

# DEVELOPING THE BOTSWANA COAL INDUSTRY

BOTSWANA RESOURCE CONFERENCE

June 2018



**REUTERS HEADLINE – “*NEW  
PRESIDENT LOOKS TO WEAN  
BOTSWANA OFF DEPENDENCE  
ON DIAMONDS*” 1 APRIL 2018**

Quote:

“We still seek to build a Botswana in which sustained development is underpinned by economic diversification,”

“One of my top priorities ... will be to address the problem of unemployment especially amongst the young.”

- President Masisi







## COAL

### CAN AND MUST BE A SIGNIFICANT PART OF THE SOLUTION

- › Botswana coal reserves estimated to be in excess of 200 billion tons
- › Regional and international shortages
- › International price of seaborne thermal coal at levels last seen in 2007
- › Botswana coal is high quality and economical to mine
- › *“Major mining houses are making record profits from their coal divisions”* – Bloomberg May 2018

# Industry Overview

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Coal is a crucial source of energy

## COAL AND THE ENVIRONMENTAL IMPACT

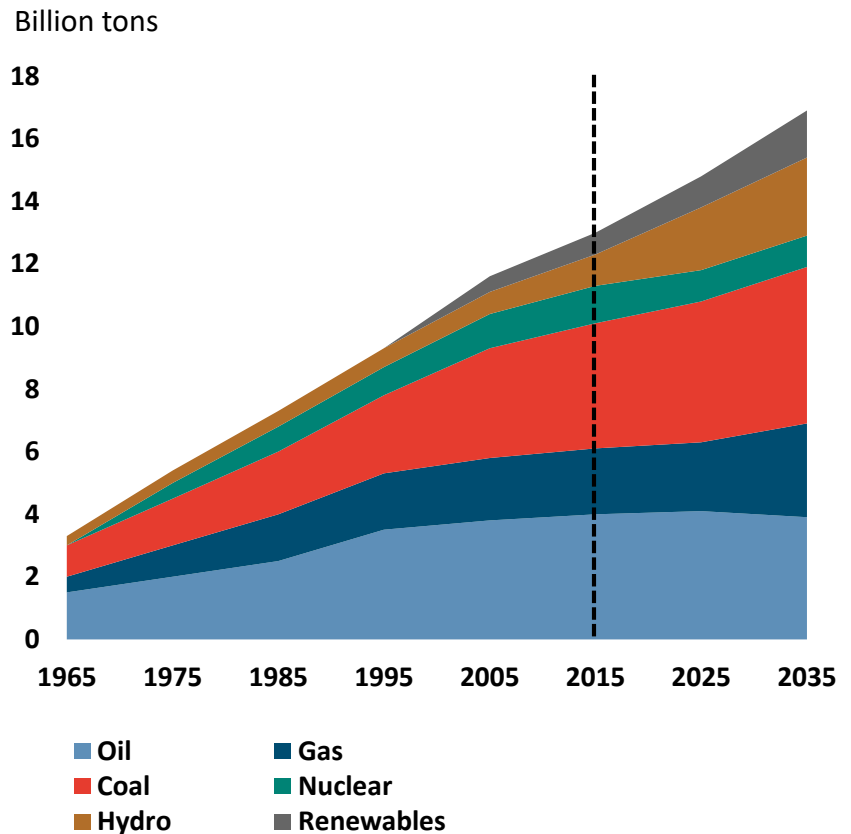
- › Coal Industrialization: A lesson from China to Botswana - Sunday Standard May 2018
  - » *“The culprit behind these climatic misfortunes points to coal production”*
    - Coal production has a minimal impact on emissions, coal consumption does
    - Botswana cannot be compared to China regarding emissions
  - » The developed nations were developed on the back of fossil fuels, now developing nations are to be denied the same opportunity
    - Developed nations should increase cut backs to allow developing nations space, especially in Africa
- › The coal industry has acknowledged the impact on the environment and worked for decades on clean coal technology
  - » Carbon Capture and Storage (CCS)
  - » High Efficiency Low Emission (HELE)
- › Modern coal fired power plants using these technologies have reduced emissions to levels comparable to gas fired powered plants

## COAL INDUSTRY

- › The transition in the fuel mix continues with non-fossil fuels accounting for half of energy growth
- › Even so, oil, gas and coal remain the dominant sources of energy powering the world economy
- › Will account for more than 75% of total energy supplies in 2035 (down from 85% in 2015)
- › The International Renewable Agency found that current policies would see renewable energy generation make up only 21% of total energy generation by 2030

### PRIMARY ENERGY CONSUMPTION BY FUEL

Source: XMP Consulting





## COAL INDUSTRY

- › In the World Energy Outlook 2016 report, the International Energy Agency (“IEA”) forecasts that coal will remain the largest single source of electricity generation through to 2040
- › Coal still makes up 41% of global electricity generation and 29% of primary energy demand
- › There are 1,600 coal fired power plants either being planned or under construction in 62 countries which will, without older plant decommissioning, expand the world’s coal-fired capacity by 43% - Straits Times July 2017
- › Coal will continue to play a major role in delivering energy access and security long into the future



## PROJECTED SEABORNE THERMAL COAL DEMAND

Mt

Coal Supply	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
<b>Total supply</b>	<b>890</b>	<b>898</b>	<b>932</b>	<b>889</b>	<b>858</b>
<b>Total Demand</b>	<b>889</b>	<b>911</b>	<b>960</b>	<b>1,069</b>	<b>1,241</b>
<b>Balance</b>	<b>1</b>	<b>-13</b>	<b>-28</b>	<b>-180</b>	<b>-383</b>



Source: Noble Energy Research - 2016





› **WORLD COAL ASSOCIATION  
(WCA) – 14 June 2017**

*“Even in its latest forecast, BP admits that China will remain the world’s largest market for coal, accounting for nearly half of global coal consumption in 2035. India is also the largest growth market, with its share of world coal demand doubling from around 10% in 2015 to 20% in 2035.”*

*“Writing off coal today is premature and ignores many trends that will influence global coal demand over the coming years. For instance the role of Southeast Asia is often ignored, as our recent report shows*

› **No mention of Africa – Ignore at your peril**

Andre Boje – CEO Minergy

# The Africa Context

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Largely ignored future market



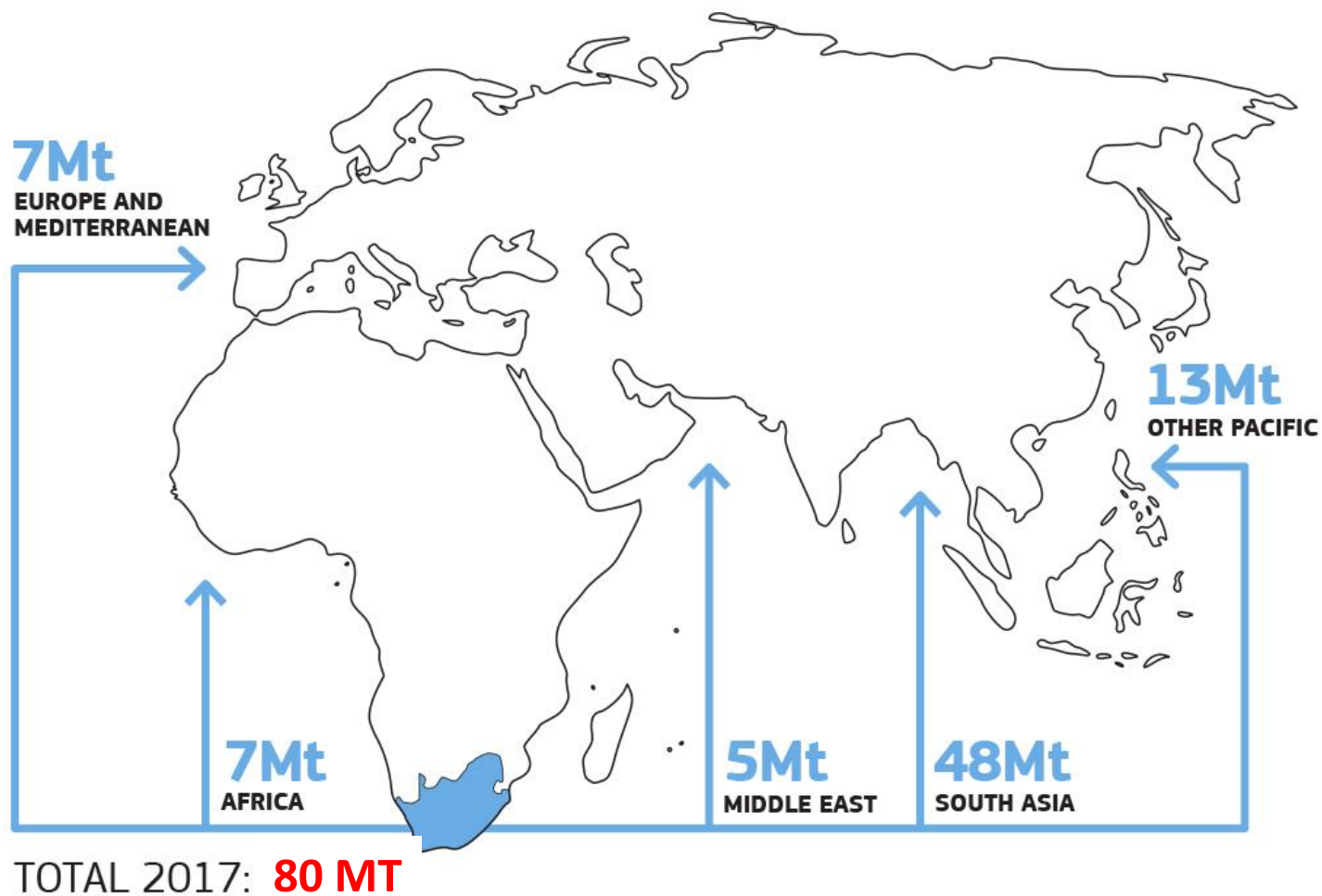
## AFRICA URGENTLY NEEDS POWER

- › 620 million Africans rely on firewood, kerosene and charcoal for cooking, heating and lighting
- › 600,000 Africans, mainly women and children, die prematurely annually due to illnesses caused by this, that is 1,643 deaths per day
- › Alarming deforestation to source firewood and charcoal, Zambia alone loses 250,000 hectares annually
- › Off and on grid renewables have a role but cannot support base load requirements. Base load to be provided by coal as the cheapest form of energy requiring the lowest capital outlay

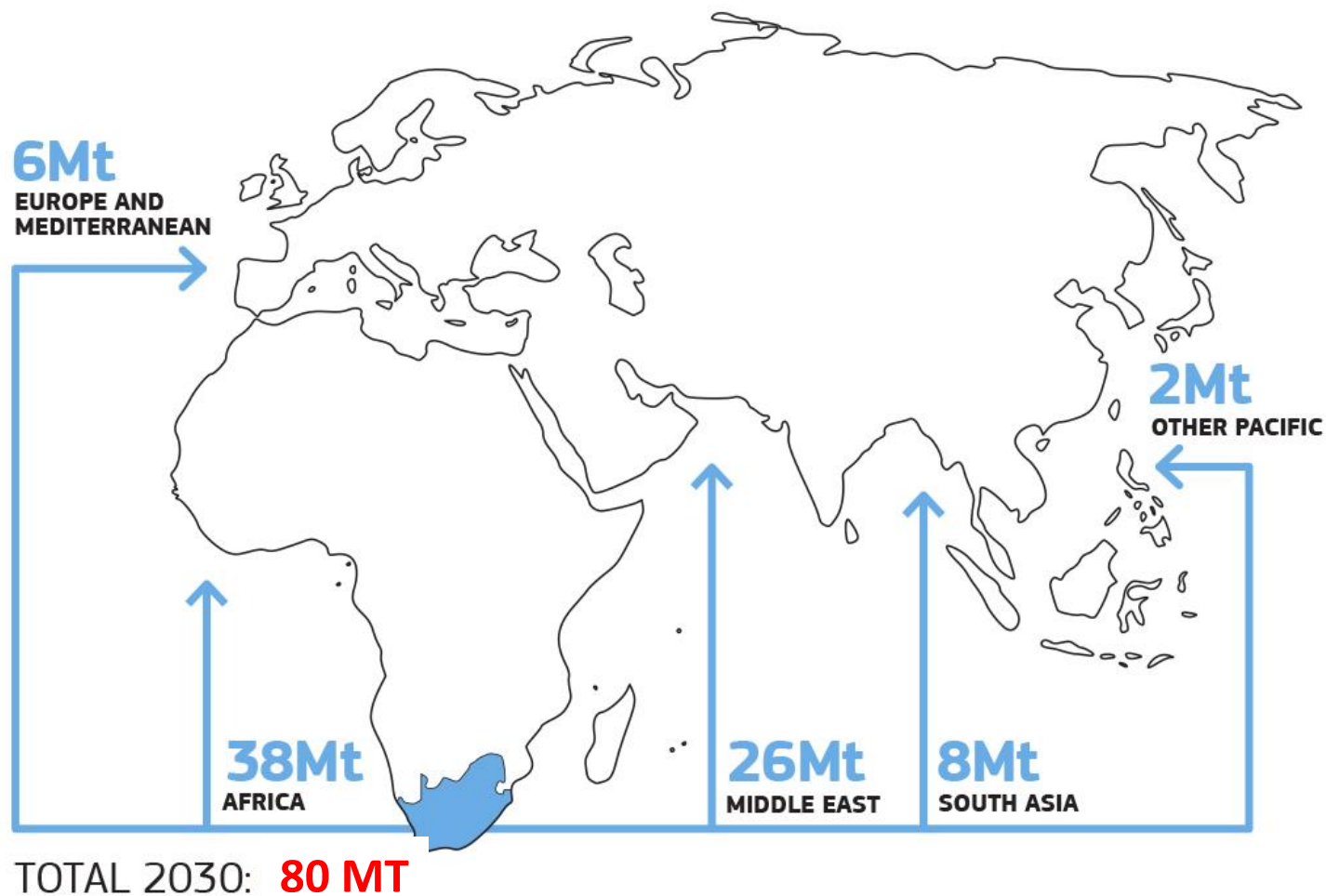




## SOUTH AFRICAN EXPORT MARKET



## SOUTH AFRICAN EXPORT MARKET



# International Markets

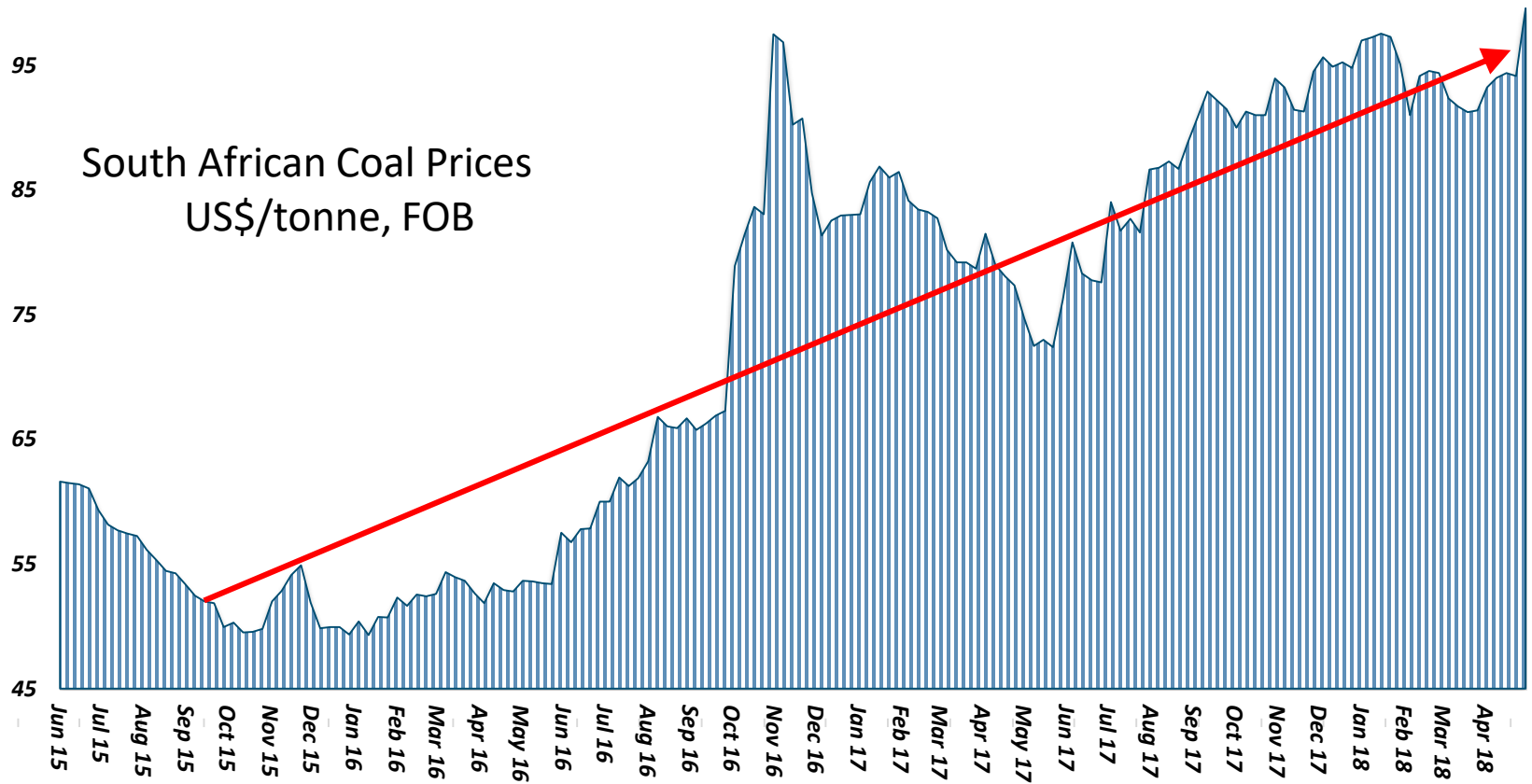
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Significant Price Trends



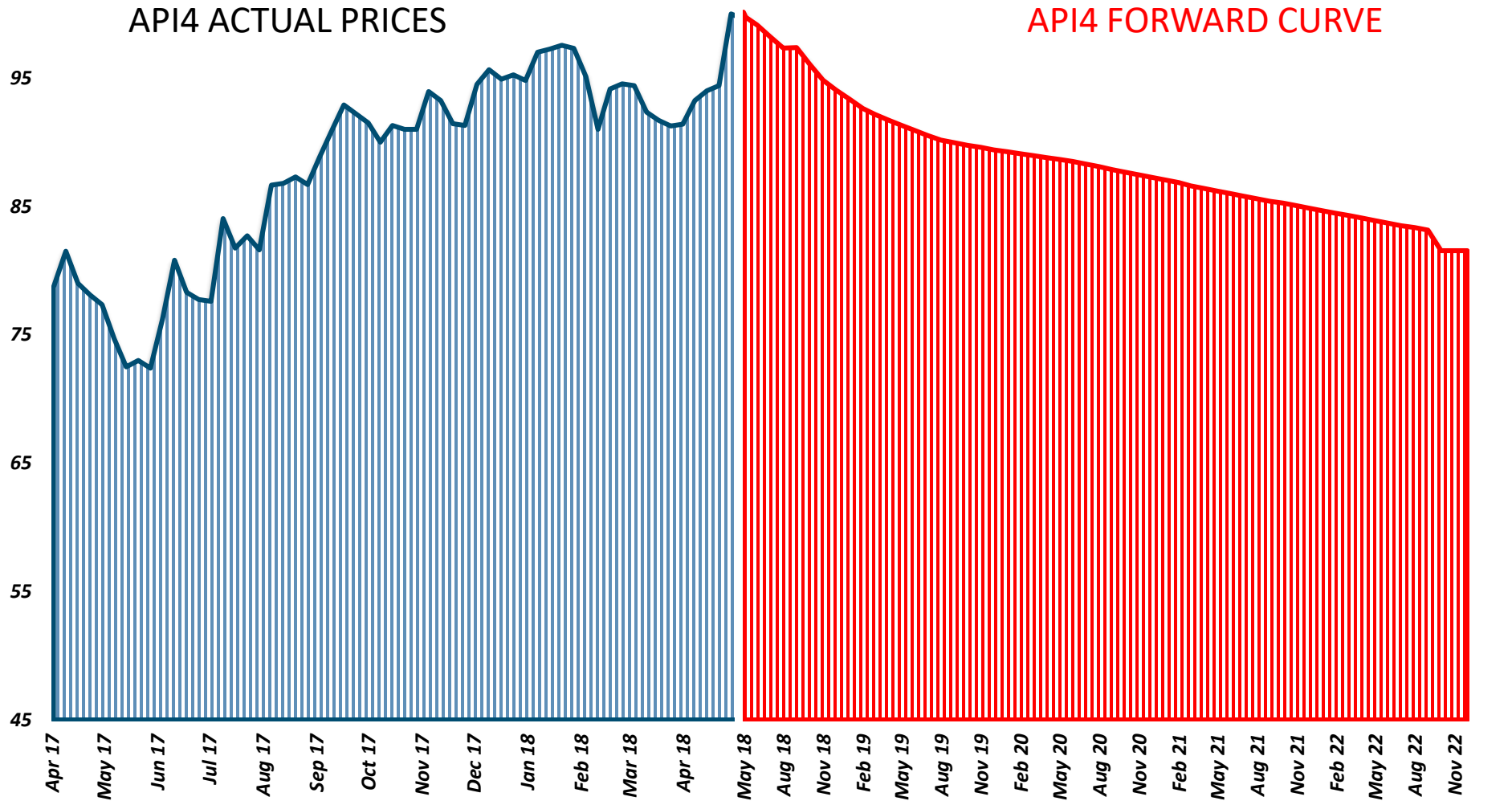
## COAL INDUSTRY IN TRANSITION

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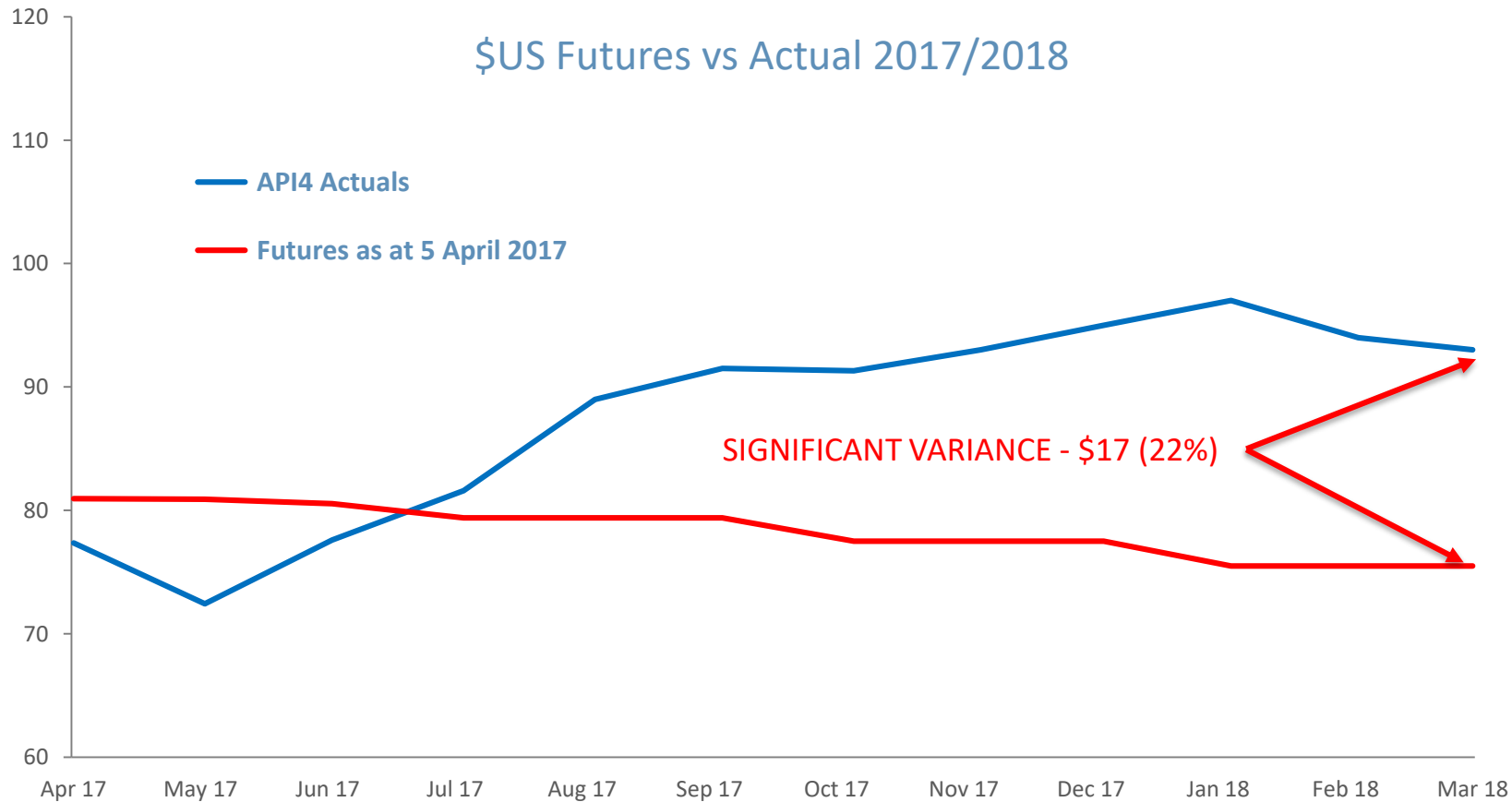
Source: Quandl, Argus/McCloskey

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Source: Argus/McCloskey

## EXPORT MARKETS – API4 PRICES

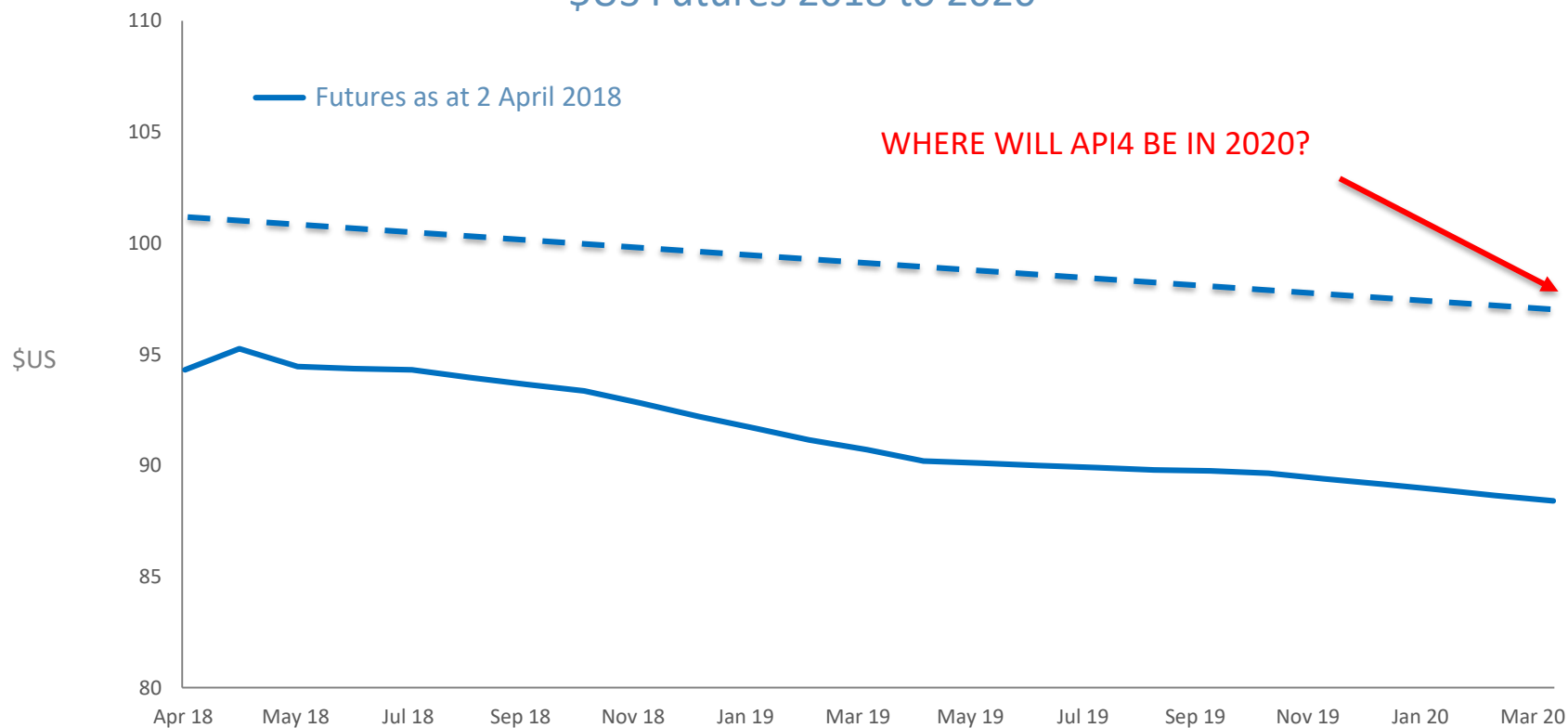


Source: Argus-McCloskey



## EXPORT MARKETS – API4 PRICES

\$US Futures 2018 to 2020



Source: Argus-McCloskey



## EXPORT PRICE DYNAMICS

- › API4 increased from \$49 to > \$100 in 2016 - 2018 an increase of 80%
- › Increase on the back of production cutbacks of 500 Mtpa in China
- › Major producers focusing on returns at the expense of volume
- › Increased demand in Asia
- › Eskom reaching “coal cliff”
- › Historically no greenfields projects on the drawing board
- › Opinion piece on 6 October 2017 “South Africa’s coal mining sector could shrink by 46%”
  - » Minimal investment
    - Regulatory uncertainty
    - Rhetoric around resource nationalisation



# Botswana Coal Industry

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Huge Opportunity for Botswana



## MISSED OPPORTUNITIES FOR BOTSWANA COAL

- › Richards Bay Coal Terminal (RBCT) has a capacity of 91 mtpa
- › Transnet Freight Rail (TFR ) has capacity of 82 mpta
  - » Only 75 mt railed in 2017 due to coal shortages
- › Botswana could have exported 7 mt
  - » Created >1,000 jobs
  - » Revenue of \$US 525 million
  - » Royalties of \$US 12,6 million
  - » Taxes of \$US 14 million



## BOTSWANA COAL INDUSTRY

- › Logistical infrastructure not suited to seaborne thermal coal export initiatives
- › Lack of investment in coal specific projects
  - » Focus on power related projects not coal specific projects, two separate industries
  - » Minimal coal specific skills
  - » Perception that Botswana coal is uneconomical to export
- › Limited access to capital
- › A successful project(s) will bring foreign direct investment into the Botswana coal industry



## DEVELOP THE COAL INDUSTRY

- › Government must make commitments to drive
  - » Investment in the logistical infrastructure
  - » Departments adhering to regulatory time frames
  - » Accelerated regulatory approval timeframes
  - » “One stop shop” for Prospecting License and Mining License applications
    - BITC is the beginning, needs to expand activities
  - » Review of the coal industry tax structure to negate the logistical disadvantage to RSA coal exports
    - Reduce company tax to maximum 15% for coal exporting companies as was done for coal producers supplying power generation
- › Focus on shortest lead time to market otherwise Botswana will miss the opportunities
  - » South Africa has the most sophisticated bulk handling facilities in Africa, link into it
  - » Lephalale is 123km’s to Botswana main line



## DEVELOP THE COAL INDUSTRY

- › Coal producers to work together to create an industry
  - » An industry creates far more value than individual mines
  - » Large multi-nationals will look to invest in a thriving industry, not into exploration
- › Botswana Rail (BR) to commit to cost competitive rates
  - » BR together with TFR, is a key player that will determine the success or otherwise of the coal industry in the regional and international seaborne thermal coal market.





## FUTURE OPPORTUNITIES FOR BOTSWANA COAL

- › Create in excess of 1,000 jobs
- › Botswana can be a low cost, high quality coal producer
- › International traders have turned their attention to coal from Botswana
  - » Numerous and varied approaches
- › Eskom in South Africa facing a coal cliff
  - » Lack of investment in cost plus mines
  - » Export is more attractive for current producers
  - » Can the unthinkable happen, Eskom buying coal on rail from Botswana?
    - Require additional 6 to 11 mt May to September 2018
    - Require additional 100 mt longer term





## FUTURE OPPORTUNITIES FOR BOTSWANA COAL

- › Botswana Rail has committed to
  - » Competitive rail rates
  - » Signing an MOU with TFR for the Lephalale rail link during 2018
  - » 2 million ton annual capacity on current rail infrastructure
- › TFR has committed to
  - » Competitive rail rates to Richards Bay
  - » 13 million ton capacity on the Lephalale line by end 2019
  - » Increasing coal line rail capacity from 81 to 100 million tons per annum
- › Explore opportunities into Africa over the Kazungula bridge to Zambia

## EXPORT MARKET RAIL LOGISTICS



### Project Characteristics

- Provide a rail link to unlock Botswana coal reserves - potential for up to 100Mtpa
- Need to construct 3-4km bridge to cross the Limpopo River

### Benefits

- Stimulate economic growth in Botswana and Limpopo province
- Provide a route to unlock Botswana coal reserves
- Link Botswana mines to TFR rail network

### Current Status

- FEL 1 (conceptual study) completed

## REGIONAL MARKET OPPORTUNITY

The July 2017 UK based McCloskey Coal Report quotes under the heading

***“SAF domestic coal market bullish”***

*“Spot prices of A grade pea coal in the South African domestic market are nearly 51% higher than the same period in 2016”*

*“Strong demand from cement, industrial firms and the paper industry, plus production issues at the mines is keeping the market tight”*

*“..there have been production issues at mines due to a lack of general investment in machinery, installations, and technology”*

*“The climate of under-investment is partly blamed on political interference in the mining sector and the rise of resource nationalism*



## BIGGEST OPPORTUNITY FOR THE INDUSTRY

- › Uplift the communities in which we operate
  - » Employ as many local community members as possible
  - » Upgrade healthcare facilities
  - » Support local schools
  - » Provide electricity where feasible
  - » Upskill the local community in other tasks
  - » Assist in ancillary business opportunities
    - Tuck shops
    - Boarding facilities
    - Laundries



## IN CONCLUSION

- › “War on coal making the world’s top mine owners a lot richer” – Bloomberg May 2018
  - » Anglo American, which not long ago wanted to unload it’s coal assets, has seen income from the business triple since 2015.... Last year, Glencore reported earnings from the fuel more than doubled.... BHP said it surged six fold
- › Income from the 37 coal producers tracked in a Bloomberg Intelligence index was the highest in six years

Where will the Botswana coal industry be in 2023?





Thank you

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