



DEPARTMENT OF ELECTRICITY AND ENERGY

Invest. Build. Power Up:
**Unlocking Private Capital for Expanding & Modernising
Transmission Infrastructure**



SA Transmission Infrastructure Investment Forum 2025

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4 April 2025

JSE



VISION FOR ENERGY TRANSFORMATION: 2024–2029

Department of Energy & Electricity strategic priorities

Achieve Universal Access, Availability, Affordability and Quality;

Attain Sovereign and Regional Energy Security:

Defend and expand Eskom's share of generation capacity, drive catalytic programmes: Green Hydrogen, reset the role and place of nuclear and **expand and modernise transmission**;

Drive industrialisation and lead innovation;

Qualitatively Transform Energy Demographics: Elevate the Role of Women and Youth;

Assert SA, Continental and Global Energy Leadership



TRANSMISSION: A KEY ENABLER FOR SA'S ENERGY SECURITY

South Africa's case for change - reimagining the transmission industry through leveraging private sector participation is critical for energy security & regional energy sovereignty

01

Addressing South Africa's energy security

Bid Windows 6 and 7 unable to allocate almost 6GW

TDP 2024, requires 30GW and 56GW to be grid connected by 2030 and 2034 respectively and 14,500km transmission lines

02

Scaling delivery & financial requirements

Delivery rate needs to scale by 8 times implying increasing the build rate from 300 to 2300km per year

Even greater rate of investment and delivery required to 2050

Almost R390 / USD21 billion required over the next decade, highlighting critical need to explore alternative solutions

03

Optimising existing capacity

17GW can be unlocked in the short-term through targeted transformer investment (CST, 2023)

Supply chain issues emerging

04

Eskom's current financial position and the country's fiscal position

Places significant limitations on its ability to attract sufficient capital towards expanding the grid

In some instance, SOC capacity to prioritise and package projects is lacking

05

Strong institutions & robust implementation capacity

The need for robust technical & engineering skills



ITP RATIONALE

Key objectives of the programme

Support Economic Growth, Energy Security and the Energy Transition

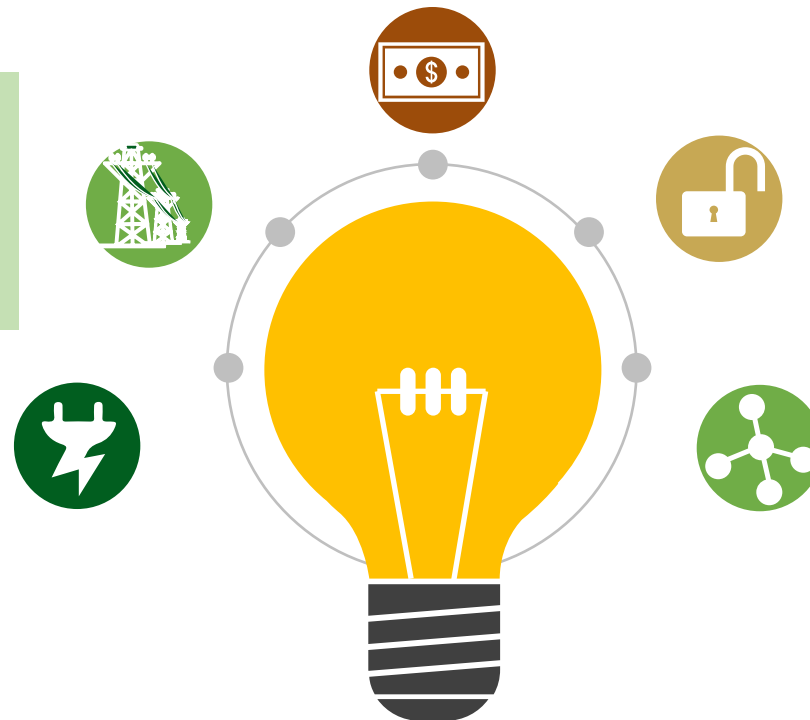
The ITP programme contributes to: South Africa's energy transition, the country's economic growth target of 5% (as per the National Development Plan), and addresses fiscal constraints. Key to alleviating grid constraints in integrating diverse energy technologies.

Accelerate and Support Transmission Infrastructure Development

Supports the implementation of South Africa's Transmission Development Plan. Leverages private sector capacity to achieve the objectives of the TDP.

Inform Procurement and Regulatory Frameworks

Develop regulatory instruments to support the ITP programme.



Mobilise Private Capital

Facilitates investment from the private sector to meet the country's private infrastructure investment goal of 20% of GDP.

Encourage Stakeholder Engagement

Provides an opportunity for developers, funders, and financiers to collaborate with government on a programme of national significance.

Sources: Public announcement (11 December 2024) issued by the Ministry of Electricity and Energy and National Treasury and the RFI (<https://emea.dcv.ms/T6wZikhMYT>)



INDEPENDENT TRANSMISSION PROJECTS (ITP)

Cabinet endorsed the use of ITPs – progress following Cabinet’s decision

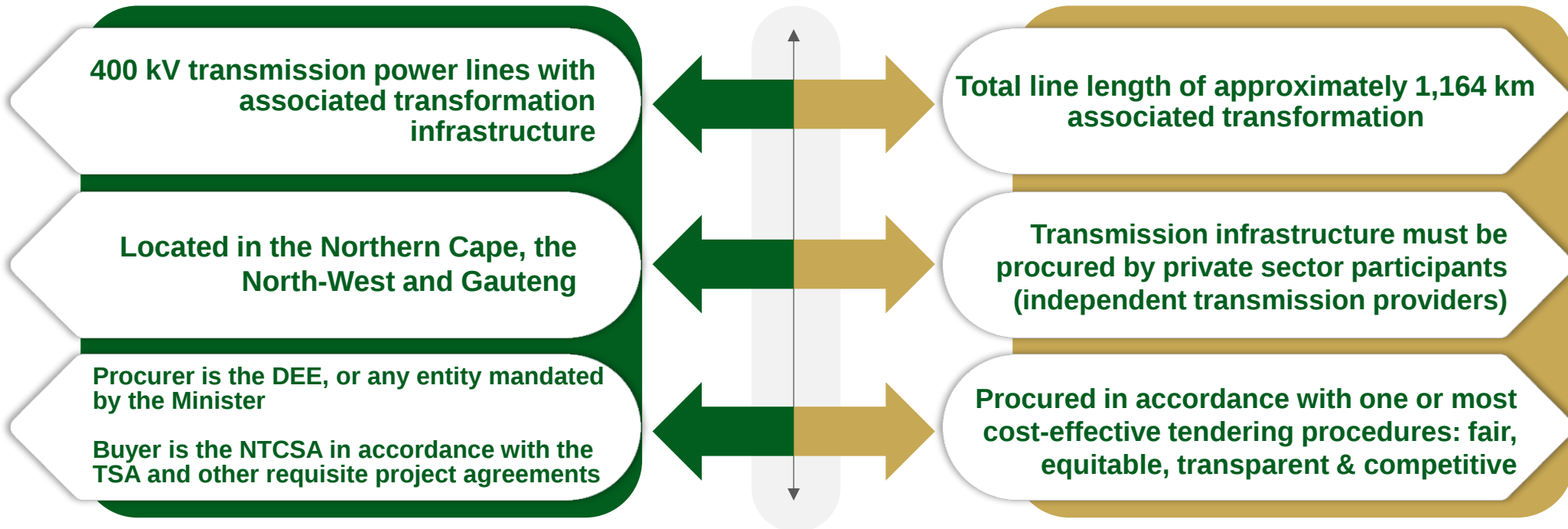
GOVERNANCE/REGULATION	FINANCING	TECHNICAL PREPARATION
1 Ministerial determination Ministerial determination for Transmission Pilot Lines gazetted on 28 March 2025.	4 Market Sounding ITP Market Sounding jointly issued by DEE and NT (globally) on 11 December 2024 and closed on 28 Feb 2025.	6 Project identification Technical due diligence finalised. Projects identified address the transmission capacity gaps
2 Regulations Draft Transmission Regulations (under the ERA Amendment Act) published for public comment on 3 April 2025.	5 Credit Guarantees A Credit Guarantee Vehicle intended to substitute for sovereign guarantees to be piloted and released in parallel with ITP Pilot (jointly between DEE/NT)	7 ITP Pilot Tender Pre-qualification and RFP to be issued to market before end of the calendar year.
3 MOEE/DBSA Work underway to establish the ITPO, determine the funding model and organisational structure being finalised between DEE and DBSA.		8 Three ITP Workstreams Guides the strategic direction of the ITP programme, the regulatory and legal framework and procurement design. All key activities supported by regular workstream meetings. Includes a Multidisciplinary Task Team between government and NERSA.



MINISTERIAL DETERMINATION

Key Highlights – Gazetted on 28 March 2025

The Ministerial Determination gazetted in terms of Section 34(1)(b) of the ERA (2006), as amended, after consultation with the Minister of Finance & NERSA, for the purposes of ensuring security of supply in the national interest includes:



- Role of the procurer is to conduct one or more tendering procedures, including any RFPs, drafting the TSA and other applicable project agreements and facilitating its conclusion, in addition to requisite key responsibilities
- Buyer (NTCSA) is required by virtue of the determination to enter into the TSA/s and other project agreements concluded pursuant to the tendering procedure/s conducted



DRAFT ELECTRICITY TRANSMISSION REGULATIONS

Key highlights – Gazetted for public comment on 03 April 2025

The Draft Electricity Transmission Regulations, under Section 35(4) of the Electricity Regulation Act (2006), as amended, aim to:

Facilitate **planning for the procurement of transmission capacity from private parties** by **expediting** the establishment of **new electricity transmission infrastructure**;

Support measures to **enhance the reliability and security** of the national transmission power system;

Facilitate **electricity generation connection** into the transmission power system;

Ensure **consistency and predictability** in the application of section 34(1)(b) of the Act;

Make provision for **Transmission Services Agreements (TSAs), multi-component determinations** and facilitate **cost recovery**;

Create a **predictable, credible and transparent framework** for **private sector participation**



DRAFT ELECTRICITY TRANSMISSION REGULATIONS

Key highlights – TSA, Cost Recovery & Other Elements

TSA (Draft Regulation 10)

Must represent **value for money**

Transfer appropriate technical, operational and financial **risk** to the transmission service provider

Contain effective mechanisms for implementation, management, enforcement and monitoring

Permit adequate due diligence by the buyer or user on the service provider's competence & capacity

Draft Regulations 10(2) and 10(3) **guide the interaction between the procurer and the buyer or user** as it pertains to the TSA

COST RECOVERY (Regulation 11)

The **Regulator must ensure** that the **buyer or user is able to recover**, at least, the **full amount of the costs** incurred, pertaining to:

Availability or capacity payments, or other compensation mechanisms provided for in the TSA

Any other payments made by the buyer or user in accordance with the TSA

Efficiently incurred costs incurred by the buyer or user in terms of the TSA and costs of termination of a TSA

The **buyer or user may request the Regulator to issue a cost recovery assurance letter before entry** into a TSA and the Regulator must respond within 30 days

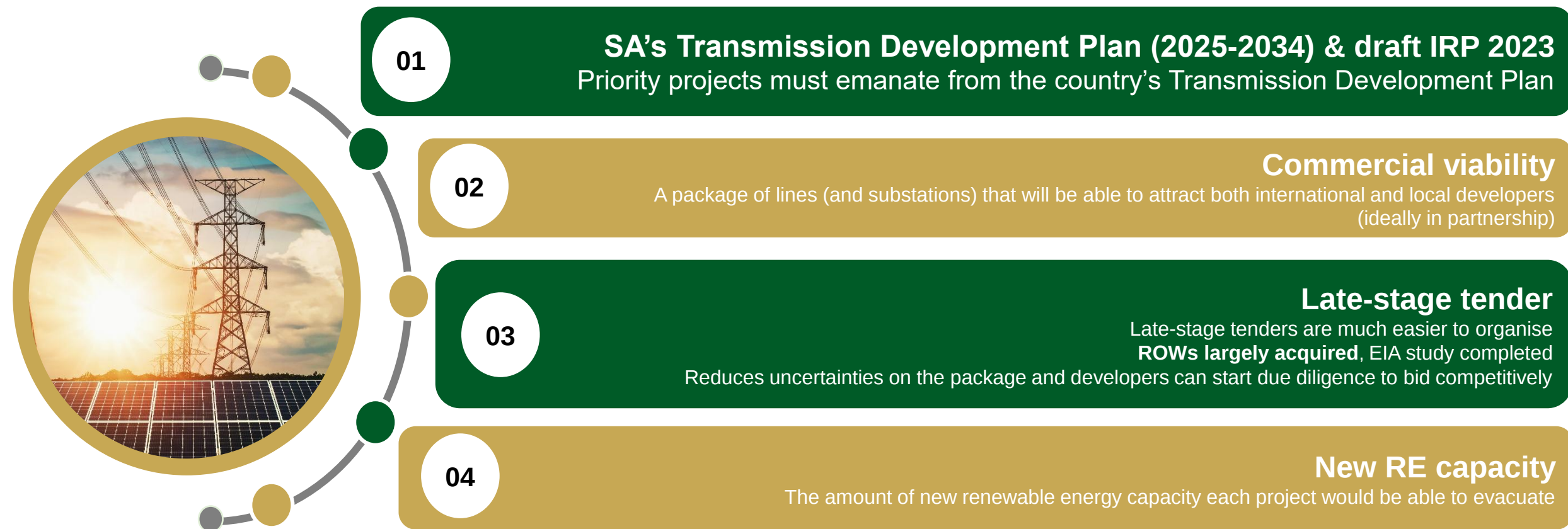
The Draft Regulations do not apply to:

- the establishment of new electricity transmission infrastructure by TSO SOC;
- the procurement of transmission capacity by TSO SOC on its own initiative;
- the carrying on by TSO SOC, in the ordinary course, of its transmitter functions as provided for in section **34B(1) of the Act** or in its licence.



SOUTH AFRICA'S APPROACH TO SELECTING PROJECTS FOR ITPs

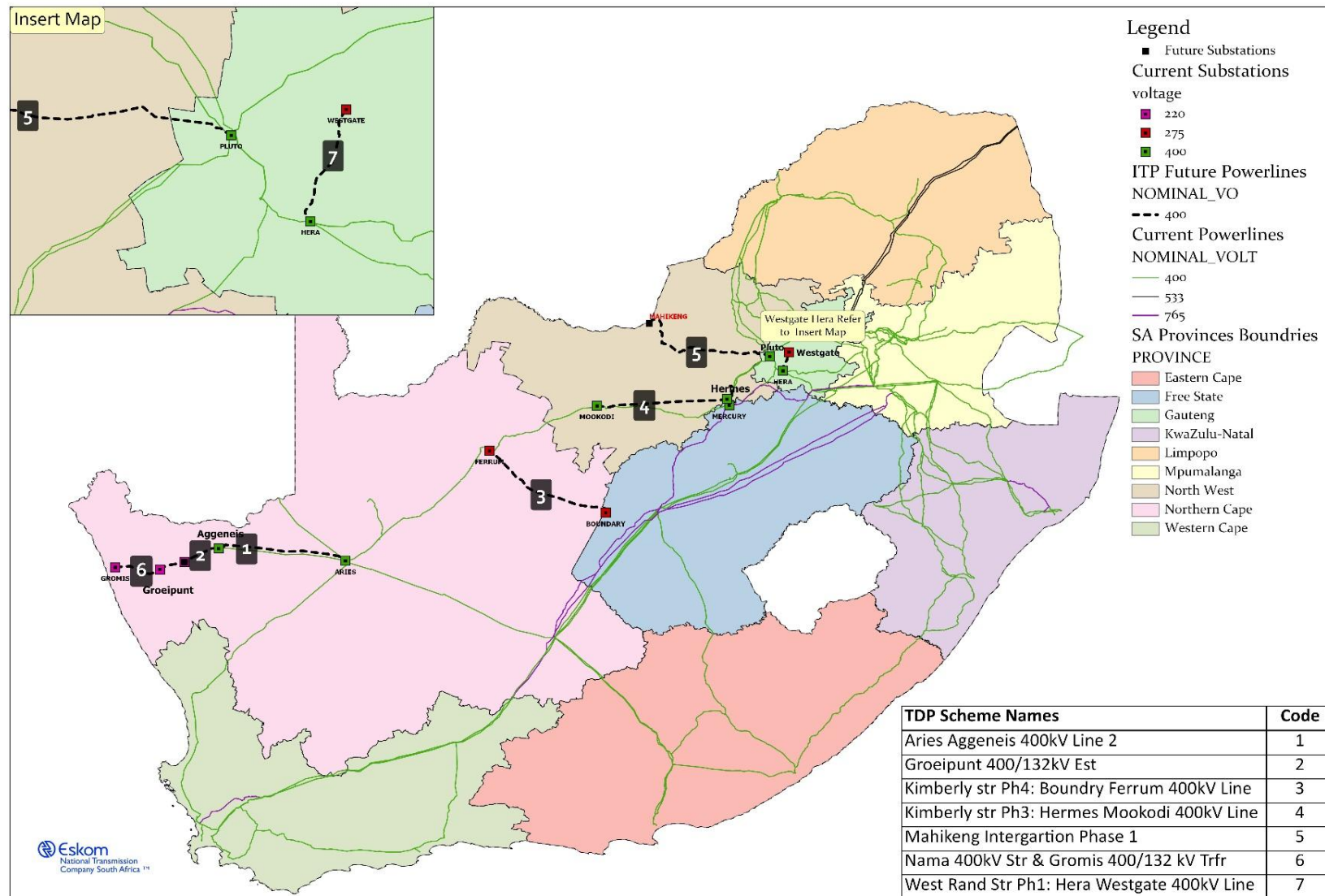
Criteria applied for Phase 1 of the ITP Programme





ITP PHASE 1 PROJECTS

Projects are located in the Northern Cape, North-West & Gauteng

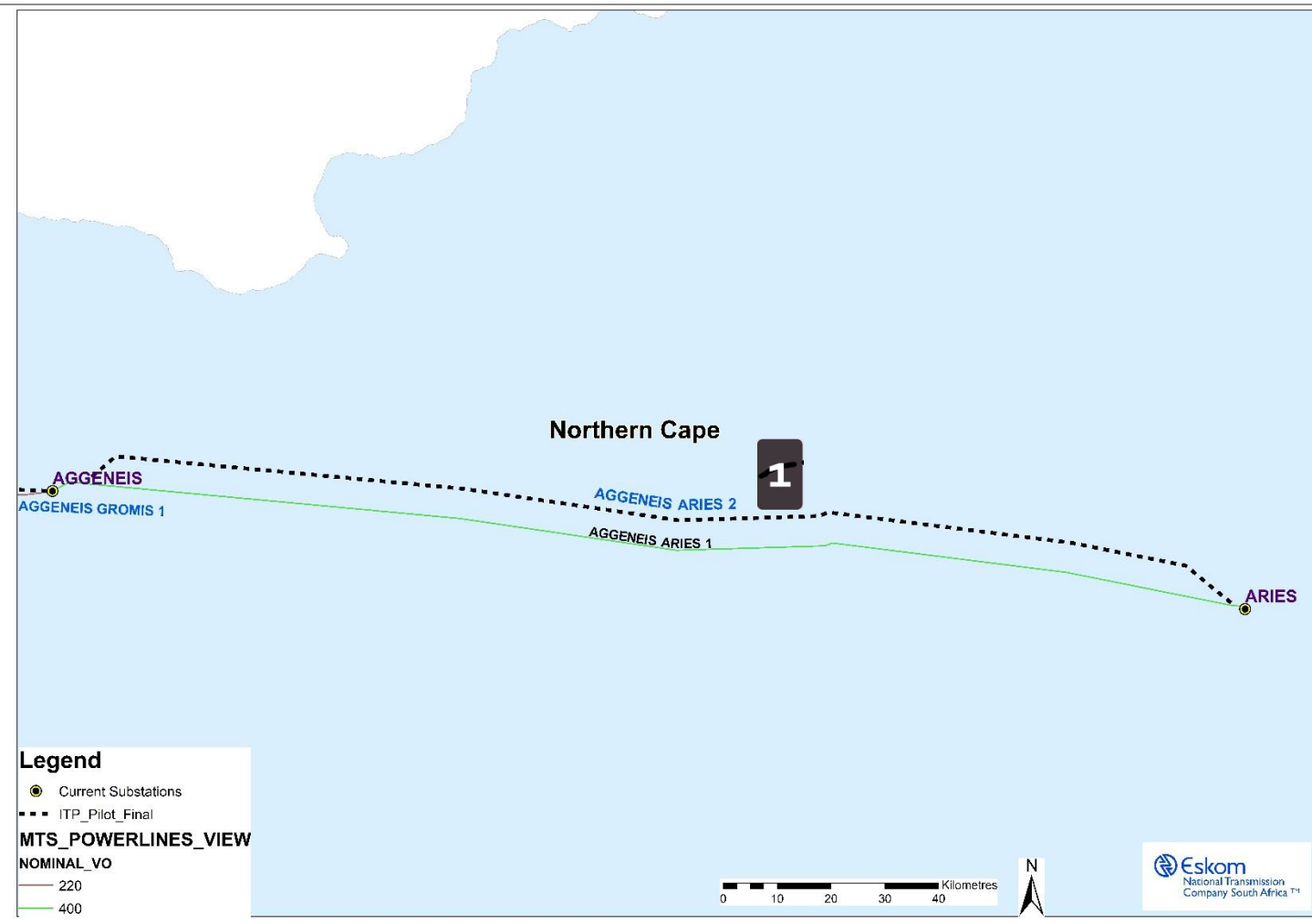


- Total package of lines 1,164 km
- Total package of transformation 2,630 MVA
- Total package capacity 3,222 MW
- Projects listed in alphabetical order



ITP PHASE 1 PROJECT (1/7)

Aries-Aggeneis 400kV Line 2

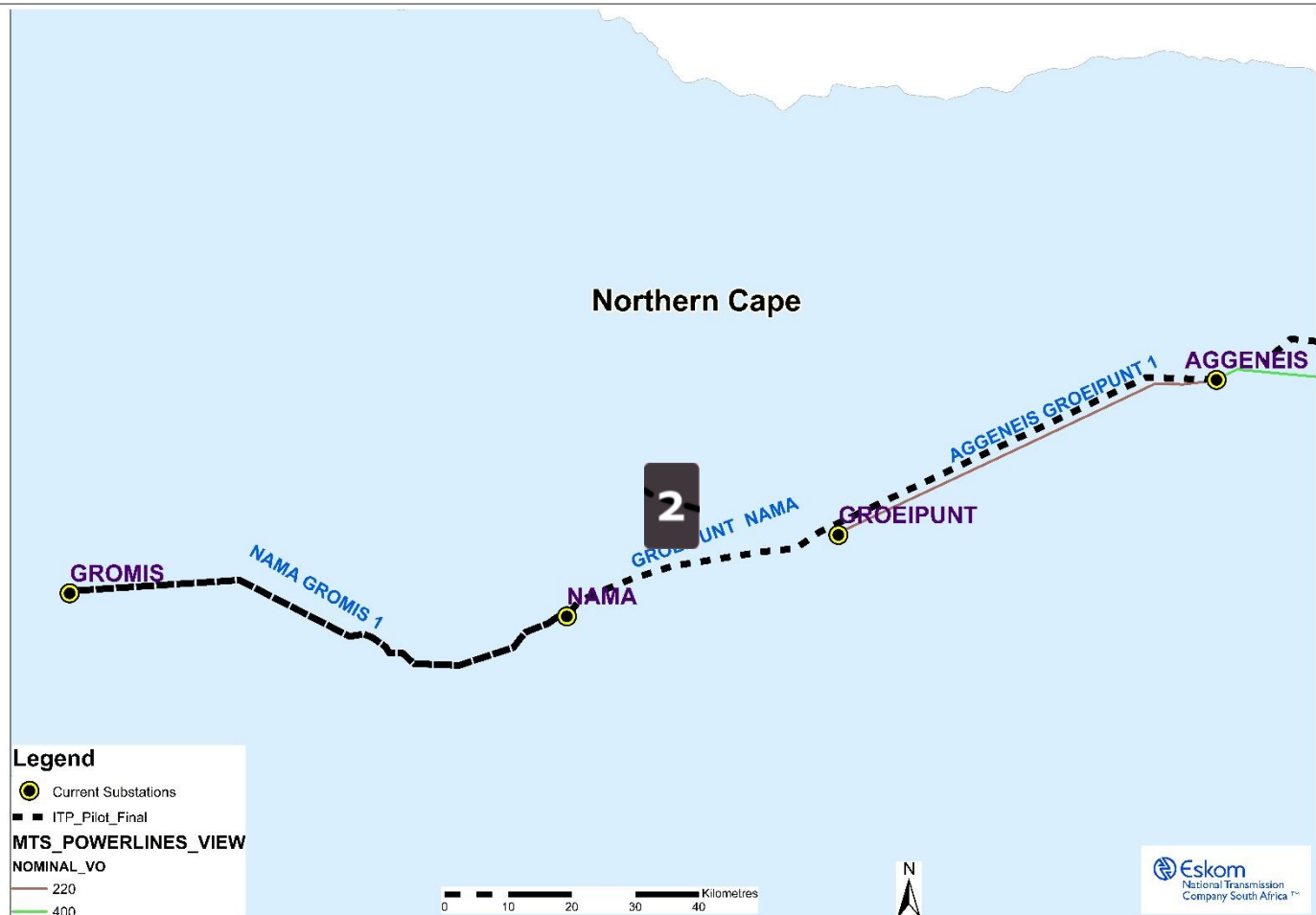


Project Name	Aries - Aggeneis 400kV Line 2
Overhead Line length (in km)	200
Transformation Capacity (in MVA)	0
Capacity Unlocked (in MW)	174
Associated Substation scope	Yes
Completion Date	31-Aug-29



ITP PHASE 1 PROJECT (2/7)

Groeipunt 400/132kV Est. 400kV lines

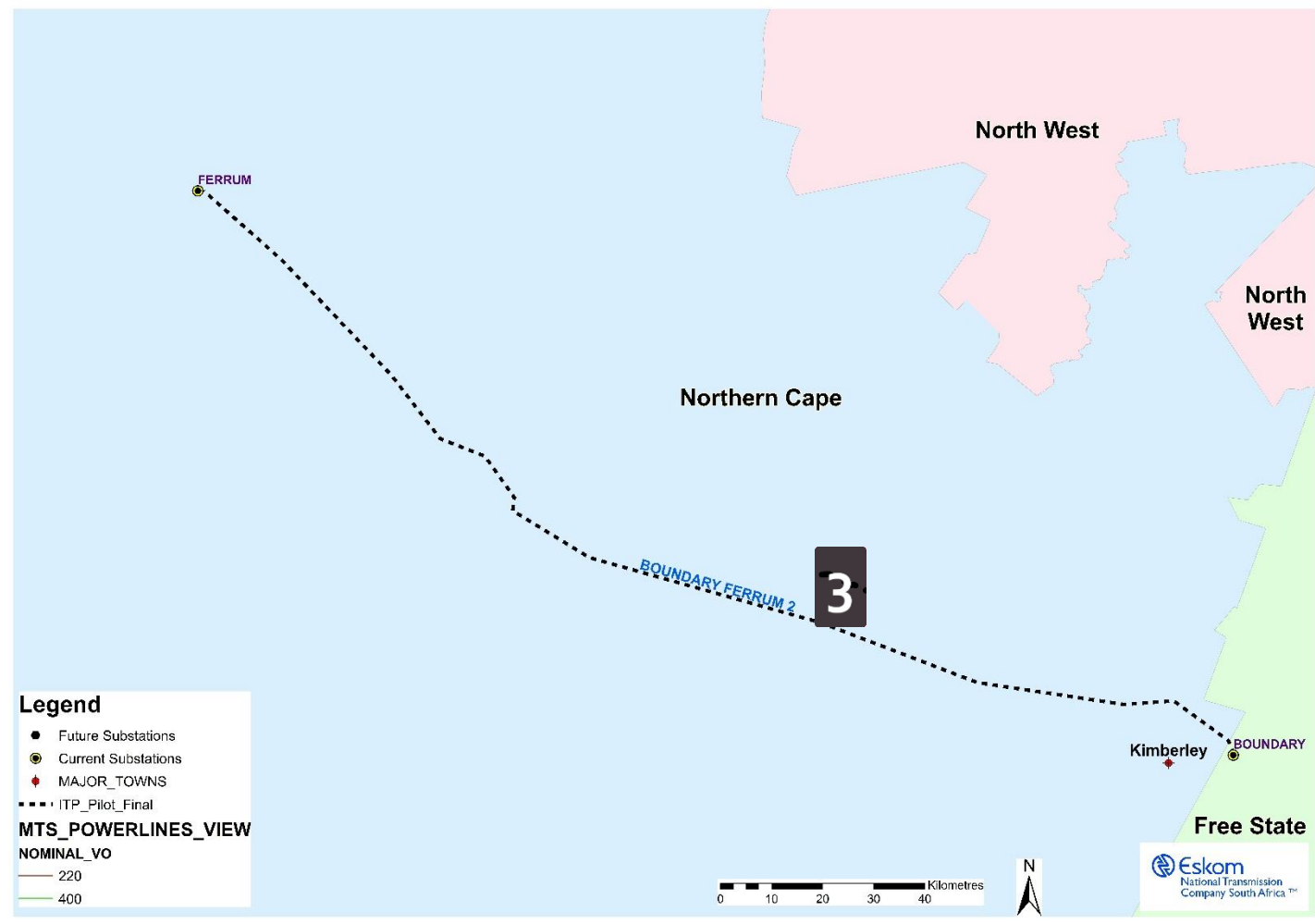


Project Name	Groeipunt 400/132kV Est. 400kV lines
Overhead Line length (in km)	126
Transformation Capacity (in MVA)	500
Capacity Unlocked (in MW)	87
Associated Substation scope	Yes
Completion Date	28-Apr-29



ITP PHASE 1 PROJECT (3/7)

Kimberley Str Ph4: Boundary-Ferrum 400kV line

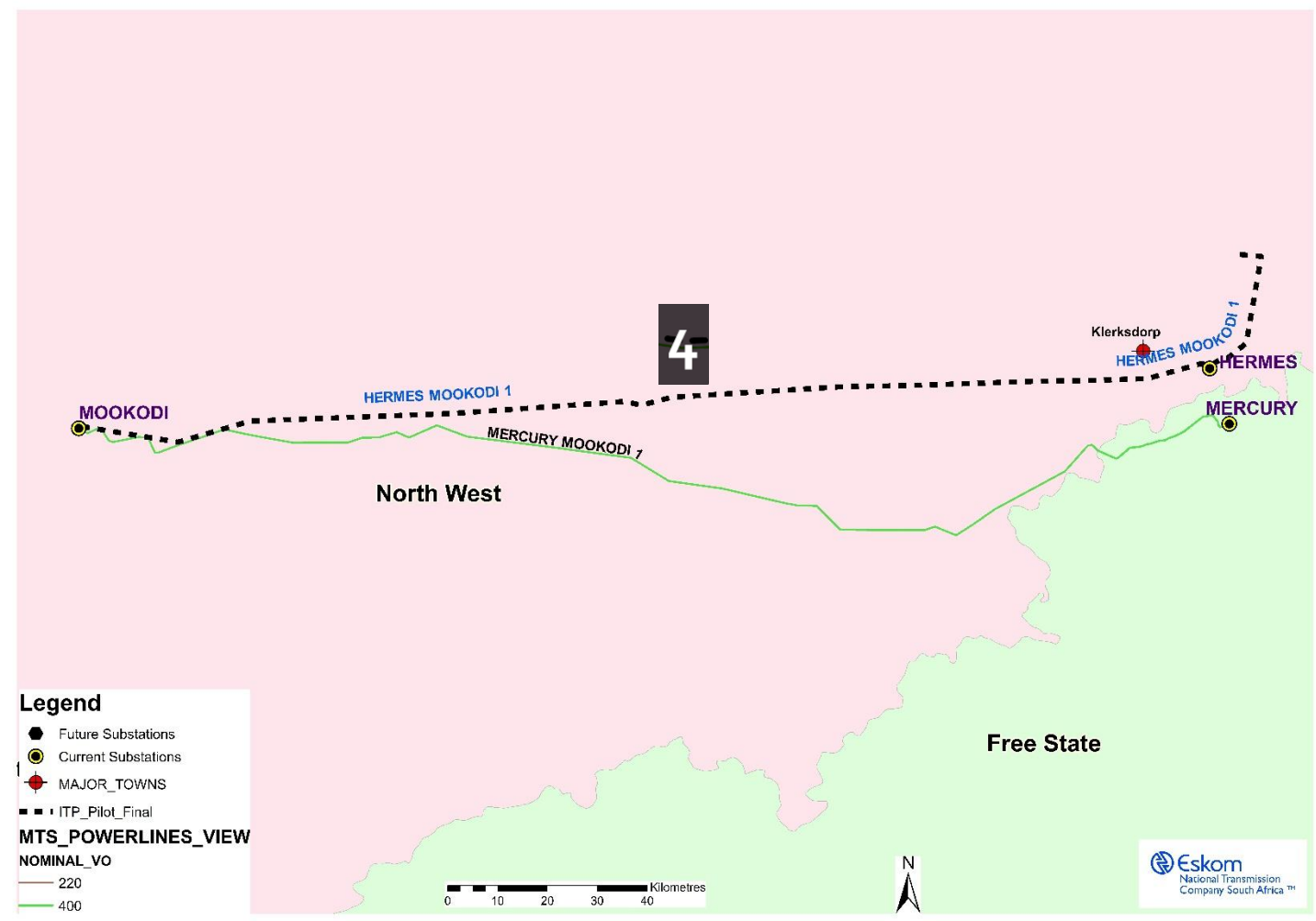


Project Name	Kimberley Str Ph4: Boundary-Ferrum 400kV line
Overhead Line length (in km)	265
Transformation Capacity (in MVA)	0
Capacity Unlocked (in MW)	500
Associated Substation scope	Yes
Completion Date	30-Sept-29



ITP PHASE 1 PROJECT (4/7)

Kimberley Str Ph3: Mookodi-Hermes 400kV line

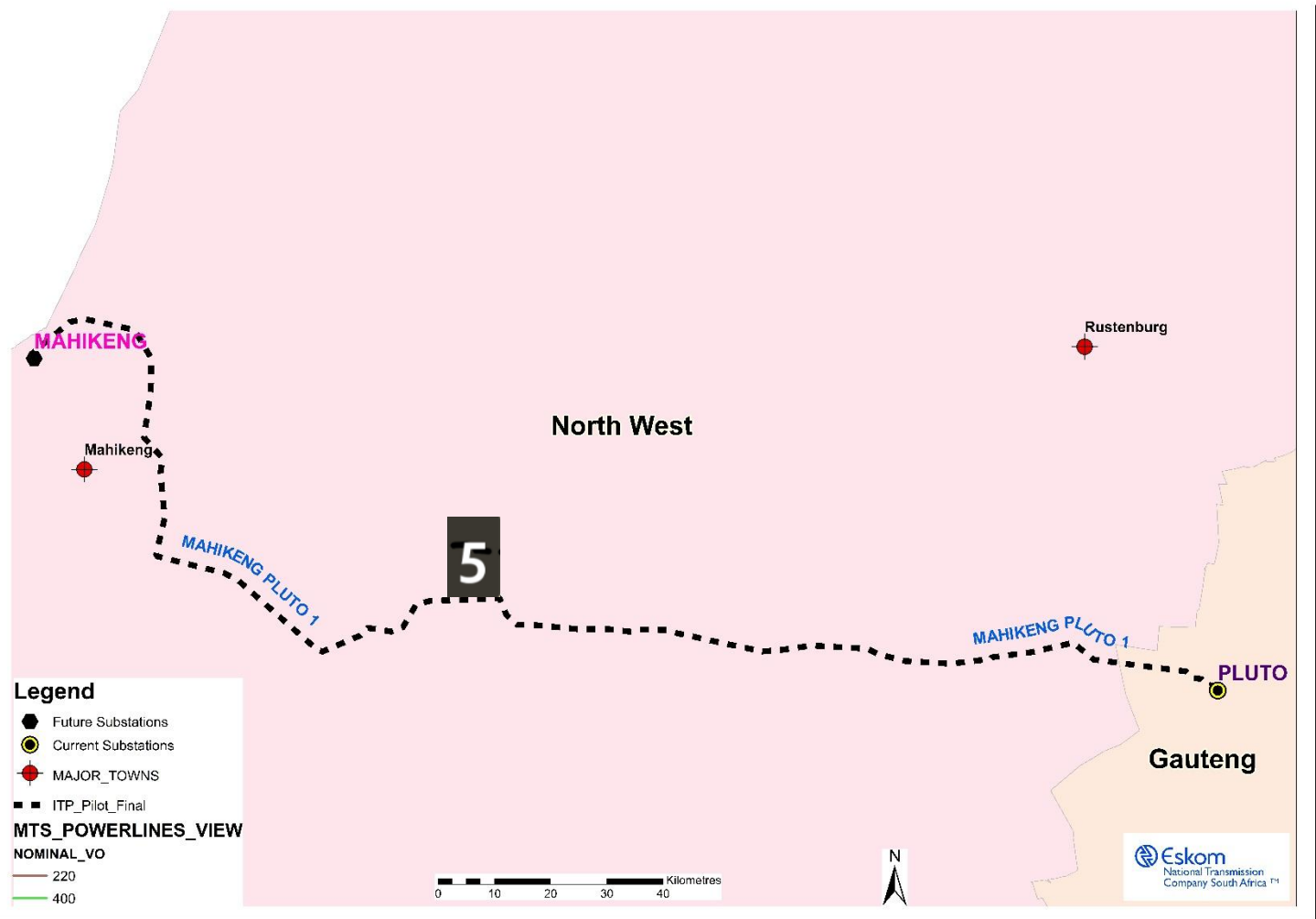


Project Name	Kimberley Str Ph3: Mookodi-Hermes 400 kV Line
Overhead Line length (in km)	240
Transformation Capacity (in MVA)	0
Capacity Unlocked (in MW)	250
Associated Substation scope	Yes
Completion Date	30-Dec-28



ITP PHASE 1 PROJECT (5/7)

Mahikeng Integration Phase 1

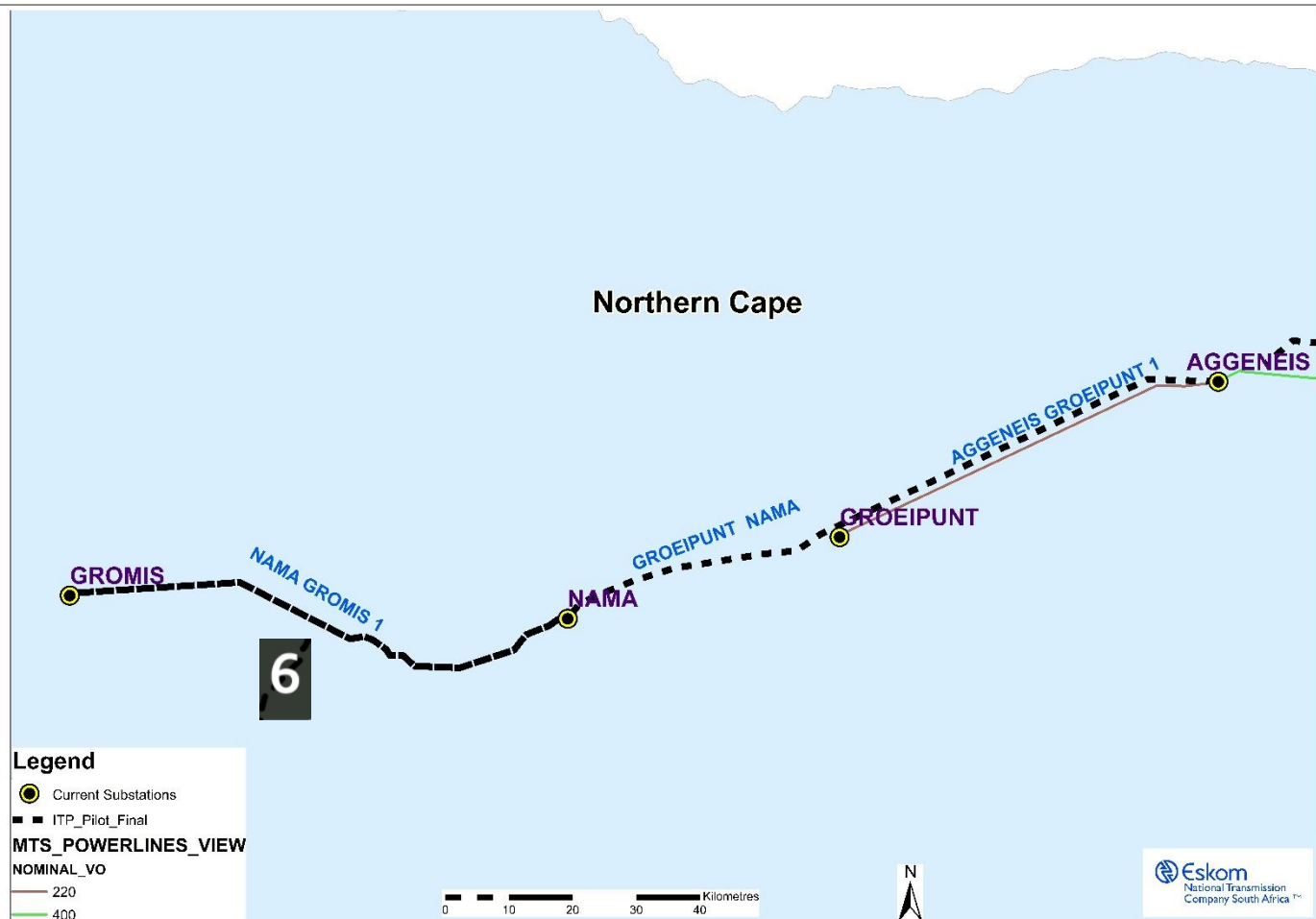


Project Name	Mahikeng Integration Phase 1
Overhead Line length (in km)	180
Transformation Capacity (in MVA)	630
Capacity Unlocked (in MW)	1,000
Associated Substation scope	Yes (New Substation)
Completion Date	24-Dec-30



ITP PHASE 1 PROJECT (6/7)

Nama 400kV Str & Gromis 400/132kV Trfr



Project Name	Nama 400kV Str & Gromis 400/132kV Trfr
Overhead Line length (in km)	117
Transformation Capacity (in MVA)	1,000
Capacity Unlocked (in MW)	811
Associated Substation scope	Yes
Completion Date	28-Feb-30



ITP PHASE 1 PROJECT (7/7)

West Rand Strengthening Phase 1: Hera-Westgate 400kV line



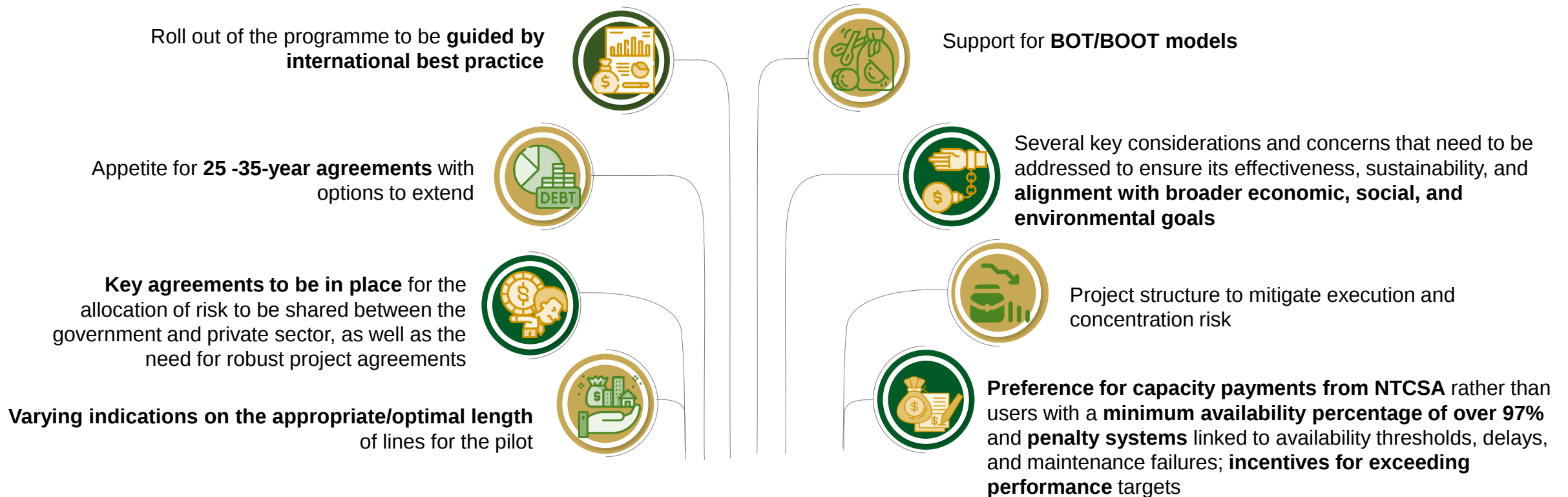
Project Name	West Rand Strengthening Phase 1: Hera - Westgate 400kV Line
Overhead Line length (in km)	36
Transformation Capacity (in MVA)	500
Capacity Unlocked (in MW)	400
Associated Substation scope	Yes
Completion Date	30-Jan-29



ITP MARKET SOUNDING

High-level Overview

 Key insights gained from the RFI responses – ITP Structure

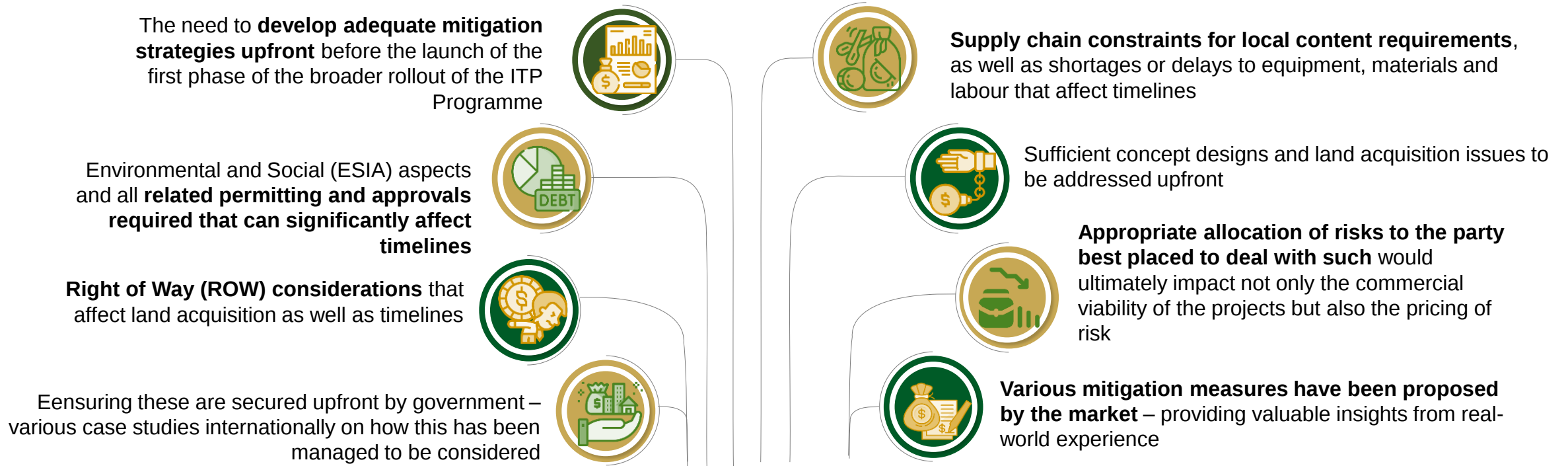




ITP MARKET SOUNDING

High-level Overview

 Key insights gained from the RFI responses – Risk Allocation (incl major risks cited)





ITP MARKET SOUNDING

High-level Overview



Regulatory risk

Establishing a stable and transparent regulatory environment, alongside fostering private sector involvement will be crucial for the successful implementation of transmission projects in South Africa

Regulatory certainty including NTCSA revenue model as a requirement

Improved coordination and collaboration between different regulatory bodies to create a more unified and efficient approach to addressing regulatory bottlenecks

Unclear regulatory framework and permitting issues that need to be addressed



Regulatory barriers need to be addressed upfront

Respondents also suggested mitigation measures to address these concerns which provided valuable insight from experienced market participants

Regulatory approval and licensing for new entities

Grid integration and capacity constraints



ITP MARKET SOUNDING

High-level Overview



Other recommendations

Programmatic approach with frequent rounds leveraging IPPO successes (predictability key)



Importance of strong public-private collaborations



Stable and transparent regulatory environments, as seen in Brazil, India, Chile, and Peru.



Consideration of financial tools used in markets like the U.S., Chile, and Mexico, such as sovereign-backed guarantees, green bonds, and availability-based payments



Regional integration with SAPP which is critical for improving grid resilience and enabling cross border trade



Credible and experienced advisors to support government in design



Benchmarking and learning from China and Europe to be considered for the **integration of advanced technologies** such as smart grids and HVDC systems



Alignment in the planning process between IRP and TDP



Transparency, credibility and predictability is key for strong public-private collaborations



PHASE 1 OF THE ITP PROGRAMME

Next steps

Request for Information (RFI)

Released in December 2024 to gather insights on alternative models for transmission infrastructure development, potential delivery mechanisms, and private sector interest and readiness. Closed for comment on **28 February 2025**.

Request for Qualification (RFQ)

Request for Qualification (RFQ) will be released in **July 2025**

Request for Proposals (RFP)

Request for Proposals will be released in **November 2025**

A PROGRAMMATIC APPROACH GOING FORWARD

*Following Phase 1 of the ITP Programme, government will bring in a programmatic approach over the medium to long-term **creating predictability and certainty** with **successive bid windows implemented***