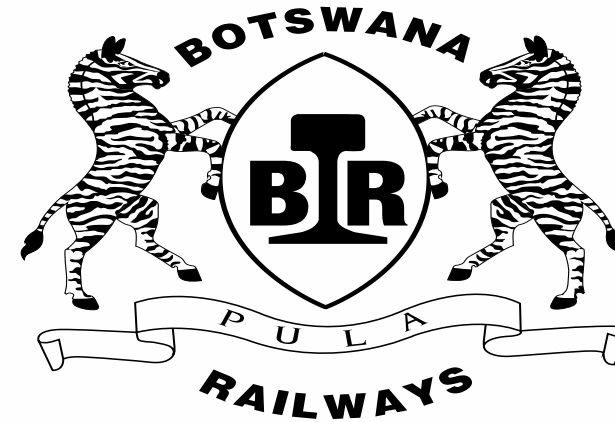


BUSINESS BREAKFAST SEMINAR

**LEONARD M. MAKWINJA
CHIEF EXECUTIVE OFFICER**

December 10, 2018



BOTSWANA RAILWAYS

OUTLINE

- ❖ BR RAIL PROFILE
- ❖ BRIEF ON RAIL INFRASTRUCTURE IN SADC
- ❖ PROJECT PRIORITIES
- ❖ MOSETSE-KAZUNGULA RAIL PROJECT
- ❖ MMAMABULA-LEPHALALE RAIL PROJECT
- ❖ ROLLING STOCK MAINTENANCE FACILITY
- ❖ CONCLUSIONS



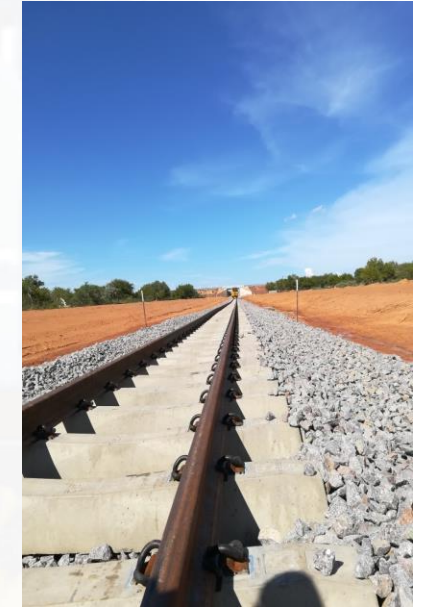
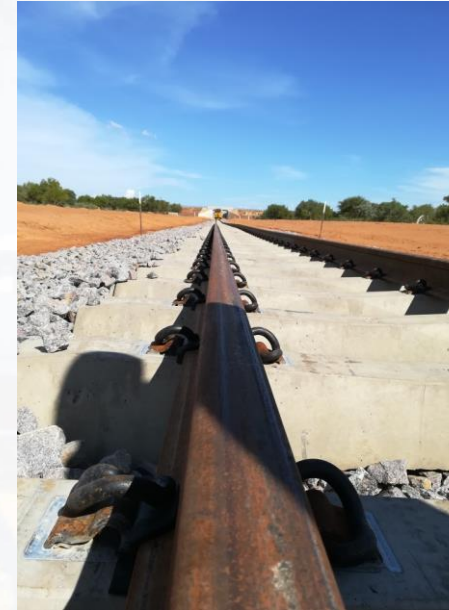
BR BACKGROUND

- Botswana Railways (BR) is a Government Enterprise given a mandate as sole Rail operator since establishment in 1987 (BR Act 1986; Amended in 2004)
- Amendment of the Act provides for BR to form Joint Ventures, Subsidiary companies and to exploit other business opportunities
- Mandated to provide transportation of goods and passengers within Botswana, efficiently, safely and cost-effectively, along sound commercial lines.

RAIL INFORMATION – Track Infrastructure

Track Infrastructure

- Mainline rail track of 640 km
 - Cape gauge (1067 mm)
 - Capacity: 4.5 million tons per annum
- Branch lines measuring 263 km
 - Sua branch line - 175 km
 - Selibe-Phikwe branch line - 56 km
 - Morupule branch line - 16 km
 - Tshele branch line (heavy haul) - 14 km



ROLLING STOCK-Motive Power

LOCOMOTIVE ROAD ID	NO. IN FLEET	HORSEPOWER	SERVICE ENTRY	AGE (YEARS)
BD 1	4	2150	1983	35
BD 2	20	2250	1986	32
BD 3	10	1800	1991	27
BD 5	8	3300	2017	1
BD 6	3	3300	2018	0
	45			

NOTE: 76% of Motive power is more than 20 years.



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ROLLING STOCK-Wagons

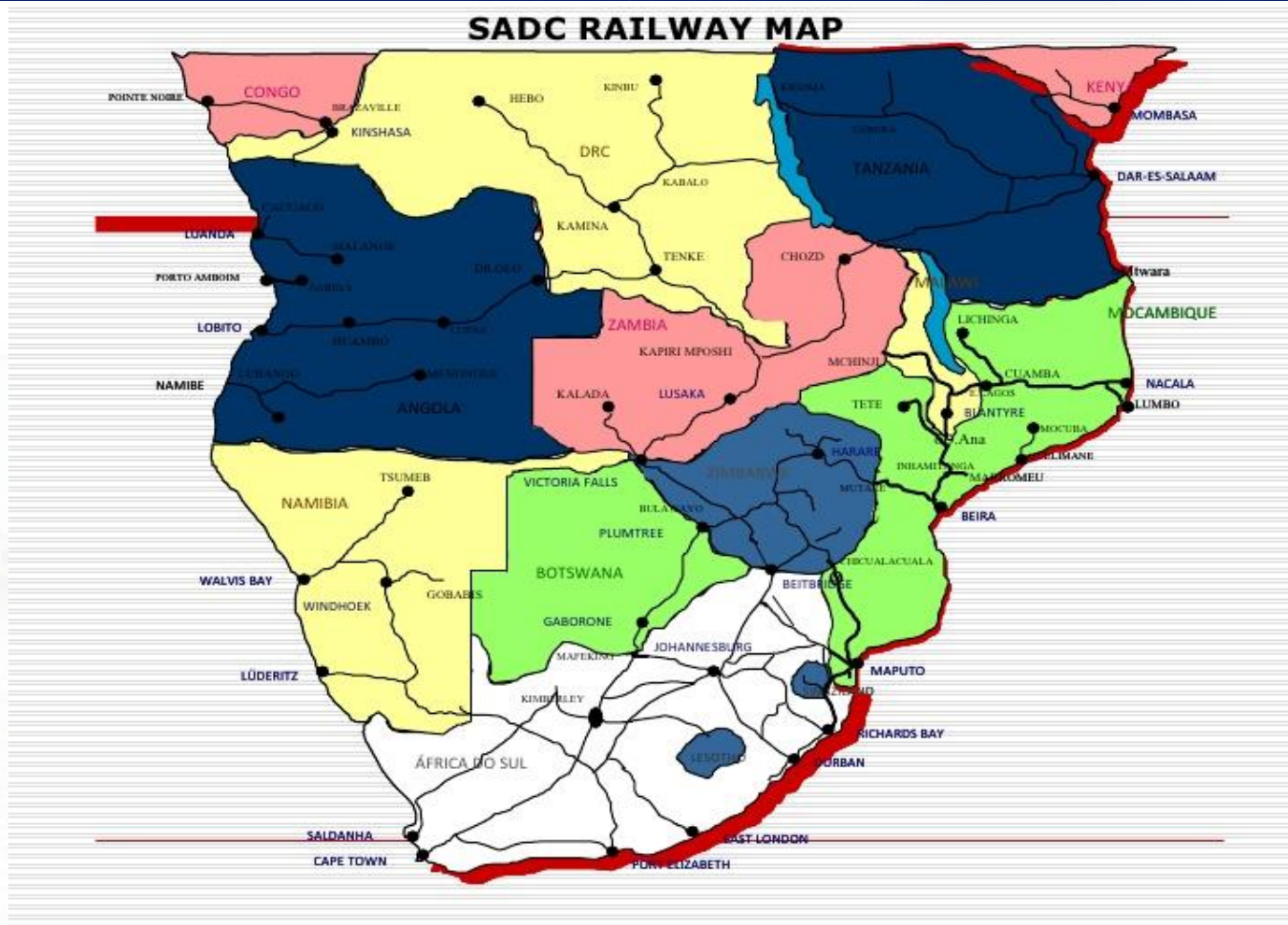
WAGON TYPE	DESCRIPTION	TOTAL NUMBER	GOODS
BCV	Covered Van	88	General goods
BOH	Coal Hoppers	35	Coal
BPT	Petroleum Tankers	79	Diesel/Petrol
BHS	High Sided	197	General Goods
BDS	Drop sided	284	General Goods
BSA	Soda Ash	128	Soda Ash
BSO-1	Salt Wagons	290	Salt/coal
BOH-1	Open Hoppers	34	Coal
BDS-1	Drop sided	34	General goods
BHS-1	High Sided	204	Salt/coal



TOTAL 1373

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REGIONAL OVERVIEW– SADC Rail Network



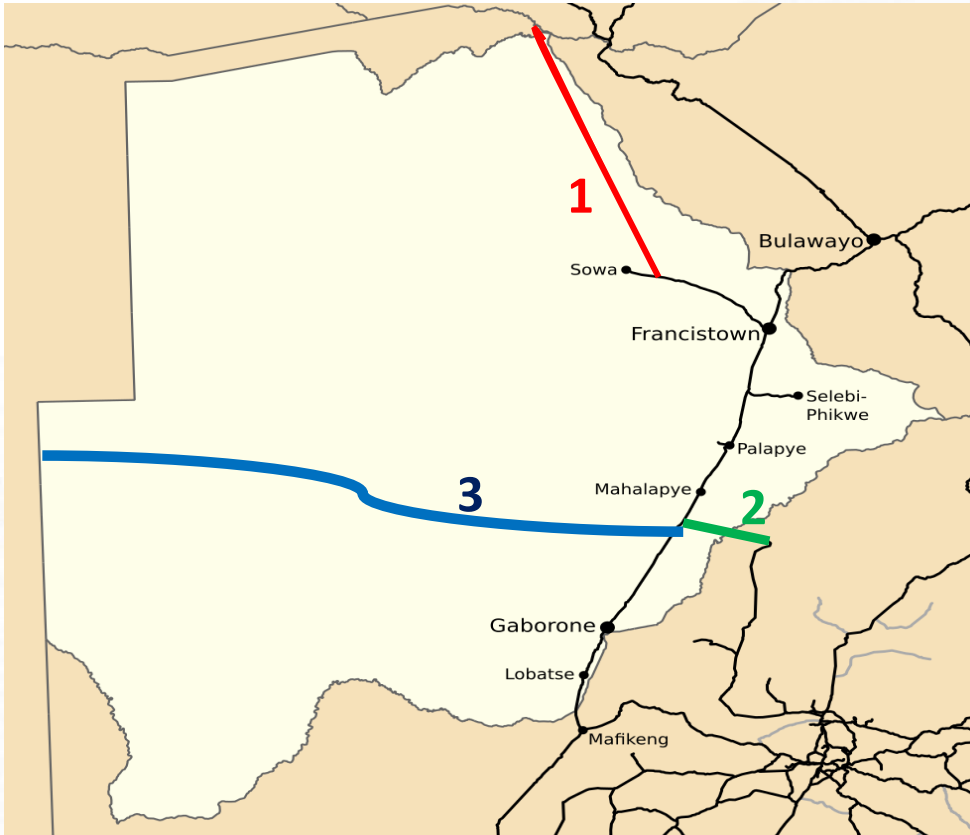
Source: www.botswanatourism.us/experience_botswana/railway_network_map.html

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BOTSWANA - A Transport and Logistical hub in the region

- ▶ Adequate Physical Rail Infrastructure is instrumental to the growth and competitiveness of Botswana given its strategic geographical location at the Centre of Southern Africa.
- ▶ By developing enabling infrastructure, the Government can achieve the goal of transforming the country into a regional hub for FDI by tapping into both neighboring and international markets.
- ▶ Certain Infrastructural projects have been identified to close “infrastructure gaps” to position Botswana as a Transport and logistical hub in the region (e.g. Masetse – Kazungula & Mmamabula - Lephale).

“INFRASTRUCTURE GAPS TO BE CLOSED” – Proposed New Rail Links



Legend

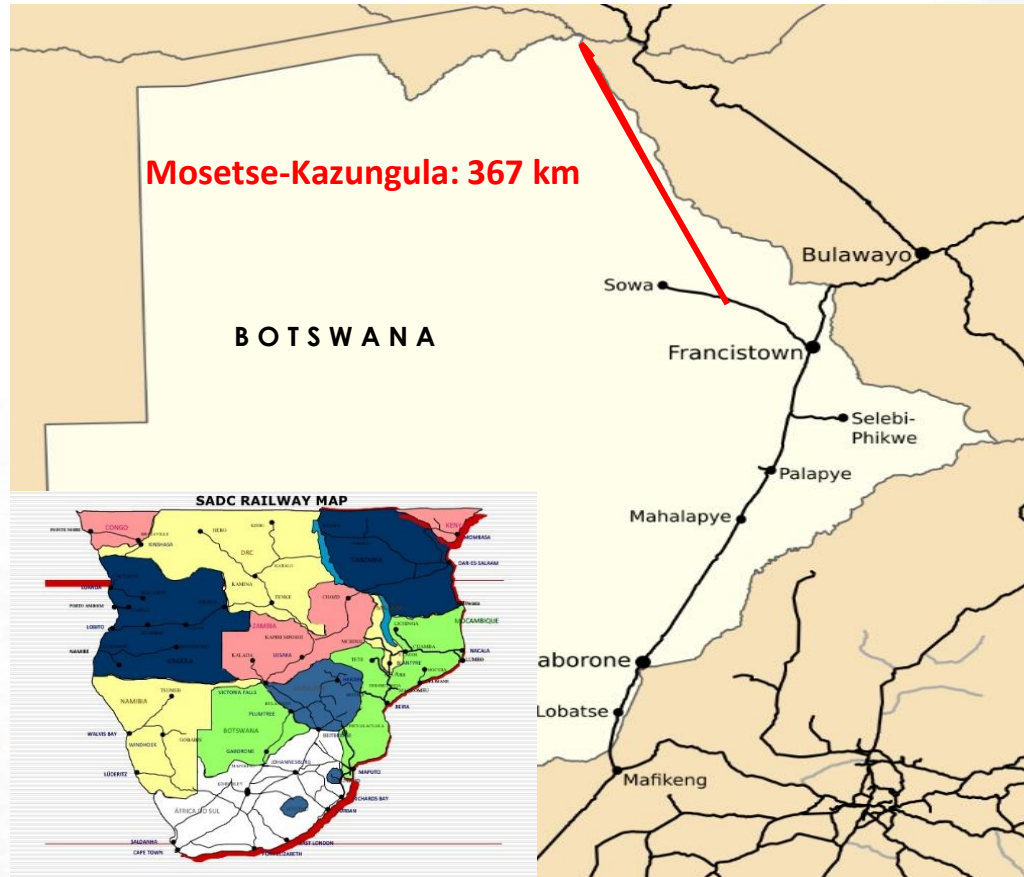
1. Masetse – Kazungula rail line

2. Mmamabula – Lephalele rail line

3. Trans Kalahari rail line

PROJECT DEVELOPMENTS – BR Priority Projects

Mosetse-Kazungula Rail Link



Project Characteristics

- Project to provide a line from Mosetse in Botswana, connecting to Zambia and beyond through the Kazungula bridge.
- Rail line is part of the North South Corridor (NSC)

Project Benefits

- Gate-way to North African markets promoting inter regional trade
- Connects North African region to maritime ports in South Africa
- Reduction of haulage traffic on roads
- Opportunity for tourism industry – Tourist trains
- Alternative transport mode for Agricultural products from Pandamatenga Farms in Botswana

Project Status

- Botswana Railways is open to partner with potential investors
- Recent State Visit to China has indicated capacity and willingness to participate by Chinese Government.

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PROJECT DEVELOPMENTS – BR Priority Projects

Mosetse-Kazungula Project Cost

Item/Activity	Estimated Amount (BWP)
Design & Supervision	13,000,000,000
Build/Construction	
Project Management Office	

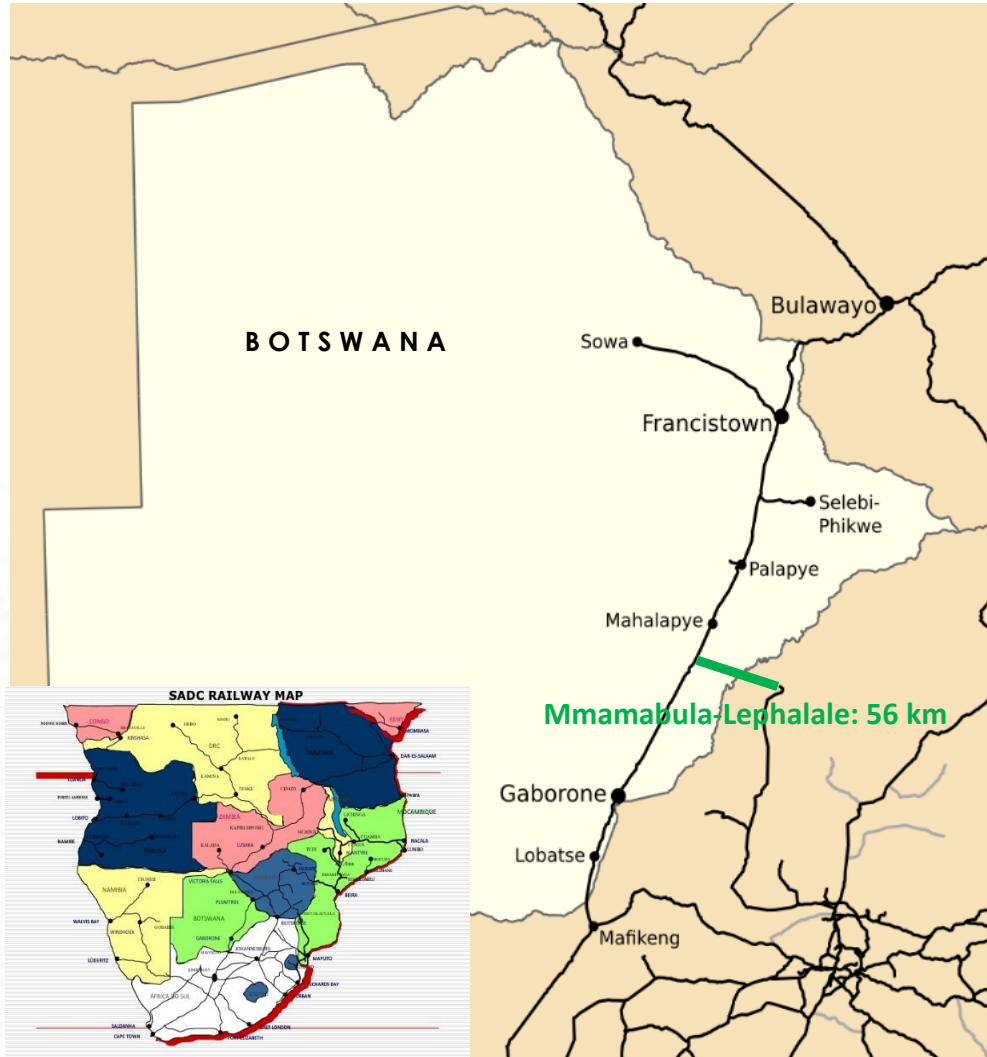


PROJECT DEVELOPMENTS – Mosetse-Kazungula Summary Project Details

- ▶ The project costs are estimated at BWP 13 billion excluding rolling stock requirements
- ▶ The estimated initial tonnage is at 2 millions tons and expected to grow to 4 millions tons.
- ▶ 14 locomotives (2250 Horsepower) required. Traffic will mostly be transit with wagons supplied from point of origin.
- ▶ Line is designed as cape gauge, heavy haul at 26 ton/axle (367 Km)
- ▶ The line goes through wildlife and agricultural areas.
- ▶ Stations will be at the following areas;
 - i. Mosetse
 - ii. Nata
 - iii. Pandamatenga
 - iv. Kazungula

PROJECT DEVELOPMENTS – BR Priority Projects

Mmamabula Lephthalale Rail Link



Project Characteristics

- Over 200 billion tons coal deposits found in Botswana (at least two thirds of Africa's coal resource)
- Project aims to link these coal deposits to South African heavy haul lines
- Line connects Mmamabula/Dibete in Botswana to Lephthalale in South Africa
- Need to build a bridge across Limpopo River

Project Benefits

- Gate way to South African ports for the coal market
- Shortest route for NSC if coupled with Mosetse-Kazungula line
- Employment opportunities for citizens.
- Alternative route into South Africa from BR line, which is a single line with a capacity of 4.5 million tons per annum.

Project Status

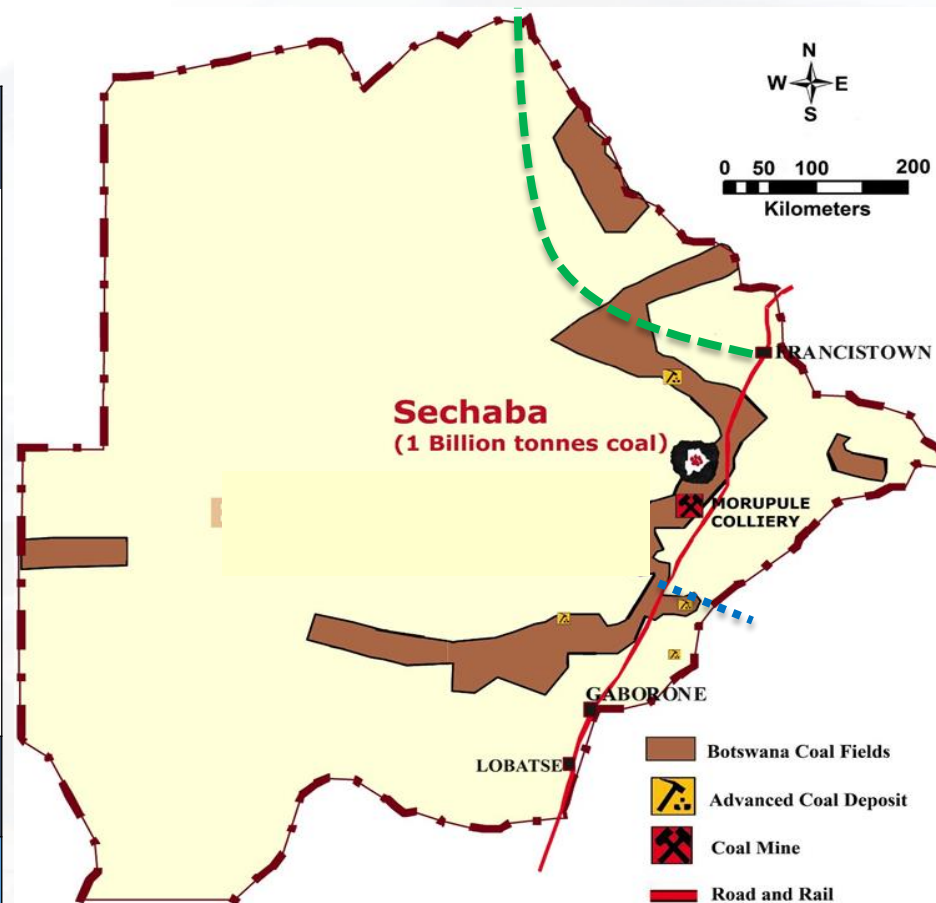
- BR and TFR to sign MoU to facilitate progress of the project

BOTSWANA COAL FIELDS



PROJECTED SEABORNE THERMAL COAL DEMAND

Coal Supply (Mt)	2016	2017	2020	2025	2030
Indonesia	370	380	390	330	280
Australia	200	200	210	220	220
Russia	108	108	105	125	150
Colombia	88	90	100	95	85
South Africa	73	74	80	80	80
US	16	14	12	12	12
Other	35	32	35	27	31
Total supply	890	898	932	889	858
Total Demand	889	911	960	1,069	1,241
Balance	1	-13	-28	-180	-383



- Existing line
- Mmamabula Lephale line
- Mosetse-Kazungula line

Source: Noble Energy Research - 2016

“Powering the Economy into the Future”

PROJECT DEVELOPMENTS – BR Priority Projects

Mmamabula-Lephalale Project Cost

Item/Activity	Estimated Amount (BWP)
Design & Supervision	2,000,000,000
Build/Construction	
Project Management Office	

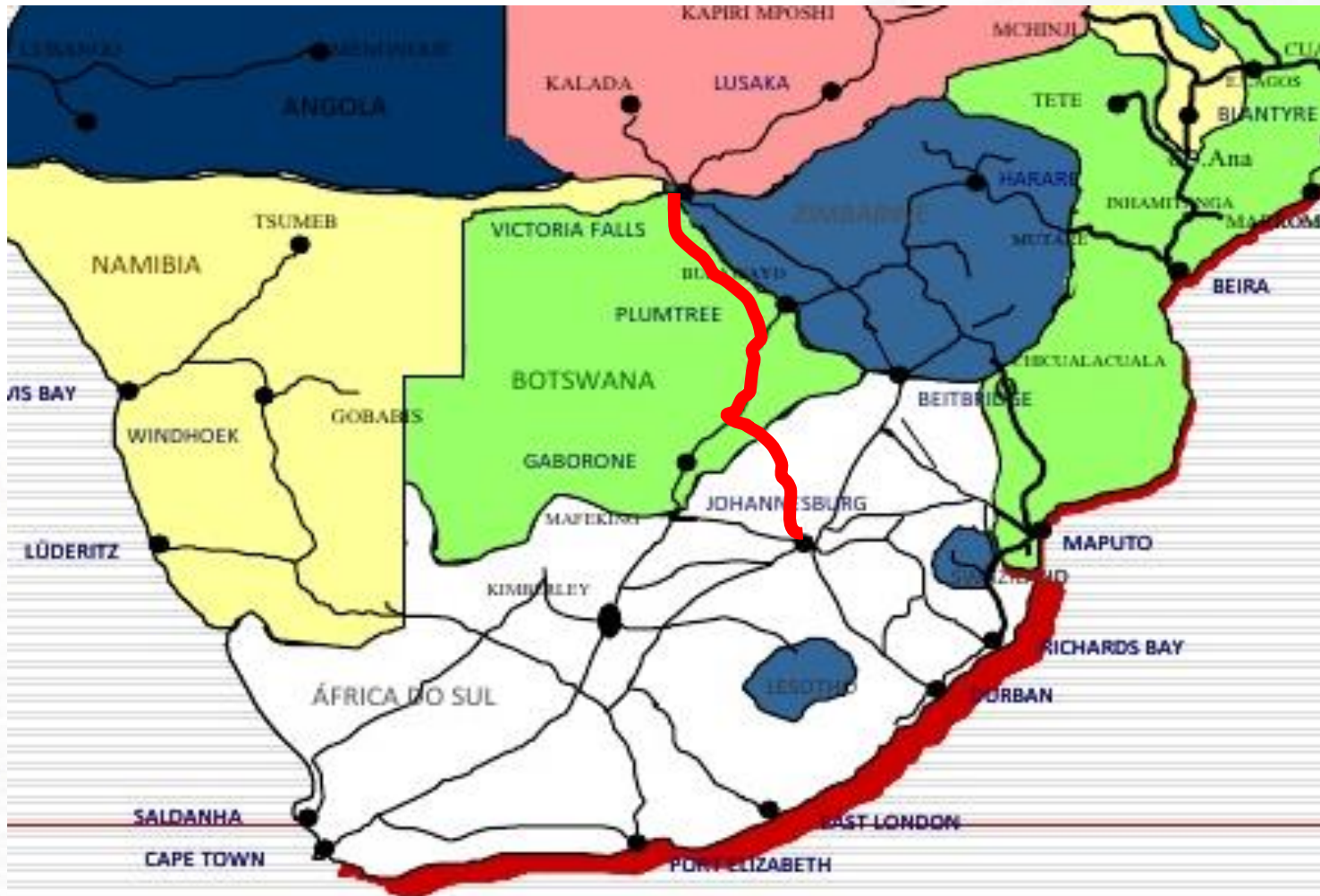
PROJECT DEVELOPMENTS – BR Priority Projects

Mmamabula-Lephalale Summary Project Details

- ▶ The project costs are estimated at BWP 2 billion excluding rolling stock requirements
- ▶ Line is designed as cape gauge, heavy haul at 26 ton/axle
- ▶ Initial two years tonnage is estimated at 10.5 MTPA. Thereafter ramp up is estimated to go up to 24 MTPA
- ▶ Operations is estimated to require 60 locomotives (3000 Horsepower) and 2000 wagons at the initial phase.

PROJECT DEVELOPMENTS – BR Priority Projects

Mmamabula Lephalale Rail Link



Benefits when coupled with Mosetse – Kazungula link

- Shortest direct route for North South Corridor (NSC)
- This would shorten the journey time of transit traffic between Zambia and countries to the North and ports of South Africa.

Mmamabula Lephale – Coal Mining Developments

- BR has engaged with Coal miners through Botswana Chamber of Mines for their transport needs to drive coal mining development.
 - MCM
 - Minergy
 - Maatla Resources
 - Shumba Energy
 - Jindal



Mmamabula Lephale – Coal Tonnage and Employment Forecasts.

	INITIAL TWO YEARS	FOUR YEARS AND BEYOND
ANNUAL TONNAGE (Mt)	10.5	24.0
DIRECT EMPLOYMENT	1800	3900
INLAND REVENUE (Pbn)	5.775	13.2
Royalties @ 3% (Pbn)	0.173	0.396
BR REVENUE – Haulage (Pbn)	0.997	2.28

ASSUMPTIONS:

- Ramping up of production is 2 years
- Current price of coal is \$95 per ton and can be maintained or improved

NOTE: Indicated tonnages cannot go through Mafikeng. Capacity of Mafikeng line is 4.5 million tons per annum.

COAL DEVELOPMENTS – Readiness of Miners (Minergy)



OPERATIONAL OVERVIEW JUNE - SEPTEMBER 2018

- › Environmental Impact Statement (ESIA) approved
- › Mining License (ML) awarded
- › Commenced skills search and employment
- › 62 employees now on site – 57 are Botswana citizens
- › Mine construction in progress

Key Timelines

- October - December 2018
 - Complete civil works
 - Construct access roads
 - Commence wash plant assembly
 - First mine box cut
 - Complete site offices
 - Receive power from BPC
 - Water reticulation
 - Expose first coal by December 2018
- Q1 2019
 - Commission wash plant
 - First coal blast
 - First saleable coal



PROJECT DEVELOPMENTS – Rolling Stock Maintenance Facility



Project Characteristics

- The purpose of the facility is to undertake running maintenance, out of course repairs as well refurbishment programs for rolling stock
- The project is also aimed to help eliminate maintenance backlog
- The estimated required area is 6,000 to 8,000 m²
- Project cost estimated at BWP 300,000,000.

Project Benefits

- Maintenance cost reduction
- Improved asset/equipment availability
- Employment creation
- Skills development/transfer

Project Status

- BR is drawing a business case for the project

COMMUTER TRAINS – DIESEL MULTIPLE UNITS DMUs



Project Characteristics

- Botswana Railways proposes to introduce Diesel Multiple Units.
- These are 5-car trainset of a DMUs with two power cars at each end of the train and 3 trailer cars in the middle.
- A single train set is expected to carry a minimum of 280 passengers.
- BR proposes to purchase 3 train sets for the commuter service.

Project Benefits

- DMUs have better adhesion compared with locomotive hauled coaches
- DMUs have lighter axle loads
- DMU trains are more operationally efficient than locomotive hauled trains

Project Status

- Estimated cost of 3 train sets is **P190,000,000**.

CONCLUSION

- Projects are at study phases
- Biggest challenge is financing

PROJECT DESCRIPTION	ESTIMATED COST (BWP)
Mosetse – Kazungula Rail Project	13,000,000,000
Mmamabula – Lephalale Rail Project	2,000,000,000
Rolling Stock Maintenance Facility	300,000,000
Purchase of DMUs	200,000,000

- Public procurement guidelines will be followed.



Thank you!