availability and delivery times. Supplier to confirm spares will be available 10 years after contract expires.		
4.3	Information on local technical support and level of support offered. This includes training and the costs.		
4.4	Full compliance with the Type Tests in the Technical specification 240- 82858472		
4.5	Supplier/OEM training to be specified.		

4. Authorization

This document has been seen and accepted by:

Name and surname	Designation
Kevin Plasket	Senior Advisor, PTM&C Telecommunications T&S
Jacques Schutte	Senior Engineer, PTM&C Telecommunications T&S

5. Revisions

Date	Rev	Compiler	Remarks
March 2020	1	J Schutte	Analogue and DMR handheld radio enquiry.

6. Development team

The following people were involved in the development of this document

- Kevin Plasket
- Jacques Schutte

7. Acknowledgements

Not applicable.