electricity & energy

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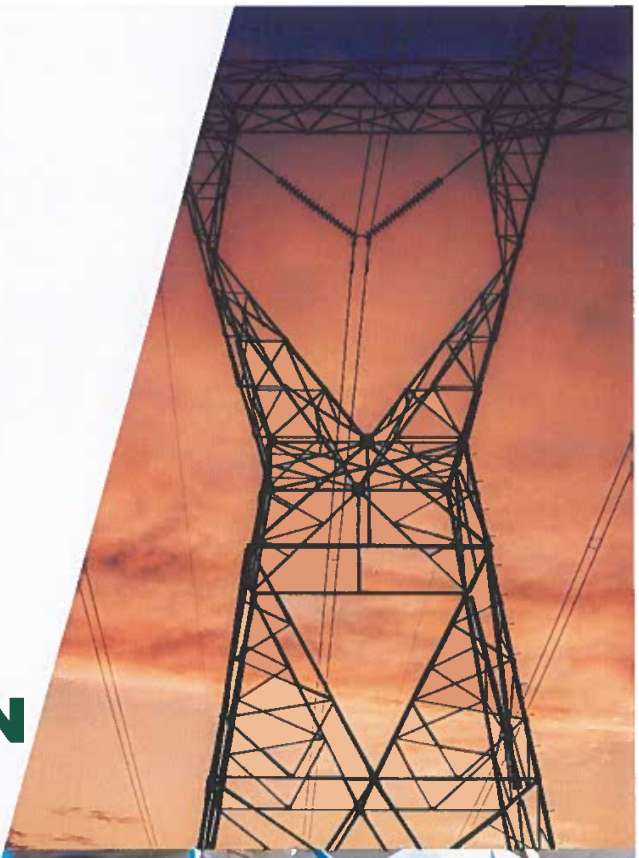

ELECTRICITY SECTOR MARKET TRANSFORMATION POSITION PAPER

AUGUST 2026

Table of Contents

1.1 Introduction 2
1.1.1 Context 2
1.1.2 Government's objectives 3
1.1.3 The rationale for implementing sectoral transformation 4
1.2 Overview of Government's proposed sectoral transformation 6
1.2.2 Guiding principles for sectoral transformation 6
1.2.1 Overview of transformation 7
1.2.2 Timeframes & process for implementation 18
1.3 Annex 1: Key Concepts from the electricity sector 20
1.4 Annex 2: Steps to support the introduction of competitive wholesale markets ... 23

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1.1 Introduction

1.1.1 Context

The electricity sector in South Africa, and globally, has been undergoing a period of rapid change that has introduced new challenges for policy makers and utilities, driven by changing demand patterns, the development of new technologies, the decentralisation of electricity generation, new financing options and the imperative of decarbonisation and a just energy transition.

To date, the development of South Africa's electricity sector has been guided by the 1998 Energy Policy White Paper, the National Development Plan 2030 (NDP) published in 2011, the 2019 Integrated Resource Plan (IRP), the 2019 Roadmap for Eskom, and the President's Energy Action Plan (EAP) announced in July 2022 as well as the Just Energy Transition Implementation Plan published in 2023.

Over the last two decades, the sector has faced a growing number of challenges, including a lack of adequate and reliable generating capacity (leading to prolonged periods of load shedding), poor operational and financial performance at publicly owned utilities across each segment of the electricity value chain, increasing pressures on the fiscus, the rapid development and integration of variable renewable generation technologies, and the need to appropriately address decarbonisation of the energy mix.

In response to these challenges, Government has embarked on a transformation agenda for the electricity sector to achieve long-term energy security. While Government interventions have helped to successfully resolve the most recent load shedding crisis, further structural transformations are essential to prevent its recurrence and to build a sustainable system for the future. As part of this agenda, various legislative changes have been implemented to enable private investment in electricity generation projects of any size, resulting in a robust and growing pipeline of investment in the sector. Eskom is progressively restructuring into distinct entities for generation, transmission and distribution, beginning with the establishment of the National Transmission Company of South Africa (NTCSA) in 2024. The Electricity Regulation Amendment Act (ERAA) provides for the introduction of a competitive electricity market and for an independent Transmission System Operator to create a level playing field for wholesale competition. These steps together represent a fundamental shift in South Africa's electricity landscape.

As South Africa prepares for the establishment of a competitive wholesale electricity market, a clear vision is required for the future of the sector and the role that various

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actors will play in a future transformed energy system. This document seeks to outline such a vision, bringing together the various initiatives already underway into a single, coherent agenda for market transformation.

1.1.2 Government's objectives

Government's objectives for the electricity sector are derived from the National Development Plan 2030, stated as:

- Ensuring a secure and reliable electricity supply to promote economic growth and development.
- Promoting social equity through affordable tariffs and the protection of vulnerable customers.
- Environmental sustainability through the decarbonisation of the electricity sector.

Striking a balance across each of these three interrelated and often competing objectives is a complex undertaking. In the South African context, however, the pursuit of these objectives must be further reconciled with the country's unique socio-economic realities and development imperatives, including employment creation, inclusive growth, and economic transformation. South Africa therefore faces an "energy quadrilemma," in which Government must simultaneously address security of supply, affordability, environmental sustainability, and socio-economic development.

Decarbonising the electricity sector must therefore be implemented in a just and inclusive manner, mitigating adverse economic impacts on workers and communities, while maximising opportunities for job creation, skills development, and broader economic participation in the transition to renewable energy sources.

In this context, the pace and scale of decarbonisation must be carefully managed as part of the broader effort to transformation the electricity sector. Initiatives should be firmly grounded in the principles of a just transition and be designed to ensure that the transition does not outstrip the country's capacity to manage its socio-economic impacts. Such an approach aims to safeguard employment, strengthen local economies, and protect vulnerable groups, ensuring that sector transformation remains both just and sustainable.

As South Africa looks to move beyond its present-day energy constraints, investments that support national carbon reduction commitments are needed for electricity generation, as well as for network upgrades and expansion. Such investments should seek to be transformative in nature, contributing meaningfully to the sector's evolution while being strategically prioritised to avoid placing undue pressure on public finances.

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1.1.3 The rationale for implementing sectoral transformation

To better address South Africa's energy quadrilemma within prevailing national fiscal constraints, Government intends to initiate sectoral transformation through the introduction of a competitive wholesale electricity market. This requires balancing energy security, energy equity (affordability), and environmental sustainability, while also advancing socio-economic and inclusive development outcomes. A coherent and integrated approach to energy transformation is therefore required as South Africa rebuilds and reimagines its electricity system to become more resilient, efficient, and future-ready.

The electricity distribution sector will also need to be transformed to improve technical and financial performance; however, while acknowledging the interdependencies across the electricity value chain, this document focuses primarily – but not exclusively – on the creation of a new wholesale electricity market as the next step in the transformation process, recognising the central role of the wholesale market in shaping system-wide efficiency, investment signals, and security of supply.

In introducing a wholesale electricity market, Government intends to increase efficiency in the sector's generation segment, which until recently had largely been characterised by limited competition to enter the market via the Independent Power Producers Procurement Programme (IPPPP). While the Amendment of Schedule 2 of the Electricity Regulation Act allows for more competition, due to the nature of longer-term contracts, competition does not regularly occur once generators have entered the market. The introduction of a competitive wholesale electricity market will therefore enable ongoing competition amongst generators who have entered the market[1]. This will lead to more accurate and transparent price signals and better incentives that will encourage improved short-term performance, better long-term investment decisions, establish a level playing field for new participants to enter the market, and achieve more efficient outcomes for the sector. In the long-term, enhanced competition is expected to support security of supply (as the market responds to accurate signals regarding current and future demand) and, all else being equal, contribute to lowering the overall cost of electricity for South Africans.

This proposed transformation represents a formal consolidation of various policy commitments and initiatives that have been advanced over the last 25 years. In bringing these initiatives together under the unified framework of a competitive wholesale electricity market, Government intends to establish an organised,

[1] Commonly known as competition "in the market."

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transparent, and rules-based environment for the sale and purchase of wholesale electricity, as envisaged in the Electricity Regulation Amendment Act of 2024.

This document outlines Government's approach to transforming the electricity sector. The principles and proposals outlined herein will form the foundation of other regulatory documents such as detailed market design frameworks, which will provide a clear, coherent, and integrated view of how the various components of the ongoing sector transformation process fit together.

This market design document and associated market codes should serve as a reference for NERSA and other sectoral stakeholders, guiding the ongoing evolution of the electricity market and regulatory framework, as necessary, to implement the proposed sectoral transformations effectively, in line with the ERAA. These documents will be developed through an iterative and mutually reinforcing process to ensure overall system coherence.

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1.2 Overview of Government's proposed sectoral transformation

1.2.2 Guiding principles for sectoral transformation

Government is committed to implementing sectoral transformation in accordance with the following principles:

- Stimulate competition and innovation through market mechanisms. Responding to market signals in a competitive environment typically leads to more efficient deployment of private capital.
- Create incentives for new investment in generation and networks to ensure adequate and reliable electricity supply.
- Promote competitive neutrality. A well-designed market must remain technology neutral and impartial to all participants to ensure that system requirements are met at the lowest cost while promoting innovation. Competitive neutrality requires market administrators and/or facilitators to act with independence through minimising actual or potential conflicts of interest. It also requires the provision of access to the electricity network on a non-discriminatory basis.
- Ensure accountability within the market. Each entity involved in the market must be responsible for areas that fall within the scope of their functions. Failing to fulfil such responsibilities must lead to appropriate consequences, ensuring that market actors are committed to their roles and associated obligations, thereby contributing to a well-functioning and reliable market.
- Facilitate the optimal allocation of risks. A well-designed market must ensure that risks, costs, and the related financial responsibilities for decisions made or actions taken can be allocated to those best placed to manage them.
- Provide clarity and consistency in rules. A well-designed market must provide for a clear and consistent set of rules that facilitate decision making amongst market participants.
- Minimise informational asymmetries. Market participants must be provided with accurate and timely information to enable efficient decision making. Information disclosures help ensure a level playing field, thereby enhancing efficiency and fairness for all participants.
- Facilitate market integration. Longer-term energy markets must support efficient outcomes in support of short-term markets. Markets must be designed such that complementary offerings and/or requirements, such as energy and ancillary services, can be procured competitively in an integrated manner.
- Discourage free riding. All customers must contribute to a fair share of the overarching system costs. A number of technologies deployed today have high fixed costs and low operating costs. As the share of fixed costs increase, prices per unit of output will matter less and fixed charges will matter more.

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- Incorporate stakeholder perspectives. A market that aims to better meet the needs of all participants must be informed by their perspectives as it is designed, implemented, and updated. Incorporating perspectives that align with the existing principles and objectives for transformation will lead to the development of a balanced market design.
- Promote inclusive economic participation through transformation and localisation. Electricity sector transformation must serve as a vehicle for inclusive economic growth. All commercial aspects of the transformation, including investment, procurement, and market participation, will be governed by South Africa's Broad-Based Black Economic Empowerment legislation and localisation requirements. These measures will ensure meaningful participation by historically disadvantaged individuals and local enterprises, support the development of domestic value chains, and do so while maintaining a strong commitment to efficiency and competitiveness.
- Protect vulnerable consumers. Indigent consumers must be protected using mechanisms that facilitate increased access to affordable electricity services.
- Ensure fair cost allocation for end-use customers. A well-designed market must prevent end-use customers from bearing disproportionate costs or being disadvantaged by subsidies. Charges and contributions should be allocated transparently and equitably across all industry participants to maintain fairness and sustainability.

1.2.1 Overview of transformation

Overall sectoral structure along the value chain

Government intends to introduce a competitive wholesale electricity market that accommodates participation from generators, traders, and eligible customers. The market will be supported by network service providers (at the transmission and distribution levels), a System Operator (SO), a Market Operator (MO), a Central Purchasing Agency (CPA), and a regulator (NERSA), each of whom will act impartially and in the best interests of all participants.

The South African Wholesale Electricity Market (SAWEM) will include a centralised platform for the sale and purchase of wholesale electricity, while also permitting the trading of wholesale electricity through bilateral contracts and government procurement programmes. Use of the centralised platform will be voluntary; however, participation in the SAWEM will require market actors to either transact through the centralised platform or through bilateral arrangements. Generators will compete with one another to produce electricity for customers. End-use customers will purchase electricity through intermediaries such as independent traders or the trading arms of electricity distribution companies (the latter will be referred to as "retailers"). In some

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cases, customers will have the option to purchase electricity directly from generators (such customers will be referred to as "eligible wholesale customers").

The new market structure will be enabled by the legal separation of the National Transmission Company of South Africa (NTCSA) into an independent entity and the further delineation of activities along the value chain, including distinguishing between the provision of networks for the conveyance of electricity and the provision of retail services for the sale of electricity to end-use customers. Open access to the transmission and distribution networks in South Africa, as required by the ERAA, will be achieved through establishing clear rules and tariffs that all network service providers follow. Such rules will be outlined in a new market code, which will be developed by the NTCSA and approved by NERSA. They will also be included in an updated and expanded transmission code and distribution code, as well as in licences granted by NERSA.

The restructuring of Eskom is a key enabler to the successful implementation of transparent and competitive markets in the electricity sector. The restructuring of Eskom into legally separate companies, including a legally separate NTCSA, will help to create a level playing field for generators in the sector and is in line with best practice internationally when it comes to market transformation. Government envisages that:

- Eskom's generation business will operate as a legally separate entity under Eskom Holdings and will participate in the proposed wholesale electricity market on the same basis as other generation companies. The Market Operator will treat Eskom Generation with the same rules and obligations applied to all market participants. To safeguard competition, Government will review and implement mechanisms to limit the exercise of market power, ensuring that no generation company (be it Eskom Generation, or a private entity) can distort market outcomes[2].
- The NTCSA will be a legally distinct entity, responsible for supporting all market actors through serving as an impartial network service provider, as well as an impartial system and market operator.
- Eskom's distribution business will be a legally distinct entity under Eskom Holdings, responsible for supporting the market through serving as an impartial network service provider and a retailer (i.e. trader).

[2] As a state-owned enterprise (SOE), Eskom Generation will align its operations with Government's broader policy objectives, which may include supplementary socio-economic objectives (e.g. industrialisation and employment creation) in addition to the primary objective of operating in a commercially viable manner, while complying with all rules and regulations established by the Market Operator and NERSA.

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An overview of the envisaged market structure is shown in Figure 1. Details on the various actors, from generators through to the end-use customers, are provided below.

Generation

Generators own power generating plants and are in the business of selling the energy they produce. Such companies may also sell other services such as frequency regulation, voltage control, and reserves that the system operator needs to maintain the quality and reliability of electricity supply. Generators in the envisaged market will include Eskom's generation division, independent power producers (IPPs) procured through the Government-administered IPPPP, private generators exempted from requiring a generation licence, and distributed energy resources (i.e. resources connected to distribution networks) with an installed capacity threshold to be determined at a later stage and specified in the market code and/or market design document. All generators will compete on a level playing field in the centralised market administered by a Market Operator in the NTCSA, or contract directly with customers.

Transmission networks, system, and wholesale market operation

As required by the ERAA, the legally separate NTCSA will be regulated by NERSA. It will undertake several functions, including the provision of the transmission system (transmission network service provider), the administration of the centralised wholesale market (the Market Operator - MO), the balance of supply and demand (the System Operator - SO), and the development of additional transmission network capacity alongside independent transmission projects (ITPs).[3]

The NTCSA's functions will also include serving as a Central Purchasing Agency (CPA), a market support entity that will serve as an administrator for contracts between dominant generators (e.g. Eskom Generation) and certain electricity distribution companies that elect to directly participate in the wholesale market, and a counterparty for generators with legacy contracts awarded through government procurement programmes (e.g. the REIPPPP). It is expected that the CPA will participate in the SAWEM, using the centralised market platform, on behalf of IPPs with existing contracts granted under Section 34 of the Electricity Regulation Act (i.e., the CPA will take responsibility for submitting bids into the day-ahead market for these generators). The CPA is not expected to participate in the SAWEM for contracts between Eskom's generation division and electricity distributors; instead, it will manage capacity payments, and broker energy hedges between the various counterparties.

For the most part, the NTCSA will act as a facilitator in the competitive wholesale electricity market, providing essential services that allow sales and purchases to take place. To maintain the trust and confidence of market actors, Government will ensure

[3] See the Appendix for a brief description of these activities in the context of the electricity sector.

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that the NTCSA acts objectively and impartially, taking a system-wide approach to guide its decisions.

Distribution networks and retail

Electricity distribution companies, including Eskom Distribution and municipal distribution companies, will continue to be regulated by NERSA. They will continue to provide network services and customer-facing retail services. Network services will be provided on a non-discriminatory basis to all generation and load, and customer-facing retail services will be provided to non-eligible (i.e., captive) customers and to eligible retail customers who elect not to exercise their respective eligibility. Government will develop criteria and rules regarding "retail eligibility" which will be outlined in the forthcoming market design document.

In alignment with the ERA Act, a distinction between the network (wires) business and the retail business must be established, in the medium term, for all distributors. The network business will act as a facilitator for the market (by providing for the conveyance of electricity on a non-discriminatory basis) while the retail business will form a separately licenced activity covering the purchase of wholesale electricity and its subsequent sale to end-use customers. The network businesses will be remunerated through regulated connection and use of system charges, while the retail business will be remunerated through specific retail charges. Final customer charges will be the sum of generation, network (transmission and distribution) and retail (trading) charges, and will reflect any approved subsidies and costs that are to be socialised across customers. While customers who are entirely off grid will not have to pay any system charges, those that rely on the grid for some power or want to sell their excess energy will be required to pay network charges.

Some end-use customers, such as all residential households and smaller commercial entities connected at the distribution level, will continue to purchase power from incumbent distribution companies' retail arms (i.e. these customers will not be able to exercise choice in who their retail service provider is). In such instances, the provision of retail services to captive customers will be regulated by NERSA. Network charges, including any cross-subsidisation contained in those charges, should not be avoided by a customer's choice of retailer/trader.

A size threshold (e.g. 1 MW) and other relevant parameters for clearly defining what constitutes an eligible retail customer will be considered and subsequently defined in forthcoming policy and/or regulation.

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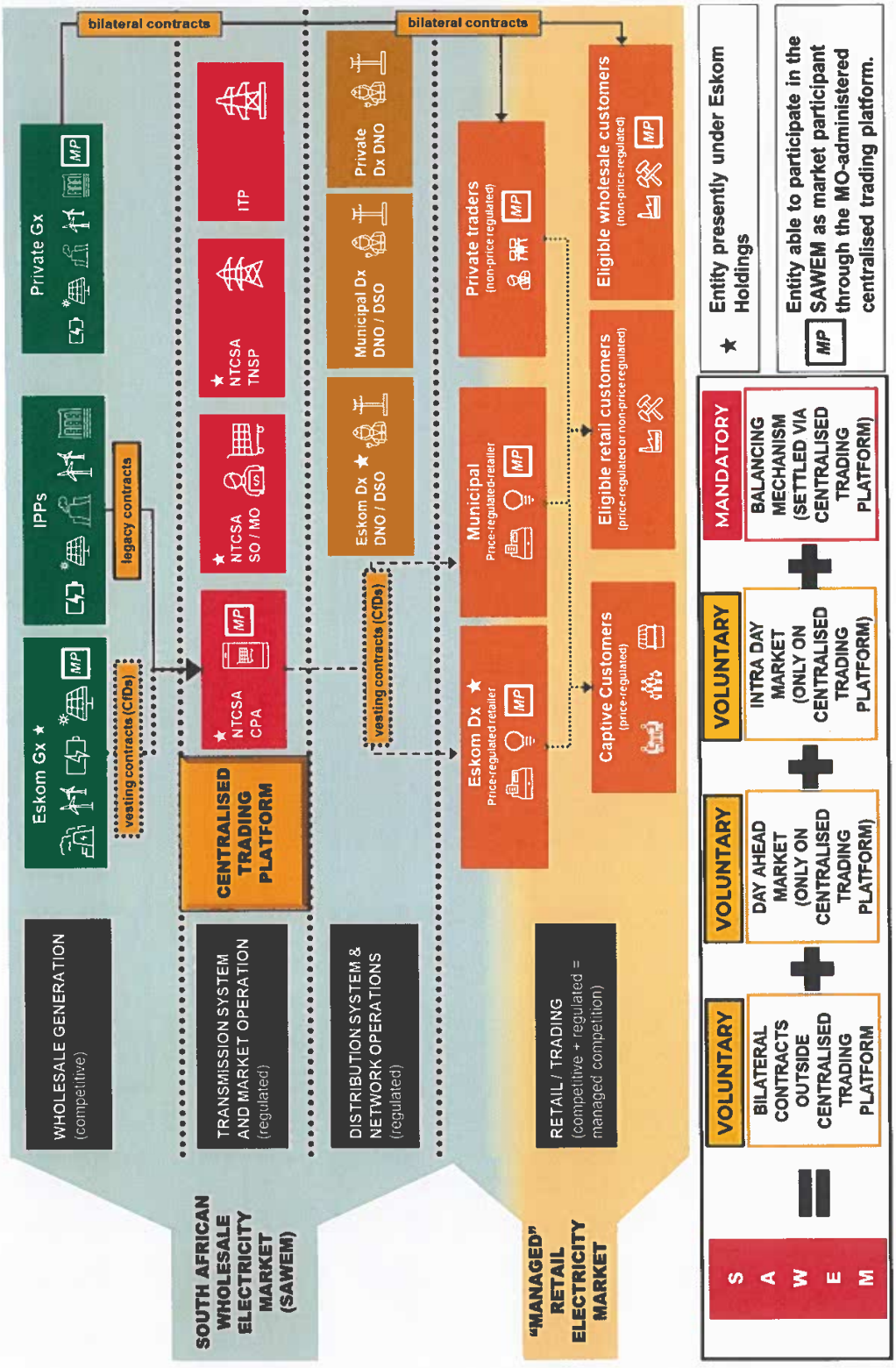
Figure 1: Overview of the future electricity market structure



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Wholesale market administration and governance

Wholesale transactions will be facilitated (1) through organised short-term markets administered by the MO using a centralised platform; and (2) by allowing for counterparties to directly transact with one another (bilateral contracts).

As the economic regulator for the sector, in addition to regulating natural monopolies such as the transmission and distribution networks, NERSA will be responsible for regulating and correcting market failures/imperfections, as well as protecting the interests of all customers. Given the introduction of competition in the proposed wholesale market, the Competition Commission will also have powers to investigate and intervene with regards to anti-competitive behaviours, including the abuse of market power.

Governance structures for the centralised wholesale market administered by the MO will be established. These will include a set of rules, developed by the MO and approved by NERSA, for participating in the centralised market. Appropriate structures will be created to oversee the market rules and the performance of the market, including a market governance committee (MGC) that will govern changes to the rules of the centralised market, and a market surveillance unit (MSU) that will monitor and enforce market rules and monitor the market for improper behaviour and market abuse.

The new market structures will require the role of NERSA to evolve to regulate network service providers as unbundled entities (irrespective of ownership), include wholesale market oversight and other related functions aimed at facilitating efficient market outcomes, in line with regulatory best practices internationally. Government will facilitate NERSA's adaptation and preparedness for these market transformations.

Wholesale market

Short-term markets

Maintaining a balance between the production and consumption of energy at any given moment is paramount to ensuring the stability and reliability of the electricity system. This requires production (generation) to be scheduled ahead of time, to meet expected demand (load).

To support the advanced scheduling of generation and load, and to allow buyers and sellers to optimise their sales and purchases ahead of real-time, short-term markets will be established by the MO. These markets will start the day before electricity is delivered (day-ahead markets) and run through to the real-time production of electricity.

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A centralised platform, administered and managed by the MO, will form an integral component of the envisaged short-term markets, enabling generation and load to submit bids and offers for selling and purchasing wholesale electricity to meet their respective short-term requirements. Participation in the competitive short-term markets, using the centralised trading platform, will be voluntary. To enable the MO and the SO to plan for real-time, however, all generation and load transacting outside of the centralised market (e.g. through bilateral contracts), will be required to submit their respective day-ahead production and consumption schedules no later than the day-ahead bids and offers using the centralised platform.

The outcome of the short-term markets administered by the MO through the centralised platform will be a set of schedules and hourly prices for wholesale electricity, in addition to prices for other services procured through the centralised platform, such as operating reserves. Prices from the short-term market will be used by the MO to settle payments between buyers and sellers, as determined by the rules set out in the market code for the centralised platform (however, prices for bilateral contracts will continue to be settled privately). The centralised platform will optimise the short-term efficiency of production through scheduling the lowest cost resources first, accounting for transmission constraints.

Costs associated with deviations between scheduled, and actual, production and consumption (i.e., balancing costs), will be recovered in accordance with the principle of ensuring accountability within the market and the principle of facilitating an optimal allocation of risks. The market code will elaborate on how hourly imbalance prices will be calculated.

Forward markets

Forward markets provide a mechanism for market participants to engage in contracts for a predetermined amount of capacity, energy, or other services at a predetermined price over a defined period (ranging from one week to as long as 20 years). These markets help to address price risk over the medium and long-term, thereby facilitating investment in new resources, ensuring that such resources will be available when they are needed (i.e., enhancing the security and reliability of supply).

To date, forward markets have predominantly been administered by Government, through long-term contracts, under initiatives such as the REIPPPP. Since the removal of licensing requirements for generation, private generators have increasingly entered into long-term bilateral contracts with commercial and industrial off-takers, either directly or via traders.

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The NTCSA will help implement additional formalised forward markets, most likely in the form of a capacity market. It is expected that such a market may be required, for instance, to ensure sufficient generating capacity (and possibly other reliability services) is made available over the medium to long-term, complementing the price signals emerging from the centralised wholesale electricity market. There are numerous examples that have been successfully implemented worldwide, including various capacity remuneration mechanisms, which will be reviewed to determine the most appropriate approach for the South African context.

Plans for new generation capacity are currently detailed in a cyclically reviewed Integrated Resource Plan (IRP), prepared by the DEE with input from the NTCSA. In line with the ERA Act, the IRP will serve as an indicative document that reflects the optimal electricity mix for the country. It will be used to plan for new central procurement of generating or storage capacity. Procurement of new capacity may be carried out by the NTCSA (e.g. through a capacity market), and/or be procured in terms of a Ministerial determination as provided for in the ERA Act.[4] Any Government-administered procurements for capacity will be informed by the IRP, as well as by assessments carried out by the SO.

In addition to formalised forward markets, private generators will continue to be able to engage in long-term bilateral contracts through participating in various privately administered procurement processes. Generators, traders, retailers and consumers will also be able to enter into financial hedges, such as Contracts for Difference (CfDs), amongst themselves.

Participation in wholesale markets

The following three entities are envisaged to actively participate in the wholesale markets centrally administered by the MO:

- **Generators** who own power generating facilities and are in the business of selling the energy they produce. It is envisaged that certain demand side resources will also be able to participate by offering to increase or decrease their offtake. A threshold for participation (e.g. a minimum size of facility) will be established (e.g. 1 MW). Generators connected to the transmission and distribution networks will be able to participate.
- **Eligible wholesale customers** who qualify to directly purchase electricity from the centralised market rather than through a trader. Customers that are not deemed to be "eligible wholesale customers" will be required to procure electricity through the trading arm of their respective electricity distribution

[4] A Ministerial determination may be issued in the event of the failure of a market, or in the event of an emergency, or for the purposes of ensuring security of energy supply in the national interest.

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company (i.e. a retailer) or an independent trader. The criteria for "wholesale eligibility" will be further considered by Government and will be outlined within a forthcoming market design document and updated regulatory framework.

- **Traders** engaging in the wholesale purchasing and subsequent reselling of electricity at the wholesale and/or retail level. The retail arm of electricity distribution companies (including municipal distribution companies) would fall under this category of participant, as would independent traders.

To participate in the centralised wholesale market, it will be necessary to satisfy certain prudential requirements, as per the requirements of the market code, grid code and relevant licenses. If a prospective participant is unable to meet such requirements, then they will be barred from procuring (or selling) electricity in this market.

It is likely that some prospective participants, such as some municipal electricity distribution companies, may not be able meet such requirements. This matter cannot be divorced from Government's long-standing objective of implementing transformations in the electricity distribution sector. Government therefore intends to develop a mechanism to allow for non-qualifying distributors to procure electricity, while simultaneously driving electricity distribution transformations with the objective of ensuring that all distribution companies will eventually be on a stable financial footing and be able to participate in the wholesale market using the centralised platform.

Additional considerations for the wholesale market

To help ensure that the proposed transformations yield the intended benefits for all sectoral stakeholders, the following matters will be carefully considered in the design and implementation of a competitive wholesale market:

Market power:[5] Currently, Eskom Generation provides most of the electricity supplied to the end-use customers and is a dominant player in this part of the value chain. As noted above, market monitoring and surveillance mechanisms will be established to detect potential abuses of market power. In addition to this, even with the implementation of competitive wholesale markets and market surveillance, Eskom Generation may still need to be regulated to limit its ability to exercise market power. The exact form of such regulation will need to be developed and implemented by NERSA.[6]

Government will evaluate whether additional measures beyond regulation may be necessary to mitigate the risk of Eskom Generation exercising market power, with a view to protecting end-use customers. Where appropriate, the forthcoming market

[5] See the Appendix for a brief description of market power in the context of electricity markets.
[6] For example, NERSA could regulate Eskom Generation's bids into the SAWEM.

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design document will propose appropriate mechanisms to address these risks and support fair and efficient market outcomes.

Conflicts of interest: For an efficient and fair wholesale market to flourish, it is essential that conflicts of interest are effectively mitigated. This is particularly relevant in the case of the competitive (international trading and CPA) functions consolidated under the NTCSA, given the NTCSA's concurrent responsibility for administering the centralised market. Robust ring-fencing and independence provisions within policy and regulation will be introduced to identify and mitigate potential conflicts within the NTCSA.

Legacy IPPs: Since 2011, Government has procured energy on a long-term basis from the private sector through various initiatives such as the REIPPPP. It is Government's intention that the terms of these legacy contracts be honoured (through novation to the CPA as the off-taker), even if the prices enshrined in some contracts are not competitive in the envisaged markets.

Stranded investments: Some generation assets may become uneconomic to operate, should their marginal cost of generation exceed the market price for electricity over an extended period of time. Such assets may no longer be able to recover their costs through the sale of electricity. If this is the case, then such assets may become 'stranded,' particularly if their capital costs have not already been recovered. Government and NERSA will work to identify whether such assets are likely to exist, and if required, outline the preferred approach for addressing such potentially stranded investments.

Transmission network expansion: Fully realising the benefits of future investments in new generation capacity will require a significant expansion of the national transmission network, which in turn, will require significant amounts of capital and time. To facilitate a more rapid expansion of the network, to evacuate new power generation and maintain system reliability, Government will enable private sector participation in transmission infrastructure investment.

Network congestion: As new generation capacity becomes operational, increasing constraints on the network's ability to transport electricity will arise. It is envisaged that these constraints will be managed through the implementation of 're-dispatching' strategies.

Recognising the importance of having market outcomes reflect the physical realities of the system, Government will look into the feasibility and practicality of introducing alternative mechanisms for managing and pricing network constraints, and for guiding

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transmission network development, toward the end of the initial transition period. Such mechanisms may incentivise generation and load to develop in better suited areas of the network, and to operate in a manner that helps to further reduce system costs.

Cross-border trading: Government acknowledges that the introduction of a wholesale electricity market within South Africa is not sufficient, on its own, to enable the cross-border trading of electricity. The ERAA allows for imports and exports under specific conditions and the market code (and any other relevant codes, regulations, or policies) will allow for a seamless interface with SAPP to facilitate regional electricity trading.

Retail market

The retail market is the mechanism through which retailers (traders) sell wholesale electricity to end-use customers at the retail level. Retailers are responsible for procuring electricity on behalf of end-use customers, setting the prices these customers pay, and managing customer service.

Currently, most retail services are bundled with the provision of electricity distribution network services, and there is no clear separation between the 'wires' business and the 'customer service' business. Over the medium term, these functions must be clearly delineated and separately licenced.

A subset of end-use customers will be able to directly purchase electricity from the wholesale market (eligible wholesale customers) or from an electricity trader (eligible retail customers) of their choice. During the transition period, Government envisages that this will only apply to energy users above a defined threshold connected to the transmission and/or distribution networks, as well as the retail arm of licensed distributors.[7] All remaining customers, including small residential customers, will remain 'captive' to their respective electricity distribution company's retail arm and will be charged regulated tariffs. NERSA will therefore be required to regulate retailers appropriately and to protect the interests of end-use customers, particularly the most vulnerable. Eligibility will be expanded over the longer term as part of a managed transition to full retail competition, which will ultimately be governed by a comprehensive Retail Code.

To facilitate a smooth wholesale market model transition for the retail segment of the electricity value chain, Government acknowledges that it will be important for:

[7] Noting that distributors will need to meet certain requirements to qualify for participation in the envisaged centralised wholesale market.

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- Resources to be made available to support the retail arms of electricity distribution companies in undertaking the new or enhanced activities required of them in the market (e.g., directly procuring electricity on a long-term basis, forecasting demand to support participation in the short-term markets, etc.).
- Structural barriers limiting the participation of municipal electricity distribution companies to be addressed. Government will therefore review the legislation governing municipal procurements, and other potential constraints, to ensure that it enables municipal distribution companies to effectively participate in the new markets.
- Pre-requisites to market transformation to be addressed across all electricity distribution companies, including the delineation of the retail and network service businesses. This will require an evolution in NERSA's approach to the regulation of the electricity distribution sector, including separate regulatory accounts, separate tariffs, and separate licencing.
- Municipal finances from the provision of electricity services, and the application thereof, to be improved. Government will continue to pursue electricity distribution transformation to enhance the financial viability and sustainability of all municipal electricity distribution companies.

1.2.2 Timeframes & process for implementation

Requirements for competitive markets

To ensure the long-term efficiency and success of a competitive wholesale electricity market in South Africa, a number of comprehensive requirements must be fulfilled. It will not be possible to fulfil all requirements prior to the opening of a wholesale electricity market. For instance, achieving depth in the wholesale market (i.e., a large number of buyers and sellers) will occur over time as the market matures. Government will therefore ensure that the market is designed in a manner that allows for, and encourages, such requirements to be realised over time.

Other requirements, such as ensuring timely payment and financial settlement, unbundling the tariff structure, and developing clear rules and regulations, as well as putting in place (and testing) the systems required to operate the market, are essential for a competitive market to be established. Government will therefore work to address these requirements as a matter of priority to ensure that they are in place prior to market opening.

Supporting sectoral stakeholders

Government will ensure that all sectoral stakeholders be provided with sufficient time to adjust to their new roles and responsibilities, and to adequately test market platforms. A phased implementation approach will therefore be adopted, ensuring that

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sectoral stakeholders are provided with sufficient lead-time to fully understand, internalise, and prepare for the proposed transformations.

Following the opening of the market, a transition period is envisaged during which market actors will be supported as they adjust to their new roles and responsibilities. Government will evaluate how best to support market actors and incorporate suitable transitional mechanisms within the design of the wholesale market. One such mechanism will be the introduction of "vesting contracts," which set wholesale market prices for generators and load during the initial stages of market operation. These contracts will be phased out over time as the market matures. Additional mechanisms may also be considered to address specific transitional challenges and ensure a stable and equitable progression to competitive electricity markets.

Further details regarding the transition to competitive markets will be provided in a forthcoming market design document.

Oversight, review, and adjustments to the market rules and regulations

Prior to the implementation of the market and during the transition period, it will be critical for mechanisms to be in place to monitor the performance of the market, identify deficiencies, and to implement corrective measures. Government will ensure that such mechanisms are established and implemented with consideration of the views and experiences of all market actors.

Timeframes

Government will continue working with all relevant stakeholders to fulfil the conditions necessary for the establishment a competitive wholesale electricity market, with the aim of soft-launching market operations in 2026, followed by a gradual and phased opening of the market to participants beyond Eskom, starting in 2027. This will include the development of a market design document and a market implementation roadmap, which will clearly set out the sequencing, milestones, and enabling conditions required for the introduction of a competitive wholesale market (an indicative list of pre-requisites has been included in the appendix).

Several key milestones have already been achieved, including the passing and operationalisation of the Electricity Regulation Amendment Act, the legal separation of the NTCSA, and ongoing work on the development of a market code. Additional transformation efforts are being actively supported by Government, such as the revision of the regulatory framework and pricing models, and transformations to the electricity distribution industry. As specified in the ERA Act, the NTCSA will be converted into an independent entity within five years.

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1.3 Annex 1: Key Concepts from the electricity sector

- **Centralised market platform:** The centralised market platform is an organised, electronic marketplace administered by the Market Operator (MO) where generators, traders (incl. retailers), and eligible customers can submit bids and offers for the sale and purchase of wholesale electricity and related services (such as reserves). Participation in the centralised platform is voluntary, but all market actors in the South African Wholesale Electricity Market (SAWEM) must transact either through this platform or via bilateral contracts. The platform will facilitate price formation, efficient scheduling, and the settlement of short-term (day-ahead, intra-day, and real-time) electricity transactions.
- **Imbalances:** Imbalances refer to the differences between the scheduled (forecasted or contracted) and actual production or consumption of electricity by a generator or load participating in the SAWEM, whether through the centralised market platform or through bilateral contracts. These deviations can occur due to unforeseen changes in generation or demand. All generators and loads (e.g., traders and eligible wholesale customers) involved in the SAWEM are subject to balance responsibility, meaning they are financially liable for any imbalances they create. This ensures that market actors are incentivised to accurately schedule their production and consumption, and that the costs associated with deviations are allocated fairly according to market rules. The market code will specify how imbalance prices are calculated and how these costs are recovered.
- **Market administrator or market facilitator:** A market administrator or market facilitator is an entity responsible for operating, managing, and overseeing the functioning of the electricity market and the power system. They do not buy or sell electricity for profit but instead ensure the market functions efficiently, transparently, and reliably.
- **Market participants:** Entities that actively engage in commercial transactions within the electricity market. They buy, sell, or consume electricity and are exposed to market prices and competition. This includes generators, traders, retailers, and eligible customers who meet the prudential and technical requirements set out in the market code, grid code, and relevant licences. Market participants are subject to the rules and obligations of the market and may transact via the centralised platform or through bilateral contracts.
- **The main difference between administrators / facilitators and participants:**
  - Market administrators and facilitators focus on enabling system-wide outcomes, such as reliability, efficiency, and fairness. They do not participate in commercial transactions but rather enable those transactions to take place.

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- Market participants focus on individual commercial outcomes, aiming to optimise their financial performance within the rules set by administrators.

- **Market operation:** Market operation includes operating and/or facilitating the centralised wholesale markets, administering the market participants, conducting market clearing, settlement and invoicing.
- **System operation:** system operation includes being responsible for the security of the South African national electricity grid by monitoring, controlling and operating it in a safe, economical and reliable manner. This includes load forecasting, protection criteria, analysis of system security, operational planning including provision of ancillary services, dispatching, control systems, information systems, etc.
- **Transmission network services:** Transmission network services include engineering, construction, project management, maintenance management, etc.
- **Eligible wholesale customer:** An eligible wholesale customer is a customer that meets specific criteria (such as size, connection voltage, or other parameters to be defined in policy and regulation) and is permitted to purchase electricity directly from the wholesale market, rather than through a retailer or trader. These customers typically include large industrial or commercial users connected to the transmission or distribution network above a defined threshold. The criteria for wholesale eligibility will be outlined in the forthcoming market design document and market code.
- **Eligible retail customer:** An eligible retail customer is an end-use customer who meets defined criteria (such as a minimum size threshold, e.g., installed capacity or demand above a certain level) and is permitted to choose their electricity retailer or trader, rather than being captive to the incumbent distribution company's retail arm. Eligible retail customers may procure electricity from independent traders or the trading arms of distribution companies. The criteria for retail eligibility will be outlined in the forthcoming market design document and regulatory framework.
- **Market power:** refers to the ability of a company or group of companies to influence the price of electricity in a competitive electricity market by controlling supply or demand, thereby distorting fair market competition. Market power can lead to artificially high prices, inefficiencies, and harm to consumers. Market power can be exercised in different ways, e.g. through "economic withholding" which occurs when a participant can profitably alter their offer price significantly from their marginal costs, or through "physical withholding" which occurs when a generator withholds some supply from the market in order to increase the price at which the remaining supply is sold.
- **Contracts for Difference (CfDs):** A CfD is a contract that provides stability and certainty to the energy price received by a generator and paid by the contract

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counterparty. They can be instrumental in providing certainty to generators and incentivising new generation capacity. A CfD establishes a "strike price". If the electricity price is below the strike price, the generator receives a "top-up". If the electricity price is below the strike price, the generator pays the contract counterparty.

- **Vesting contracts:** contracts that are signed with each power plant and consist of two parts. The first part specifies an agreed upon payment to cover the fixed capital, operational and maintenance costs required by the plant and special ancillary services such as black starting and islanding. The second section specifies a fixed energy price to be applied at the start of the contract and the process by which this fixed price will gradually transition to the market price over time.

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1.4 Annex 2: Steps to support the introduction of competitive wholesale markets

- Development and finalisation of a market design document.
- Finalisation of the market codes
- Revision to the current regulatory framework.
- Development of secondary legislation on "eligibility" criteria and subsequent NERSA approval
- Revision to the transmission and distribution codes.
- Development of criteria for issuing trading licences, conditions for maintaining a trading licence, processes for implementing a change of trader, and ensuring that there is a trader and/or retailer "of last resort."
- Confirmation of the approach to future system planning, and structure of procurement process to align with / complement the future energy market (e.g., through capacity auctions).
- Implementation of changes to municipal regulations to allow for participation in markets.
- Confirmation and finalisation of the proposed vesting contracts.
- Confirmation of the method to handle stranded costs for IPPs and/or generation plants.
- Training of participants on features of markets with numerical examples, flow charts, and simulations.
- Implementation of new IT tools and software.
- Training of participants on the market platform software for testing, prior to live implementation.
- Development of new business processes and new delegation of authority for Eskom line divisions and NTCSA.
- Implementation of measures to ensure the independence of the NTCSA.
- Further unbundling of Eskom Distribution and Eskom Generation from Eskom Holdings and the implementation of various measures to guarantee Eskom Distribution's independence as network service provider.
- Undertaking system testing (market trials, end-to-end tests, etc.) to ensure market platforms perform as intended prior to going live.

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