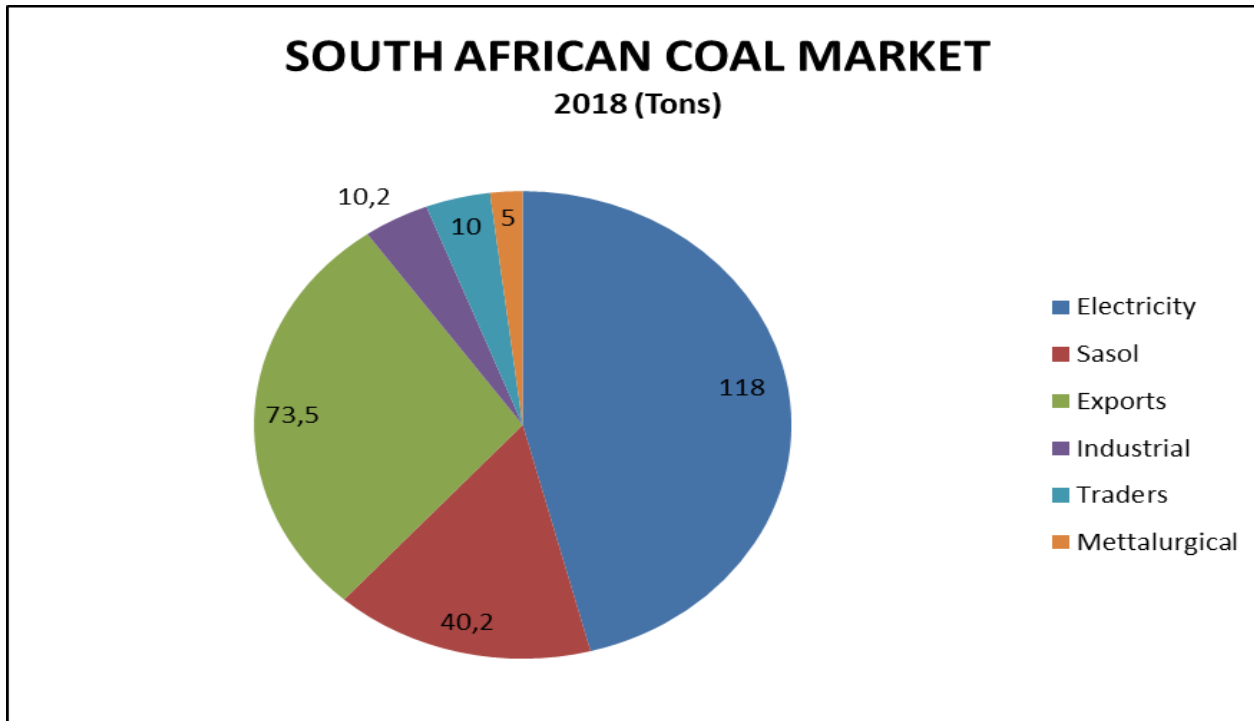


Downstream Coal Beneficiation Opportunities in Botswana: Alternative uses of Coal

THE SIZE OF THE MARKET

Mike Blenkinsop

THE SA AND REGIONAL EXPORT, DOMESTIC AND POWER MARKETS



- **Total market is between 250mtpa and 260mtpa**
- **Exports is largely capped by allocation and price is determined by market forces**
- **The SA inland market is small, (20mtpa) but prices are high and stable**
- **Sasol is effectively a closed shop**
- **There is also a small regional domestic, industrial and power market**

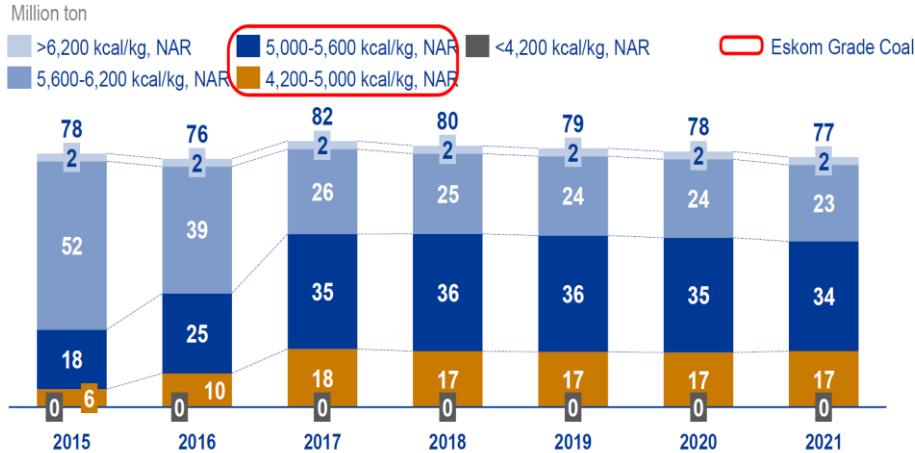
THE SA INLAND MARKET – PRICES AND USES

Market	Tons	Value (ZAR)	Ave (R/ton)
Bituminous Coal			
Merchants and Traders	11 065 000	R4 013 943 000	R 358
Industrial	5 627 000	R3 125 707 000	R 562
Steel	2 956 000	R2 599 113	R 896
Chemical	170 700	R91 284 500	R 535
Cement	1 150 000	R686 485	R 598
Metallurgical	43 000	R68 166 000	R 1 459
Brick and Tile	265	R119 921	R 466
Steam	5 845 000	R2 162 556 000	R 388
Mines	249 000	R254 905	R 1 054
Agriculture	34 000	R35 107 000	R 1 042
Anthracite			
Steel	9 000	R8 045 000	R 852
Metallurgical	1 346 000	R1 954 854 000	R 1 419
Domestic	791 000	R371 949 000	R 459
Other	91 000	R115 074 000	R 1 364

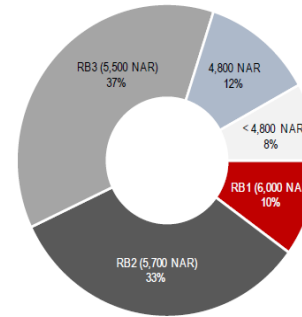
SA inland market is 29 million tons/annum – significantly smaller than Eskom buy in market but approx. 70% of the value and all higher grade

THE SA EXPORT MARKET

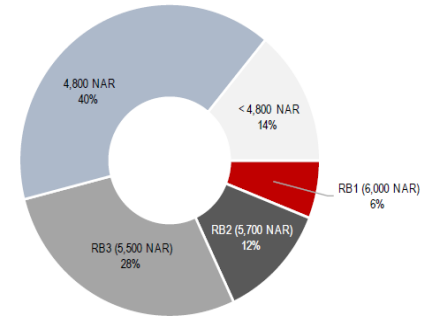
South African thermal coal exports – from all ports



2025-2040
SA COAL QUALITIES (estimated)



2020 RBCT Exports
RB3 dominant

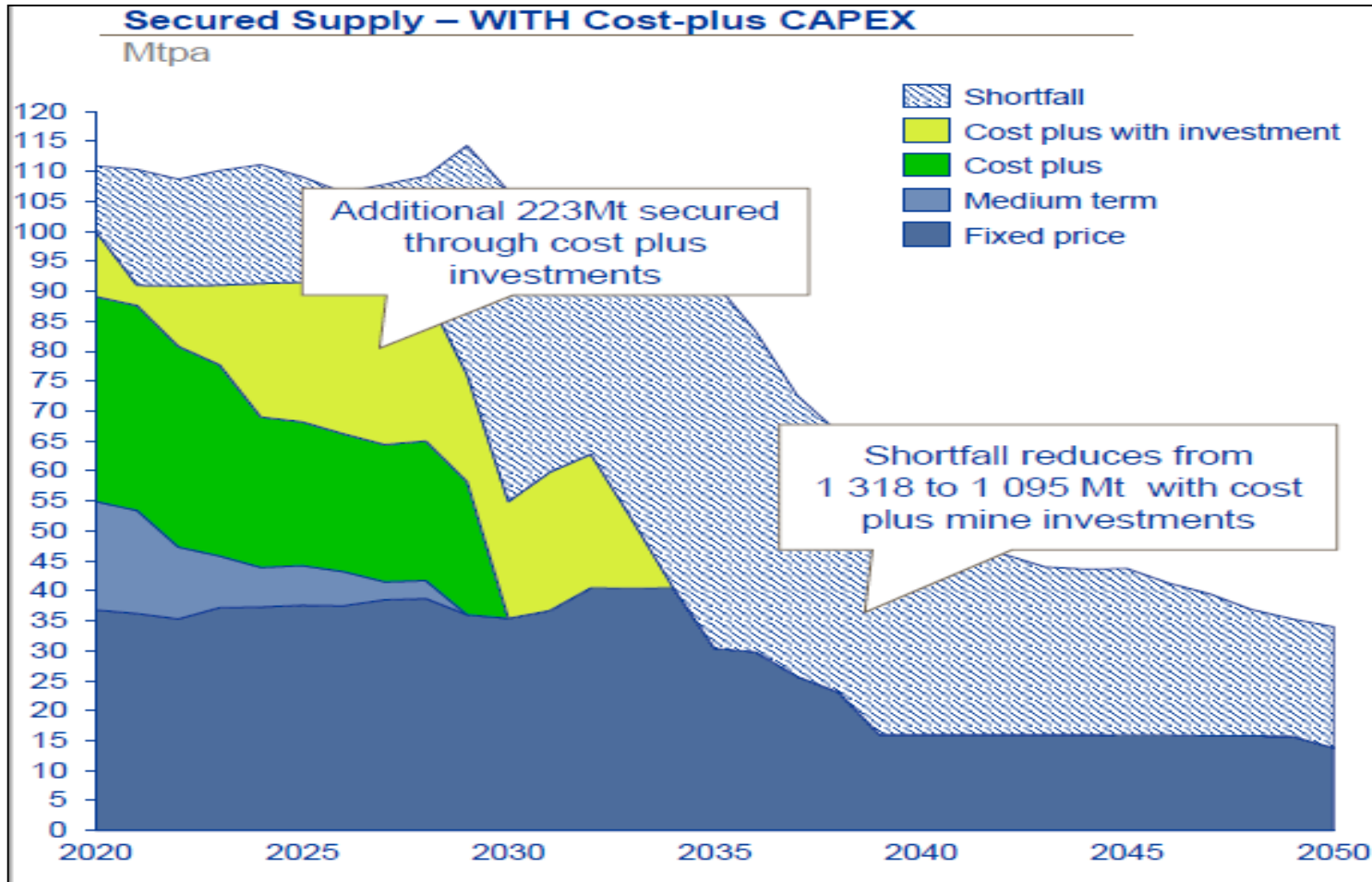


2025 RBCT Exports
4,800 (22,50 MJ/kg) dominant?

- Minerals Council of SA (nee Chamber of Mines) Coal Strategy 2018, forecasts that India's coal demand will continue to **increase** in the foreseeable future, best case will be that exports remain constant
- Investment capital may also not be available in the future, as financing for coal based energy is reducing, thus coal mining investment is uncertain which will further constrain coal supply as **Eskom will be competing against the export market** for this limited supply
- Eskom must guard itself in this limited supply environment by signing long term coal supply agreements which will ensure security of coal supply and **hedge against price fluctuations**

- Future export scenario envisages a greater proportion of lower grade coal exports, particularly at the 4500kcal/kg quality competing directly with Eskom**
- With appropriate rail infrastructure and bulk freight pricing, certain Botswana resources can compete at an RBl base price of \$70/ton**

THE SA POWER (ESKOM) MARKET



Eskom faces a coal supply cliff from the late 2020's or potentially earlier

THE IMPENDING SA SUPPLY SIDE CRUNCH

- SA's coal resource is depleting
- Qualities are heading lower
- Production costs are rising
- The majors are leaving or have left

SA COAL SUPPLY SIDE (MTPA)					
Year	2020	2025	2030	2035	2040
Exports - High \ Low Grade	-	-12,92	-30,28	-49,58	-57,48
Domestic Power (Eskom)	-	-1,36	-4,68	2,51	2,07
Chem / SynFuel	-	-5,70	-5,70	-1,00	-1,00
Industrial & Metallurgical & Traders	2,0	0,08	-12,20	-12,95	-17,06
NET SUPPLY RELATIVE TO 2020	2,00	-19,90	-52,86	-61,01	-73,47

THANK YOU



SAFETY



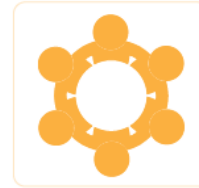
PASSION



CARING



GROWTH



**WORKING
TOGETHER**



EXCELLENCE