

Title: **TECHNICAL EVALUATION  
CRITERIA FOR INTERVAL  
METER DATA ACQUISITION  
SYSTEM AND METER DATA  
MANAGEMENT SYSTEM**

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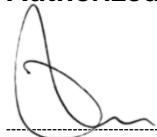
**Functional Responsibility**



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**TECHNICAL EVALUATION CRITERIA FOR INTERVAL  
METER DATA ACQUISITION SYSTEM AND METER  
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## **1. Introduction**

This document provides an overview of Eskom's technical evaluation criteria to be used when evaluating tender proposals for an Interval Meter Data Acquisition System and Meter Data Management System to be used within the Transmission Division.

The report defines the 'Mandatory', 'Technical Qualitative', 'Practical Evaluation', and 'Deemed Offer Risk(s)' criteria that will be used to evaluate the proposals in response to the enquiry.

## **2. Supporting clauses**

### **2.1 Scope**

The report provides the technical evaluation criteria relating to a commercial enquiry for the design, development and user documentation, training, testing, supply, delivery, installation and commissioning of an Interval Meter Data Acquisition System and a Meter Data Management System for use within Eskom's Transmission Division.

#### **2.1.1 Purpose**

The purpose of this document is to define the technical evaluation criteria that will be used to evaluate proposals for the supply of an Interval Meter Data Acquisition System and Meter Data Management System

#### **2.1.2 Applicability**

This document shall apply throughout Eskom Holdings Limited, Transmission Division

## **2.2 Normative/informative references**

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

### **2.2.1 Normative**

- [1] 240-170000884 Interval Meter Data Acquisition System and Meter Data Management System – Engineering and Functional Requirements
- [2-AB] 240-170000884 Interval Meter Data Acquisition System AB Schedules
- [3-AB] 240-170000884 Meter Data Management System AB Schedules

### **2.2.2 Informative**

Not applicable

## **2.3 Definitions**

### **2.3.1 General**

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

### 2.3.2 Disclosure classification

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

## 2.4 Abbreviations

Abbreviation	Description
DAS	Data Acquisition System
MDMS	Meter Data Management System

## 2.5 Roles and responsibilities

It is proposed that:

- Metering Technology & Support shall utilise this document as the basis for the technical evaluation process.
- Tenderers shall note the evaluation criteria as laid out in this document and submit tenders in compliance to the stipulated requirements.

## 2.6 Process for monitoring

Not applicable

## 2.7 Related/supporting documents

Not applicable

## 3. Technical Tender Evaluation Procedure

The following criteria will be used to assess the tenderer's capability to enter into a contract with Eskom with respect to the provision of either a standalone Interval Meter DAS and standalone MDMS, or an integrated Interval Meter DAS and MDMS. The evaluation process for each system has four stages:

- 1) Mandatory Requirements Evaluation
- 2) Technical Qualitative Requirements Evaluation
- 3) Practical Demonstration Evaluation
- 4) Deemed offer Risk(s) Evaluation

Tenderers offers must achieve the minimum threshold for each stage in order to qualify for evaluation under a subsequent stage. Tenderers that do not achieve the minimum threshold for a stage will not be evaluated further. The detailed methodologies for scoring in each stage are provided in the sections below.

### 3.1 Mandatory Requirements Evaluation

This part of the evaluation starts when submissions are opened and assessed for the first time. The Eskom evaluation team will go through the details of the returnable submissions that are required and will ensure that all the Mandatory Requirements are met. Submissions that receive a "No" for any of these requirements will not be able to proceed to the 'Technical Qualitative Requirements Evaluation' stage and therefore will fail the technical evaluation.

**Table 1: Mandatory Requirements Evaluation – Interval Meter DAS**

Mandatory Criteria	Enquiry Returnable	Comply	Comments
Are completed A&B Technical Schedules, submitted, and signed by the duly authorised representative	Completed and signed A&B Technical Schedules as in normative reference [2-AB]	Yes/No	
Are completed A&B Engineering & Support Requirements Schedules, submitted, and signed by the duly authorised representative	Completed and signed A&B Engineering & Support Schedules as in normative reference [2-AB]	Yes/No	
Are all the detailed technical documents provided	Detailed brochures, manuals and supporting documents provided	Yes/No	
Is all information supplied in English?	Documents, brochures, manuals and supporting documents supplied in English	Yes/No	
Are completed Annexure A of 240-170000951	Completed and signed Annexures.	Yes/No	
<b>Threshold.</b> Should the tenderer fail to meet ANY ONE of the above requirements they will be disqualified.			

**Table 2: Mandatory Requirements Evaluation – MDMS**

Mandatory Criteria	Enquiry Returnable	Comply	Comments
Are completed A&B Technical Schedules, submitted, and signed by the duly authorised representative	Completed and signed A&B Technical Schedules as in normative reference [3-AB]	Yes/No	
Are completed A&B Engineering & Support Requirements Schedules, submitted, and signed by the duly authorised representative	Completed and signed A&B Engineering & Support Schedules as in normative reference [3-AB]	Yes/No	
Are all the detailed technical documents provided	Detailed brochures, manuals and supporting documents provided	Yes/No	
Is all information supplied in English?	Documents, brochures, manuals and supporting documents supplied in English	Yes/No	
Are completed Annexure B of 240-170000951	Completed and signed Annexures.	Yes/No	
<b>Threshold.</b> Should the tenderer fail to meet ANY ONE of the above requirements they will be disqualified.			

### 3.2 Technical Qualitative Requirements Evaluation

This stage shall comprise of scoring in two sub-categories each for the Interval Meter DAS and MDMS. There are two A&B schedules pertaining to this request for proposal viz. [2-AB] Interval Meter DAS A&B Schedule and [3-AB] MDMS A&B Schedule. The relevant A&B Schedule pertaining to the proposed system, shall be completed, signed, and submitted. Annexure A, pertaining to the Interval Meter DAS and Annexure B, pertaining to the MDMS shall also be completed, signed and submitted to support the relevant A&B Schedule.

This stage shall comprise of scoring in two sub-categories and each sub-category will be weighted and scored as a percentage as per Table 3.

**Table 3: Weight Allocations for Technical Qualitative Evaluation**

Stage 2 evaluation Subcategory name	Score %	Threshold	Weight (%)
A&B Technical schedules		80%	60
A&B Engineering and Support schedules		80%	40

Only submissions that pass the Technical Qualitative Requirements Evaluation scoring a threshold of 80% for each sub-category (Table 3) will proceed to the 'Practical Evaluation' stage.

### 3.2.1 Subcategory: A&B Technical Evaluation

Refer to the 'A&B Technical Schedules' in the excel sheet of the relevant A&B Schedule. The A&B Schedules for the Interval Meter DAS and MDMS, use a default weight of 1 for each scored item with critical items being assigned higher weights. For example, a weight of 10 indicates that the item will count the same as ten items with weight 1.

The excel spreadsheet containing the A&B Technical Schedules indicate the weight allocated for each item. Each item will be assigned a score by the Eskom evaluation team, based upon the tendered response and cross-checked with the supporting document provided.

Tender proposals claiming compliance to an item (e.g. 'Comply') but which are found to be partially compliant or non-compliant during verification will be assigned the corresponding score by the Eskom evaluation team. Items for which compliance is not claimed (e.g. 'Do Not Comply'), but which are found to be compliant during verification will be scored as 'Non-compliant' or 'Partially compliant', based on the original response. Items for which no response is provided shall automatically be scored as 'Non-compliant'.

All scores for the A&B Technical Schedules will be tallied and shall be calculated based on the maximum possible score (Weight x (Score from 4)). This value will be recorded as the equivalent amount out of a score of 100%

The completed 'A&B Technical Schedules' sheet shall be printed, signed and submitted as part of the tendered proposal returnable. If the returnables are unsigned or incomplete, it will result in disqualification and the proposal will not be evaluated further.

**Table 4: Scoring of Items in A&B Technical Schedules**

Criteria	Score
Fully compliant	3
Partial Compliance (minor deviations)	1
Non-compliant (major deviation)	0

### 3.2.2 Subcategory: A&B Engineering and Support Evaluation

Refer to the 'A&B Engineering & Support Schedules' in the excel sheet of the relevant A&B Schedule. Tenderers are required to indicate compliance to the requirements listed in the 'A&B Engineering & Support Schedules' sheet. The completed 'A&B Engineering & Support Schedules' sheet shall be printed, signed and submitted as part of the tendered proposal returnables. Unsigned copies will be excluded from the evaluation.

Each item will be assigned a score by the Eskom evaluation team, based upon the tendered proposal, using 5.

Tender proposals claiming compliance to an item (e.g. 'Comply') but which are found to be partially compliant or non-compliant during verification will be assigned the corresponding score by the Eskom evaluation team. Items for which compliance is not claimed (e.g. 'Do Not Comply'), but which are found to be compliant during verification will be scored as 'Non-compliant' or 'Partially compliant', based on the original response. Items for which no response is provided shall automatically be scored as 'Non-compliant'.

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All scores for the A&B Engineering and Support Schedules will be tallied and shall be calculated based on the maximum possible score (Weight x (Score from 5)). This value will be recorded as the equivalent amount out of a score of 100%.

**Table 5: Scoring of Items in A&B Engineering & Support Schedules**

Criteria	Score
Fully compliant	3
Partial Compliance (minor deviations)	1
Non-compliant (major deviation)	0

### 3.3 Practical Evaluation

The technical evaluation will include a physical demonstration of the Interval Meter DAS and MDMS by the supplier to the Eskom technical team on the respective use cases specified in Table 6 and Table 7. Suppliers that have met the minimum threshold for stage 2 of the evaluation will be notified of their respective dates for the Practical Evaluation. The Practical Evaluation will be conducted at Eskom premises in Gauteng.

The demonstration shall be performed by the local representative of the vendor. All Suppliers will be provided with the same allocated time to demonstrate the functionality/use cases.

An Eskom technical panel will evaluate the demonstration which will form part of the technical compliance assessment. The practical evaluation will comprise of functional demonstrations of the use cases with respective weightings as defined in 6 and 7. The Eskom 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 Eskom technical team reserves the right not to proceed with the Practical evaluation if required.

**Table 6: Use cases for Interval Meter DAS demonstration**

Nos.	Demonstration	Weighting (%)
1	Supplier to demonstrate the various system access types and roles. In addition, Suppliers are required to demonstrate how the segregation of duties are managed.	10
2	Demonstrate how a customer is configured on the Interval Meter DAS	10
3	Demonstrate automatic synchronisation of customer information with other system e.g. MDMS	5
4	Demonstrate the DAS capability of remotely interrogating meters (scheduled and on demand) from any two approved Eskom meters. Demonstration shall include remote retrieval of load profile data, energy register and meter alarms and events	10
5	Demonstrate the DAS validation and verification capability	10
6	Supplier to demonstrate the systems capability in support of load and demand profiling for different intervals, billing quantities and engineering quantities	10
7	Supplier to demonstrate the DAS ability to perform calculations and aggregation	5
8	Demonstrate the system's ability to perform estimations and editing of data	10
9	Demonstrate the DAS data export capability (scheduled and on demand)	10
10	Demonstrate the DAS alarm and reporting capability	10
11	Demonstrate the systems audit trail management	10
12	The Supplier should demonstrate the following reports. Where possible graphical representation of the reports should also be demonstrated:	
12.1	Dial out performance reports that identify the type of failures	10



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Nos.	Demonstration	Weighting (%)
12.2	Data validation reports	10
12.3	Aggregation performance reports	10
12.4	Exported file performance reports	10
12.5	Meter time tolerance reports	10
12.6	Data edits/estimates performed	10

**Table 7: Use cases for MDMS demonstration**

Nos.	Demonstration	Weighting (%)
1	Supplier to demonstrate the various system access types and roles. In addition, Suppliers are required to demonstrate how the segregation of duties are managed.	10
2	Supplier to demonstrate how a customer is configured on the MDMS system both manually and as automatically synchronised from the Interval Meter DAS	10
3	Demonstrate the systems mapping management capability in subdividing customers into special groups	5
4	Demonstrate MDMS automated functionality of retrieving data from the Interval Meter DAS	10
5	Demonstrate the MDMS validation, estimations and editing (VEE) capability	10
6	Supplier to demonstrate the MDMS ability to perform calculations and aggregation such as official data calculation and losses calculation	10
7	Demonstrate the systems capability of disseminating data (automatic and on based on end-user requests) to end-user systems	5
8	Suppliers to demonstrate the available platforms for the provision of data to customers such as web portal and the security mechanisms in place to restrict customer access	10
9	Demonstrate the systems audit trail management	10
10	The Supplier should demonstrate the following reports. Where possible graphical representation of the reports should also be demonstrated:	
10.1	Dial out success rate log / Remote Interrogation log	5
10.2	Data validation reports	10
10.3	Interval Meter DAS upload log	5
10.4	Data Availability Report	10
10.5	Official Report	10
10.6	Losses Report	10
10.7	Data Comparison (Main vs Check)	5
10.8	Data Management / Change data log	10
10.9	Missing data report	10
10.10	Meter Status Report	10
10.11	Meter Alarm Report	10

The Practical Evaluation Checklist uses a weighting as defined in 6 and 7 for each scored item. Each item will be assigned a score by the Eskom evaluation team. The score for each item will be multiplied by its weight to obtain the total score per item.

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Table 8: Scoring of Items for Practical Evaluation Checklist

Criteria	Score
Fully compliant	3
Partial Compliance (minor deviations)	1
Non-compliant (major deviation)	0

All scores from 6 and 7 will be tallied and shall be calculated based on the maximum possible score (Weight x (Score from 8)). This value will be recorded as the equivalent amount out of a score of 100%. This value will be recorded as the "Score %" in Table 9.

Table 9: Practical Evaluation

Criteria	Score %	Comments
Evaluation score from Practical Evaluation Checklist		
<b>Threshold</b>	<b>80%</b>	

Only submissions that pass the 'Practical Evaluation' scoring threshold of 80% will be deemed as compliant and will proceed to the 'Deemed Offer Risk(s)' stage.

### 3.4 Deemed Offer Risk(s)

Eskom's evaluation team shall compile a narrative summarising risk(s) associated with any aspect of the offer:

- noted during the Technical Qualitative Requirements Evaluation,
- noted during the Practical Evaluation,
- based on the deviations provided in excel sheet 'Deviation Schedule'.
- based on the tenderers response to the respective Questionnaire i.e. Annexure A – Interval Meter DAS Questionnaire and Annexure B – MDMS Questionnaire
- based on the existing operational installed base; Eskom's preference is for a system that has confirmed implementation in at least two electrical utilities with customer references included as part of the submission.
- noted during a review of any pricing anomalies that cannot be acceptably clarified. The pricing will only be reviewed after an initial technical report on tenders is compiled, any additional deemed risks will be included as a revision to this report.

This narrative 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 accepted as shown in Table 10 below.

Table 10: Deemed Offer Risk(s) Evaluation

Criteria	Score	Comments
Deemed Offer Risk(s)		
<b>Threshold</b>	<b>Acceptable</b>	

#### 4. Authorization

This document has been seen and accepted by:

Name and surname	Designation
Nelson Luthuli	PTM&C Engineering Senior Manager (Acting)
Andre de la Guerre	Protection, Metering & DC Technology Manager

#### 5. Revisions

Date	Rev.	Compiler	Remarks
Aug 2021	1	M Omar	First Issue

#### 6. Development team

- M Omar

#### 7. Acknowledgements

Not applicable

**Annex A – Interval Meter DAS Questionnaire**

Tenderers submitting a proposal for the Interval Meter DAS are to complete and submit a signed copy of the questionnaire below.

	Question	Supplier Response
1.	Describe the technical support available for the Interval Meter DAS in South Africa.	
2.	Describe the support methodology. Do you assign a single technical account manager to the account, or do you use a contact centre approach?	
3.	Describe the availability of the technical support, and the access methods (08h00-17h00, 24 hour, Help Desk, Web Site, etc).	
4.	Should you be a reseller/local agent of the system, describe in detail the support provided to you by the OEM, including training, technical support, escalation support and direct access to the vendor by the Eskom.	
5.	<p>The Supplier shall provide a full life cycle product support service by describing the following:</p> <ul style="list-style-type: none"> <li>• Support concepts and programs</li> <li>• Support levels/tiers and contracts</li> <li>• Type of service desk support 24/7, 12/5, etc</li> <li>• Guaranteed response time for action and resolution including priority response services, etc.</li> <li>• Support mechanisms and/or resources that are built into the products including remote diagnostics, on-line technical problems, knowledge base for clients, on-line self-service for problem submittal and user community.</li> <li>• User groups</li> <li>• Support skills transfer strategy</li> <li>• Support call response time (remote and on-site)</li> </ul>	
6.	Suppliers are required to provide proof of the required support functions. This shall be a list of all technical staff i.e. number of OEM and business partner technical support staff, their respective roles (support technical specialist, software engineers/programmers etc.) and a short CV of each of the technical staff.	

7.	Suppliers are to provide a list of utilities/companies where the system has been deployed both locally and internationally. Suppliers are to provide a list of references including customer names, location, type of system deployment, industry, and number of metering points.	
8.	Suppliers are to provide their product roadmap for the next 5 years with details of future planned upgrades/releases	
9.	Does the Interval Meter DAS support the retrieval of Quality of Supply meters as per the following requirements	
9.1	Data Acquisition Software in accordance to 240-132938253 - section 4.6.1a, d and c, 4.6.3 and 4.6.4	
9.2	Read and store the following parameters <ul style="list-style-type: none"><li>• 10 min rms voltages and currents</li><li>• 10 min harmonics (individual and THD)</li><li>• 10 min voltage unbalance</li><li>• 10ms rms voltage dip profile (during dip)</li><li>• 10ms rms voltage dip profile (during dip)</li><li>• 10ms rms current profile (during dip)</li><li>• Event trigger/flag</li><li>• Flicker – Pst and Plt (every 10min)</li></ul>	
9.3	The Interval Meter DAS should support the retrieval of data in the Eskom PQDIF format as in 240-132938253	

**Declaration**

I confirm that the responses indicated in this questionnaire are true and can achieve these requirements for the offered product to Eskom.

**Name of Company Representative:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

### Annex B – MDMS Questionnaire

Tenderers submitting a proposal for the MDMS are to complete and submit a signed copy of the questionnaire below.

	Question	Supplier Response
1.	Describe the technical support available for the MDMS in South Africa.	
2.	Describe the support methodology. Do you assign a single technical account manager to the account, or do you use a contact centre approach?	
3.	Describe the availability of the technical support, and the access methods (08h00-17h00, 24 hour, Help Desk, Web Site, etc).	
4.	Should you be a reseller/local agent of the system, describe in detail the support provided to you by the OEM, including training, technical support, escalation support and direct access to the vendor by the Eskom.	
5.	<p>The Supplier shall provide a full life cycle product support service by describing the following:</p> <ul style="list-style-type: none"> <li>• Support concepts and programs</li> <li>• Support levels/tiers and contracts</li> <li>• Type of service desk support 24/7, 12/5, etc</li> <li>• Guaranteed response time for action and resolution including priority response services, etc.</li> <li>• Support mechanisms and/or resources that are built into the products including remote diagnostics, on-line technical problems, knowledge base for clients, on-line self-service for problem submittal and user community.</li> <li>• User groups</li> <li>• Support skills transfer strategy</li> <li>• Support call response time (remote and on-site)</li> </ul>	
6.	Suppliers are required to provide proof of the required support functions. This shall be a list of all technical staff i.e. number of OEM and business partner technical support staff, their respective roles (support technical specialist, software engineers/programmers etc.) and a short CV of each of the technical staff.	

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7.	Suppliers are to provide a list of utilities/companies where the system has been deployed both locally and internationally. Suppliers are to provide a list of references including customer names, location, type of system deployment, industry, and number of metering points.	
8.	Suppliers are to provide their product roadmap for the next 5 years with details of future planned upgrades/releases	

**Declaration**

I confirm that the responses indicated in this questionnaire are true and can achieve these requirements for the offered product to Eskom.

**Name of Company Representative:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_