

	TENDER SCOPE OF WORK Group Technology	Template Identifier	240-IT042	Rev	3
		Effective Date	June 2026		
		Review Date	June 2029		

Description of Request	Provide brief description / summary of your request
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1. High level background

1.1 Historical Context

Eskom Generation Division (Gx) has operated within an evolving electricity market framework since the establishment of its internal energy market between 1996 and 2004, initiated in response to the Energy Policy White Paper. Trading between Generation and the **National Transmission Company of South Africa (NTCSA)** is currently governed by the **Eskom Dynamic Energy Market (EDEM)** and annual **Power Purchase Agreements (PPAs)** in a regulated market environment. Each Generation power station enters into PPAs with NTCSA on a yearly basis, covering price agreements, terms, and conditions of energy trading.

1.2 The Evolving Energy Market: ERAA and SAWEM

South Africa's electricity sector is undergoing its most far-reaching reform in decades. The **Electricity Regulation Amendment Act 38 of 2024 (ERAA)**, signed into law on 16 August 2024 and effective from 1 January 2025, marks a historic shift from Eskom's vertically integrated monopoly toward a **competitive, multi-market electricity system**.

The ERAA's core objectives, as they relate to Eskom Generation, are to:

- **Establish an independent Transmission System Operator (TSO)** — to develop, maintain and operate the transmission grid and provide non-discriminatory access to all market participants.
- **Enable a competitive wholesale market** — with multiple generators competing on a level playing field, including Independent Power Producers (IPPs)
- **Introduce an open market platform** that allows for transparent and competitive electricity trading
- **Mandate legal separation** of Generation, Transmission, and Distribution entities, each requiring separate licences under Section 13(3) of the ERAA.
- **Establish vesting contracts** as the transitional bridge mechanism between the regulated and competitive market structures (Sections 34A–35C).

The **South African Wholesale Electricity Market (SAWEM)**, represents the practical implementation of these reforms. The Market Code (Rev 2.3, February 2026) has been formally submitted to NERSA and defines the operational and governance rules for participation, including trading arrangements, market participation requirements, and settlement processes.

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2. Scope of work/Business requirements

1. Eskom requests a free demonstration of Energy Trading and Risk Management (ETRM) software.

The software must demonstrate the following capabilities:

- Trade Capture and Sourcing
 - Automated Bid to Bill capability – bidding, scheduling, reporting and settlements
 - Automated Bid Submission, Financial settlements, compliance and billing
 - Settlement Tracking and Billing including reporting
 - Regulatory and Accounting standard Compliance Tools
 - Market integration
 - Intelligent insights, Scenario Analysis and Forecasting with AI
 - Position Reporting
 - Modelling and quantifying risks
 - Price Curve Management
 - Valuation and Risk Analysis
 - Counterparty credit risk management
 - Profit and Loss (P and L)/Mark to Market reporting
 - Counterparty and Contract Management
 - Regulatory and Accounting standard Compliance Tools
 - Carbon and Renewables carbon accounting
 - Asset optimisation software – real time insights, scenario modelling, asset valuation, nodal pricing, congestion and grid behaviour.
 - The capability for Real-Time Market Data Feeds
2. Production Capability view
 - The production capability view requires the view of the Power stations performance that include the daily availability and outages (partial or full load losses).
 - Ancillary services to keep track of Ancillary services contracted, in use and from which stations

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- PPA YTD performance visualization per station relating to key contracted variables (Profit and loss position), settlements of ancillary services, projection based on simulated trade strategy per power plant as well as the market and PPA settlements.
 - Weather data to keep track of Weather conditions, Temperature, Demand constraints. The weather data to simulate the amount of solar energy expected from a region throughout the day
 - Renewable power plant – To keep track, project and monitor energy performance.
 - NTCSA instructions to keep track of instructions coming from NTCSA e.g. Ramp up, ramp down as well as keep track of our performance to how the Gx stations responded
 - Future energy demand curves – economic growth, future price predictions/forecasts
3. Automation of the declaration sheet
 4. Automation of plant risk identified indicating the impact of load losses (Projection, day ahead week ahead, month ahead, year ahead)
 5. Day ahead/ Week ahead/ Month Ahead offers
 - Ability to analyse market data and simulate scenarios.
 - Monitor exposures, prices, and P&L in real time. Capture, price, and confirm physical and financial trades. Based on Plant Capacity view simulate the day ahead declaration offers for 7 days rolling window.
 - The production managers and energy traders have the capability to make changes to the simulated data.
 - Integrate with the NTCSA energy trading system to publish the offers.
 - Integrate with the NTCSA invoice and billing system to publish settlements and compare with Gx own invoice and billing system and produce exception reports.
 6. Capacity redeclarations
 - Based on Plant Capacity view simulate Redeclaration requirements in real time.
 - Simulate the deviation from submitted Offers by Power Stations
 - Redeclarations of new unit availabilities by Power Stations Publish Redeclaration

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- The production managers and energy traders have the capability to make changes to the simulated data.
- Integrate with the NTCSA energy trading system to publish the redeclaration offers.
- Integrate with the NTCSA capacity payments, capacity adjustments and capacity penalties and compare to our own settlements and produce exception reports.

7. Operations

- a. Access to the operational production and outage plans for the fleet, which will be a key input for this system. (Budget and revisions)
- b. Visualization of operational risks and recommended deviations from schedules
- c. Monitor critical fuel storage levels and associated logistics.

8. Risk management

- a. Analyse existing hedging instruments (PPA's, CFD's etc)

9. Analyse and simulate scenario's Manage risk using derivative hedge instruments and Finance and Manage the risk of the actual EAF being below the contractual EAF performance

- Reconcile trading and accounting profit and loss
- Manage settlements, payments and invoicing
- Manage cash flows and generate journal entries
- Calculate the capacity revenue that include the Day ahead payment, Adjustment payment and deviation(penalty) payments.
- Calculate energy revenue that include Day ahead payment, constraint payment, balancing payment and energy hedge payment
- Calculate Reserve revenue that include Ten Minute Reserve (TMR) payment, TMR hedge payment, Instantaneous payment, Instantaneous hedge payments, Regulatory up payment, Regulatory up Payment and Regulatory down hedge payment.
- Calculate indicative payments that include balancing indicative payment.
- Calculate all other ancillary services payments e.g. SCO, Emergency, Blackstart and Islanding

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- Comparison of the revenues calculated with the payments data from NTCSA and identify discrepancies.
 - Calculate the volume hedge (MW) into daily and hourly volumes and indicate the remaining hedge volume till month end to assist in decision making processes of offers and prices.
 - Calculate the startup payment and compare to NTCSA for discrepancies.
 - Calculate the revised availability rate as a result of the capacity availability cone and compare with the NTCSA for discrepancies.
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10. Dashboard and Reports – real time reports and dashboard assist business in decision making.