

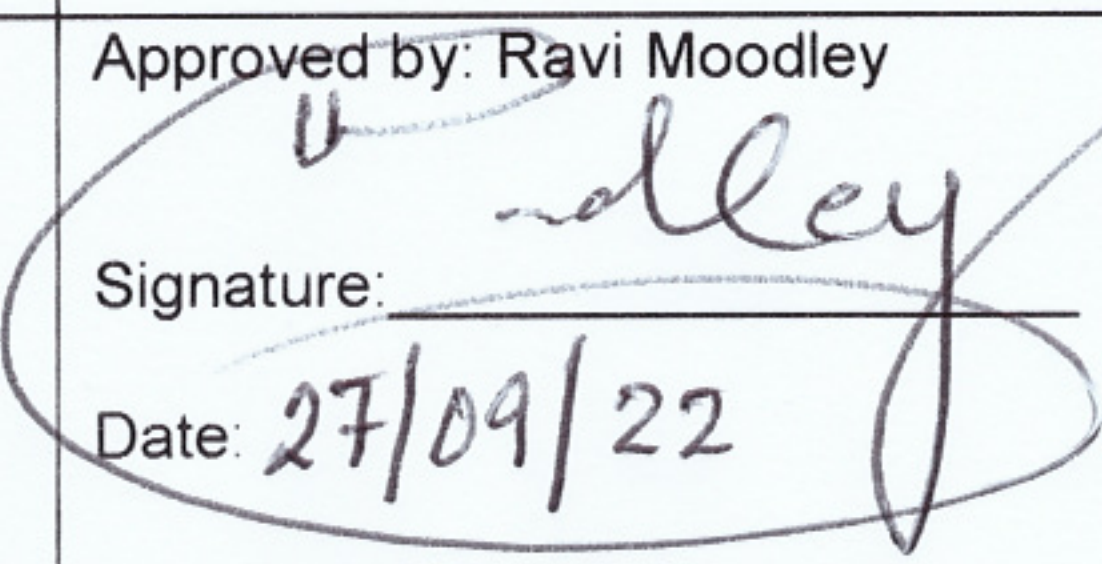
	SCOPE OF WORK AND THE TECHNICAL EVALUATION CRITERIA FOR IEC 61850 TRAINING	Unique Identifier	240- 1700000980
		Revision	0
		Revision Date	
		Distribution Learning and Development Division	

Scope of Work and Technical Evaluation Criteria FOR THE PROVISION OF IEC 61850 TRAINING FOR PROTECTION PERSONNEL

Title: Scope of Work and the Technical Evaluation for the provision of IEC 61850 training for Protection personnel		Document type: SOW and Technical Evaluation Criteria
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1. DOCUMENT PURPOSE

The purpose of this document is to provide the technical evaluation criteria for the **PROVISION OF THE IEC 61850 TRAINING FOR POWER SYSTEM PROTECTION PERSONNEL ON “AS AND WHEN REQUIRED BASIS”**.

2. BACKGROUND

The obvious and visible trend in data communications in industrial and substation environments is the migration to Ethernet and TCP/IP as the carrier of important plant data. The technology is well understood and has been effectively deployed for decades in corporate office networks.

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3. SCOPE OF WORK

Industrial Networking and TCP/IP Training course:

The course must cover the basic and advanced networking topics related to Ethernet and TCP/IP networks with an emphasis on industrial and substation network architectures which includes all the latest theories relating to the topic as well as the practical sessions.

The content should include:

- Data communications and Networking: Communication fundamentals, the OSI reference model, network topologies, LANs
- Introduction, overview and History of Ethernet: Ethernet history, standards, Ethernet operation, CSMA/CD
- Practical User cases (Eskom Tx and Dx architectures)
- General Troubleshooting techniques
- Networking configuration and fault-finding tools
- SNMP/NMS
- Cybersecurity fundamentals (philosophy)
- Recovery and load balancing techniques (RSTP/MSTP)
- Routing redundancy techniques (VRRP)


Substation Automation Using IEC 61850

The course must cover the IEC 61850 standard in depth and also look at the standard from numerous perspectives including all the latest theories relating to the topic. The course must also have a practical component.

The content should include:

- Introduction to substation automation and IEC 61850
- Concepts involved in automating power distribution and transmission networks
- New techniques in protection using intelligent relays
- Substation automation – untapped value
- Local intelligent and intelligent electronic devices (IEDs)
- What is IEC 61850?
- Development of IEC 61850
- How is IEC 61850 different from current protocols in use today?
- Structure of the Specification
- Other important referenced standards
- Is IEC 61850 a viable architecture for the future?
- Benefits of IEC 61850
- Remote access and corporate network connectivity

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4. TECHNICAL EVALUATION TEAM

Table 1: Technical Evaluation Team


#	Name	Title/ Designation
1.	Gert Madonsela	Chief Engineer
2.	Anita Oommen	Middle Manager SO
3.	Thabisile Hleza	Senior Advisor

5. TECHNICAL EVALUATION PROCESS

5.1 Technical Evaluation Strategy

The technical team constructed a process to evaluate the proposals to be submitted in response to the enquiry, as outlined below.

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5.2 Technical Evaluation Criteria and Scoring Methodology

Tenderers were first evaluated on the mandatory Technical Gatekeeper requirements.

Detail technical evaluation criteria

	Factor	Weight	Sub-factor	Score
1	The number of years of experience working with Networking and TCP/IP as well as Substation Automation	35%	2 – 3 years	50%
			3 – 5 years	75%
			> 5 years	100%
2	The number of Industrial Networking and TCP/IP and Substation Automation using IEC 61850 Training events facilitated both in Eskom and outside Eskom	25%	1 - 5 events	50%
			6 - 10	75%
			> 10 events	100%
3	CPD (Continuous Professional Development) Accreditation by Recognised Voluntary Association of the courses	10%	For both courses	100%
			For one course	50%
			None	0%
4	Professional registration of the facilitator as a Professional Engineer/ Technologist/ Technician	15%	Prof Technician	50%
			Prof Technologist /Engineer	100%
5	Qualifications of the facilitator(s)	15%	Diploma	50%
			Degree/ Honours	75%
			>= Masters	100%
	TOTAL	100%		

Threshold

The threshold on the technical evaluation criteria is 70 %. Suppliers / Service providers would be deemed technically unacceptable if they score less and will thus not be evaluated further.

5.3 Scoring Methodology

The minimum threshold for the technical evaluation score was 70% and suppliers who failed to meet this threshold were disqualified. Tenderers are requested to provide the relevant supporting documentation to each question in a file as part of their tender submission.

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