



**Aurizon Holdings Limited**  
ABN 14 146 335 622

ASX Market Announcements  
ASX Limited  
20 Bridge Street  
Sydney NSW 2000

#### **BY ELECTRONIC LODGEMENT**

8 June 2021

#### **Aurizon Investor Day**

Please find attached an ASX announcement including a copy of the 2021 Investor Presentation slides for release to the market.

The Investor Presentation will be delivered via webcast which will commence at 1.00 pm AEST.

This presentation will be accessible via the Company's website:

<https://services.choruscall.com.au/webcast/aurizonau-210608.html>

Kind regards

A handwritten signature in blue ink, appearing to read "M. W.", followed by a horizontal line and a small flourish.

**David Wenck**  
Company Secretary

*The attached ASX announcement and Investor Presentation has been authorised for lodgement by the Aurizon Holdings Limited Board of Directors.*

# ASX Announcement

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**Date:** 8 June 2021

## Aurizon Investor Day

Aurizon today is providing a presentation at an Investor Day in Newcastle (attached) detailing the Company's strategy to continue to deliver sustained value for investors and customers.

As part of the presentation, Aurizon is re-affirming FY2021 guidance for Earnings Before Interest and Tax (EBIT) in the range of \$870 - \$910 million.

Key aspects of today's presentation include:

- A demonstration of potential demand scenarios for thermal and metallurgical coal markets, built on potential drivers of Asian economic growth including global power generation mix and steel production together with an explanation of how Aurizon uses these scenarios in its business decisions.
- The opportunity for the Bulk business (all above rail haulage, except coal) to target new markets as it expands across supply chains, including port and terminal services, and taps into growing demands for inputs to renewables and batteries, infrastructure development and global food consumption. Realising this growth opportunity would change the commodity mix for coal and non-coal revenue in the Aurizon portfolio.
- Transformation, productivity initiatives and cost reduction will remain key drivers for the Company's financial and operational performance.

### Commentary from the MD & CEO Andrew Harding:

"Our strategic aim is to ensure Aurizon's core business is highly efficient and resilient in a changing market environment, while enabling the continuing growth of our Bulk business. With the re-balancing of our portfolio mix, Aurizon remains well-positioned to support shareholder returns and re-investment in the business."

For more information:

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# Aurizon Investor Day

8 June 2021

# Disclaimer

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## SCENARIO ANALYSIS (AND ASSOCIATED CASH FLOW MODELLING) AND ESG TARGETS

This document also contains scenario analysis of long-term coal scenarios (and associated cash flow modelling) and ESG targets. The scenario analysis (and associated cash flow modelling) that informs this document was undertaken by Aurizon, supported by an expert third party. The analysis is based on the information available at the date of this document and/or the date of Aurizon’s planning processes or scenario analysis processes. There are inherent limitations with scenario analysis and it is difficult to predict which, if any, of the scenarios might eventuate. Scenarios are neither predictions nor forecasts and do not constitute definitive outcomes for Aurizon. We do not assign probabilities and future performance may be outside of the ranges presented. Scenario analysis and the outcomes of those scenarios rely on assumptions that may or may not be, or prove to be, correct and may or may not eventuate, and scenarios may be impacted by additional factors to the assumptions disclosed.

## STATEMENTS ABOUT THE FUTURE

This document contains “forward-looking statements”. The words “expect”, “anticipate”, “likely”, “intend”, “should”, “could”, “may”, “predict”, “plan”, “propose”, “will”, “believe”, “forecast”, “estimate”, “goals”, “aims”, “target” and other similar expressions are intended to identify forward-looking statements. Indications of, and guidance or outlook on, future earnings or financial position or performance are also forward-looking statements.

The forward-looking statements are not based on historical facts, but rather on current beliefs, assumptions, expectations, estimates and projections of Aurizon. These statements are not guarantees or predictions of future performance, and involve both known and unknown risks, uncertainties and other factors, many of which are beyond Aurizon’s control. As a result, actual results or developments may differ materially from those expressed in the forward-looking statements contained in this document. Aurizon cautions against reliance on any forward-looking statements or guidance.

Except as required by applicable regulations or by law, Aurizon is not under any obligation to update these forward-looking statements (or scenario analysis) to reflect events or circumstances that arise after publication.

Past performance is not an indication of future performance.

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# Acknowledgement of Country

We acknowledge the Awabakal and Worimi People, the Traditional Custodians of the land we are on today.

We pay our respects to the elders past, present and future for they hold the memories, the traditions, the culture and hopes of Aboriginal Australia. We must always remember that under the ballast, sleepers, rail systems and office buildings where Aurizon does business, was and always will be traditional Aboriginal land.

*Photo: Unveiling of locomotive artwork during NAIDOC Week 2020, a design the features sacred sites from the local area, created by local Indigenous artist John Robinson*

# Executive team presenting today

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**Andrew Harding**  
Managing Director & CEO



**George Lippiatt**  
Chief Financial Officer & Group Executive  
Strategy



**Pam Bains**  
Group Executive Network



**Edward McKeiver**  
Group Executive Coal



**Clayton McDonald**  
Group Executive Bulk

# Agenda

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1	Strategic Objectives	Andrew Harding, Managing Director & Chief Executive Officer
2	Capital Allocation and Free Cash Flow	George Lippiatt, Chief Financial Officer & Group Executive Strategy
	[break]	
3	Bulk Update	Clay McDonald, Group Executive Bulk
4	Coal Update	Ed McKeiver, Group Executive Coal
5	Network Update	Pam Bains, Group Executive Network
6	Q&A	



# Overview

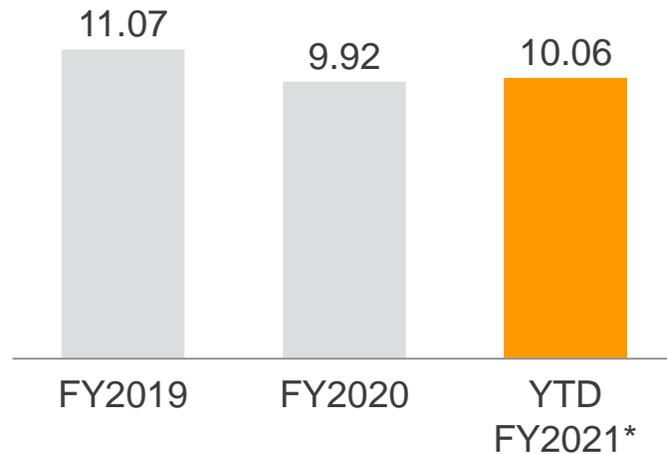
Andrew Harding  
Managing Director & CEO

# Safety performance

TRIFR results driven by low-severity strain injuries with LTIFR improving 28%

## Total Recordable Injury Frequency Rate (TRIFR)

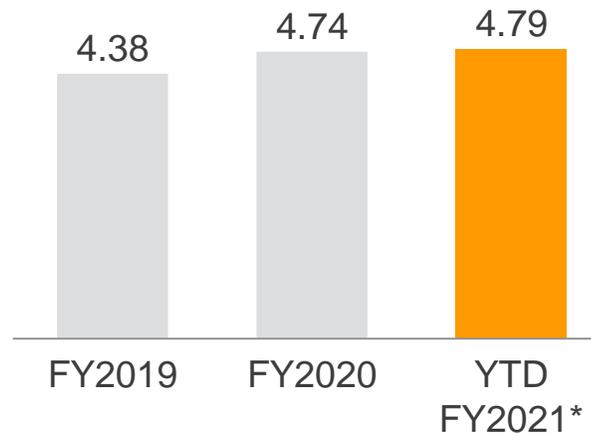
Incidents per million person-hours worked



- › Slight deterioration in TRIFR due to restricted work injuries. Higher numbers of low severity body sprains from walking on uneven ground and upper body manual handling strains

## Rail Process Safety (RPS)

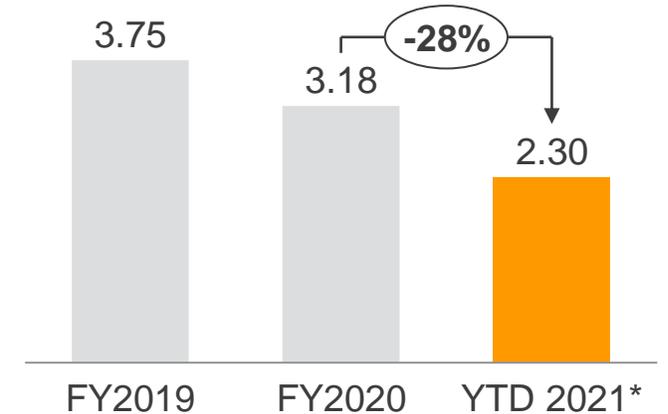
Incidents per million train kilometres travelled



- › Maintained RPS performance (fatality prevention measure). However, increase in low severity yard derailments in second half of FY21

## Lost Time Injury Frequency Rate (LTIFR)

Incidents per million person-hours worked

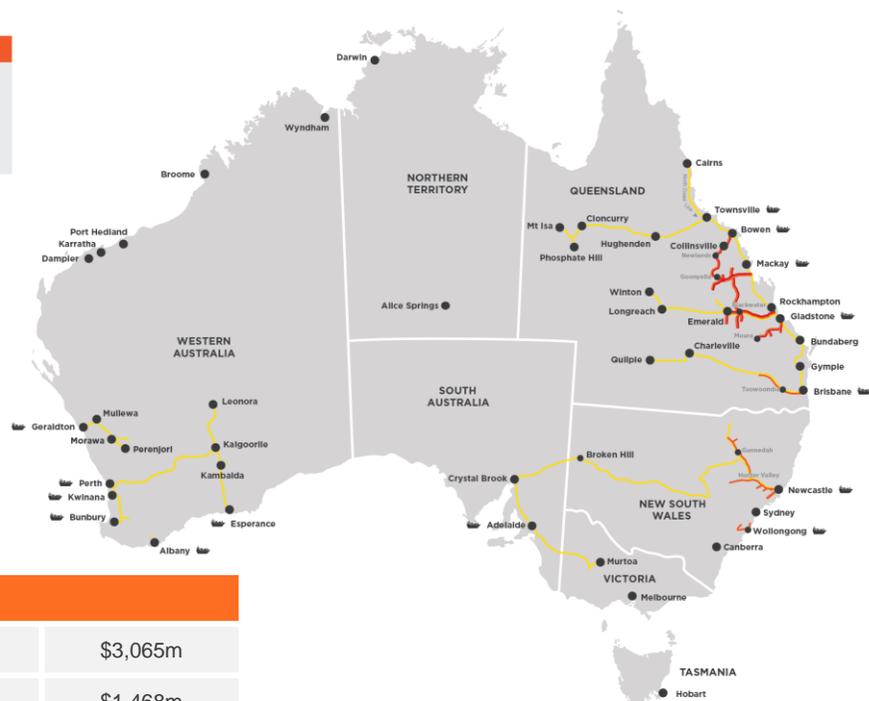


- › Includes employees and contractors

\*Year-To-Date (to 30 April 2021)

# Overview of Aurizon's operations

Aurizon is Australia's largest rail-based transport business, with diversified, cross-commodity exposure through above and below rail services, and port terminals



## Below Rail

### Network



- Critical infrastructure supporting ~90% of Australian metallurgical coal export volume
- Regulated below rail asset base
- Linked to Asian steel production and energy generation

## Above Rail

### Coal

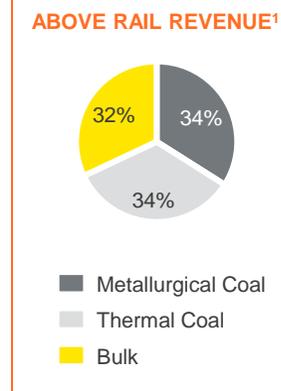


- Largest hauler of metallurgical coal in Australia
- Only rail operator with services to all nine coal export terminals on East Coast
- Linked to Asian steel production and energy generation

### Bulk



- Operations in Queensland, Western Australia and New South Wales
- Rail, road and port services
- Commodities hauled linked with economic growth and minerals associated with emerging technology such as battery storage, renewable energy and electric vehicles



FY2020	
Revenue	\$3,065m
EBITDA	\$1,468m
EBIT	\$909m
Free cash flow	\$715m
ROIC	10.9%

1. Calculated using 1HFY2021 revenue (ex-Access). Coal revenue allocated based on volume split

# Pride in our ESG<sup>1</sup> contribution

Aurizon continues to build a stronger and sustainable business

## NET-ZERO COMMITMENT BY 2050...

- › Climate Strategy and Action Plan released in October 2020
- › Continued advocacy for rail in the transition to a low-carbon economy
- › Minimising emissions:
  - Reducing loco diesel and coal dust emissions
  - Electrical fleet and testing battery locos
- › Avoiding or offsetting impacts on native biodiversity

## ...WHILE WE SUPPORT OUR REGIONS AND COMMUNITIES...

- › Updated safety strategy
- › Gender Balance Action Plan to increase proportion of women in our workforce
- › Formally committed to reconciliation through our Reconciliation Action Plan
- › Over 400 initiatives supported through Community Giving Fund
- › Founding member of Regional Australia Council 2031
- › Partnerships with Queensland Firebirds and Orange Sky

## ...AND LEAD THROUGH TRANSPARENT GOVERNANCE

- › Board provides sustainability oversight and direction
- › Code of Conduct linked to our values: Safety, People, Integrity, Customer and Excellence
- › Scenario analysis considers climate-related transition risks
- › First Modern Slavery Statement published in 2020

### Sustainability disclosures

- Annual Sustainability Report
- *Leading* rating for 7<sup>th</sup> consecutive year<sup>2</sup>
- Reporting against TCFD<sup>3</sup> since 2017



1. Environmental, Social and Governance

2. By the Australian Council of Superannuation Investors (ACSI) for corporate sustainability reporting in Australia

3. Task Force on Climate-related Financial Disclosures. See annual Sustainability Report available on Aurizon website

# Climate Strategy and Action Plan

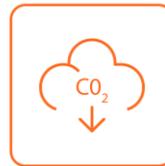
Aurizon is committed to a target of net-zero operational emissions by 2050

Net-zero operational emissions by 2050

## THREE KEY PILLARS



Manage Risk and Build Resilience



Deliver Decarbonisation



Create Carbon Abatement Opportunities

## TRACKING TOWARDS NET-ZERO OPERATIONAL EMISSIONS INITIATIVES

### Climate Strategy and Action Plan Implementation



Minimising our Operational Emissions



Electricity Consumption on Aurizon's Electrified Network Infrastructure



Partnerships and Collaboration

### Technology Pathway



Technology Investment Through the *Future Fleet Fund*



Renewable Energy

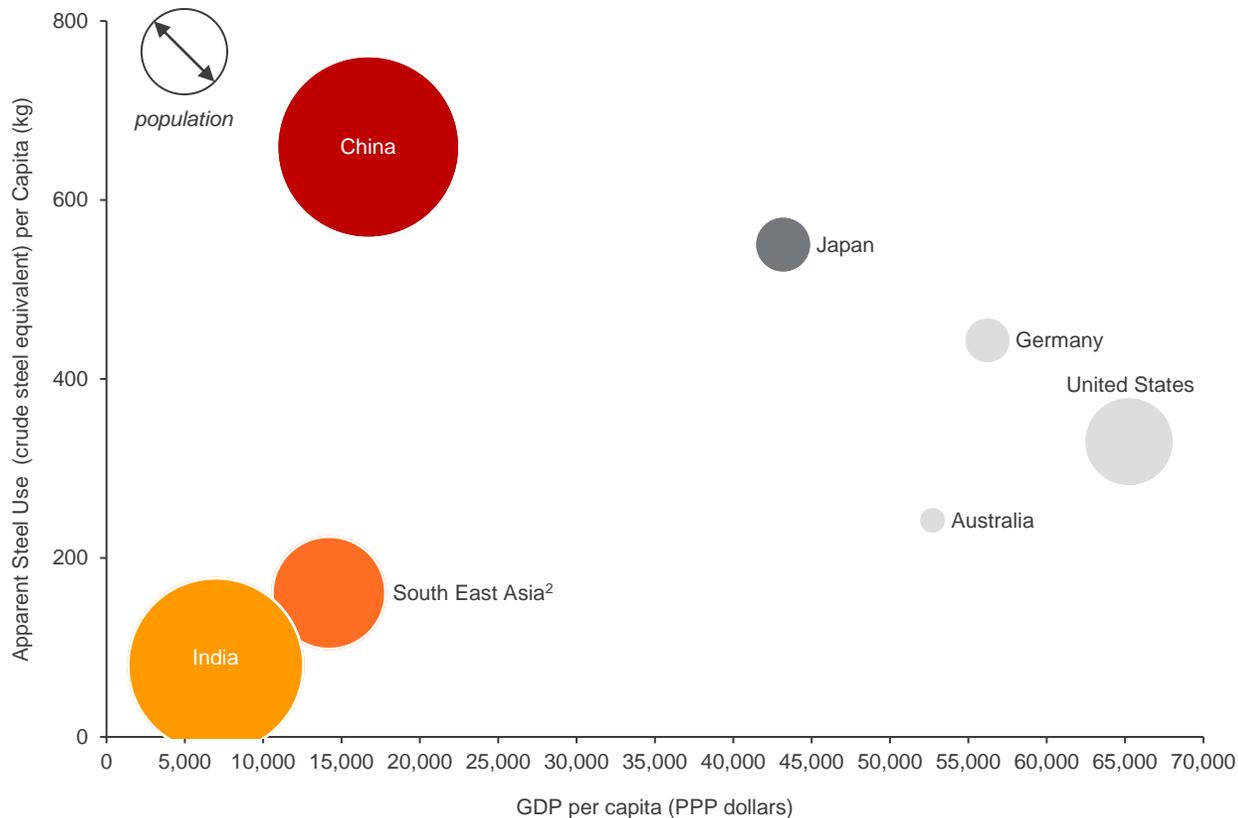


Carbon Offsets

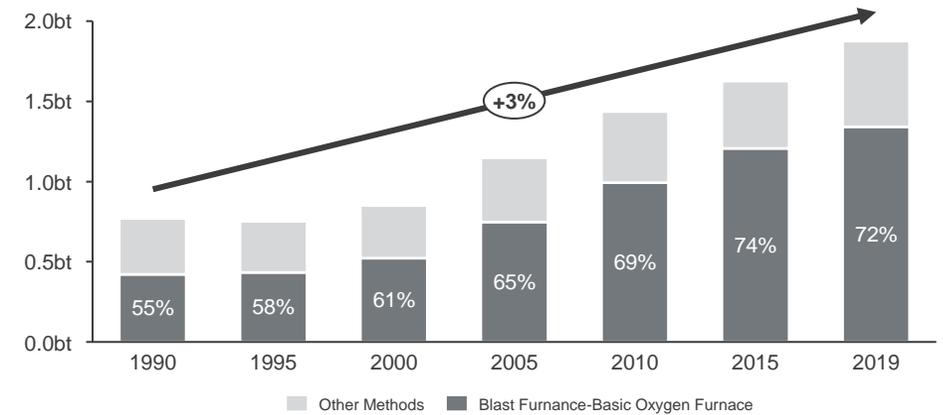
# Metallurgical coal market

Steel is an integral link to economic development. The metallurgical coal-dependent method of steel production commands almost three-quarters (1.3 billion tonnes) of global steel production

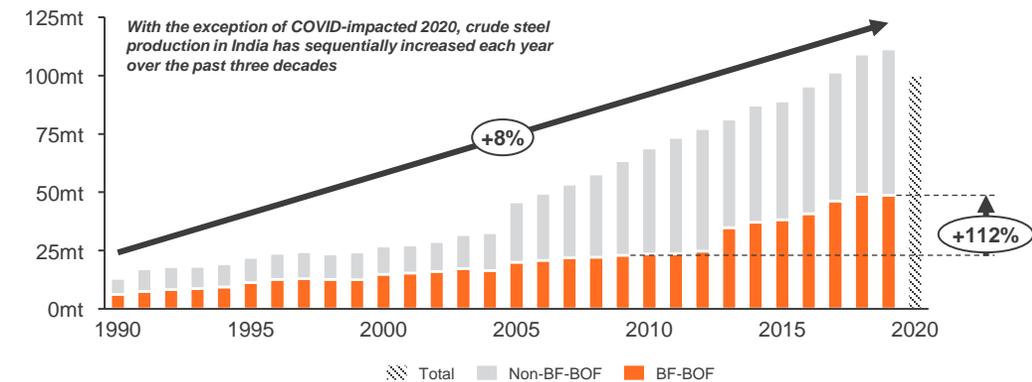
Apparent Steel Use (Crude Steel Equivalent) per capita | GDP per capita: 2019<sup>1</sup>



Global Crude Steel Production | Blast Furnace-Basic Oxygen Furnace Share<sup>3</sup>



India: Crude Steel Production (By Method)<sup>4</sup>



1. GDP (Purchasing Power Parity; international dollars) – International Monetary Fund, Population - International Monetary Fund, Apparent Steel Usage & Apparent Steel Use per Capita – World Steel Association

2. South East Asia (Select nations): Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam

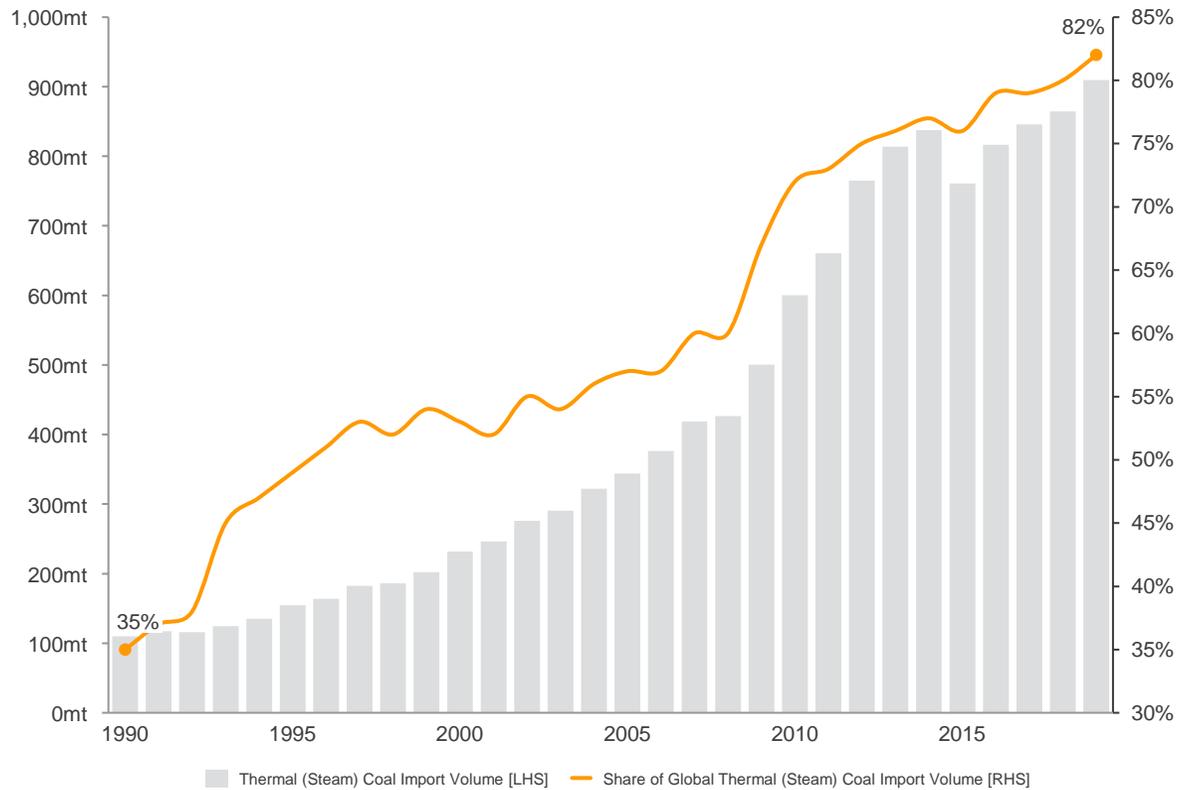
3. World Steel Association

4. World Steel Association. 2020 production split by method not available

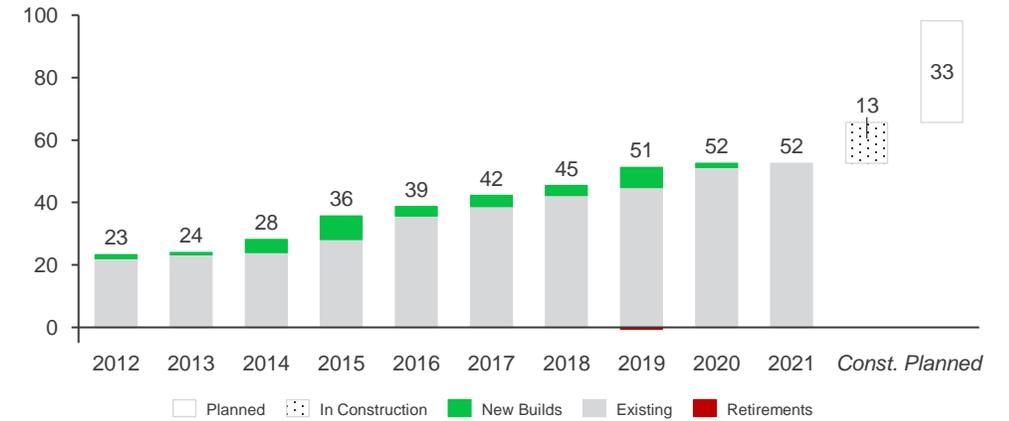
# Thermal coal market

From a share of just 35% in 1990, Asia currently comprises over 80% of the import market. In 2020, 98% of Australian thermal coal export volume was destined for this region

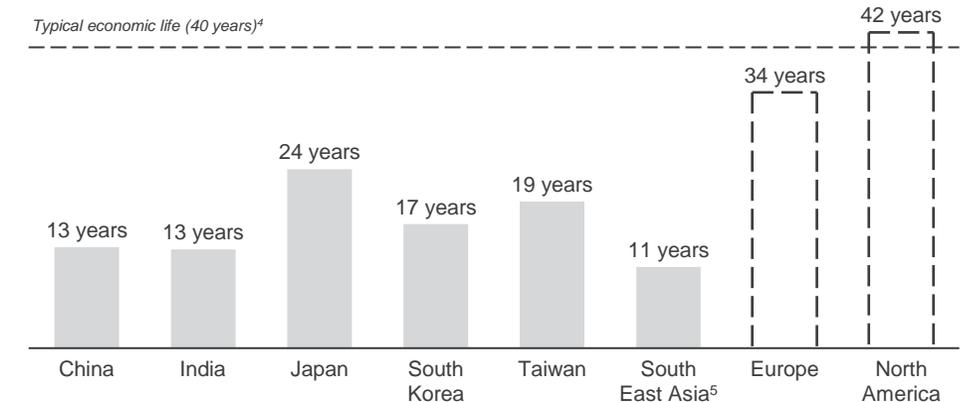
Asia: Thermal (Steam) Coal Import Volume | Share of Global Thermal (Steam) Coal Import Volume<sup>1</sup>



South East Asia (ex-Indonesia): Coal-Fired Generation Capacity (GW)<sup>2</sup>



Average Age of Coal-Fired Electricity Capacity<sup>3</sup>



1. International Energy Agency, Coal Information 2020. Thermal (Steam) includes anthracite and bituminous/subbituminous thermal coal

2. S&P Global Market Intelligence World Electric Power Plants Database (March 2021)

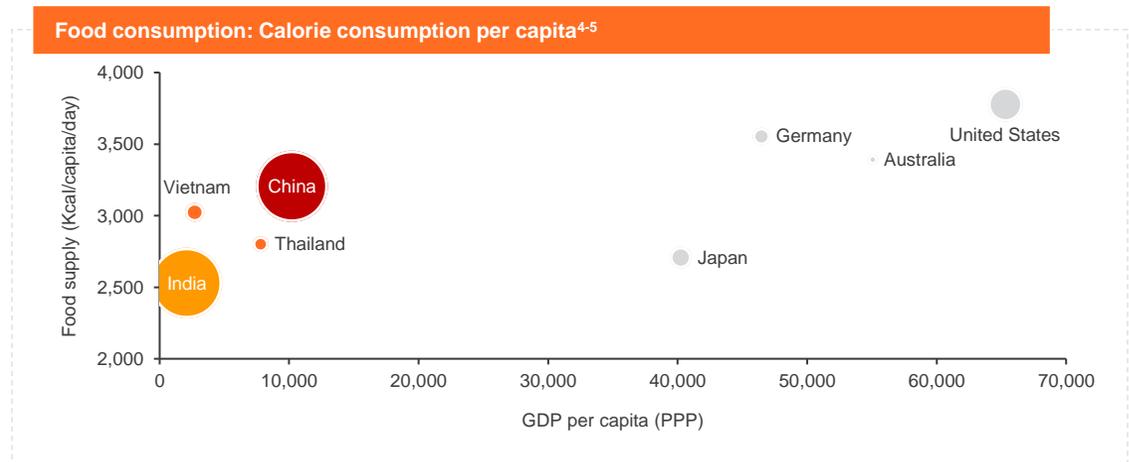
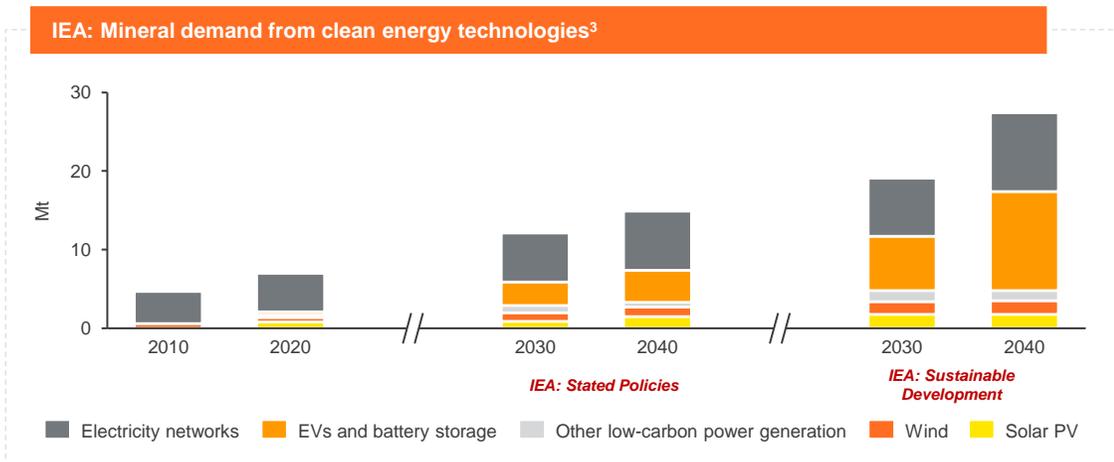
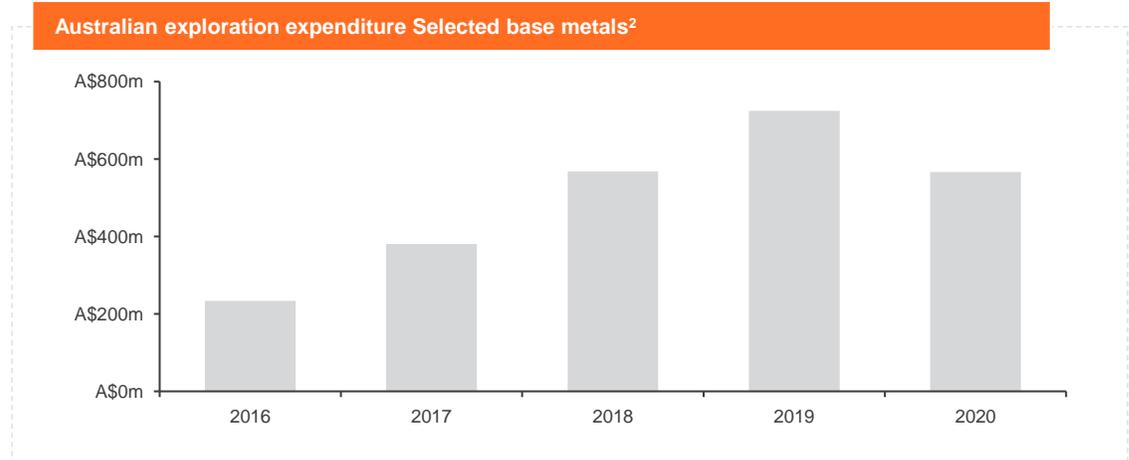
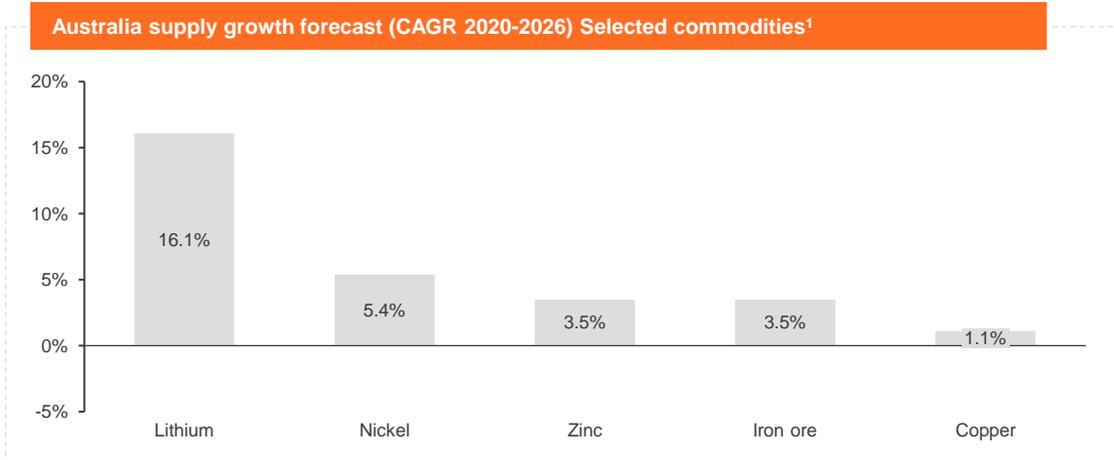
3. S&P Global Market Intelligence World Electric Power Plants Database (March 2021) as at 2021, capacity weighted. Countries ordered by absolute capacity (left to right), followed by South East Asia. Europe and North America added for reference only.

4. International Energy Agency, World Energy Investment 2018

5. South East Asia (excluding Indonesia)

# Bulk market

Demand growth for bulk commodities will be led by the transition to clean energy technologies and rising food consumption



1. Office of the Chief Economist – Research and Energy Quarterly (March 2021)  
 2. Australian Bureau of Statistics (March 2021 dataset), Selected base metals includes: copper, silver, lead, zinc, nickel and cobalt.  
 3. International Energy Agency (IEA) – The role of critical minerals in clean energy transition. Key minerals included: cobalt, copper, lithium, nickel and rare earth elements  
 4. GDP (Purchasing Power Parity; international dollars); International Monetary Fund (2019 data), Population: International Monetary Fund (2019 data)  
 5. Food Supply: Food & Agriculture Organisation of the United Nations (kcal/capita/day, 2018 data)

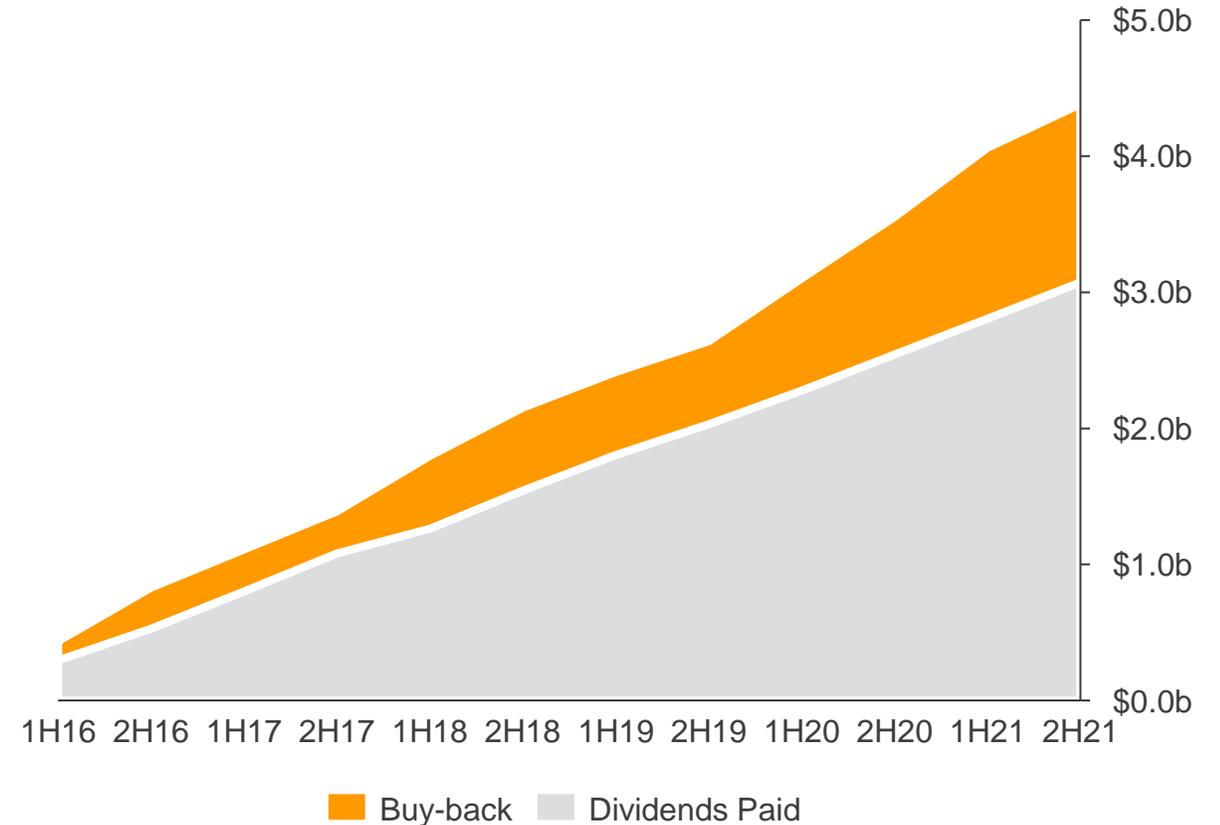
# Our value creation record

Despite changed external environment, Aurizon's cashflows remain stable and the focus on transformation continues

## HIGHLIGHTS

- ✓ Negotiated and executed UT5
- ✓ De-risked the Coal contract book
- ✓ Executed Bulk turnaround and delivered Phase 1 growth
- ✓ Dividends maintained at 100% of Net Profit After Tax for past six years
- ✓ Ongoing cost transformation
- ✓ Corporate restructure providing additional balance sheet capacity
- ✓ Announced Climate Strategy and Action Plan
- ✓ Established Aurizon Port Services

## STRONG HISTORY OF SHAREHOLDER RETURNS<sup>1</sup>



1. Cumulative. Dividends paid is shown during the period where the cash dividend was paid (rather than reporting period that the dividend was based on)



# Strategic Objectives

# Investor Day objective

Share our confidence in Aurizon's long-term outlook

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## CASH FLOW

Long term **cash flows** resilient in multiple coal volume scenarios

### COAL and NETWORK

Detailed view of **long-term demand drivers**

### BULK

**Expanded potential market opportunity** and Aurizon's position for success

### GROUP CAPITAL LEVERS

**Flexibility to changing demand** with multiple redeployment opportunities

# Focus of our businesses

Each Aurizon Business Unit has a unique focus, but all are aligned to enterprise objectives

## COAL

- › Continue transformation and productivity push
- › ROIC and FCF focus for management
- › Prudent capital investment based on scenario analysis



## BULK

- › Growing markets and new adjacencies
- › Revenue and earnings growth focus
- › Attractive opportunities to deploy capital (and redeployment from Coal)



## NETWORK

- › Embed UT5 for regulatory certainty
- › Enhance supply chain efficiency
- › Reduce costs and improve throughput



## ENTERPRISE

- › Capital efficiency to support shareholder returns and accretive growth
- › Improve supply chains to support robust long term demand for key commodities

# Coal demand scenarios

Aurizon uses six scenarios to test fleet capacity, capital investments and haulage opportunities

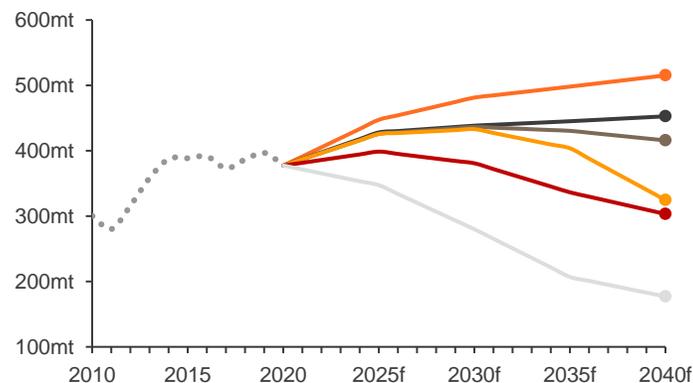
## OUR PROCESS

- › We form a view on the future of coal through our internal *Strategy in Uncertainty* framework
- › Scenarios are built on fundamental drivers of economic growth, global power generation mix, steel production and investment in new supply
- › Scenarios are reviewed regularly and produce a range of outcomes over 20 years. However, modelling indicates positive annual growth rates for five of six scenarios in the first decade

## OUR SIX SCENARIOS

- Commodity Strong
- Current Economics
- Port Constrained Australia
- Mine/Regulatory Constrained Australia
- Carbon Constrained Asia
- Rapid Decarbonisation

Australia: Coal Export Volume (million tonnes)



## SCENARIO INFORMATION

- › Scenarios and associated free cash flow modelling used in this presentation (and transcript) are based on current information detailed on slides 22-33 and the appendix
- › There are inherent limitations with scenario analysis and it is difficult to predict which, if any, of the scenarios might eventuate
- › The scenarios are not predictions or forecasts and do not constitute definitive outcomes for Aurizon
- › We do not assign probabilities and future performance may be outside of the range of the scenarios and associated free cash flow modelling presented
- › We have relied on assumptions that may not prove to be correct and they may not eventuate. The scenarios and associated free cash flow modelling may be impacted by additional factors to those assumed by us

# Our strategic aim

Resilient Network and Coal business supporting Bulk growth and shareholder returns

## UNDER THE SCENARIOS TESTED, MODELLING INDICATES RESILIENT AVERAGE ANNUAL FREE CASH FLOW OVER 20 YEARS<sup>1</sup>



### Resilient coal and network businesses

Safety, cost, productivity and capital focus supports Bulk growth



### Growing bulk business with new markets

Our aspiration to achieve 20-25% market share in 10 years within a ~\$1.25bn market profit pool would imply ~\$250-300m EBIT<sup>2</sup>



### Evolving mix reduces thermal coal exposure

Targeted bulk growth would result in revenue from thermal coal falling to less than 20% of Above Rail portfolio by 2030

1. Modelled average annual Free Cash Flows of between \$500m and \$650m. Figures are in nominal Australian dollars for the period to FY40. Aurizon uses six Strategy in Uncertainty scenarios to inform planning processes. As noted on slide 2 these are scenarios (and associated cash flow modelling) not predictions or forecasts and do not constitute definitive outcomes for Aurizon. It is difficult to predict which, if any, of these scenarios might eventuate. Further details of the scenarios, assumptions and levers to model free cash flow are described in detail on slides 22-33

2. Market share opportunities assume Aurizon secures a portion of an available range of organic and inorganic growth. There are no guarantees that Aurizon will secure any or all growth opportunities

# Bulk market opportunity

Bulk accounts for 32% of above rail revenue – new bulk markets are not correlated to coal demand and provide the potential to double Bulk’s EBIT over ten years

**ESTIMATED MARKET SIZE: \$1.25BN in 2030**

OUR ASPIRATION TO ACHIEVE 20-25% MARKET SHARE WOULD IMPLY \$250-300M AURIZON BULK EBIT<sup>1</sup>

## Bulk Rail Market

- › Traditional Aurizon market
- › Strong presence in WA and QLD
- › Additional addressable volumes have increased estimated market size by ~\$100m
- › Aurizon’s market share ~33%

Estimated market EBIT  
**\$350m**

+

## New Markets

- › Customers want end-to-end solutions
- › Value from integration in a fragmented market
- › Significantly larger than rail:
  - Road and Coastal Shipping to support Rail
  - Port Services
  - Rail Maintenance

Estimated market EBIT  
**\$600m**

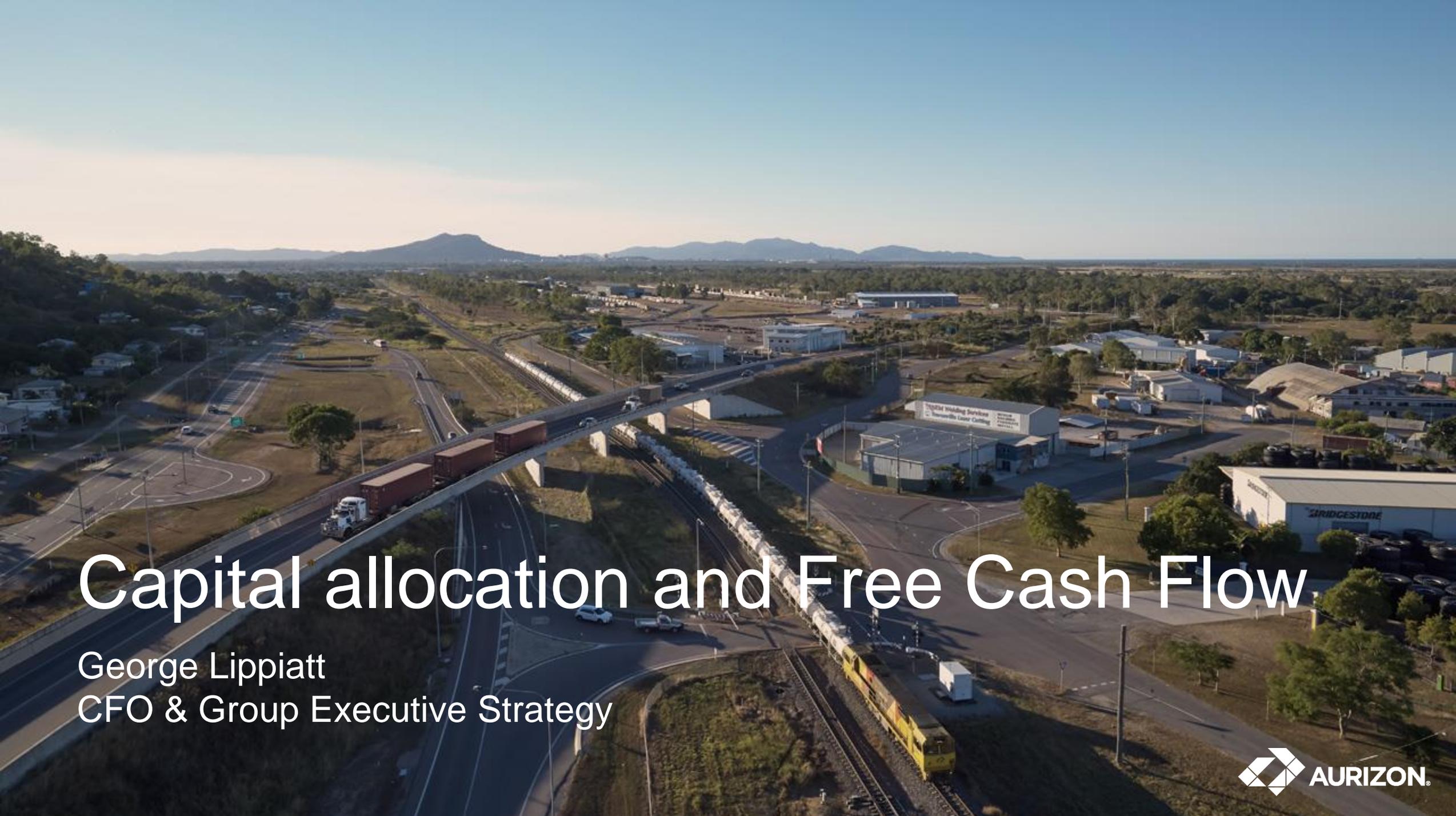
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## Growth

- › Demand for bulk commodities benefits from strong tailwinds:
  - Economic growth
  - Infrastructure development
  - Food consumption
  - Battery development
  - Energy transition

Estimated market EBIT  
**\$300m**

1. Market share opportunities assume Aurizon secures a portion of an available range of organic and inorganic growth. There are no guarantees that Aurizon will secure any or all growth opportunities.

An aerial photograph of an industrial and transport hub. A multi-lane highway with an overpass carries several red semi-trailers. Below the highway, a railway line features a yellow locomotive pulling a train. The area is filled with various industrial buildings, including one with a 'BRIDGESTONE' sign and another with 'Industrial Welding Services' and 'Nonmetallic Laser Cutting' signs. The background shows a clear blue sky and distant mountains.

# Capital allocation and Free Cash Flow

George Lippiatt  
CFO & Group Executive Strategy

# Context

FY2021 has highlighted Aurizon's financial resilience

## FY2021<sup>1</sup>

- › Performance inline with \$870-910m guidance despite coal volume softness
- › Strong Free Cash Flow forecast of ~\$700m
- › Interim dividend maintained at 100% of NPAT
- › Supportive debt markets enabling maturity profile to be extended



## FUTURE

- › Scenario outcomes applied to inform long-term decision making
- › Resilience of free cash flow generation tested under a wide range of volume scenarios<sup>2</sup>
- › Fleet supports long-term customer demand and mix change towards Bulk via ability to cascade coal locomotives
- › Principal focus on capital productivity (ROIC) and Free Cash Flow

**Continued discipline in capital deployment to support shareholder returns**

*Over \$4 billion returned to shareholders over past six years*

1. Subject to audit and normal year-end processes. ~\$700m FCF includes \$100m net proceeds from sale of Acacia Ridge (refer slide 33)

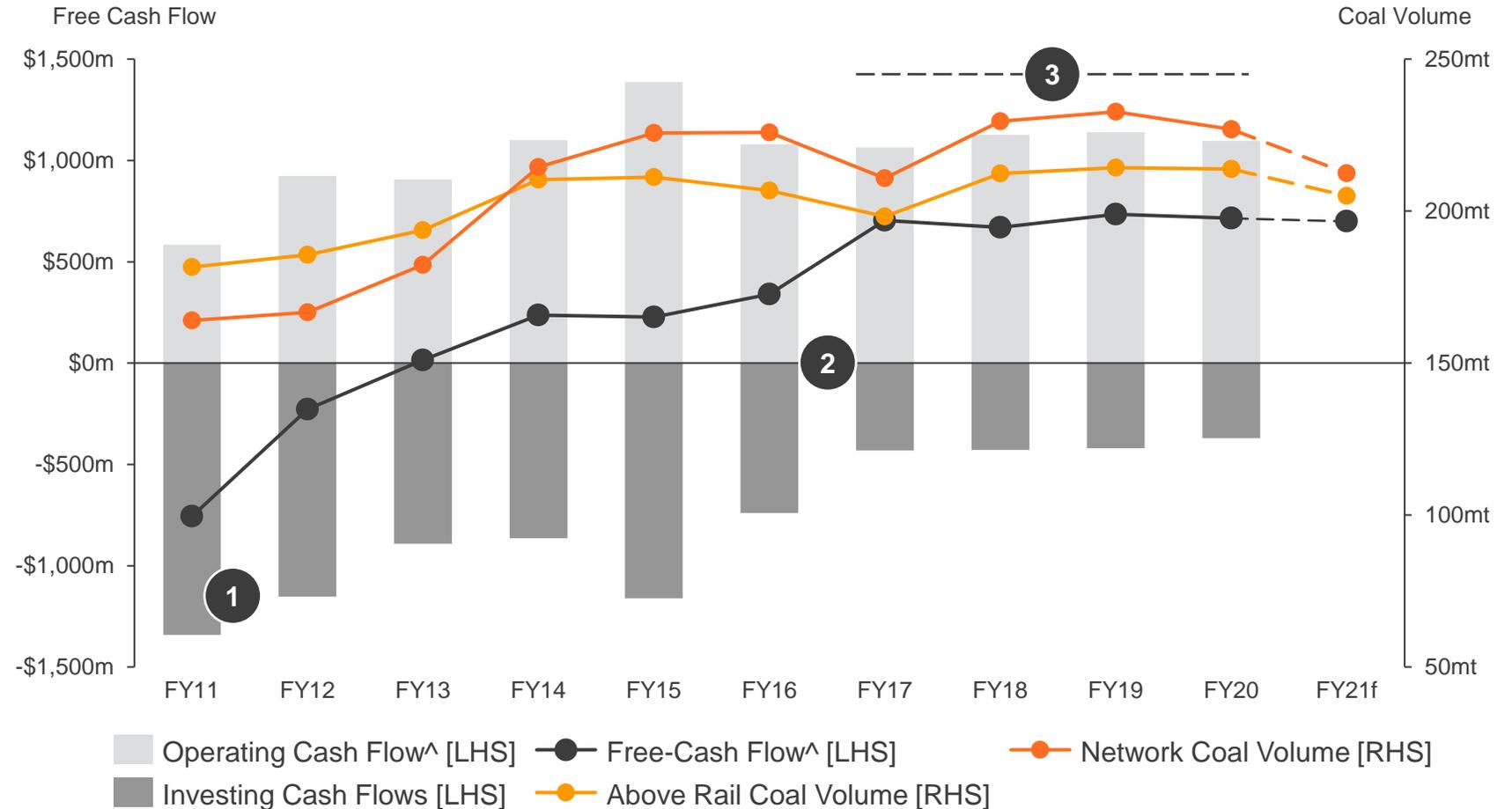
2. Aurizon uses six Strategy in Uncertainty scenarios to inform planning processes. As noted on slide 2 these are scenarios (and associated cash flow modelling) not predictions or forecasts and do not constitute definitive outcomes for Aurizon. It is difficult to predict which, if any, of these scenarios might eventuate. Further details of the scenarios, assumptions and levers to model free cash flow are described in detail on slides 22-33. Estimated average annual free cash flow range is \$500-650m over 20 years under all scenarios

# Historical Free Cash Flow

Recent cash flows have been stable following a post IPO investment cycle

## KEY MESSAGES

- 1 Post-IPO investment to support volume growth
- 2 Capital discipline and operational efficiency improvement
- 3 FCF has been stable and resilient from FY17



^After interest payments

# Aurizon's Strategy in Uncertainty (SiU) framework

SiU uses scenarios to test market drivers and evaluate capital, fleet and haulage opportunities

## OUR APPROACH

- > Assess fundamental drivers of seaborne demand for metallurgical and thermal coal
- > We also consider more subjective factors, such as government policy and trade considerations
- > Assess Australian supply considering current and future production
- > Scenarios also include Bulk commodity outlook to provide an integrated Group view

## STRATEGY IN UNCERTAINTY: KEY DRIVERS

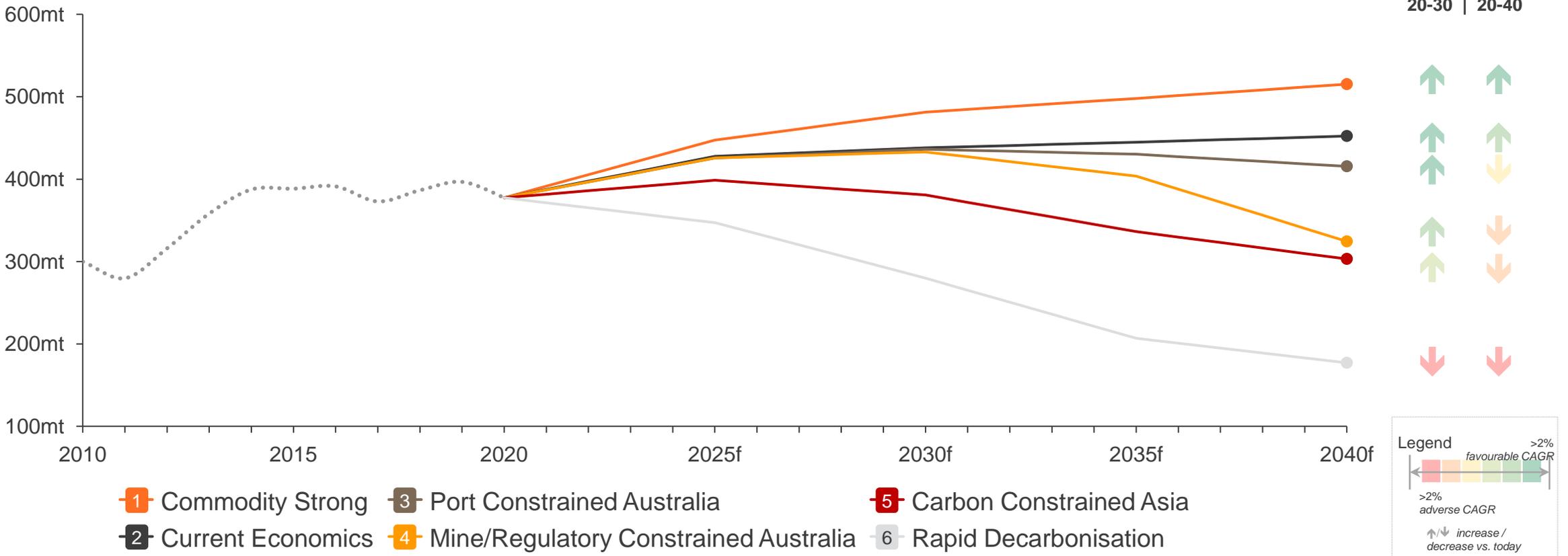
Metallurgical coal demand	Thermal coal demand	Australia coal supply	Australia Bulk demand
GDP	GDP	Operating coal mine production	Infrastructure development
Climate policy	Climate policy	Trade flows	Food consumption
Crude steel production	Energy intensity	Export infrastructure	Energy transition
Scrap availability	Energy generation and capacity mix	Global competitiveness	Australia mine projects pipeline
Steel production method	Coal-generation fleet pipeline	Domestic coal requirements	Australia mine life
Domestic coal supply / import reliance	Domestic coal supply / import reliance	Climate policy	Convertible road volumes (to rail)
		Coal mine project pipeline	

FOCUS OF FOLLOWING PAGES

# Coal volume scenarios<sup>1</sup>

A broad range of potential volume outcomes over 20 years

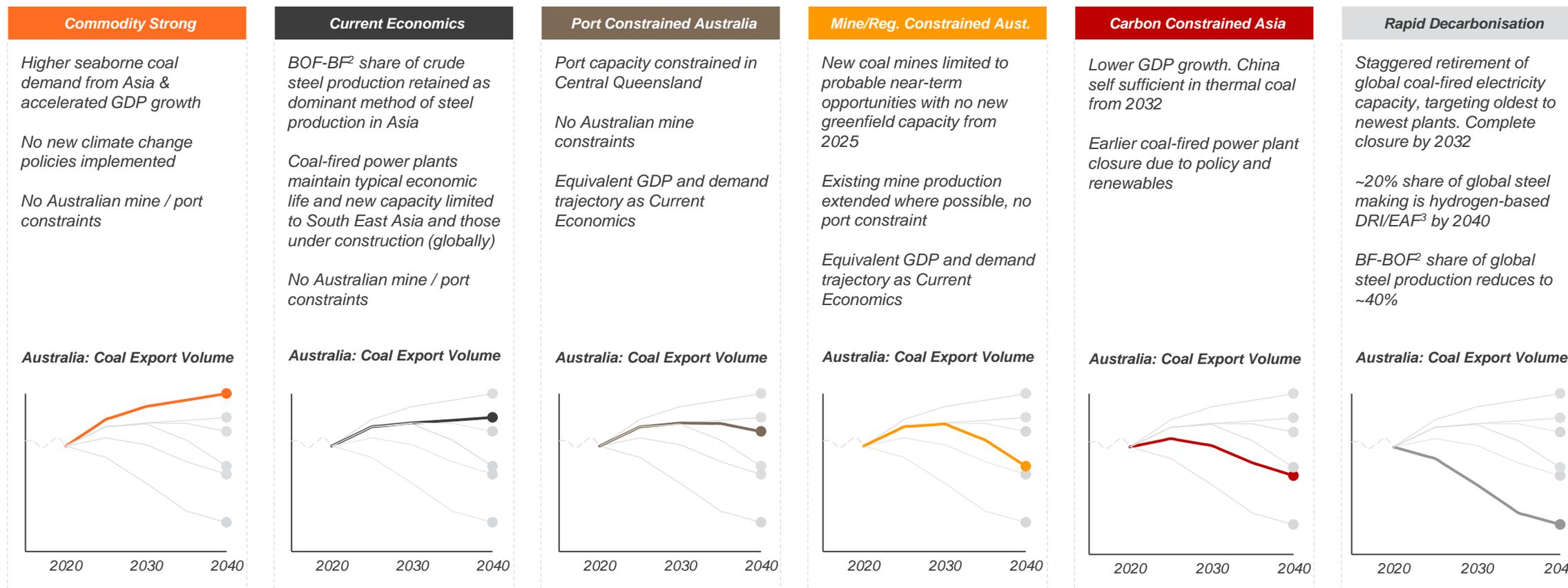
## AUSTRALIA: COAL EXPORT VOLUME (MILLION TONNES)



1. As noted on slide 2 these are scenarios (and associated cash flow modelling) not predictions or forecasts and do not constitute definitive outcomes for Aurizon. It is difficult to predict which, if any, of these scenarios might eventuate. Further details of the scenarios, assumptions and levers to model free cash flow are described in detail on slides 22-33. Additional scenario commentary provided in the appendix.

# Coal volume scenarios<sup>1</sup> (continued)

The six scenarios are based on potential outcomes to drive divergent thinking, enabling the stress-testing of the business

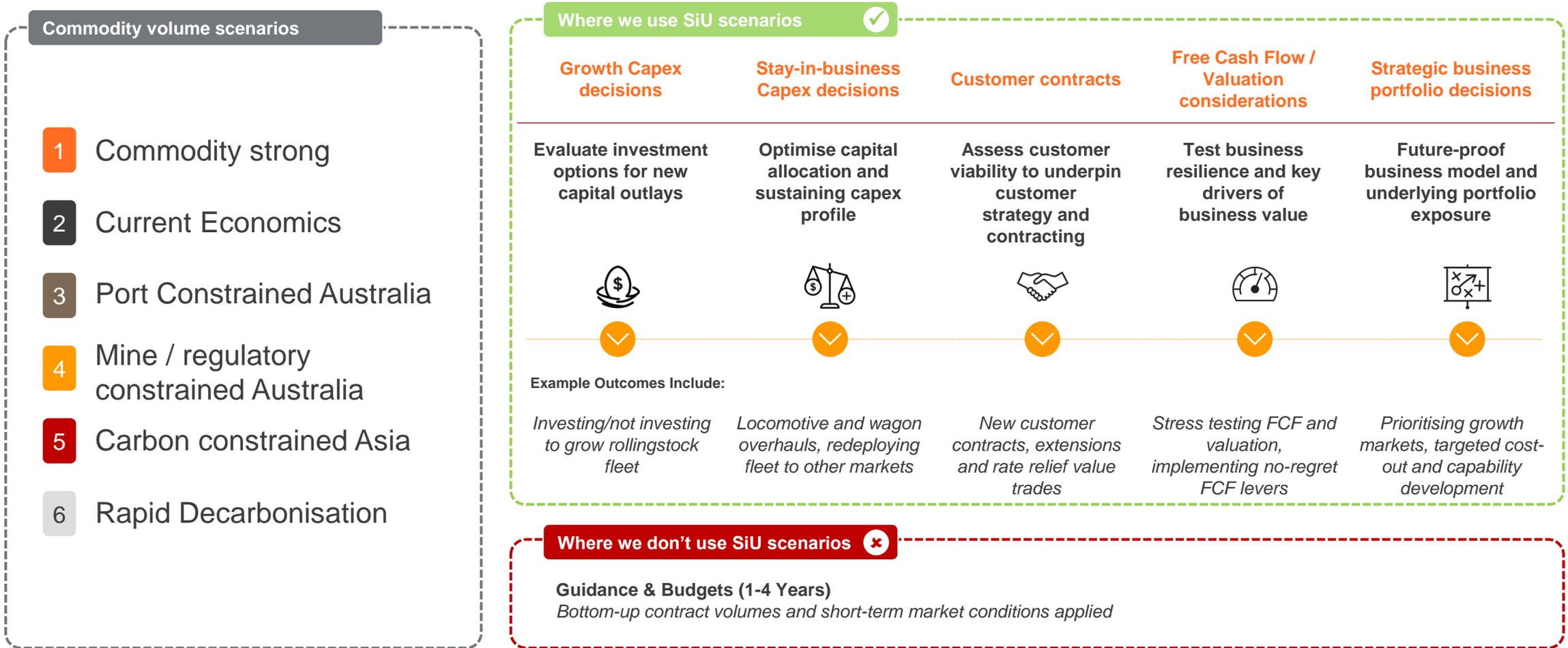


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2. Blast Furnace-Basic Oxygen Furnace  
 3. Direct Reduction Iron/Electric Arc Furnace

# Application of SiU Scenarios

Aurizon draws upon six scenarios to guide decision-making in specific aspects of its business



# Free Cash Flow methodology

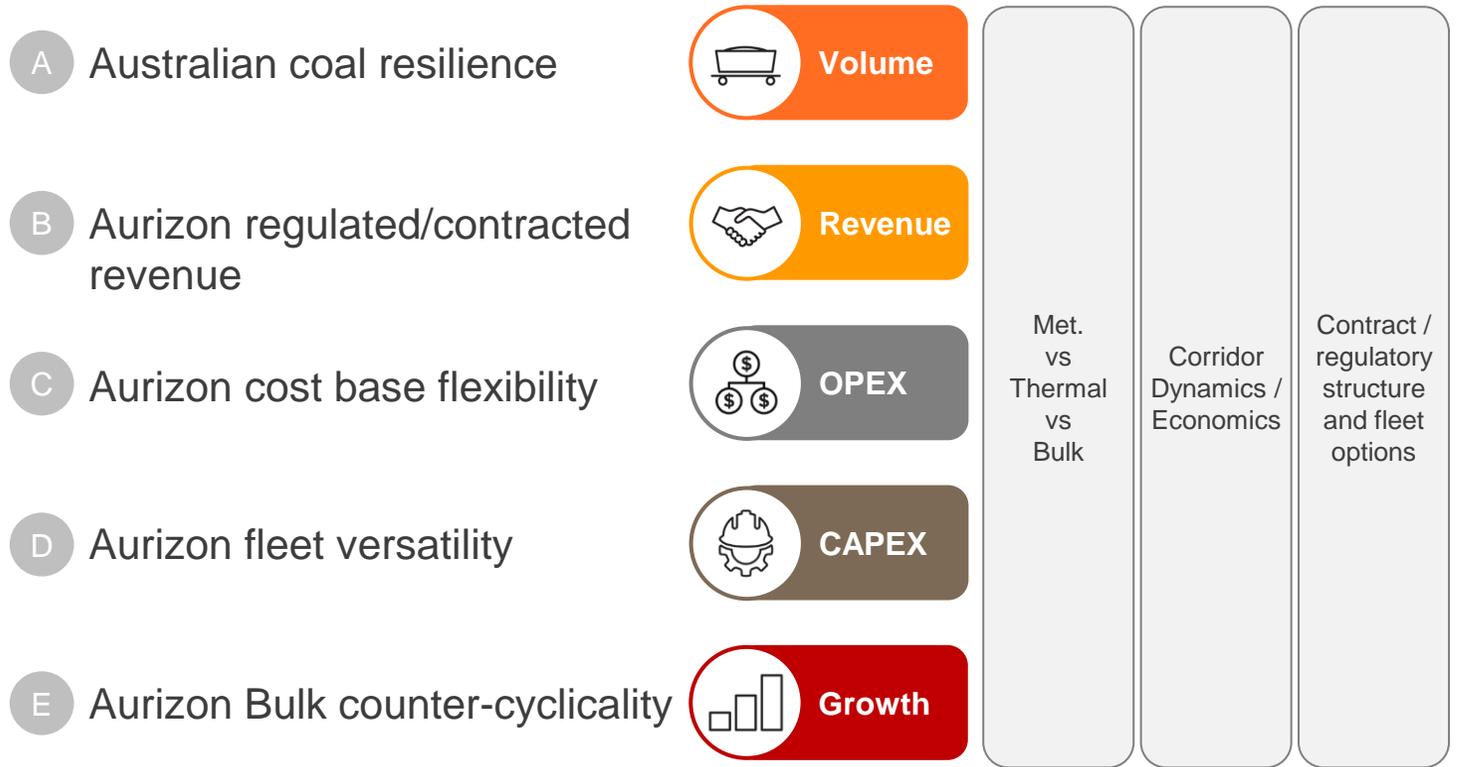
Across our key scenarios, we consider how Aurizon's businesses could be impacted and what Free Cash Flow levers are available

## COMMODITY VOLUME SCENARIOS

- 1 Commodity Strong
- 2 Current Economics
- 3 Port Constrained Australia
- 4 Mine / regulatory constrained Australia
- 5 Carbon Constrained Asia
- 6 Rapid Decarbonisation

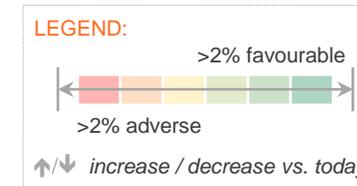
Scenarios 2, 4, 5 & 6 used for FCF modelling

## TRANSLATED INTO FREE CASH FLOW IMPLICATIONS BASED ON MODELLING OF KEY AURIZON BUSINESS CHARACTERISTICS



# Carbon Constrained Asia: Illustrative example

Aurizon Free Cash Flow is resilient<sup>1</sup> in response to global coal volume fluctuations



INDICATIVE IMPACT TO KEY METRICS (BASED ON ASSUMPTIONS MODELLED 2020-2040):  
**CARBON CONSTRAINED ASIA SCENARIO**

			AURIZON					
			MARKET	THERMAL 	MET. 	NETWORK 	BULK 	AZJ GROUP 
Volume	<b>Global Coal Demand (Volumes)</b>	Global Demand Mt (CAGR)	↓					
	<b>Competitive Australian Coal Exports</b>	Aus. Supply Mt (CAGR)	↓					
Revenue	<b>Aurizon Contracted Volumes</b>	AZJ Mt (CAGR)		↓	↑	-	↑	↓
	<b>Aurizon Revenue</b>	AZJ \$ (CAGR)		↓	↓	↑	↑	↑
OPEX	<b>Aurizon Opex</b>	AZJ \$ (CAGR)		↓	↑	↑	↑	↑
CAPEX	<b>Aurizon Capex<sup>2</sup></b>	AZJ \$ (% delta)		↓	↓	↓	↓	↓
	<b>Aurizon Free Cash Flow</b>	AZJ \$ (CAGR)		↓	↑	↓	↑	↓

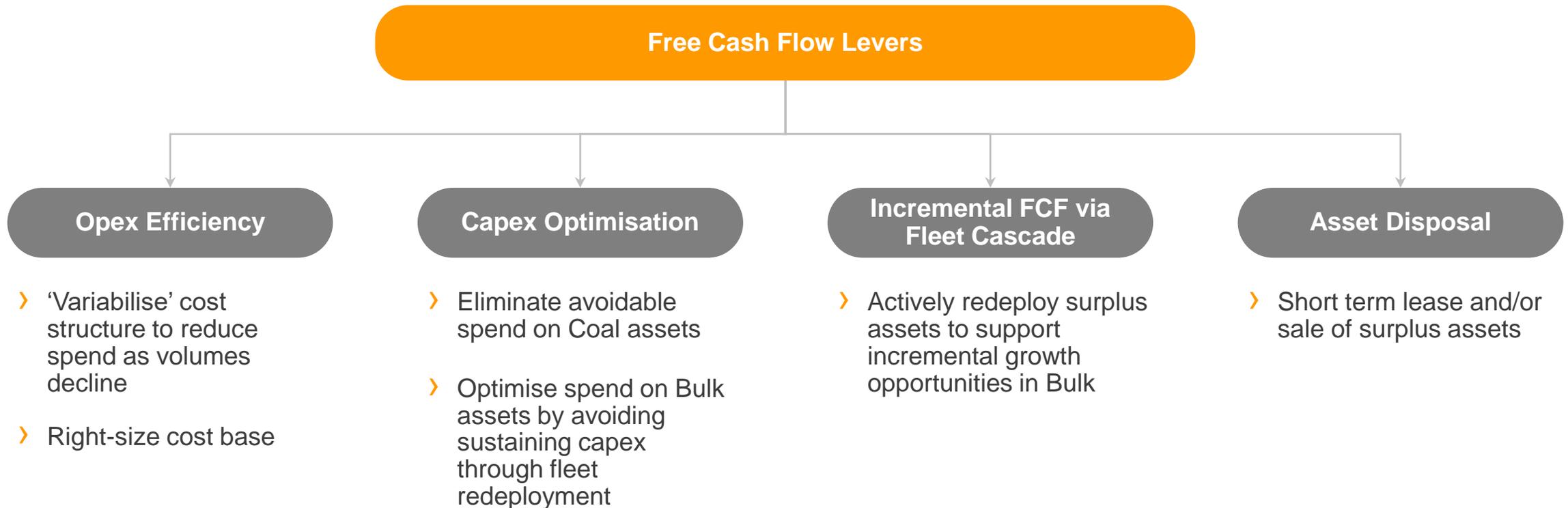
CAGR = Compound Annual Growth Rate

1. As noted on slide 2 these are scenarios (and associated cash flow modelling) not predictions or forecasts and do not constitute definitive outcomes for Aurizon. It is difficult to predict which, if any, of these scenarios might eventuate. Further details of the scenarios, assumptions and levers to model free cash flow are described in detail on slides 22-33

2. Capex CAGR not meaningful, therefore expressed as a % delta in annualised average Capex under the scenario relative to present-day expenditure

# Free Cash Flow levers

Levers are available to seek to preserve Free Cash Flow under volume downside scenarios without compromising safety or reliability



# Free Cash Flow assumptions

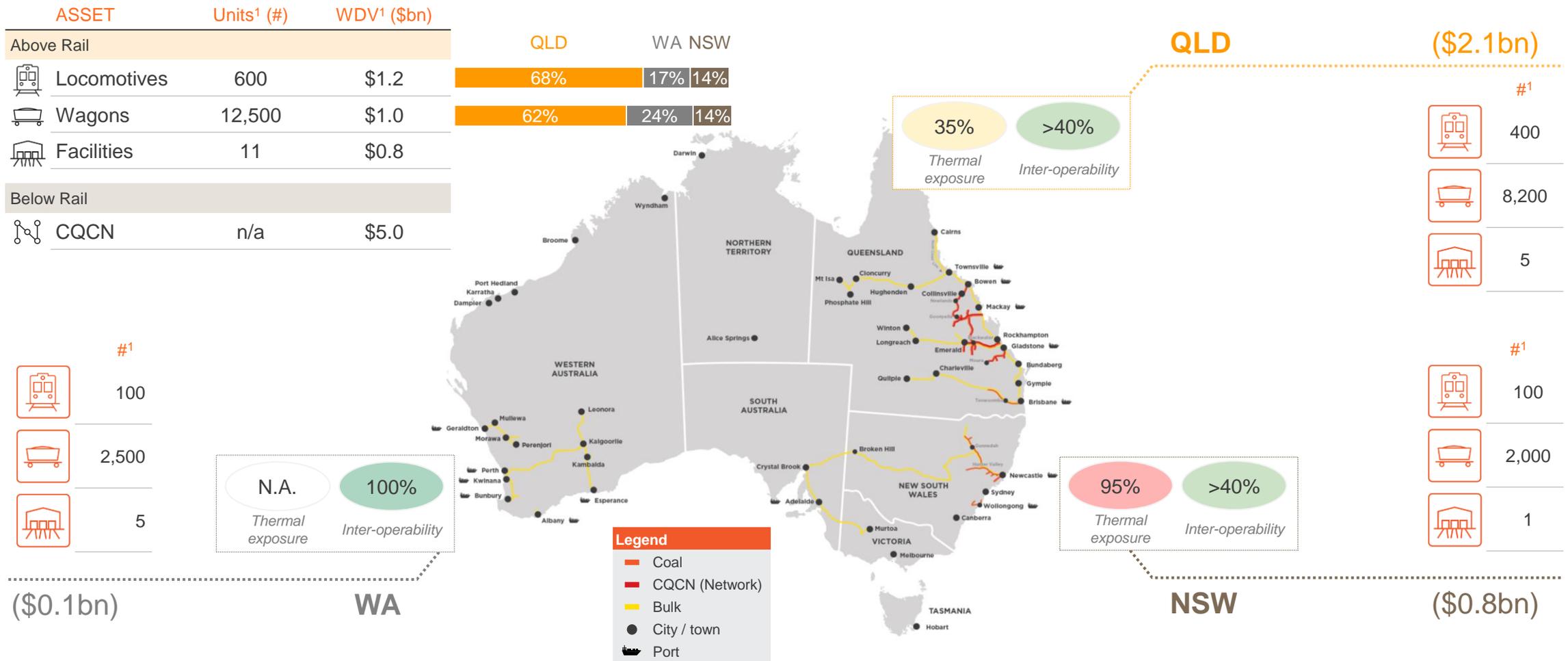
Assumptions have been applied based on Aurizon's business model and current view of our scenarios<sup>1</sup>

FCF DRIVER	ASSUMPTION APPLIED	POTENTIAL UPSIDE	POTENTIAL DOWNSIDE
 <b>Volume</b>	<ul style="list-style-type: none"> <li>Mines at intersection of supply-demand equilibrium removed immediately from tonnage profile</li> </ul>	<ul style="list-style-type: none"> <li>Mines continue to operate at &lt;100% with ramp-down over subsequent year(s)</li> </ul>	<ul style="list-style-type: none"> <li>Weaker system economics place further downward pressure on volumes</li> </ul>
 <b>Revenue</b>	<ul style="list-style-type: none"> <li>No active market share adjustments</li> <li>Reduction in haulage tariffs, particularly downside scenarios</li> <li>Network regulatory model remains, WACC increases from FY27 based on forward curve</li> </ul>	<ul style="list-style-type: none"> <li>Competitors withdraw or fail to make commensurate investments in capacity</li> <li>Increased WACC from higher risk free rates or other inputs</li> </ul>	<ul style="list-style-type: none"> <li>More competition drives over-capacity and further pressure on margins</li> <li>Risk free rates remain low maintaining low WACC</li> <li>Regulatory model does not hold</li> </ul>
 <b>OPEX</b>	<ul style="list-style-type: none"> <li>Operating ratio held flat</li> <li>Productivity savings limited by growing diseconomies of scale (as volumes decline)</li> </ul>	<ul style="list-style-type: none"> <li>Cost structures move towards North American Class 1 operators (~65%)</li> <li>Future automation benefits</li> </ul>	<ul style="list-style-type: none"> <li>Further diseconomies of scale limit cost-savings</li> <li>Higher cost of doing business (e.g., compliance, procurement) in Rapid Decarbonisation</li> </ul>
 <b>CAPEX</b>	<ul style="list-style-type: none"> <li>Above Rail Capex elasticity with volumes &lt; 0.8 in all scenarios (i.e., % reduction in Capex always less than % reduction in volume)</li> </ul>	<ul style="list-style-type: none"> <li>Capex elasticity closer to 1:1</li> </ul>	<ul style="list-style-type: none"> <li>Capex elasticity less than 0.5:1</li> <li>Lack of Bulk Rail opportunities to absorb re-deployable coal fleet</li> </ul>
 <b>Growth</b>	<ul style="list-style-type: none"> <li>Small incremental market share capture of Bulk Rail market (aided by fleet cascade from coal)</li> </ul>	<ul style="list-style-type: none"> <li>Capture higher share of redefined Bulk Rail and Non-Rail markets</li> </ul>	<ul style="list-style-type: none"> <li>Bulk BU materially underperforms on growth and margins over FY22-40</li> </ul>
 <b>Other</b>	<ul style="list-style-type: none"> <li>Gearing held flat with no step-change in credit margin</li> </ul>	<ul style="list-style-type: none"> <li>Reduce credit margin based on potential for new sources of financing</li> </ul>	<ul style="list-style-type: none"> <li>Reduce credit rating and apply ESG related debt risk premium</li> </ul>

1. As noted on slide 2 these are scenarios (and associated cash flow modelling) not predictions or forecasts and do not constitute definitive outcomes for Aurizon. It is difficult to predict which, if any, of these scenarios might eventuate. Further details of the scenarios, assumptions and levers to model free cash flow are described in detail on slides 22-33. Additional scenario commentary provided in the appendix

# Fleet cascade provides asset base flexibility

Coal fleet most exposed to thermal coal is most useful for our Bulk growth ambitions

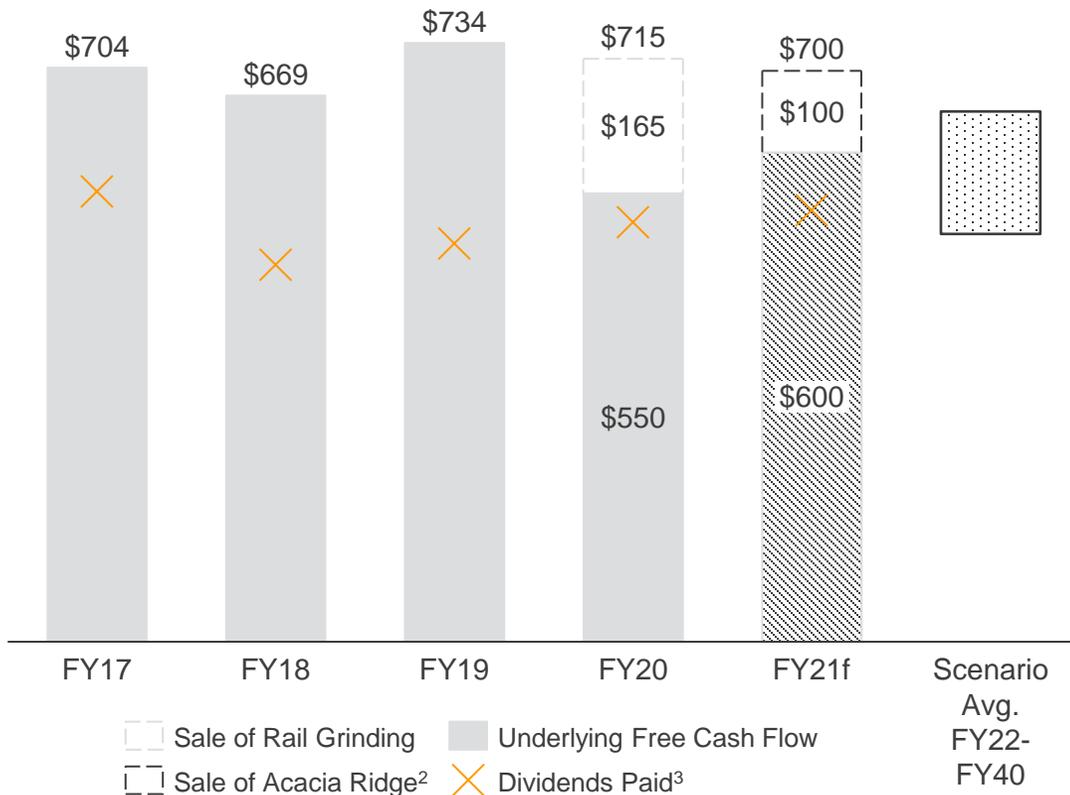


1. For simplification, rounded numbers have been provided for assets and Written Down Value (WDV)  
 2. Units exclude wagons held in storage

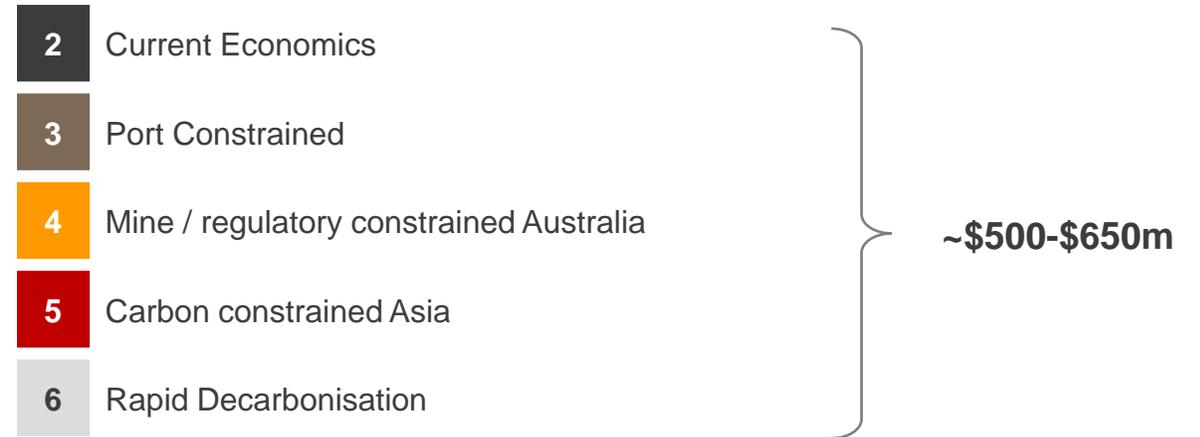
# Free Cash Flow scenarios<sup>1</sup>

Under the scenarios tested, modelling indicates average annual free cash flow over 20 years of ~\$500-\$650m

## AURIZON FREE CASH FLOW (\$M)



## COAL VOLUME SCENARIO<sup>4</sup>



1. As noted on slide 2 these are scenarios (and associated cash flow modelling) not predictions or forecasts and do not constitute definitive outcomes for Aurizon. It is difficult to predict which, if any, of these scenarios might eventuate. Further details of the scenarios, assumptions and levers to model free cash flow are described in detail on slides 22-33.

2. Net of tax (Rail Grinding tax of \$38m paid in FY21 and Acacia Ridge tax of \$32m paid in FY21)

3. Dividends paid is shown during the period where the cash dividend was paid (rather than reporting period that the dividend was based on)

4. Commodity Strong scenario not modelled in detail but average annual (nominal) cash flows estimated to be greater than \$650m over the period to FY40

# Shareholder returns

Stable cash flows have historically provided certainty on distributions with strong balance sheet providing optionality for capital management or growth

AVERAGE PER YEAR<sup>1</sup>

OPERATING CASH FLOWS

**\$1.1b**



SUSTAINING & GROWTH CAPEX

**(\$0.5b)**



DIVIDENDS (100% PAYOUT)

**(\$0.5b)**



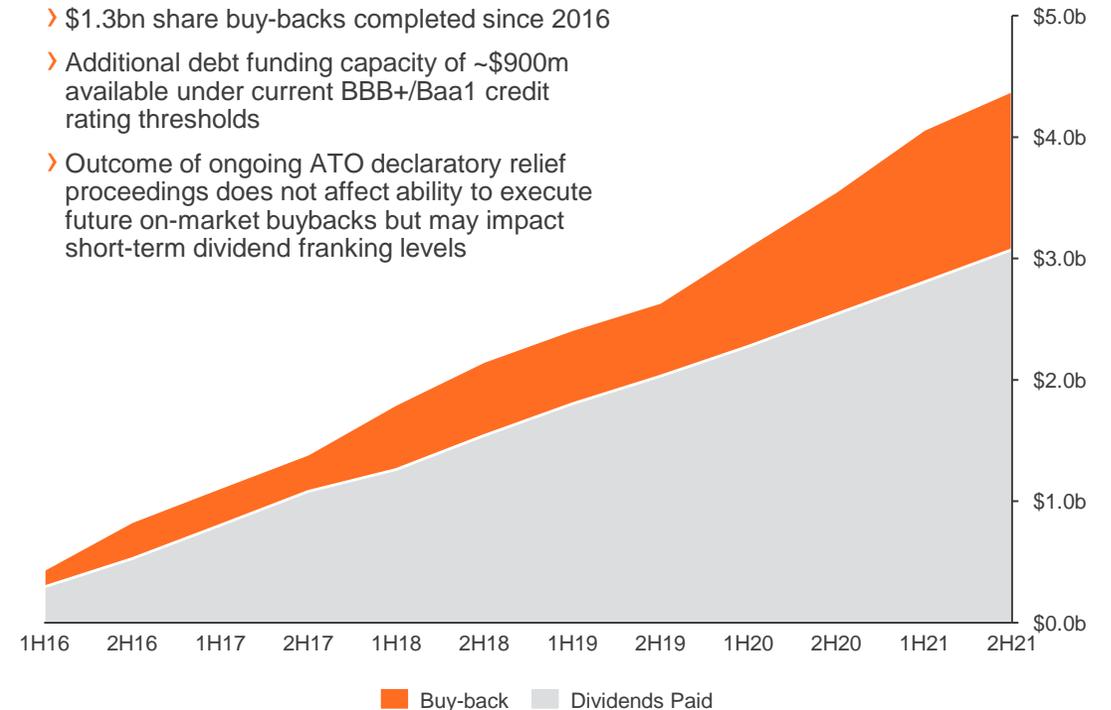
**SURPLUS FREE CASH FLOW**  
(FOR GROWTH OR CAPITAL MANAGEMENT)

**\$0.1b**

## DEMONSTRATED DISCIPLINE TO RETURN CAPITAL WHEN APPROPRIATE

Cumulative Shareholder returns since FY2016 (\$b)<sup>2</sup>

- › \$1.3bn share buy-backs completed since 2016
- › Additional debt funding capacity of ~\$900m available under current BBB+/Baa1 credit rating thresholds
- › Outcome of ongoing ATO declaratory relief proceedings does not affect ability to execute future on-market buybacks but may impact short-term dividend franking levels



1. Average of FY2016-FY2020

2. Dividends paid is shown during the period where the cash dividend was paid (rather than reporting period that the dividend was based on)

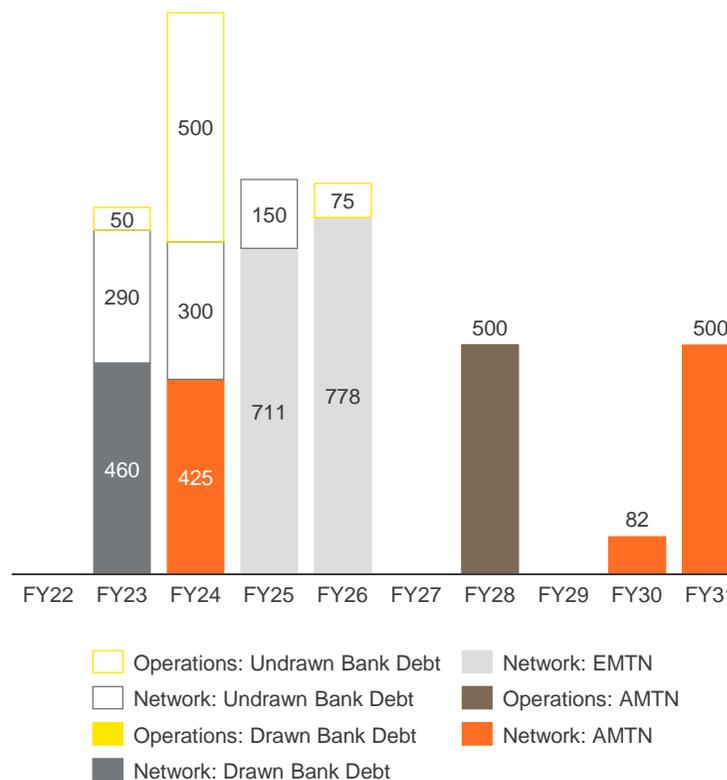
# Funding update

With resilient Free Cash Flow, Aurizon’s credit profile is strong and debt markets remain supportive

## EFFECTIVE RAISINGS

- › **Network:** Issued 10-year, \$500m A\$ Medium Term Note (AMTN) in Sep 2020, with 2.9% coupon
- › **Aurizon Operations:** Issued debut 7-year, \$500m AMTN in March 2021 with 3.0% coupon
- › **Bank debt:** No maturities until FY23 with \$1.5bn in available liquidity as at 31 May 2021

## EXTENDED MATURITY PROFILE<sup>1</sup>



## IMPROVED METRICS

	CURRENT		1HFY20
Weighted average maturity (years) <sup>2</sup>	4.5	↑	4.0
Group interest cost on drawn debt	4.3%	↓	4.5%
Operations & Network Credit Ratings <sup>3</sup>	BBB+/ Baa1	-	BBB+/ Baa1

## INTEREST RATES

- › 89% fixed to end FY2021 and 86% for FY2022-23, floating beyond FY2023 to align with Network WACC reset
- › Interest costs expected to trend lower consistent with hedging profile

1. As at 31 May 2021  
 2. Calculated on drawn debt, excluding working capital facility  
 3. S&P/Moody's

A photograph of an industrial facility, likely a port or refinery, with several large white storage tanks and a prominent mountain in the background. A yellow Aurizon locomotive is pulling a train of grey hopper cars on a set of tracks in the foreground. The sky is clear and blue.

# Bulk Update

Clay McDonald  
Group Executive Bulk

# Growing Bulk

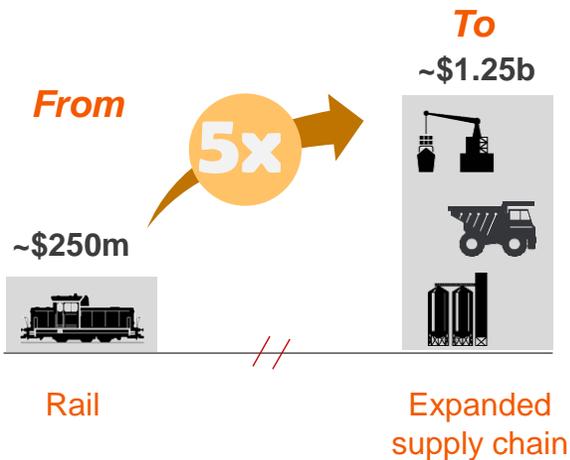
Build off our existing Bulk base and expand across the value chain

Expand across the supply chain

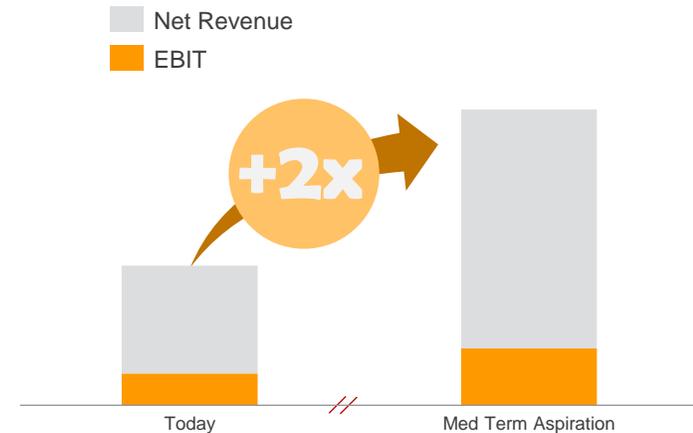
Production-to-port capability to better serve customers

Aspire to double the size of the business

Targeting a larger market<sup>1</sup> (EBIT profit pool)



EBIT growth



1. Refer to additional detail on slide 20

# Well-positioned for growth

Successfully turned the Bulk business around, and the next phase of growth is underway

## Aurizon Bulk EBIT

### Turnaround and Phase 1 growth

- ✓ Cost base optimisation
- ✓ Contract negotiations / variations
- ✓ Incremental rail growth

### Phase 2 growth

- Expanded product mix
- Production-to-port capability
- Services across modes (not just rail)
- Underpinned by safe, agile, efficient operations



# Bulk value chain

Our customers' needs drive our broader focus on Bulk logistics, which we expect to be ~\$1.25bn profit pool in ten years

## Drivers for expansion out from current rail core

Customers increasingly want end-to-end, integrated solutions

Australian and global players are building end-to-end capability

There is value from integration and taking out friction in supply chain steps

Opportunity to aggregate and make the asset base more efficient

## Targeted methodology to estimate profit pools across the heavy haul bulk value chain

Estimated **overall bulk commodity volumes** by commodity type, geography and value chain step

Exclusion of bulk volume considered not addressable (e.g. Pilbara Majors' iron ore)

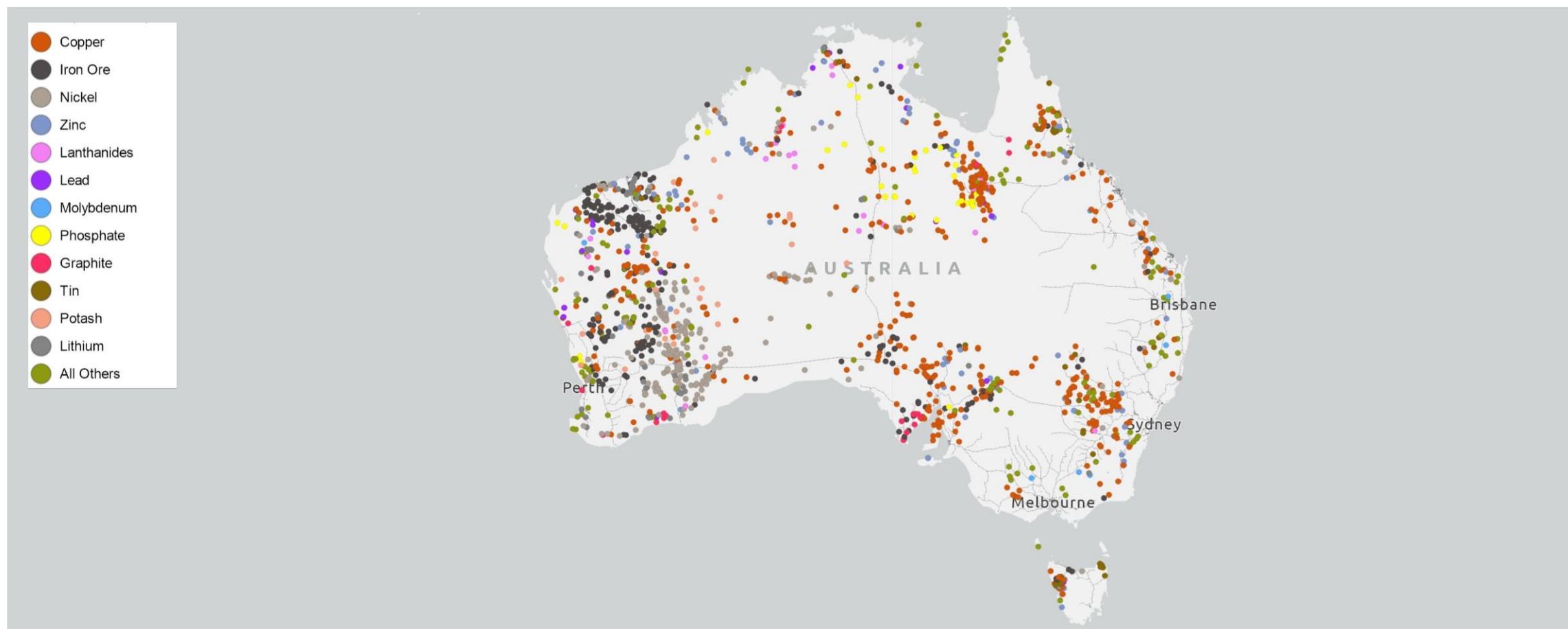
Industry intelligence informed price and margin assumptions by commodity and region to give a **profit pool sizing**

Basin plans informed an aspirational and path-dependent view of **Aurizon's Bulk business size**

~\$1.25bn expected profit pool in FY30

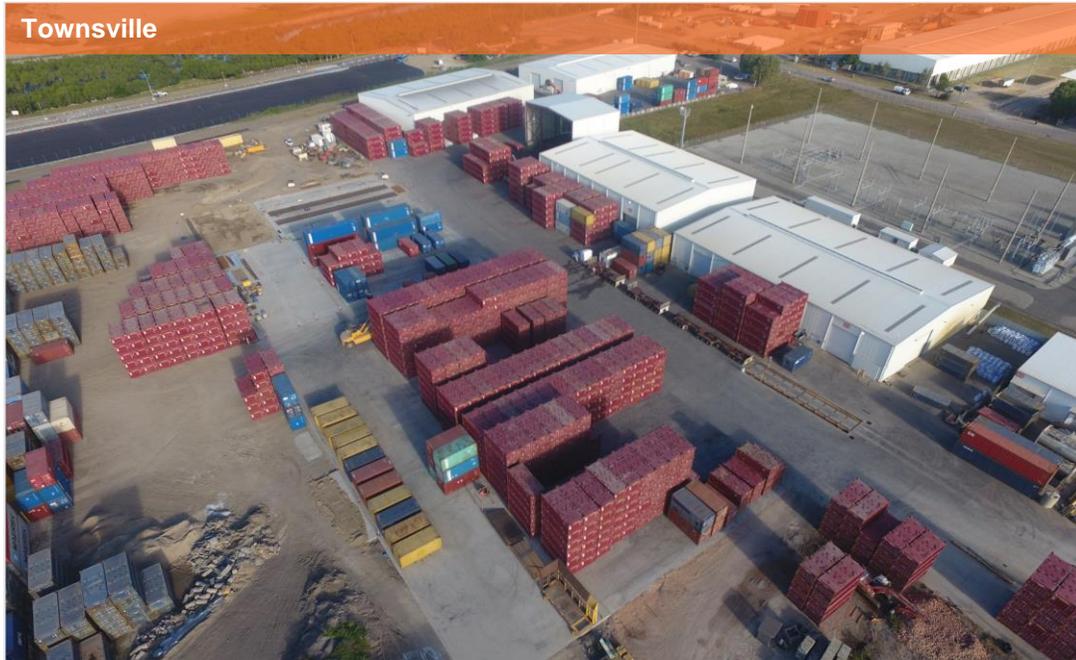
# Bulk: Australian mine projects

There are over 1,400 mine projects<sup>1</sup> across Australia, with copper, iron ore and nickel the dominant commodities



1. S&P Market Intelligence (Mine projects: Commodities – excludes precious metals, Project status – exploration to pre-production)

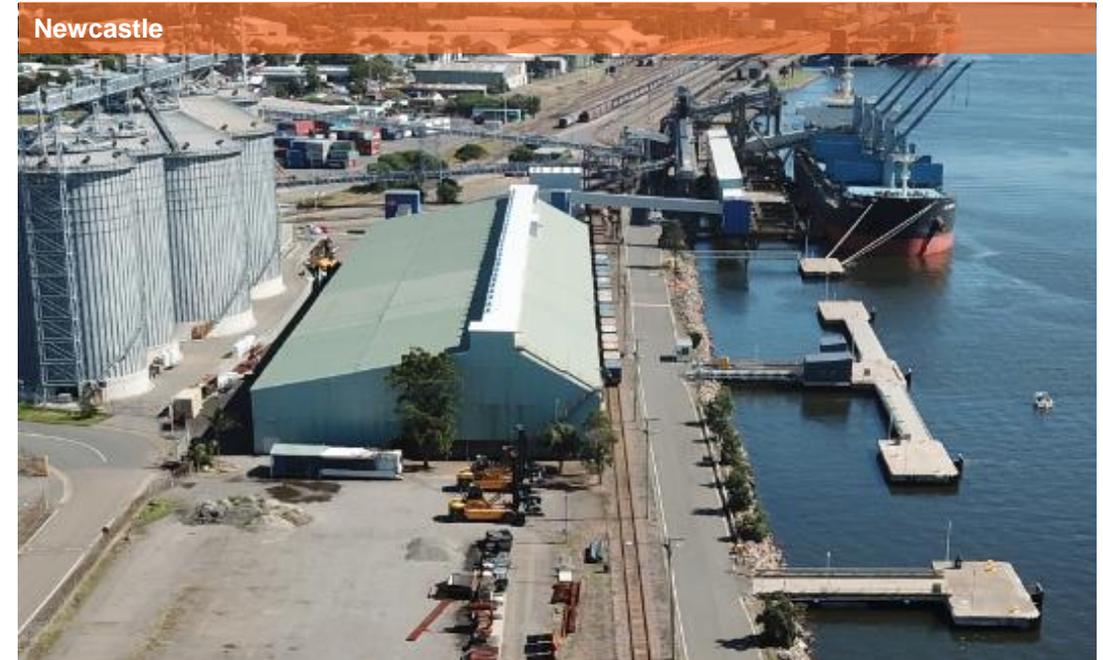
# Aurizon Port Services



**Infrastructure:** Hardstand upgrade nearing completion (100% increase in capacity) and development of unique direct rail access well progressed

**Connected:** Strategically linked to the Mount Isa Minerals province

**Expanded Services:** Connecting port, trucking and storage services to rail



**Simplicity:** Simple operating and labour model that is scalable (currently operating at 50% capacity)

**Connected:** Strategically linked to the Cobar Minerals province of NSW

**Expanded Services:** Connecting port, materials handling and storage services to rail

# Bulk continues to demonstrate agility

Iron Ore: Mineral Resources Limited



**Agile Mobilisation:** Increased fleet leased to MRL including redeployment of coal locomotives from the Hunter Valley

**Operational Flexibility:** Additional mine load point with services now operating to Esperance Port & Kwinana Bulk Terminal

Grain: South East Queensland



- Short term opportunity to deploy stored QLD grain consists
- Flexible labour model
- Clear road to rail strategy

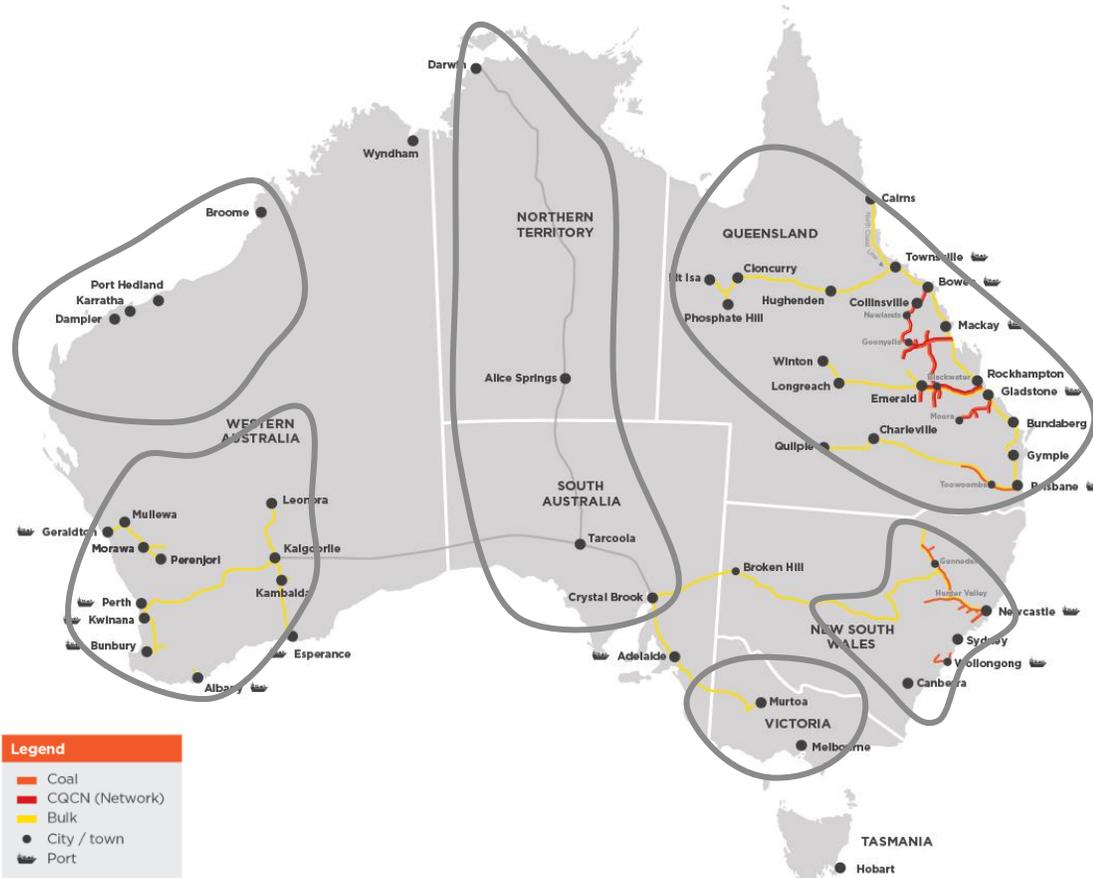
Grain: Western Australia



- Surge capacity mobilised to deliver increased CBH volume in Geraldton region
- Full service Aurizon crewing and fleet solution deployed within weeks

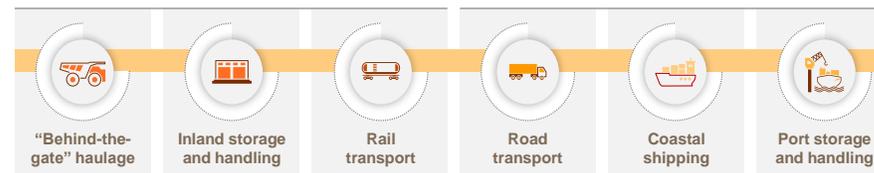
# Grow in a disciplined way

Targeting 10% share of new segments with disciplined capital investment



## We will grow Bulk from our strong geographic presence

- Build on **existing presence** in WA and QLD
- Establish offerings in **new basins** in a prioritised way
- Targeting **~10%** of new heavy haul bulk segments





# Coal Update

Ed McKeiver  
Group Executive Coal

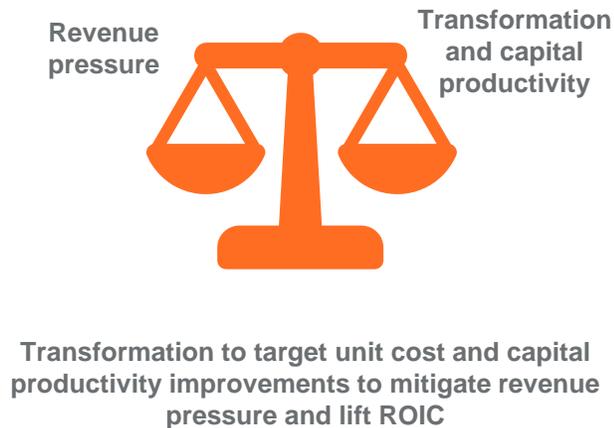
# Coal Haulage Strategy

With a strong contract book, Coal’s mission is to improve ROIC and preserve cash flows while delivering excellent service, safely for our customers

ROIC and cashflow focus

Optimise capital and fleet to strengthen key contracts and open Aurizon wide opportunities

Service Excellence



- Safe & Reliable
- Delivering Customer Value
- Efficient & Sustainable

# Proactive management of contract pipeline

Coal has a secure, long dated contract book, as demonstrated by contract wins announced today

## CONTRACT WINS AND RATES OUTLOOK

**Anglo**

**Contract extension and market share win**

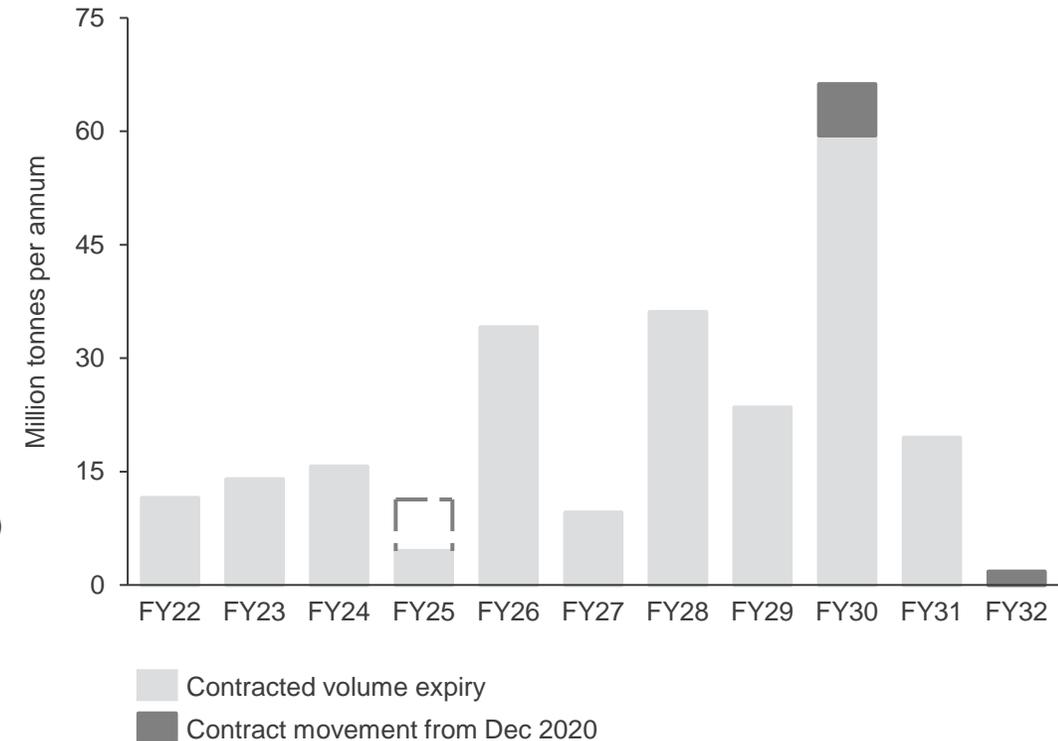
- ✓ Goonyella: new agreement across various mines
- ✓ Blackwater: new agreement for German Creek mine
- ✓ Moura: extension of Dawson mine

**Rates**

**Expected to trend down over near term**

- Contracts ending (New Acland, Stanwell, other Hunter Valley contract)
- Recontracting impacts

## COAL CONTRACT VOLUME EXPIRY BY YEAR<sup>1</sup> AS AT 7 JUNE 2021



1. Announced contract tonnages may not necessarily align with current contract tonnages. Incorporates contract extension options where applicable. Includes immaterial variations to volume/term not announced to market. This represents the forecasted contracted tonnes as at 7 June 2021 and includes nominations, options and other uncertain events that have the potential to cause variance in Aurizon contract tonnes

# Integrated program will transform Safety, Service & Productivity

Coal's Integrated Transformation Plan will continue to safely deliver unit cost and capital productivity improvements to mitigate revenue pressure and lift ROIC

## 1. PRECISION

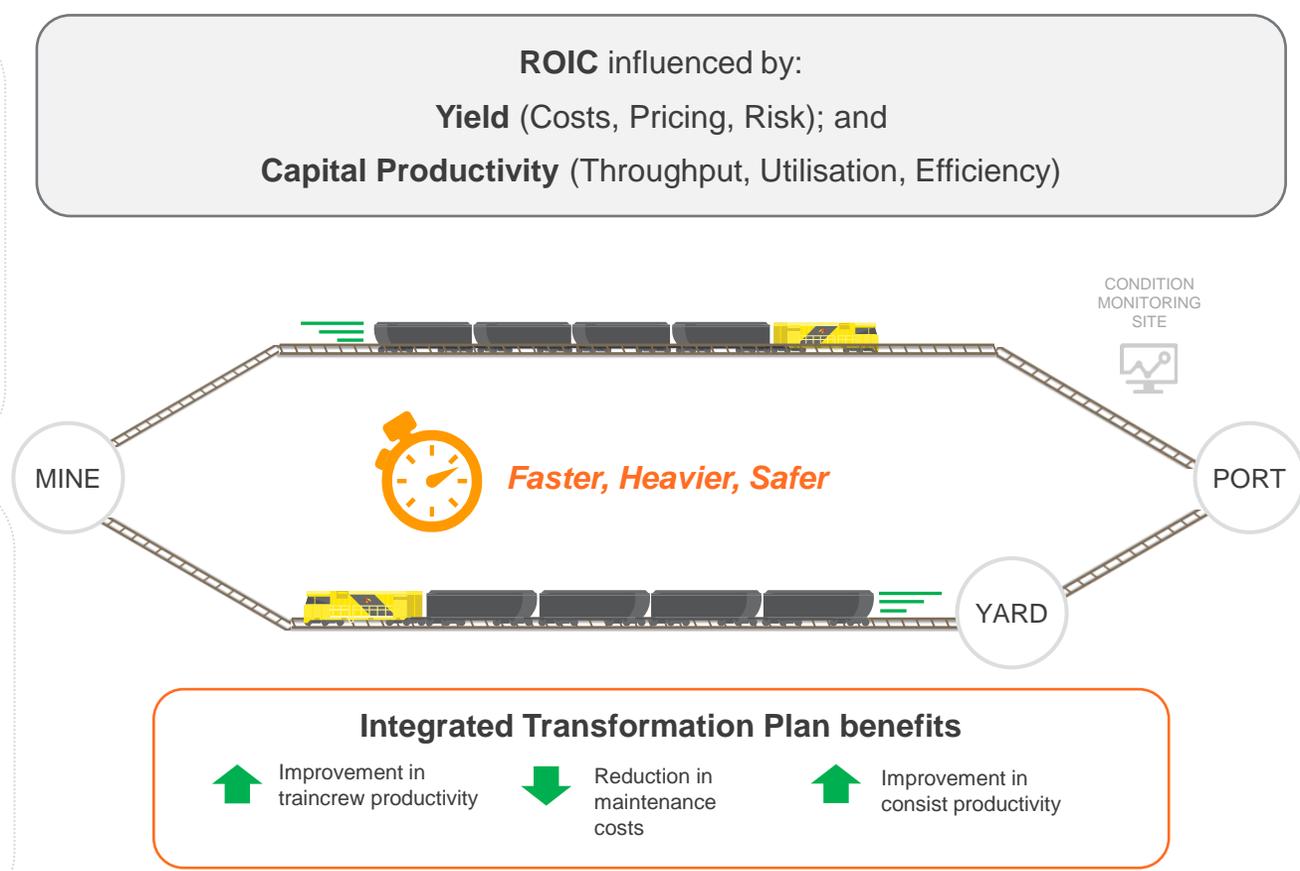
*Fewer trains, more cycles*

- Optimise cycle plans
- On time performance to plan
- Reduced train dwell
- Increased mainline velocity
- Improved crew utilisation

## 2. ASSET MANAGEMENT (ARAM<sup>1</sup>)

*Improved reliability, less spend*

- Reduced failures in traffic
- Condition based maintenance
- Standard work practices
- Component changeout
- Optimised supply chains



## 3. TRAIINGUARD

*Supervisory Braking Control*

- SPAD reduction
- Reduced disruption
- Headway compression
- Pathway to single driver

## 4. TRAINHEALTH

*Real time data capture*

- Improved train handling
- Reduced energy consumption
- Failure prevention
- Faster section run times

1. Above Rail Asset Management

# Precision

Releasing capacity and improving asset productivity in CQCN, Coal has focused on levers that improve yard discipline to deliver time back to the schedule

## CASE STUDY: BLACKWATER

Disciplined focus on value levers in Coal have assisted in the delivery of a ~2.5-hour reduction in yard time in Callemondah

### Callemondah Yard Improvement

- 
  - ✓ Safely built and deployed 124 wagon blocks<sup>1</sup>
  - ✓ Shunting hours have reduced 35% per week against July 20
- 
  - ✓ Reduced provisioning time by 30 mins for diesel consists and 20 mins for electric consists
  - ✓ Electric consists now perform (on average) 3 cycles with no provisioning
- 
  - ✓ Introduced disciplined yard planning to reduce variation in operations and maintenance activities
  - ✓ 98% on time departure at Callemondah

**Over 330 hours of consist time per week handed back to Network scheduling through improved yard execution. Equivalent to an additional two consists**

## CASE STUDY: GOONYELLA

In Goonyella, cycles per consist have increased ~9%<sup>2</sup> through reduced consist downtime and ready to depart time

- 
  - ✓ Reduced plan yard time by 50 mins for every service
  - ✓ Consists now perform (on average) 7 cycles with no provisioning
- 
  - ✓ Reduced consist downtime for maintenance activities (RE/EE<sup>3</sup>) by 40 hours per week (on average) by leveraging condition monitoring technology and completing more maintenance activities off train



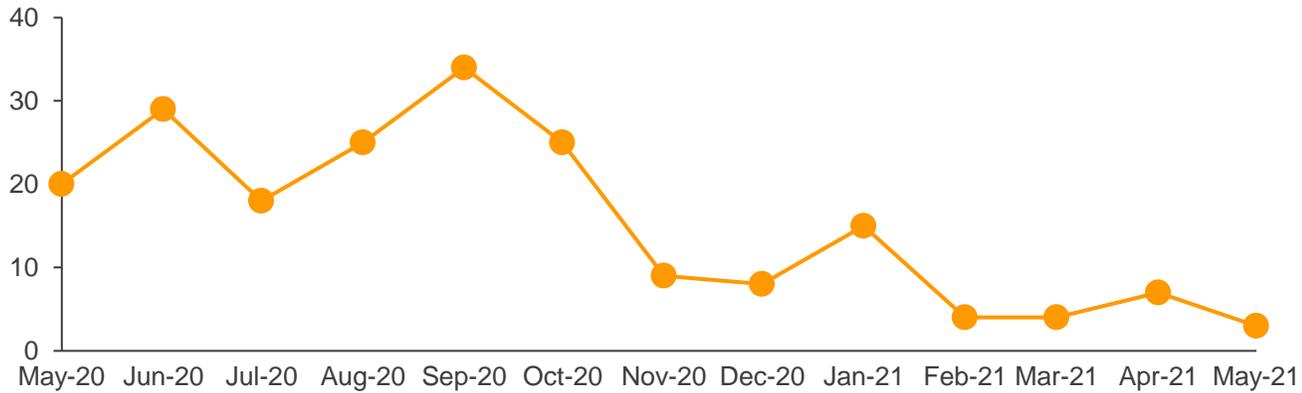
On Train Repair at Jilalan yard

1. Wagon block represents a group of 26 wagons  
 2. Comparison period March-May 2021 compared to March-May 2020  
 3. RE – Reliability Examination EE- Electronic Examination

# Optimising maintenance

ARAM<sup>1</sup> is a multi-year transformation program improving maintenance strategies, planning and execution, driving improved asset availability and reliability

## HUNTER VALLEY ROLLINGSTOCK CANCELLATIONS



Jilalan wagon overhaul facility

## CASE STUDY: 2800 CLASS COMPONENT CHANGE OUT (CCO) AT STUART DEPOT

### Traditional overhaul

- Broad scope & long duration
- Fixed time interval
- Early & more frequent change out of components



### CCO

- Scope & timing align with condition
- Component change spread over multiple intervals
- Longer component life

↓ **Average 10-15% reduction** in locomotive overhaul costs for 2800 class

↓ **Average 25% reduction** in loco downtime in overhaul – improved asset availability



CCO Engine Change at Stuart depot

1. Above Rail Asset Management

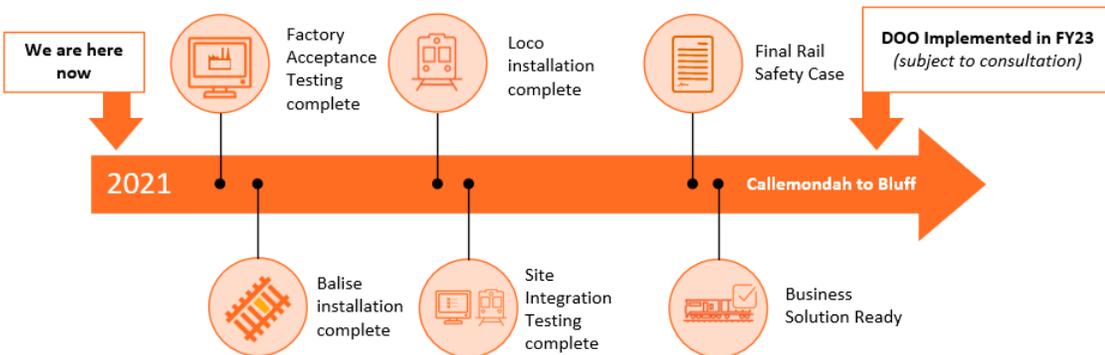
# Targeted investments in technology

TrainGuard and TrainHealth will provide a step change in safety outcomes and productivity for Coal

## TRAINGUARD

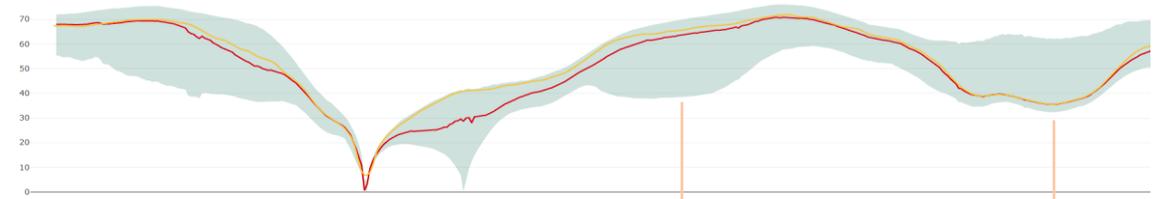
- Transform safety outcomes > 80% of SPADs<sup>1</sup> would have been prevented by TrainGuard
- Provides a pathway to driver only operations
- First deployment on Blackwater mainline 1HFY23 – project managing schedule delays attributed to supplier performance
- Future deployment stages are Goonyella mainline and Blackwater branch lines

## INDICATIVE BLACKWATER DEPLOYMENT TIMELINE

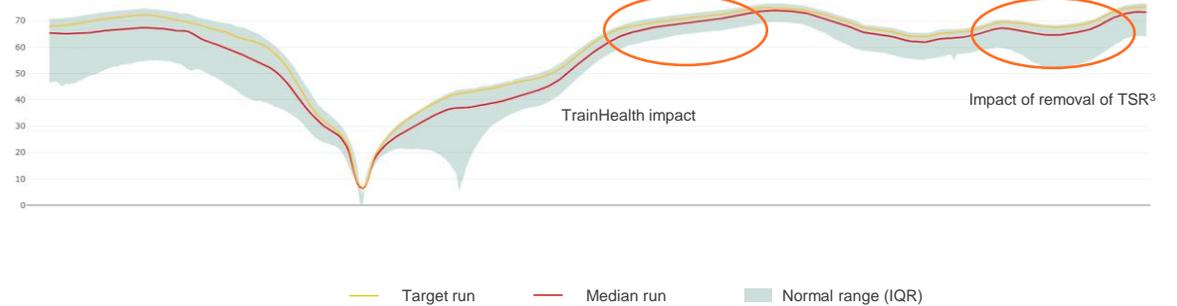


## TRAINHEALTH CASE STUDY<sup>2</sup>: REDUCING DRIVER VARIABILITY

Section Run: October 2020



Section Run: April 2021



**TrainHealth has contributed to a 5% improvement in the section run time above, driving improved TAT and performance. Over 1,600 coaching conversations Year-to-date**

1. Signal Passed At Danger (SPAD). Based on the Blackwater and Goonyella corridors for the period June 2019 to May 2021  
 2. Based on a sample size of approximately 400 services in October 2020 and 1000 services in April 2021 for Blackwater section (20km) BW-03ML  
 3. Train Speed Restriction

# Hunter Valley

With a flat volume outlook, the focus in the Hunter Valley is around retaining existing contracts, service delivery, capital efficiency and cost transformation

## HUNTER VALLEY FOCUS AREAS

### Footprint consolidation



- Reduce four operating sites to three
- Optimise crew deployment models to better align resources to demand

### Workforce management



- Right sized and aligned the workforce to demand
- Enterprise Agreement renewal from November 2021

### Capital efficiency



- Disciplined use of capital, investments to target cost out
- Cascade locomotives to Bulk for revenue opportunities
- Hexham turning angle driving productivity

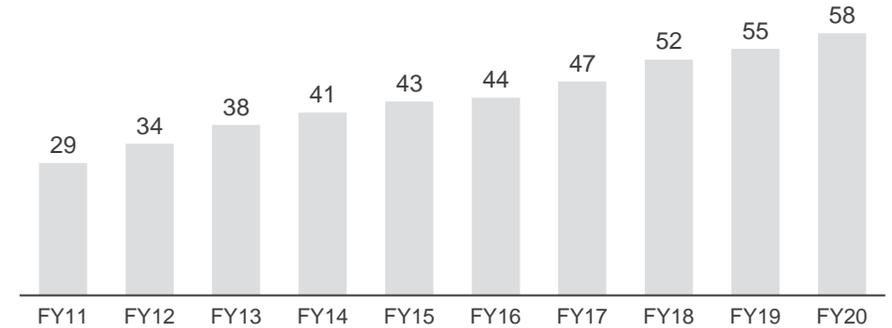
### Maintenance optimisation

(embed ARAM strategies)



- Lengthen inspection intervals on rollingstock
- Increase asset availability and reduce spares pool
- Continue to progress Component Change Out (CCO)
- Leverage Branxton condition monitoring supersite

## NSW VOLUMES (mt)



Hexham



# Network Update

Pam Bains

Group Executive Network

# Objectives for Network

Provide earnings stability and enhance supply chain competitiveness through safe, reliable and efficient operations

## Embed UT5 Customer Agreement



Realise benefits for all stakeholders



Support Independent Capacity Assessment Process



Customer aligned Maintenance & Renewals

## Enhance Supply Chain Competitiveness



Safety and performance culture



Precision Planning and Operations



Efficiency and innovation

## Drive Long Term Stability



Regulated revenue

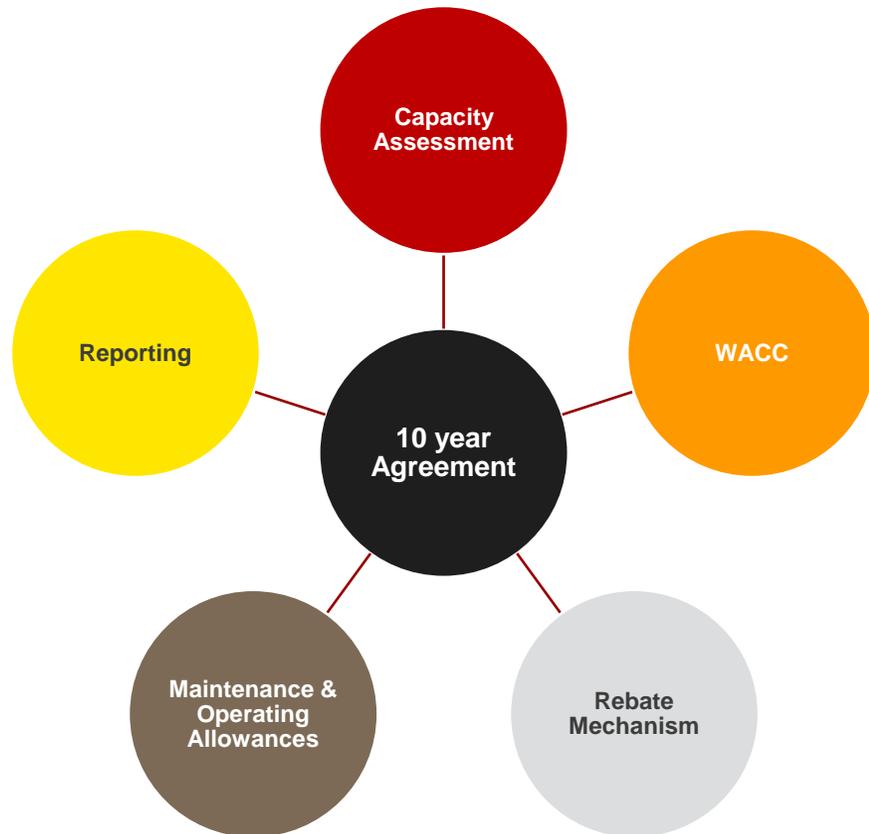


Supporting metallurgical coal rich Bowen Basin

# UT5 Outcomes

UT5 delivered significant regulatory reform and a range of material benefits for both customers and Network

## Key Features



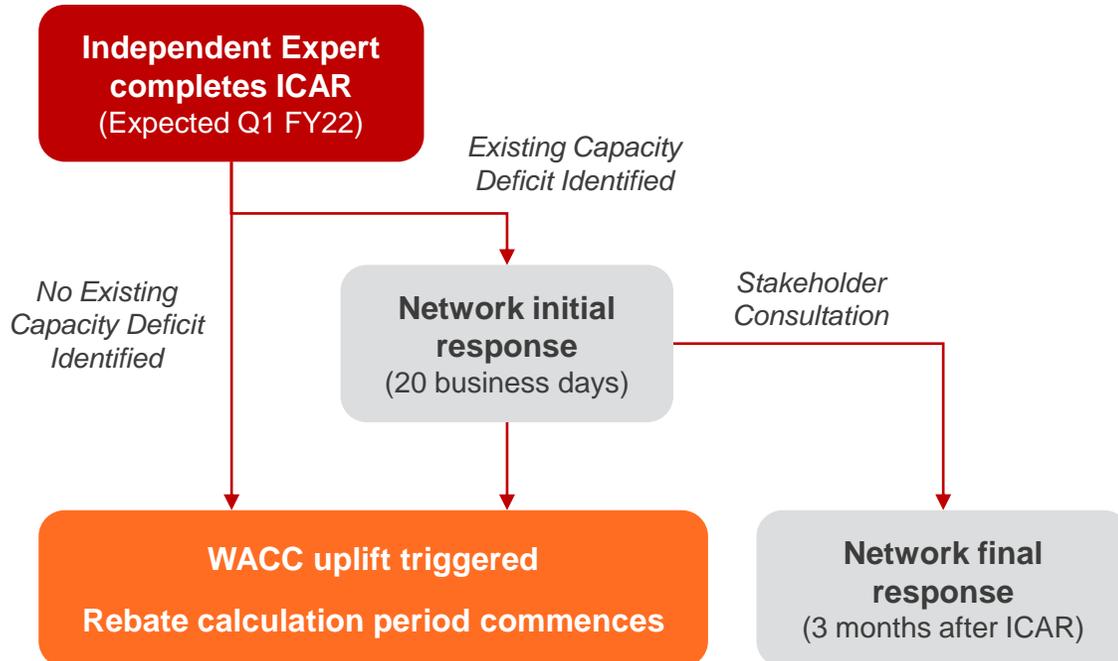
## Key Benefits

- Long Term Certainty → 10 year undertaking term (2017-2027)
- Capacity Review → Independent review and mechanisms to remedy any deficits
- Improved Return → Return better reflects the risks of owning and operating the Central Queensland Coal Network
- Transparency → Enhanced reporting & engagement on maintenance and renewals budgets
- Efficiency Benefits → Operating cost efficiencies retained by Aurizon
- Performance → Rebate mechanisms to incentivise performance

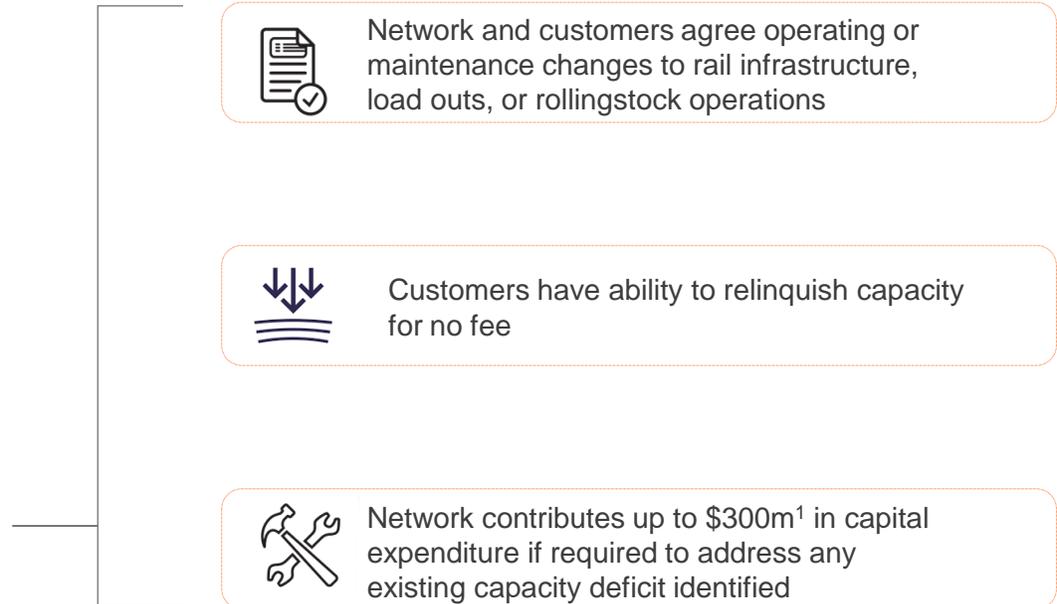
# Independent Capacity Assessment Report (ICAR)

Independent Expert currently assessing Deliverable Network Capacity (DNC) of the CQCN – decision expected Q1 FY22

## ICAR PROCESS



## IF APPLICABLE, THERE ARE THREE METHODS OF ADDRESSING CAPACITY DEFICIT



1. Any addition expenditure to be added to the Regulatory Asset Base (RAB)

# Maintenance and Renewals Strategy and Budget (MRSB)

Constructive engagement provides benefits for both Network and Customers

## Key Benefits of MRSB Engagement

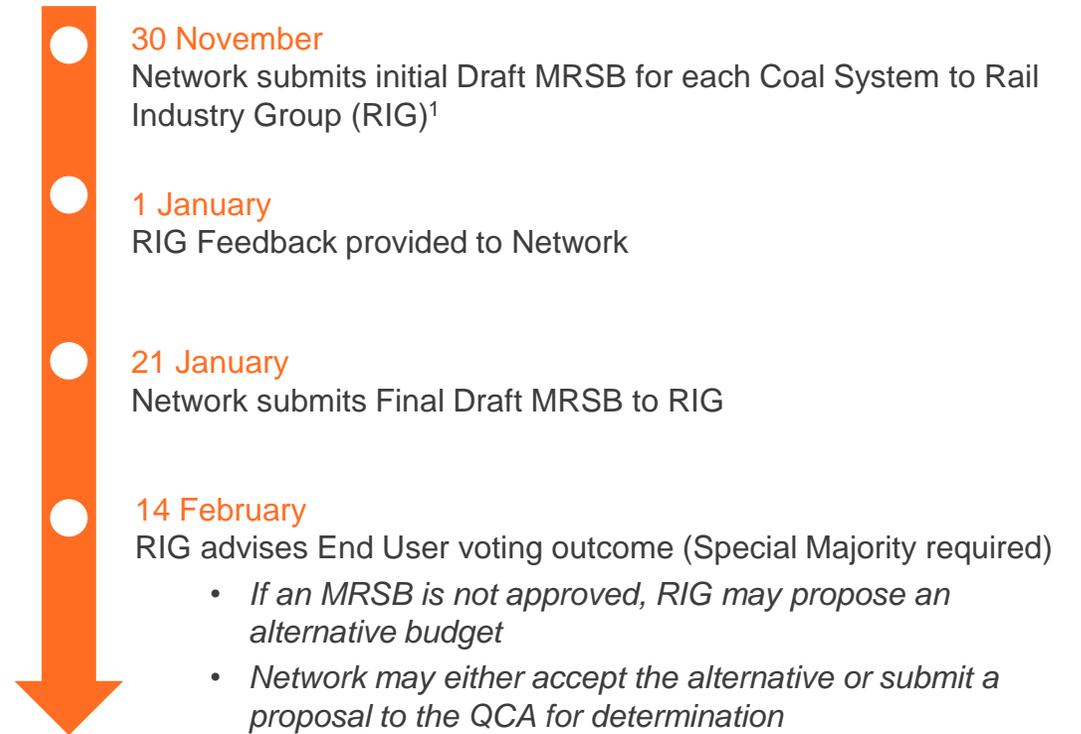
### Customers

- ✓ Visibility of future asset requirements and cost drivers
- ✓ Ability to influence asset management strategy for each Coal System
- ✓ Increased Network accountability to deliver planned maintenance and renewal activity

### Aurizon Network

- ✓ Flexibility to adjust costs based on asset need during regulatory period
- ✓ Annual process reducing potential forecast risk
- ✓ Customer pre-endorsement of renewal spend

## Annual MRSB Approvals Process



**Outcome incorporated in annual Reference Tariff review process**

1. RIG forum comprised of End Users, Access Seekers and Railway Operators (voting in each system restricted to End Users only)

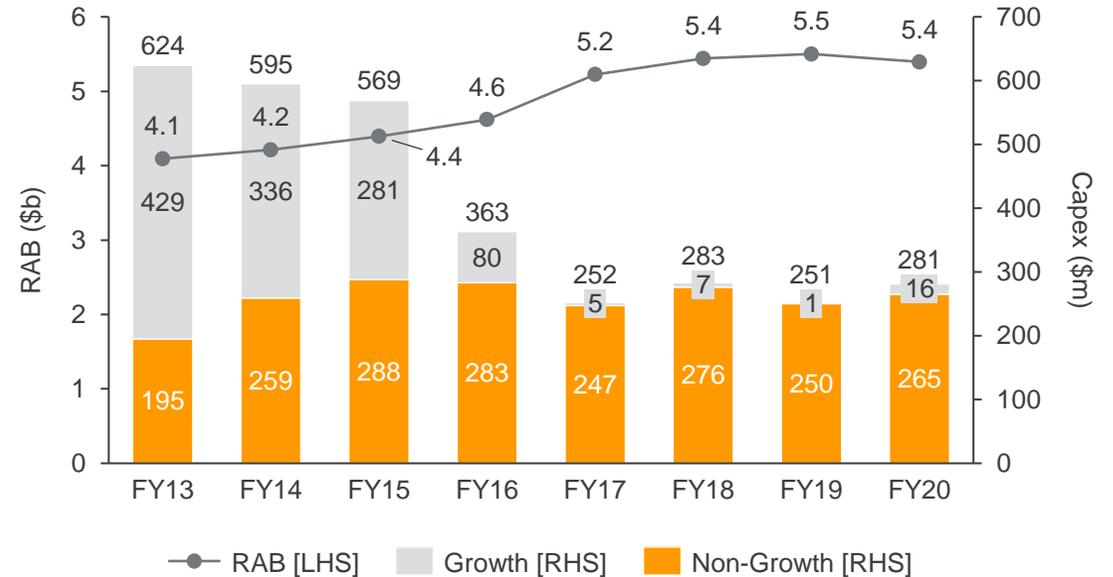
# Capital requirements

Capex is determined on an annual basis in consultation with customers who have influence on the strategy and budget

## KEY FEATURES OF REGULATORY ENVIRONMENT

- › **Network earns a fixed return each year on the approved asset base**
  - › Regulated Asset Base (RAB) is rolled forward annually with adjustments for inflation, depreciation, capital expenditure and asset disposals
- › **Capex is directly related to the safety and reliability** of the supply chain
  - › Network objective is to provide an **appropriate level of asset renewal to promote the safety, reliability and performance** while ensuring that Committed Capacity is delivered
- › Compared to Above Rail, **Network has less ability to flex capital expenditure budgets**
  - › Spend determined annually with customers on a system-by-system basis
- › **Network has agreed to fund expansions of (i) up to \$300m (if required) to address any Existing Capacity Deficit identified in the ICAR and (ii) thereafter up to \$30m p.a where it would benefit more than one access holder or seeker under UT5**

## HISTORICAL NETWORK CAPEX (\$M)



**Following completion of GAPE and WIRP projects, Network's capex profile has stabilized and centered on sustaining activity**

**Notes**

Value of asset renewal activities represented in the chart above reflects the capital expenditure incurred by Aurizon Network in a given year. By comparison, capital expenditure submitted for inclusion in the Regulated Asset Base (RAB) as per Schedule E of the 2017 Access Undertaking is on an 'as commissioned' basis  
 Represents Pricing RAB at the beginning of relevant financial year and excludes AFDs. Note: Ballast undercutting expenditure capitalised for accounting purposes since 1 July 2011. Prior to FY20 ballast was expensed against the maintenance cost allowance and excluded from the RAB. From FY20 ballast undercutting expenditure is capitalised and included in the Capital Indicator / RAB.

# Supply chain efficiency

Network is focused on delivering a safe, reliable and efficient supply chain through Precision Planning and Operations and Innovative Efficiency Initiatives

## DISCIPLINED TRAIN OPERATIONS (DTO)

DTO implemented across the CQCN to increase predictability

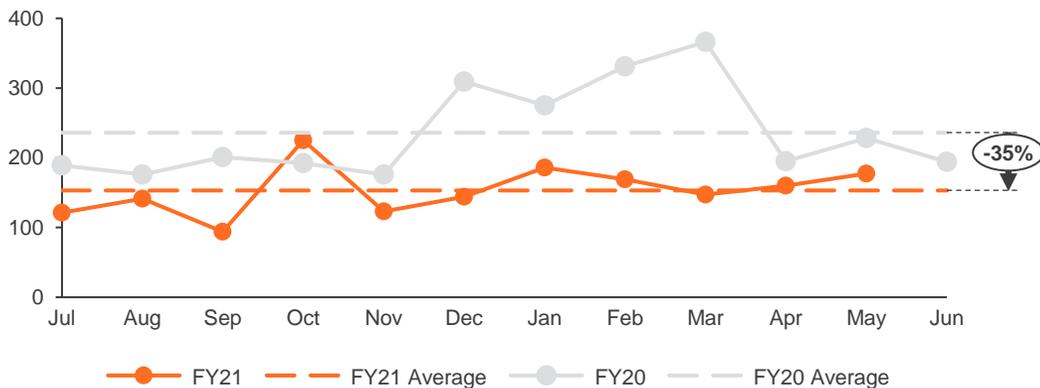
- ✓ Improving schedule adherence, reducing variability
- ✓ Increasing predictability for all stakeholders
- ✓ Enabling integrated above and below rail planning benefits

## ENHANCED PLANNING AND SCHEDULING

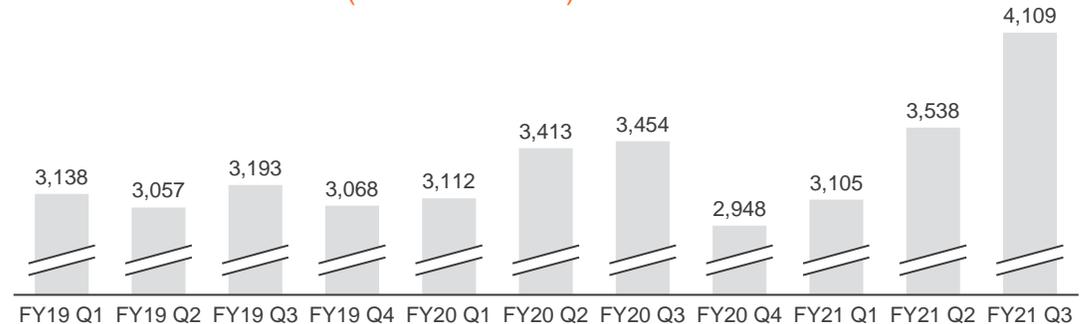
Optimising planning and maintenance to deliver improved throughput

- ✓ Using transparency afforded by Advanced Planning and Scheduling (APS) technology to enhance capacity preservation
- ✓ Reduced ‘clumping’ of maintenance activities and roster adjustments to spread maintenance activities 7 days / week in Blackwater to improve train path distribution
- ✓ *Modern Scheduling* trial to deliver integrated above and below rail planning across all Coal systems

## CQCN CANCELLATIONS: OPERATOR & NETWORK CAUSED



## SERVICES PLANNED NORMALISED PER PERCENTAGE OF NETWORK AVAILABILITY (BLACKWATER)



# Supply chain efficiency (continued)

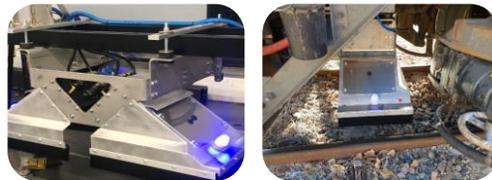
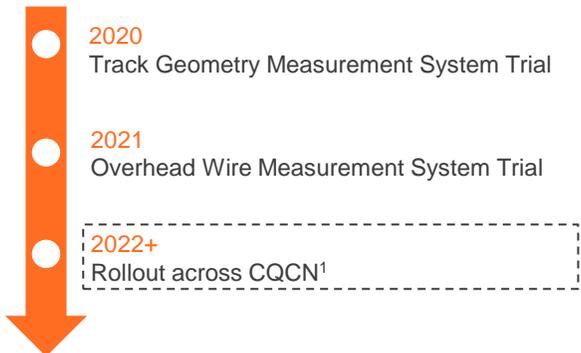
Network is focused on delivering a safe, reliable and efficient supply chain through Precision Planning and Operations and Innovative Efficiency Initiatives

## AUTOMATED TRACK INSPECTION SYSTEM (ATIS)

Advanced inspection technology to improve reliability and efficiency

- › Trialling ATIS technology to deliver precise track and overhead alignment information at line speed from equipment mounted on coal carrying services
- ✓ Increased frequency of data capture will enable more timely defect identification, reduce delays and cancellations
- ✓ Enhanced predictive maintenance capability will improve maintenance planning, reduce cost and preserve usable capacity

### Project Milestones



## VALUE-ADDED TOOLS

Providing crew the right equipment in the right place at the right time

- › Providing standardised value added equipment in order to:
  - ✓ Reduce delays and double handling
  - ✓ Increase crew productivity
  - ✓ Minimise safety risks



### Example: Standardised Welder's Truck

- HI-Ab Crane enables delivery of 6m rail and removal of scrap in one trip
- Water tank & pump to manage hot works and any potential fire hazards
- Inverter to charge battery powered equipment in field
- Tail Gate lifter to lift equipment on & off truck and reduce manual handling
- Increased fuel efficiency and reduced emissions

1. Subject to Customer Approval

## Contact and further information

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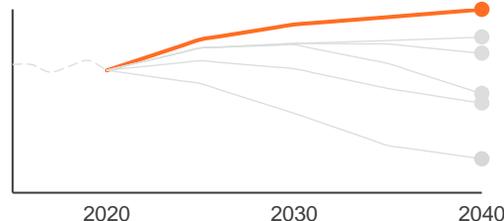


# Appendix

# Coal volume scenarios

Aurizon’s first two scenarios are based on current and upside Asian demand trends

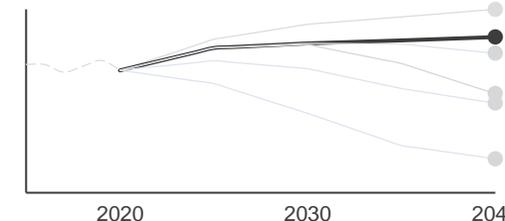
## 1 Commodity Strong



Higher seaborne coal demand from Asia & accelerated GDP growth  
 No new climate change policies implemented  
 No Australian mine / port constraints

Key assumptions	2020		2040f
GDP growth, Asia (CAGR to 2040)		~4.0% <sup>1</sup>	
Steel production, India	100mt <sup>2</sup>	↗	~280mt
BOF-BF share, Asia	81% <sup>3</sup>	↘	~75% <sup>1</sup>
Coal-fired power generation, China	4,859TWh <sup>4</sup>	↘	~3,300TWh
Coal share of electricity mix, Asia	59% <sup>4</sup>	↘	~20% <sup>1</sup>
Australian share of seaborne market	30% <sup>5</sup>	↗	~40%

## 2 Current Economics



Blast Furnace-Basic Oxygen Furnace (BOF-BF) share of crude steel production retained as dominant method of steel production in Asia  
 Coal-fired power plants maintain typical economic life and new capacity limited to South East Asia and those currently under construction (globally)  
 No Australian mine / port constraints

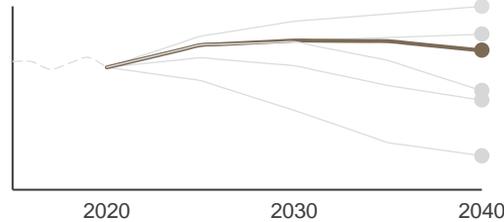
Key assumptions	2020		2040f
GDP Growth, Asia (CAGR to 2040)		~3.5% <sup>1</sup>	
Steel production, India	100mt <sup>2</sup>	↗	~250mt
BOF-BF share, Asia	81% <sup>3</sup>	↘	~75% <sup>1</sup>
Coal-fired power generation, China	4,859TWh <sup>4</sup>	↘	~3,200TWh
Coal share of electricity mix, Asia	59% <sup>4</sup>	↘	~20% <sup>1</sup>
Australian share of seaborne market	30% <sup>6</sup>	↗	~40%

1. Selected nations: China, India, Japan, South Korea, Taiwan, South East Asia (including Indonesia); 2. World Steel Association; 3. World Steel Association (2019 data); 4. International Energy Agency, Electricity Information 2020 (South East Asia; 2018, all other nations: 2019); 5. International Energy Agency, Coal 2020 (2019 data)

# Coal volume scenarios

Aurizon's second two scenarios test different Australian supply constraints

## 3 Port Constrained Australia



*Port capacity constrained in Central Queensland*

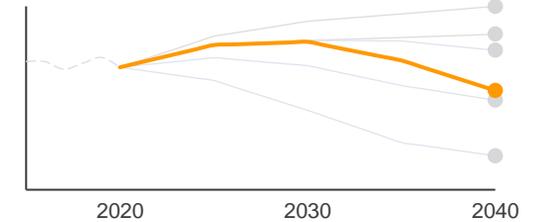
*No Australian mine constraints*

*Equivalent GDP and demand trajectory as Current Economics*

Key assumptions	2020		2040f
Australian coal terminal expansions		<i>No expansion</i>	
Central Queensland coal terminal utilisation	70% <sup>1</sup>	↗	~85%
Australian share of seaborne market	30% <sup>2</sup>	↗	~35%

1. Port/Terminal reporting (based on port/terminal nameplate capacity of 292mtpa); 2. International Energy Agency, Coal 2020 (2019 data)

## 4 Mine/Regulatory Constrained Australia



*New coal mines limited to probable near-term opportunities with no new greenfield capacity from 2025*

*Existing mine production extended where possible, no port constraint*

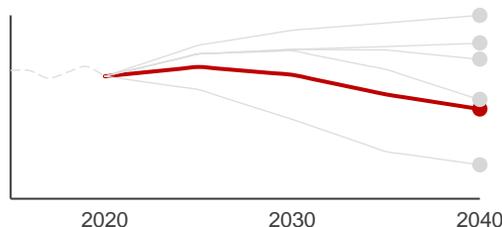
*Equivalent GDP and demand trajectory as Current Economics*

Key assumptions	2020		2040f
Australian new coal developments		<i>~30 mtpa capacity</i>	
Australian share of seaborne market	30% <sup>2</sup>	↘	~25%

# Coal volume scenarios

Aurizon’s final two scenarios assume lower Asian economic development and/or rapid decarbonisation effort

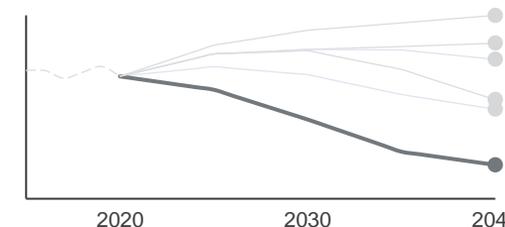
## 5 Carbon Constrained Asia



Lower GDP growth. China self sufficient in thermal coal from 2032  
Earlier coal-fired power plant closures

Key assumptions	2020		2040f
GDP growth, Asia (CAGR to 2040)		~3.0% <sup>1</sup>	
Steel production, India	100mt <sup>2</sup>	↗	~230mt
BOF-BF <sup>3</sup> share, Asia	81% <sup>2</sup>	↘	~70% <sup>1</sup>
Coal-fired power generation, China	4,859TWh <sup>4</sup>	↘	~1,000TWh
Coal share of electricity mix, Asia	59% <sup>4</sup>	↘	~10% <sup>1</sup>
Australian share of seaborne market	30% <sup>5</sup>	↗	~40%

## 6 Rapid Decarbonisation

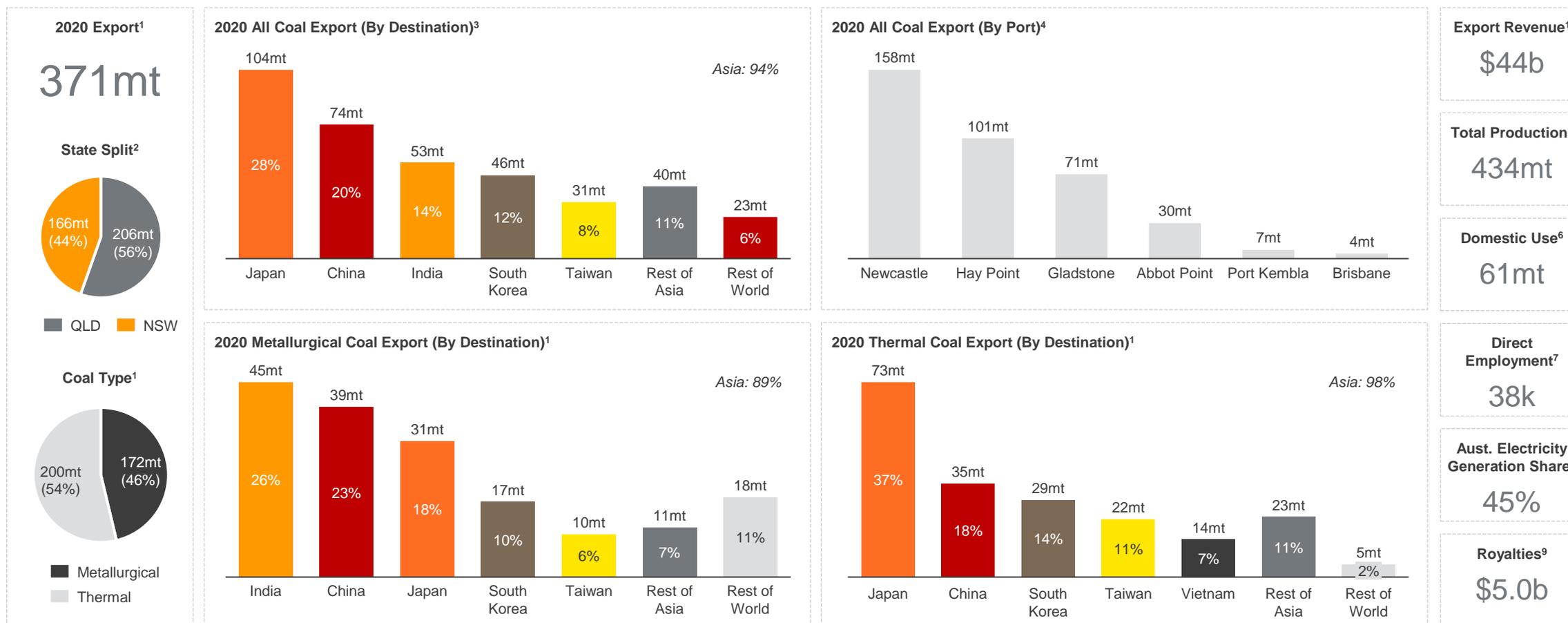


Staggered retirement of global coal-fired electricity capacity, targeting oldest to newest plants. Complete closure by 2032  
~20% share of global steel making is hydrogen-based Direct Reduced Iron/Electric Arc Furnace (DRI/EAF) by 2040

Key assumptions	2020		2040f
BOF-BF <sup>3</sup> share, Global	72% <sup>2</sup>	↘	~40%
BOF-BF <sup>3</sup> share, Asia	81% <sup>2</sup>	↘	~50% <sup>1</sup>
Coal-fired power generation, China	4,859TWh <sup>4</sup>	↘	-
Coal share of electricity mix, Asia <sup>1</sup>	59% <sup>4</sup>	↘	-
Assumed Average Life of Asian Coal Power Plants			~20 years

1. Selected nations: China, India, Japan, South Korea, Taiwan, South East Asia; 2. World Steel Association (2019 data); 3. Blast Furnace-Basic Oxygen Furnace. 4. International Energy Agency, Electricity Information 2020 (South East Asia; 2018, all other nations: 2019); 5. International Energy Agency, Coal 2020 (2019 data)

# Australia Coal Summary



**Note:** Due to different sources and rounding, the sum of individual elements may not equal the corresponding aggregate figure.

**Sources:** 1. Australian Bureau of Statistics (ABS). 2. Respective port/terminal reporting. 3. ABS (includes anthracite, not otherwise shown). 4. Respective port/terminal reporting (Hay Point includes both Hay Point Coal Terminal and Dalrymple Bay Coal Terminal). 5. Office of Chief Economist (OCE) Resources and Energy Quarterly March 2021. 6. OCE Resources and Energy Quarterly March 2021 (FY20 data, calculated as production less export volume). 7. ABS Labour Account Australia (FY20 data). 8. Department of Industry, Science, Energy and Resources (2020), Australian Energy Statistics (FY2019 black coal only). 9. QLD Treasury Budget Strategy and Outlook (2020-21) – Budget paper No.2 (FY20 data), NSW Department of Planning, Industry and Environment (FY20 data)

# Enterprise Agreements

Enterprise Agreement		# Staff Covered (approx.)	Term (years)	Expiry Date	Headline Increases				Status
					Year 1	Year 2	Year 3	Year 4	
Aurizon Port Services <sup>1</sup>		45	3	1 Nov 2021	2.5%	2.5%	2.5%		Bargaining
NSW Coal		320	3	10 Nov 2021	2.5%	2.5%	2.5%		Planning
WA Rail Operations		370	4	30 June 2022	1.5%	2.0%	2.0%	2.25%	Planning
QLD Coal	Traincrew & Transport Operations	1240	3	11 Nov 2022	2.5%	2.3%	2.25%		Complete
	Maintenance				2.0%	2.0%	2.0%		
QLD Bulk	Traincrew & Transport Operations	370	3	24 Jan 2023	2.5%	2.3%	2.25%		Complete
	Maintenance				1.5%	2.0%	2.0%		
QLD Staff		800	4	30 Jan 2023	2.1%	2.1%	2.25%	2.25%	Complete
QLD Infrastructure		540	4	27 May 2023	2.1%	2.1%	2.25%	2.25%	Complete
WA Rollingstock Maintenance		90	4	10 May 2025	3.0%	3.0%	2.5%	2.0%	Complete

1. As part of the acquisition of Townsville Bulk Storage and Handling (TBSH) in March 2020 (renamed Aurizon Port Services), the TBSH Enterprise Agreement transferred to Aurizon by operation of the Fair Work Act 2009.

# Glossary

Metric	Description
Access Revenue	Amounts received by Aurizon Network for access to the Network infrastructure under all Access Agreements
AFD	Access Facilitation Deed
Average haul length	NTK/Total tonnes
Contract utilisation	Total volumes hauled as a percentage of total volumes contracted
CQCN	Central Queensland Coal Network
dGTK	Diesel fuel used per Gross tonne kilometre. GTK is a unit of measure representing the movement over a distance of one kilometre of one tonne of vehicle and contents including the weight of the locomotive & wagons
ESG	Environment, Social & Governance
Footplate hours	A measure of train crew productivity
Free cash flow (FCF)	Net operating cash flows less net cash flow from investing activities less interest paid
FTE	Full Time Equivalent - The number of unique employee positions filled by all Aurizon employees (excluding contractors/consultants) as at period end. The NTK/Employee metric for the half year is annualised for comparative purposes and uses period-end FTE
FWC	Fair Work Commission
GAPE	Goonyella to Abbot Point Expansion
Gearing	Net debt/(net debt + equity)
Gross Contracted NTKs	Gross contracted tonnages multiplied by the loaded distances (calculated on a contract by contract basis)
GTKs	Gross Tonne Kilometres
Maintenance	Maintenance costs exclude costs associated with traction, telecommunication, ballast and undercutting, rail renewals, flood repairs and derailments
MAR	Maximum Allowable Revenue that Aurizon Network Pty Ltd is entitled to earn from the provision of coal carrying train services in the CQCN
Mtpa	Million tonnes per annum
NTK	Net Tonne Kilometre. NTK is a unit of measure representing the movement over a distance of one kilometre of one tonne of contents excluding the weight of the locomotive and wagons
Operating Ratio	1 – EBIT margin. Operating ratio calculated using underlying revenue which excludes interest income & significant items
Opex	Operating expense including depreciation and amortisation
Payload	The average weight of product hauled on behalf of Aurizon customers per service, calculated as total net tonnes hauled / total number of services
PIA	Protected Industrial Action
QCA	Queensland Competition Authority
ROIC	ROIC is defined as underlying rolling twelve-month EBIT divided by the average invested capital. The average invested capital is calculated as the rolling twelve-month average of net assets (excluding cash, borrowings, tax, derivative financial assets and liabilities)
TCFD	Task Force on Climate related Financial Disclosures
Take-or-Pay	Contractual Take-or-Pay provisions entitles Aurizon Network to recoup a portion of any lost revenue resulting from actual tonnages railed being less than the regulatory approved tonnage forecast
Underlying	Underlying earnings is a non-statutory measure and is the primary reporting measure used by Management and the Group's chief operating decision making bodies for the purpose of managing and determining financial performance of the business. Underlying results differ from the Group's statutory results. Underlying adjusts for significant/one-off items
Velocity	The average speed (km/h) of Aurizon train services (excluding yard dwell)
WACC	Weighted average cost of capital
WIRP	Wiggins Island Rail Project