

# Aurizon Network - 1HFY2019 Results Debt Investor Update



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# Half Year in Review – Aurizon Group

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# Update on key priorities

Progress has been made on key priorities

## PRIORITY



**OPTIMISE**



**EXCEL**

› **UT5**

Approved by QCA 21 February 2019  
Engagement continues with all stakeholders



› **Operational Efficiency Improvement**

Precision Railroading in execution  
Key technology programs progressing  
Restructure of support areas continuing



› **Enterprise Agreements (EA)**

Three EAs completed and two approved in employee ballots  
Two Queensland EAs continue bargaining



› **Intermodal**

Queensland Intermodal transferred to Linfox  
Acacia Ridge sale subject to Federal Court proceedings



# FY2019 Half Year highlights<sup>1</sup>

Non-Network result in line with expectations given loss of Cliffs in Bulk and maintenance activities in Coal. Network result reflects the UT5FD, including partial true up from FY2018

## FINANCIAL RESULTS

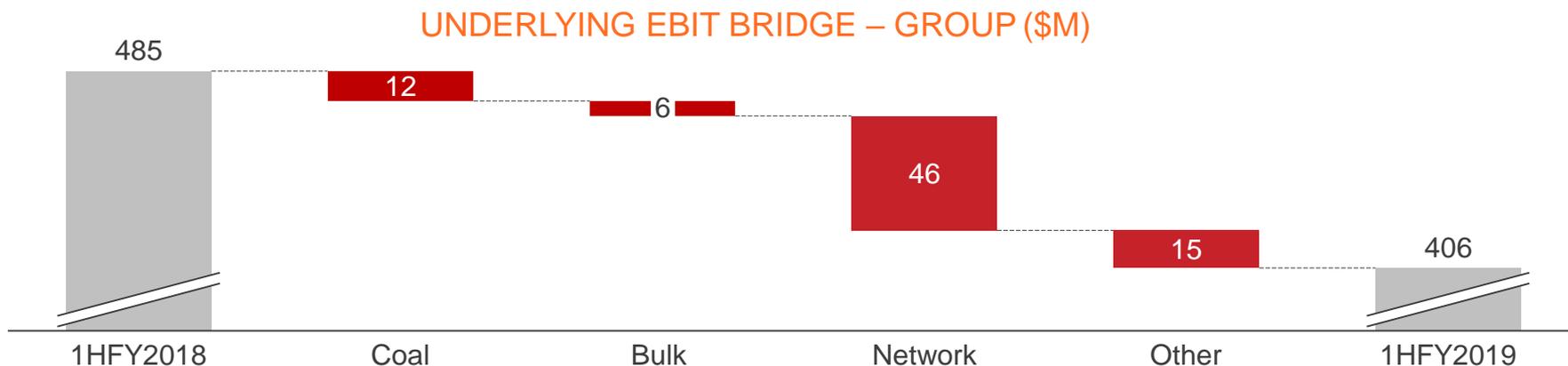
- › Underlying EBIT down 16% to \$406m
  - › Network EBIT \$203m impacted by UT5 true ups
  - › Non Network EBIT (ex redundancy<sup>2</sup>) \$217m
- › Total Above Rail volumes down 5%
  - › Bulk: cessation of Cliffs contract
  - › Coal: protected industrial action (PIA) and weather impacts
- › Network volumes flat
- › Statutory NPAT \$227m
- › ROIC 10%
- › Operating Ratio 72.1%

## CASHFLOW

- › Free cash flow (FCF) \$371m up 8%

## SHAREHOLDER RETURNS

- › Interim dividend 11.4 cents - 100% payout of underlying continuing NPAT



1. Continuing operations  
 2. Total redundancy costs 1HFY2019 \$14m

# Key financial highlights<sup>1</sup>

EBIT result impacted by UT5FD true up in Network and the Cliffs contract cessation in Bulk

\$m	1HFY2019	1HFY2018	Var
Revenue	1,455	1,565	(7%)
Operating Costs	(783)	(821)	5%
Depreciation & Amortisation	(266)	(259)	(3%)
EBIT – underlying & statutory	406	485	(16%)
Operating Ratio (%)	72.1%	69.0%	(3.1ppt)
NPAT – underlying & statutory	227	282	(19%)
EPS (cps) – underlying & statutory	11.4	13.9	(18%)
ROIC (%)	10.0%	9.6%	0.4ppt
Interim dividend per share	11.4	14.0	(19%)
Free Cash Flow	371	345	8%

- › **Revenue** reflects Aurizon's decision to account for the UT5FD, including the acceleration of the total FY2018 true up, in FY2019. Revenue is also impacted by lower volumes in Bulk with the Cliffs cessation
- › **Operating costs** benefited from reduced access costs
- › **Free cash flow** benefited from the termination payment from Cliffs
- › **Dividend** based on 100% payout ratio of underlying continuing NPAT

# Coal update

Operating in a positive demand environment, Coal is investing in fleet for capability today and future volume growth

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## INVESTING IN FLEET

- › Maintenance investment in FY2019 and fleet reliability program delivers performance improvements and supports expected future volume growth
  - › ~\$110m capital invested in Hunter Valley since FY2017 for MACH Energy and other growth tonnes, in addition to transfer of locomotives from Intermodal Interstate
  - › Further investment (capex and opex) of ~\$60m committed over the next two years to support volume growth in CQCN
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## CONTRACT ENVIRONMENT

- › Positive demand environment with a competitive haulage market
- › Recontracting environment evolving:
  - › Tailoring operating solutions to customer requirements
  - › Opening dialogue with some existing customers in relation to tailored renewal solutions
- › Ongoing operational efficiency improvements, including targeted investments in technology, to preserve margins over the long term

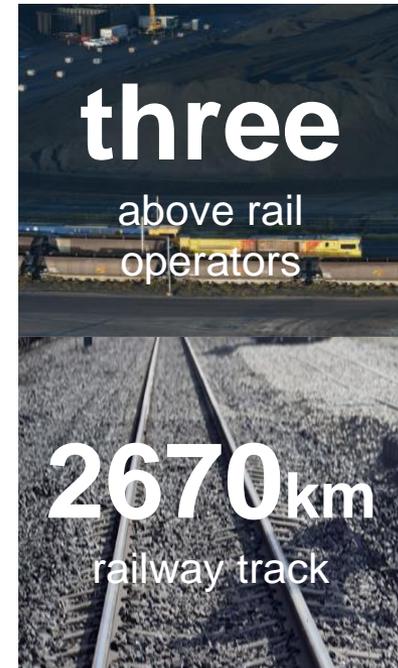
# Half Year in Review – Aurizon Network

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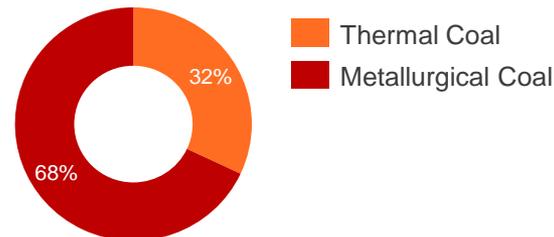


# Network snapshot

As at 31 December 2018



## HAULAGE BREAKDOWN<sup>2</sup> 1HFY2019



1. Estimate at 1 July 2018 - Roll forward value based on UT5FD (excludes \$0.4bn in assets operating under an Access Facilitation Deed (AFD)).

2. Estimate – based on AZJ analysis, represents coal hauled on the CQCN by all operators

# Network

EBIT performance reflects the UT5FD, including \$30m impact of true up from FY2018 with a further \$30m to be recognised 2HFY2019. RAB rollover estimated value \$5.7bn<sup>1</sup>

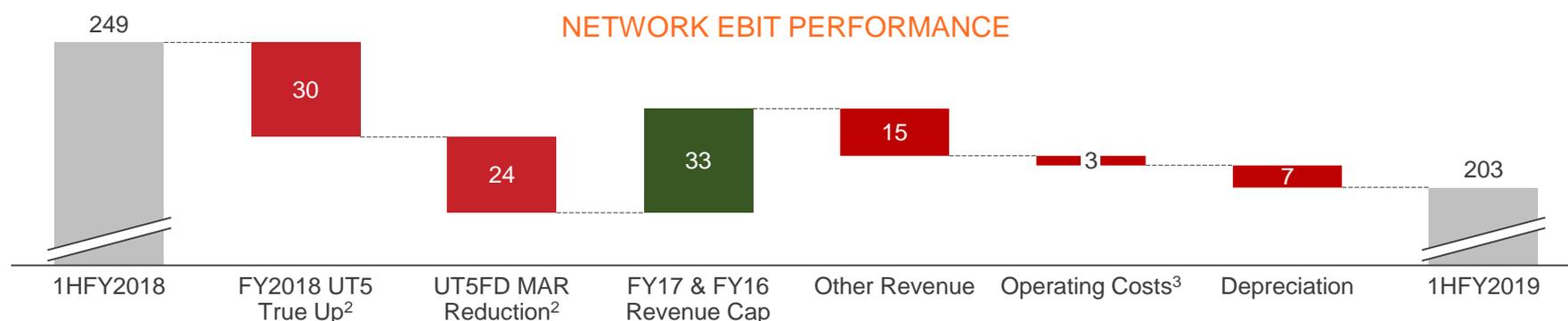
\$m	1HFY2019	1HFY2018	Variance
Track Access	534	577	(7%)
Services & Other	23	31	(26%)
<b>Revenue</b>	<b>557</b>	<b>608</b>	<b>(8%)</b>
Energy & Fuel	(52)	(76)	32%
Other Operating Costs	(144)	(132)	(9%)
Depreciation	(158)	(151)	(5%)
<b>EBIT</b>	<b>203</b>	<b>249</b>	<b>(18%)</b>
Tonnes (m)	116.5	116.6	-
NTKs (bn)	28.8	29.0	(1%)

## Revenue

- › \$30m recognised in 1H in relation to FY2018 UT5FD true up, balance to be recognised in 2H
- › FY2016 and FY2017 revenue cap adjustment \$33m
- › Other revenue includes the Caledon bank guarantee from prior year and GAPE revenue adjustments

## Costs

- › Costs unfavourable due to increased consumables (including maintenance), labour costs and depreciation, offset in part by lower energy connection costs



1. Based on the UT5FD, including all deferred capital but excluding AFDs of \$0.4bn  
2. Excludes GAPE

3. Costs are net of EC Revenue

## Network profit and loss (underlying)

\$m	1HFY2019	1HFY2018	Variance	2HFY2018
Tonnes (m)	116.5	116.6	-	113.0
Access Revenue	534	577	(7%)	590
Services and other	23	31	(24%)	21
<b>Total Revenue</b>	<b>557</b>	<b>608</b>	<b>(8%)</b>	<b>611</b>
Operating costs	(196)	(208)	5%	(222)
<b>EBITDA</b>	<b>361</b>	<b>400</b>	<b>(10%)</b>	<b>389</b>
Depreciation and amortisation	(158)	(151)	(4%)	(157)
<b>EBIT</b>	<b>203</b>	<b>249</b>	<b>(18%)</b>	<b>232</b>

# Network Cash flow – free cash flow growth

\$m	1HFY2019	1HFY2018
EBITDA - statutory	351	393
Working capital & other movements	84	31
Non-cash adjustments - impairment	-	-
<b>Cash from operations</b>	<b>435</b>	<b>424</b>
Interest received	-	-
Income taxes (paid) / received	(34)	(28)
<b>Net cash inflows from operating activities</b>	<b>401</b>	<b>396</b>
<b>Net cash outflow from investing activities</b>	<b>(123)</b>	<b>(158)</b>
Interest paid	(73)	(71)
<b>Free Cash Flow (FCF)</b>	<b>205</b>	<b>167</b>
Net proceeds/(repayments) from borrowings	(32)	220
Payment of transaction costs relating to borrowings	-	(4)
Capital distribution to Parent	-	-
Loans from (to) related parties	5	81
Dividends paid to company shareholders	(179)	(483)
<b>Net cash outflow from financing activities</b>	<b>279</b>	<b>(257)</b>
<b>Net (decrease) / increase in cash</b>	<b>(1)</b>	<b>(19)</b>

- › Free Cash Flow has increased in H1 FY19 mainly due to lower payments on PP&E during the half
- › Working capital movements includes receipt of annual GAPE fees and Take or Pay

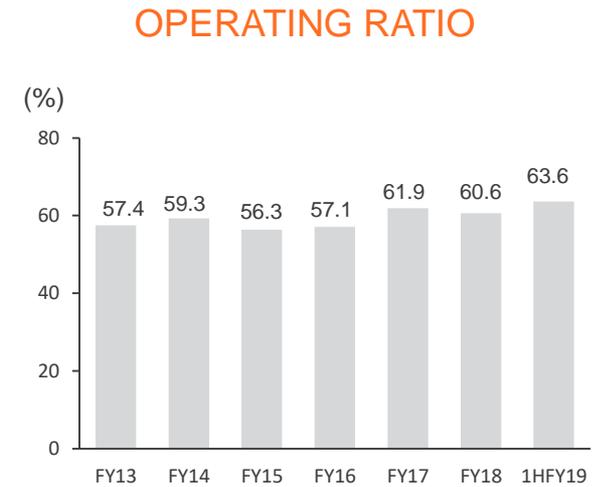
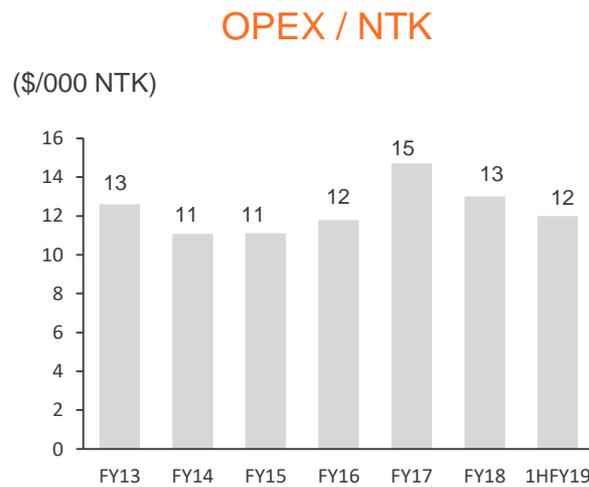
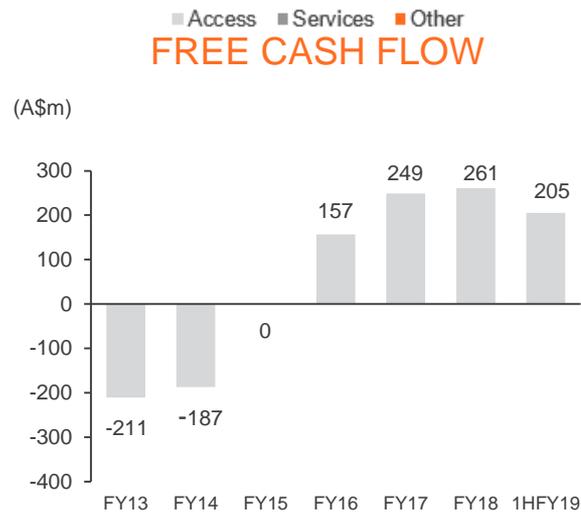
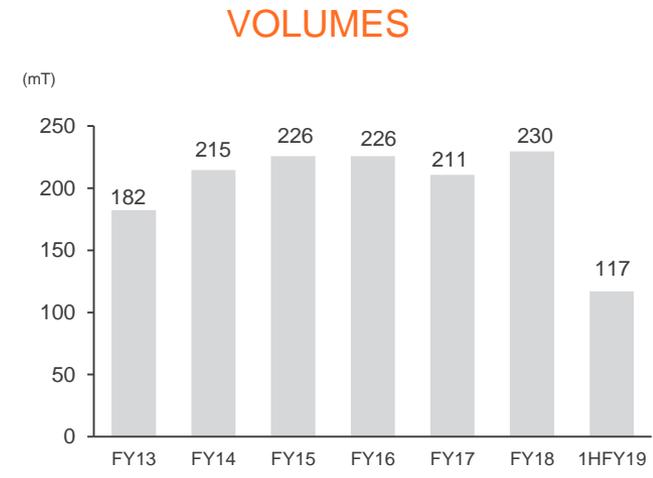
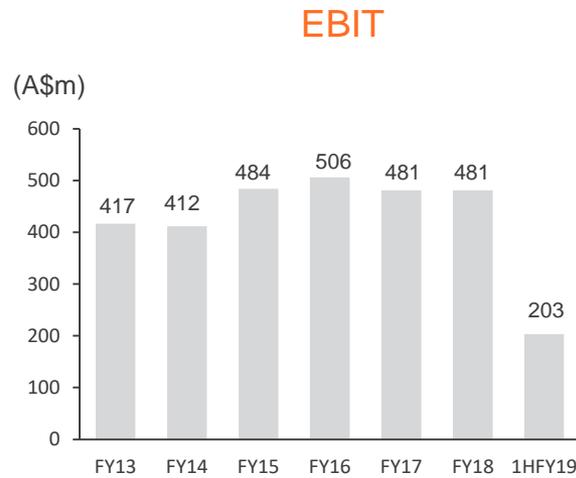
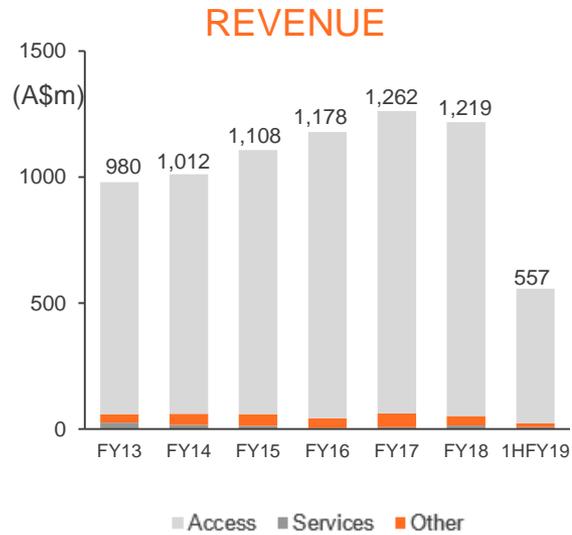
# Network balance sheet

As at \$m	31 Dec 2018	31 Jun 2018
Total current assets	189	259
Property, plant & equipment	5,367	5,408
Other non-current assets	255	211
<b>Total assets</b>	<b>5,811</b>	<b>5,878</b>
Other current liabilities	(222)	(220)
Total borrowings	(3,393)	(3,353)
Other non-current liabilities	(835)	(846)
<b>Total liabilities</b>	<b>(4,450)</b>	<b>(4,419)</b>
<b>Net assets</b>	<b>1,361</b>	<b>1,459</b>
<b>Gearing (net debt/net debt + equity)</b>	<b>71.4%</b>	<b>69.7%</b>
<b>Gearing (net debt/RAB excluding AFDs<sup>1</sup>)</b>	<b>60.4%</b>	<b>62.4%</b>

- › Total current assets has decreased largely due to \$79m decrease in trade and other receivables due to the collection of FY18 GAPE fees and Take or Pay.
- › Slight decrease in PP&E due to depreciation for the period exceeding new capex spend.
- › Other non-current assets has increased largely from revaluation of derivatives (\$40m).
- › Borrowings increased due to the \$65m mark-to-market revaluation of the Euro bond, \$5m intercompany loan and \$2m reduction in capitalised borrowing costs, offset by net \$32m repayment of bank debt.
- › Other non-current liabilities has decreased largely due to the release of income in advance to revenue (\$9m), lower revaluation of derivative liabilities (\$17m), offset by increase in deferred tax liabilities (\$16m).
- › Book Gearing increased 1.7% primarily due to higher cash dividends paid than profit accumulated during the period.

1. Access Facilitation Deed

# Network Key Financial Metrics



# Regulation

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# UT5 Final Decision summary

	AN <sup>1</sup> UT5 SUBMISSION	QCA UT5DD	AN'S RESPONSE TO UT5DD	QCA UT5FD
Return on Capital (WACC)	1,592	1,289	1,677	1,381
Depreciation (less inflation)	1,141	899	936	1,034
Maintenance cost	921	817	928	739
Operating cost	855	743	867	795
Tax	328	141	300	170
<b>Total MAR</b>	<b>4,838</b>	<b>3,888</b>	<b>4,708</b>	<b>4,120</b>
Capital Carryover	54	5	49	3
<b>Total adjusted MAR</b>	<b>4,892</b>	<b>3,893</b>	<b>4,757</b>	<b>4,123</b>
WACC (post tax nominal vanilla)	6.78%	5.41%	7.03%	5.70%
<i>Blended Tariff (\$/net tonne)</i>	<i>5.36</i>	<i>3.86</i>	<i>4.90</i>	<i>4.23</i>

Note: numbers may not add due to rounding

1. Aurizon Network (AN)

# Network update

## UT5 approved by the QCA on 21 February 2019

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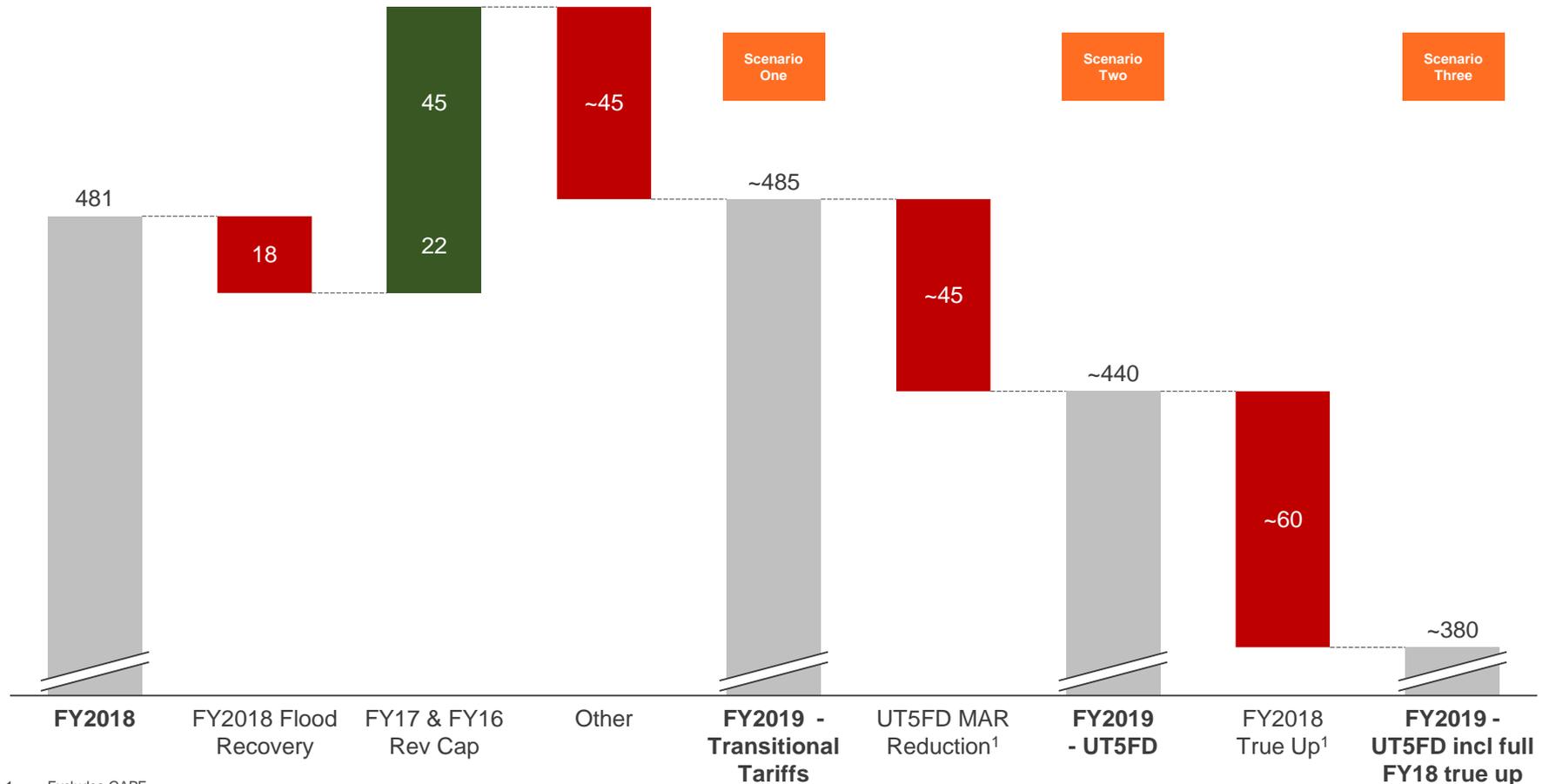
- › Aurizon submitted a conforming undertaking to the QCA on 18 February 2019 which was approved on 21 February 2019
- › Compared to UT5DD:
  - › MAR increased ~\$230m to \$4.123bn over four years
  - › WACC increased from 5.41% to 5.70%
  - › All deferred WIRP capital now included in RAB – estimated RAB rollover value \$5.7bn<sup>1</sup>
- › Engagement with stakeholders continues
- › If agreement with industry can be reached, Aurizon has the ability to lodge a Draft Amending Access Undertaking for consideration by the QCA – this would modify the conforming undertaking to reflect any agreement

1. As at 1 July 2018 and includes all deferred capital but excludes \$0.4bn of AFDs

# Network EBIT scenarios post UT5 Final Decision

Network EBIT range for FY2019 is \$380m – \$485m under various revenue recognition scenarios assuming no volume variance. FY2020 EBIT growth from MAR increase

## INDICATIVE NETWORK EBIT RANGE FY2018 – FY2019 (\$M)



1. Excludes GAPE

# UT5 Final Decision MAR and known adjustments

\$m	FY2018	FY2019 <sup>3</sup>	FY2020 <sup>3</sup>	FY2021 <sup>3</sup>
UT5 Final Decision MAR (ex GAPE)	874	887	936	908
Estimated MAR (ex GAPE)	932 <sup>1</sup>	887	936	908
Known adjustments:				
Revenue Cap / Flood Recovery	(3)	45	(1)	
UT5 Estimated MAR True Up (FY2018)		(61)		
Volume variance	7			
<b>Adjusted MAR (ex GAPE)</b>	<b>936<sup>2</sup></b>	<b>871</b>	<b>935</b>	<b>908</b>

1. Transitional MAR excluding flood and revenue cap

2. Actual AT<sub>1-5</sub> revenue billed excluding GAPE

3. FY2019 to FY2021 assumes volumes railed equal volumes detailed in UT5FD. MAR may differ due to actual volumes not aligning to regulatory system forecast volumes.

# Funding and Capital Management

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# Funding update

Work is underway to determine the optimal legal and capital structure for the Group

## LEGAL & CAPITAL STRUCTURE REVIEW

- Current legal structure is a legacy of the IPO and limits flexibility

## RATING AGENCY METRICS

- Moody's FFO/Debt Network threshold lowered to 13% in August 2018
- UT5FD supports Moody's Baa1 and S&P BBB+ credit metrics for Network
- Group metrics – limited headroom in FY2019, however significant buffer exists from FY2020 with higher earnings

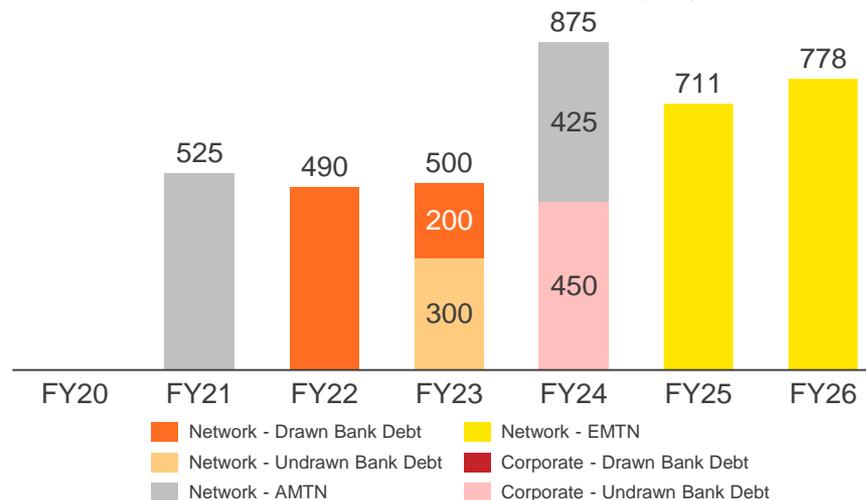
## 1HFY2019 FUNDING ACTIVITY

- Aurizon Finance cancelled existing bank debt syndicated facilities and replaced with bilateral facilities totalling \$450m, with maturity extended to November 2023
- Group debt is ~90% fixed in line with UT5 regulatory period

1. Calculated on drawn debt, excluding working capital facility  
 2. Group Gearing – net debt/net debt plus equity  
 3. Network Gearing – net debt/RAB  
 4. Access Facilitation Deed

KEY DEBT METRICS	1HFY2019	1HFY2018
Weighted average maturity <sup>1</sup>	4.8	5.1
Group interest cost on drawn debt	4.5%	4.5%
Group Gearing <sup>2</sup>	42.4%	41.2%
Network Gearing <sup>3</sup> (incl AFDs <sup>4</sup> )	56.4%	56.7%
Credit Rating (S&P/Moody's)	BBB+/Baa1	BBB+/Baa1

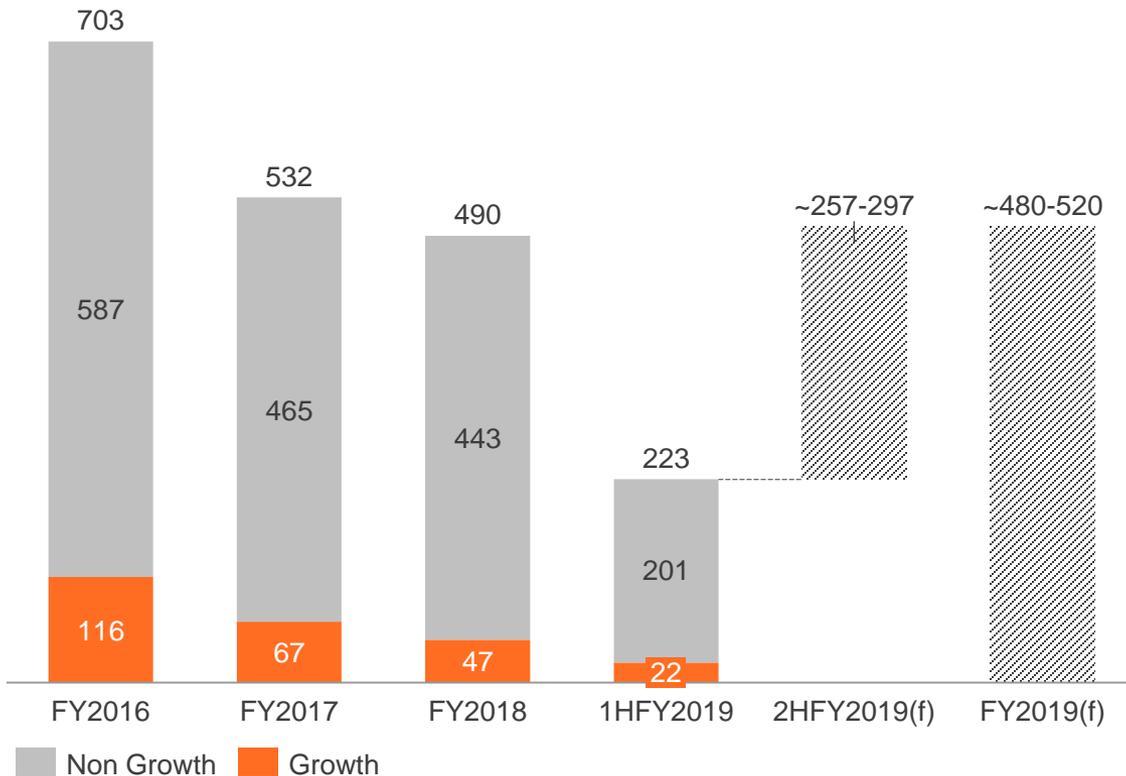
## MATURITY PROFILE (\$M)



# Capital expenditure

FY2019 capital expenditure mix change with Network decrease offset by increase in Coal to support fleet reliability and growth

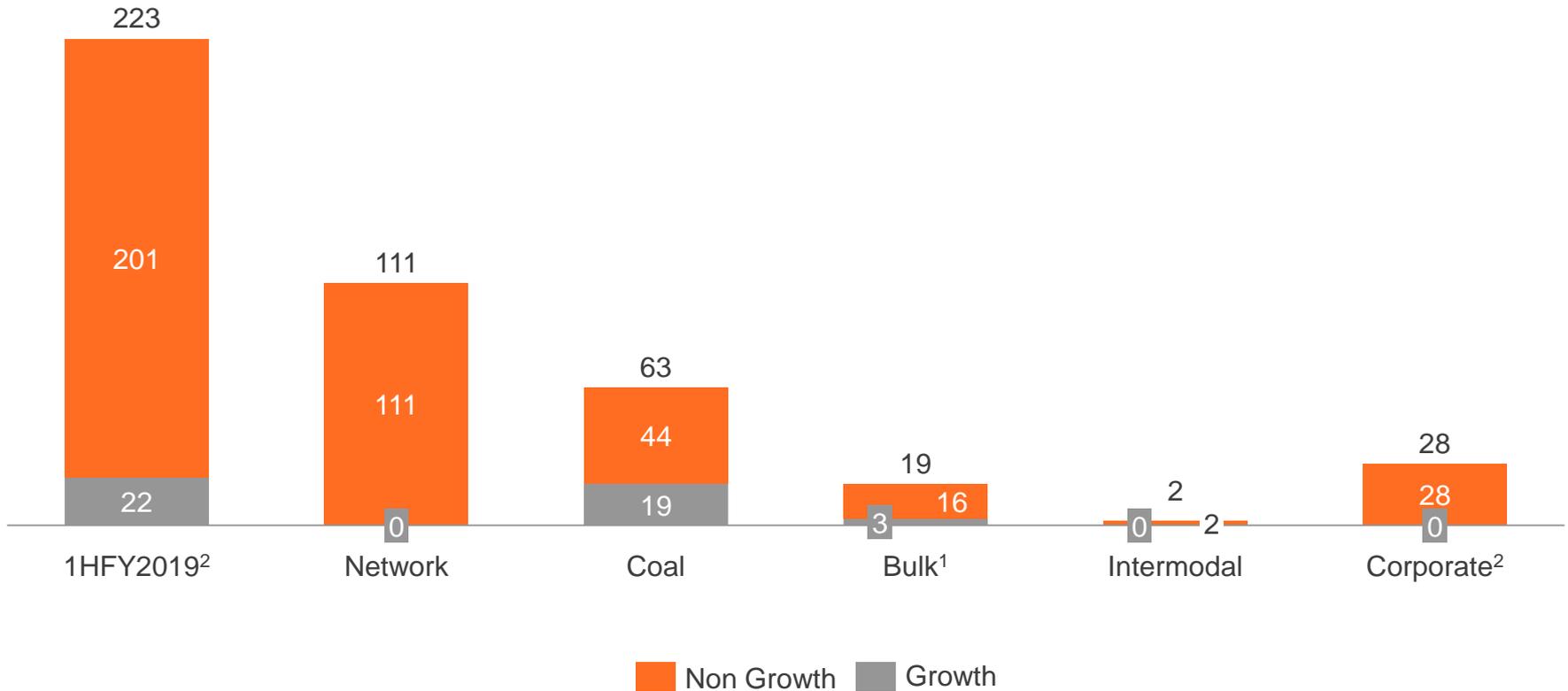
## CAPITAL EXPENDITURE<sup>1</sup> FY2016 – FY2019 (\$M)



- › Capital expenditure guidance for FY2019 remains \$480m – \$520m
- › Growth capital in 1HFY2019 includes new rollingstock to support growth tonnes across the Hunter Valley
- › Purchase of rail grinder and associated assets to support ARTC contract renewal \$21m in 1HFY2019 (~\$5m 2HFY2019)
- › Non growth capital in 2HFY2019 forecast to increase as a result of:
  - › Rollingstock overhauls due
  - › Facility projects
- › FY2020 expectation for non growth capital ~\$500m

1. Total Group capital expenditure net of lease incentive payments and externally funded projects and includes capitalised interest

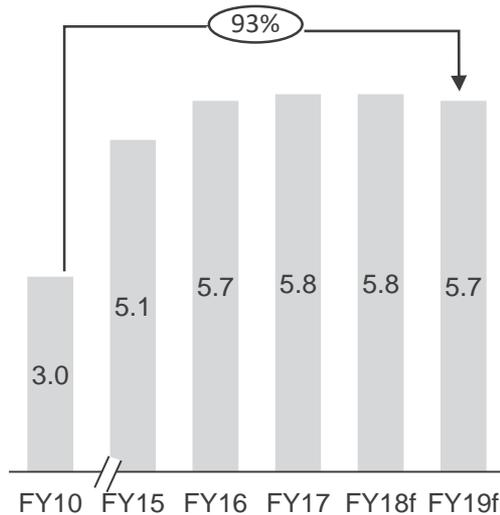
# 1HFY2019 group and business unit capital expenditure (\$m)



1. Net of externally funded payments  
 2. Includes capitalised interest

# Network RAB, CAPEX and Depreciation profile

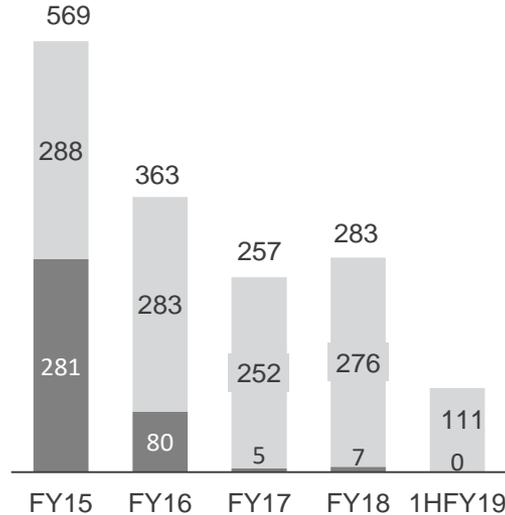
RAB ROLL FORWARD



■ Regulated Asset Base (RAB) \$Abn

- › RAB Roll-forward, indicative (closing balance) projection based on Aurizon Network’s submitted UT5 RAB. Excludes assets operating under an Access Facilitation Deed (AFD) of c. \$0.4bn and is subject to QCA approval of the FY18 capital claim.

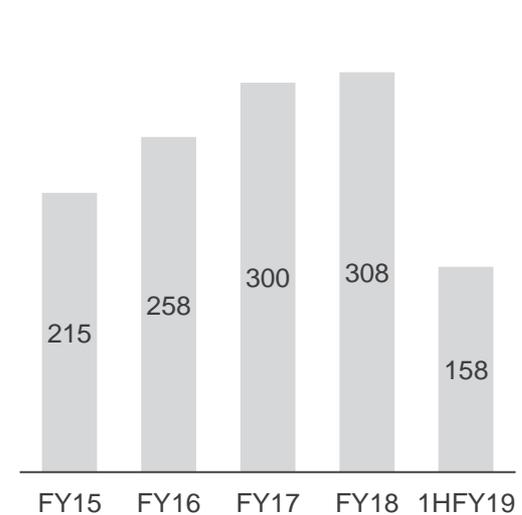
CAPEX



■ Growth \$m ■ Sustaining \$m

- › Network sustaining capex is expected to be in the range of \$240 - \$300m (4% - 5% of RAB)
- › Capex presented on a Functional basis

ACCOUNTING DEPRECIATION



■ Depreciation \$m

- › Increase reflects conclusion of WIRP and capitalisation of rail renewals – includes all WIRP capex (no deferral for accounting purposes)
- › Long-term to approximate sustaining capex
- › Depreciation from FY17 onwards is for Network segment and includes share of corporate assets.

# Outlook & Key Takeaways

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# FY2019 outlook

Non-Network EBIT guidance confirmed at \$390m - \$430m

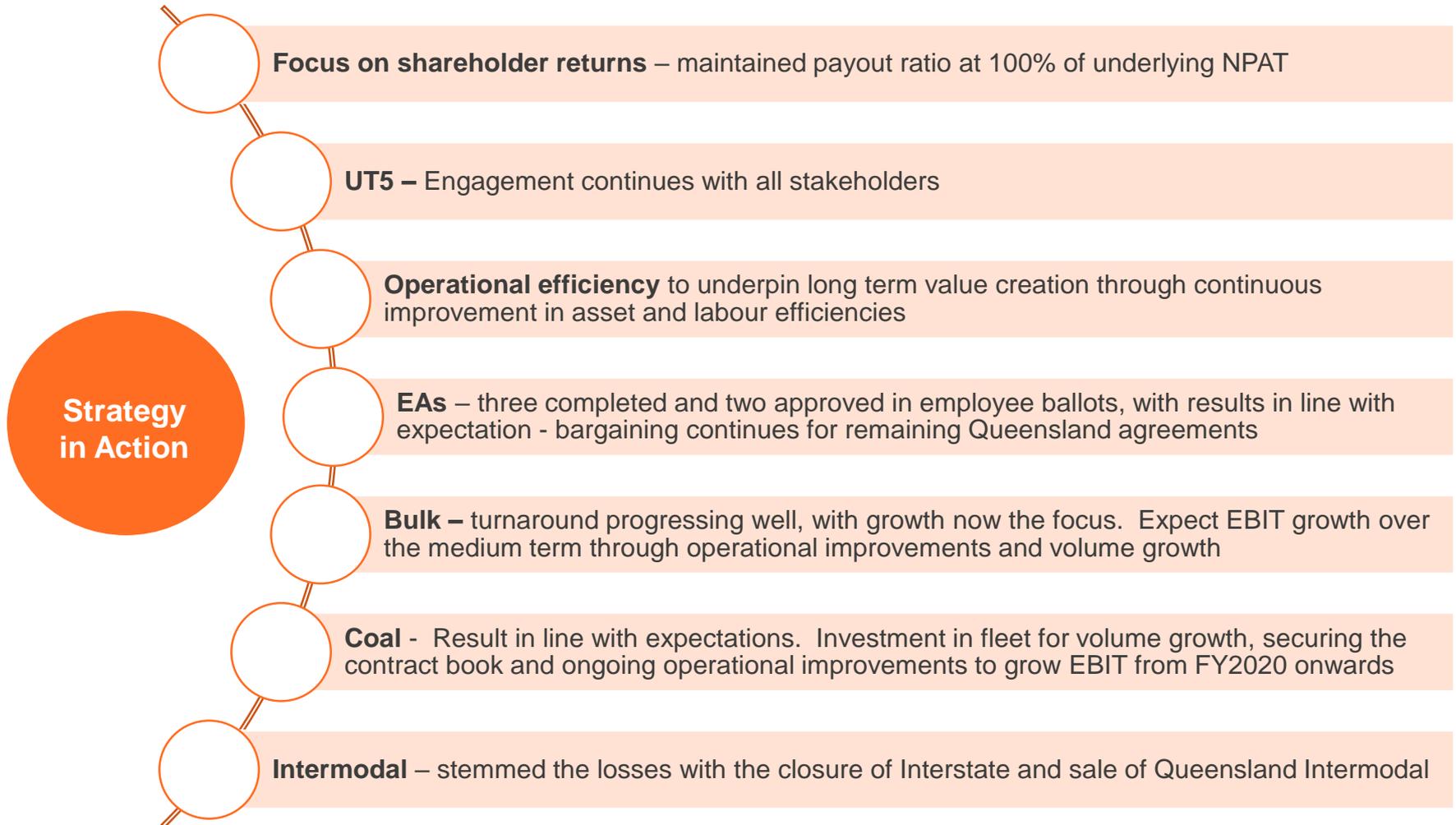
EBIT \$m	1HFY2019 RESULT	GUIDANCE
Non-Network	217	390 - 430
Network	203	n/a
<b>Group (ex redundancy)</b>	<b>420</b>	<b>n/a</b>
Redundancy costs	(14)	n/a
<b>Group</b>	<b>406</b>	<b>n/a</b>

## KEY ASSUMPTIONS

- › Coal – 2H volumes higher with growth from new contracts, partly offset by increased maintenance and operating costs. Volume guidance remains 215 – 225mt for FY2019
- › Bulk – 2H EBIT impacted by cessation of Mt Gibson from January 2019, incremental impact from Cliffs and current weather conditions in North Queensland
- › Continued delivery of operational efficiency improvements
- › No major weather impacts

# Key takeaways

Continue to deliver on promises, focus remains on executing against the strategic framework to position Aurizon for long term earnings growth



# Additional Information

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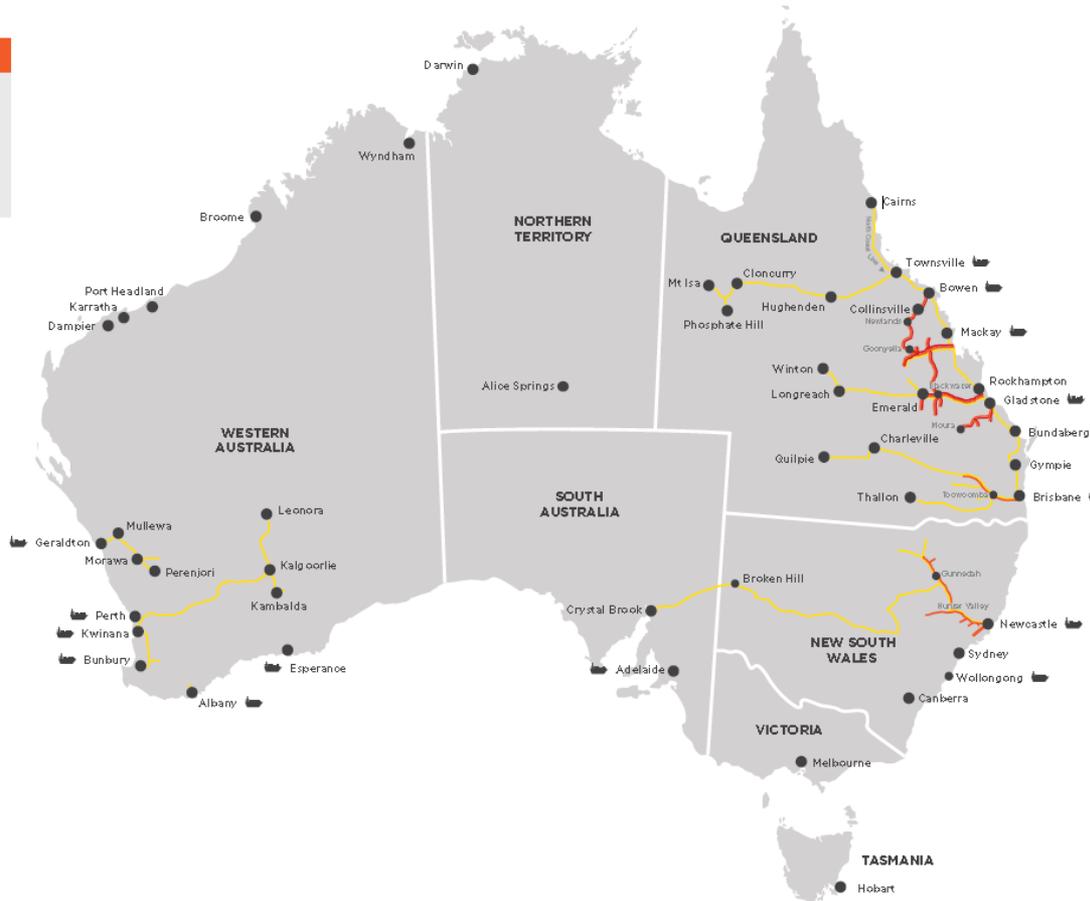
## Group



# Aurizon's rail haulage operations

**Legend**

- Coal
- CQCN (Network)
- Bulk
- City / town
- 🚢 Port



## KEY OPERATIONAL STATISTICS

### COMMODITIES

Coal, iron ore and bulk freight

### ROLLINGSTOCK

500+ active locomotives

### OPERATIONAL FOOTPRINT

More than 160 operational sites

### PEOPLE

More than 4,500 operational full-time employees

### WAGONS

13,000+ active wagons

# Aurizon's vision, purpose and values

Focussed on customers and recognises its important role in both regional Australia and global supply chains

## VISION

The first choice for bulk commodity transport solutions

## PURPOSE

Growing regional Australia by delivering bulk commodities to the world

Achievement of vision represents:

- #1 in the market
- Strongest renewals and new business growth
- Increasing Australian share of seaborne coal and other bulk trade

## VALUES

SAFETY

PEOPLE

INTEGRITY

CUSTOMER

EXCELLENCE

# Strategic levers required to fulfil Aurizon’s vision

Execution against the three strategic levers is aimed at driving differentiation, competitive advantage and sustainable performance

## STRATEGIC LEVERS



### OPTIMISE

- Delivering a cost effective and customer aligned model
- Moving decisions closer to our operations and customers
- Delivering a portfolio of value adding businesses
- Allocating capital rigorously and efficiently



### EXCEL

- Labour and asset productivity through technology
- Regulatory reform
- Developing a safety and performance culture that is agile and innovative



### EXTEND

- Improving the competitiveness of supply chains we operate
- Leveraging expertise to adjacent assets and activities
- Bulk commodity supply chain manager of choice

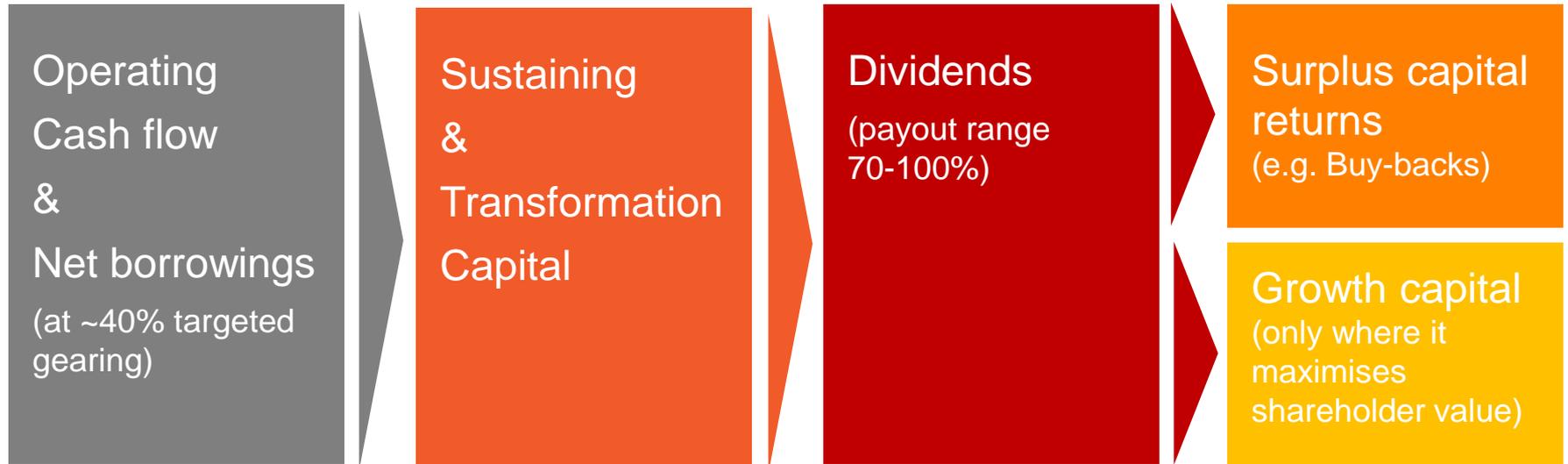
## OUTCOME

Accelerate cost competitiveness of Aurizon

Achieve regulatory reform, secure contract wins and gain competitive advantage through asset efficiency

Position Aurizon for growth, value creation and the next phase of Enterprise evolution

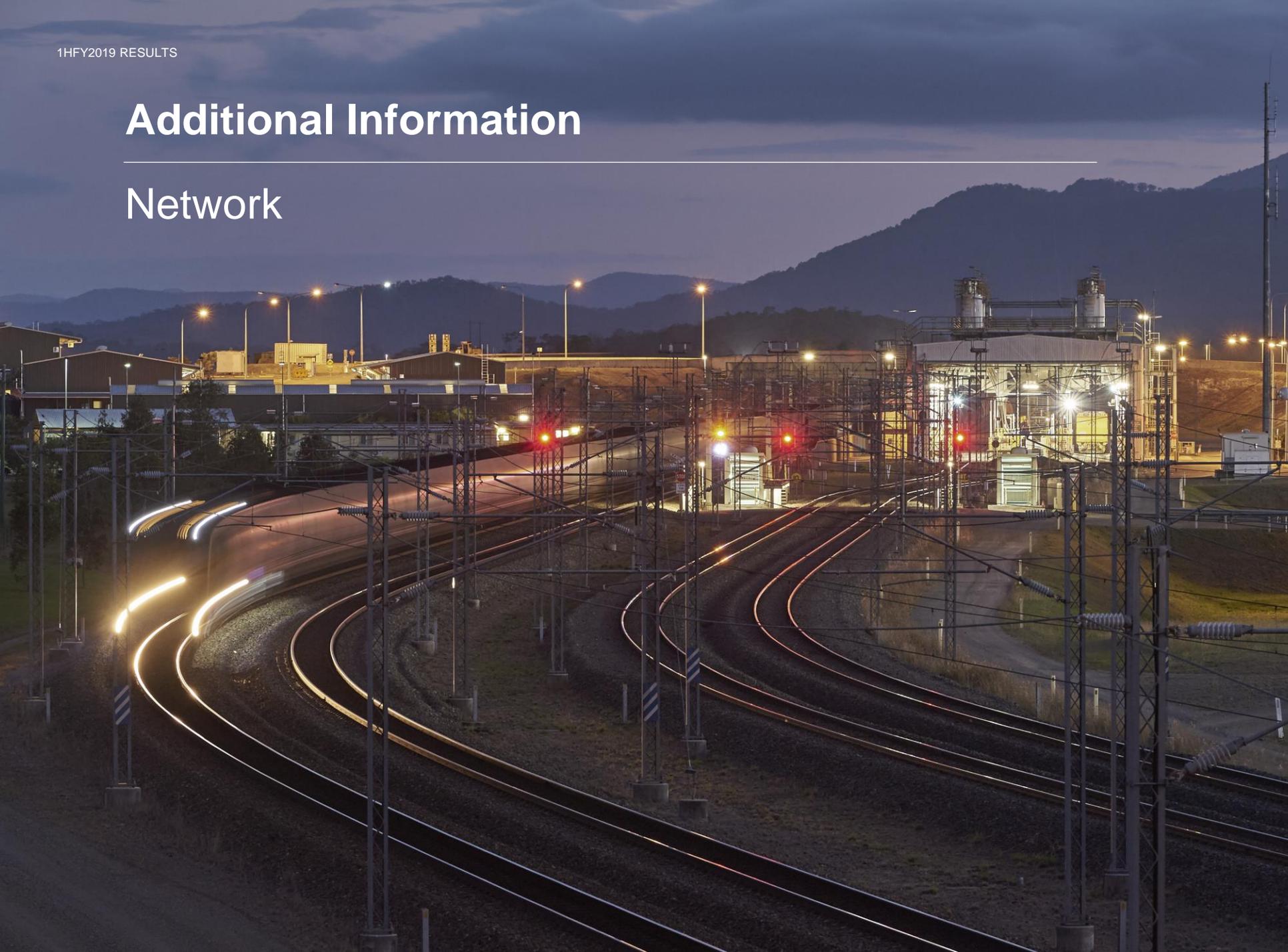
# Capital allocation framework



# Additional Information

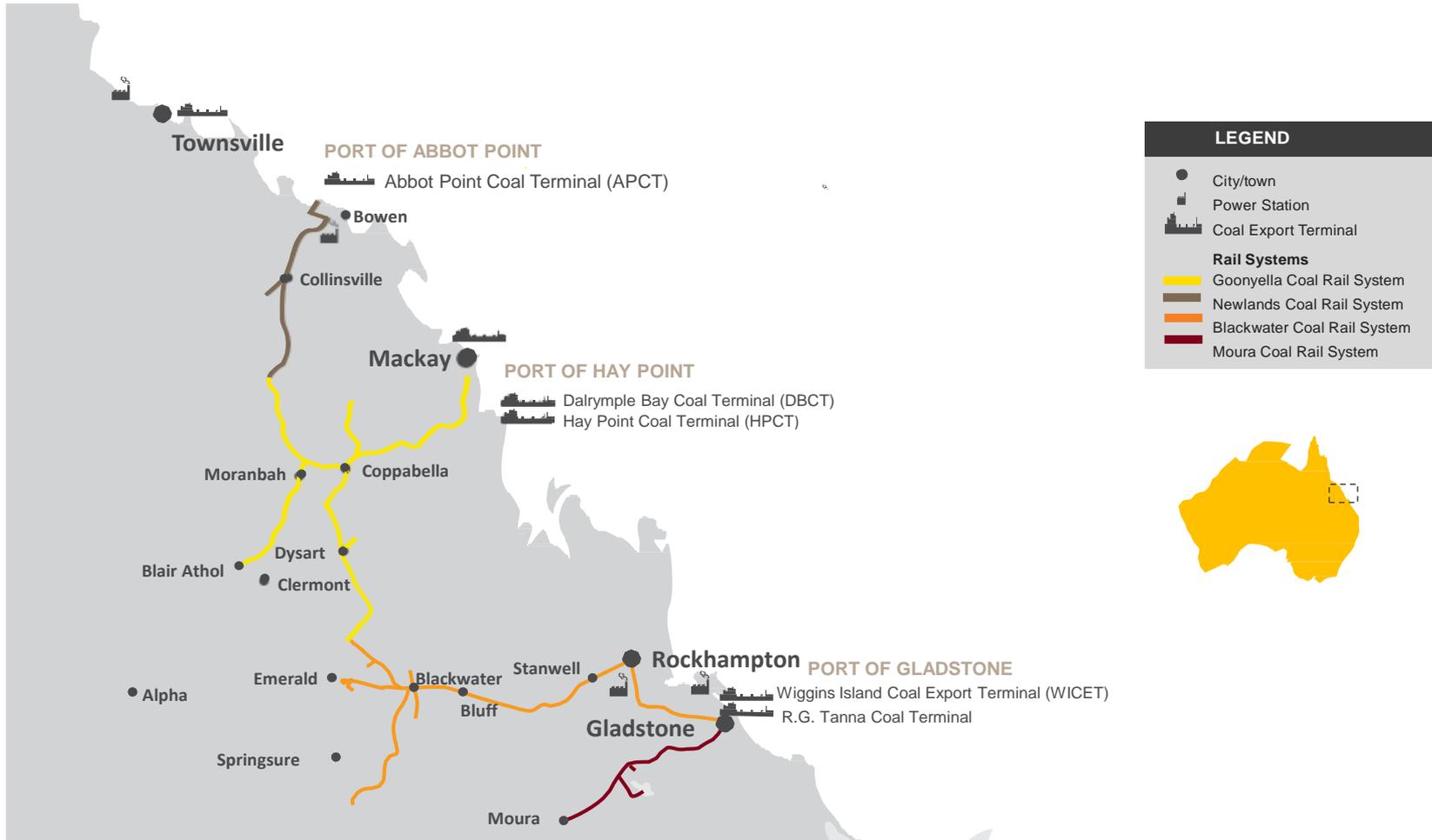
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## Network



# Central Queensland Coal Network (CQCN)

CQCN comprises four major coal systems and one connecting system link (GAPE) servicing Queensland's Bowen Basin coal region



# Network strategic levers

Priorities are focussed on the development of a fit for purpose network that creates value and facilitates changing the regulatory environment for the benefit of all



## OPTIMISE

UT5 solution	Fit for purpose operations	Capability
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- 1 Supply chain productivity
- 2 Network cost efficiencies



## EXCEL

Customer solutions	Regulatory framework
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- 1 Regulatory reform
- 2 Tailored asset and capacity management
- 3 Build system and people capability



## EXTEND

Existing customers	Adjacencies	New markets
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- 1 Opportunistic expansion of CQCN
- 2 Supply chain alignment
- 3 Growth outside CQCN

# Network volumes<sup>1</sup> (mt)

	1HFY2019	1HFY2018	Variance	2HFY2018
Newlands	6.5	6.8	(4%)	6.3
Goonyella	62.6	63.9	(2%)	62.6
Blackwater/WIRP	31.8	32.8	(3%)	29.9
Moura	7.0	5.7	23%	5.4
GAPE	8.6	7.4	16%	8.8
<b>Total</b>	<b>116.5</b>	<b>116.6</b>	-	<b>113.0</b>
Average haul length <sup>2</sup> (kms)	247.5	248.3	-	247.0

1. Table represents coal tonnes hauled on the CQCN by all operators  
 2. Defined as NTK/Net tonnes

## Network revenue adjustment amounts (revenue cap)

Financial Year	AT <sub>2-4</sub> (diesel tariff) \$m	AT <sub>5</sub> (electric tariff) \$m	Total \$m
2018 <sup>1</sup>	(5.6) <sup>2</sup>	4.9	(0.7) <sup>2</sup>
2017 <sup>3</sup>	30.7	14.2	44.9
2016 <sup>3</sup>	(26.7) <sup>2</sup>	3.1	(23.6) <sup>2</sup>

- › Revenue adjustment amounts (RAA) are the difference by system between Aurizon's Total Actual AT<sub>2-5</sub> Revenue and Allowable AT<sub>2-5</sub> Revenue
- › RAA also includes adjustments for maintenance and consumer price index (MCI/CPI), rebates, energy connection costs and other costs recoverable in accordance with Schedule F of the Access Undertaking
- › The RAA amounts are collected or repaid through a tariff adjustment two years later
- › All (except FY2018) revenue adjustment amounts include cost of capital adjustments. FY2016 and FY2017 amounts will be amended following approval of the UT5 Undertaking for the UT5 weighted average cost of capital

Note: AT = Access Tariff Revenue Adjustment Amount

1. Estimated, excludes cost of capital adjustment and only includes AT<sub>2-5</sub> adjustments. This has not been submitted to the QCA
2. Excludes the cost of capital adjustment. Amounts have been approved by the QCA
3. FY2016 AT<sub>2-4</sub> includes \$2.0m return for GAPE, FY2017 AT<sub>2-4</sub> includes \$0.5m return for GAPE

# Reconciliation of billed MAR to reported access revenue

\$m	FY2018 Actual	FY2019 Estimate*
Billed Access Revenue (AT <sub>1</sub> to AT <sub>5</sub> ) (ex. GAPE)	940	887
<u>Approved Adjustments to MAR</u>		
Flood Claim recoveries <sup>1</sup>	18	
Revenue Cap (ex. GAPE and inclusive of capitalised interest)	(22)	45
UT5 estimated MAR True-up	-	(61)
<b>Regulated Access Revenue (ex. GAPE)</b>	<b>936</b>	<b>871</b>
Total non-regulated Access Revenue (ex. GAPE)	38	24
Total GAPE Revenue <sup>2</sup> (Regulatory + non-regulatory)	193	183
<b>Total Access Revenue per Aurizon Statutory Accounts</b>	<b>1,167</b>	<b>1,078</b>

**\*FY2019 information is based on the Final Decision Allowable Revenue, actual may differ subject to finalisation of UT5**

Note: Access Revenue excludes other revenue which primarily consists of Access Facilitation Charges (AFC) paid by customers to Aurizon and other services revenue

1. FY2018 includes amounts of \$2.2m approved in respect of the FY2015 event and \$16.2m (excluding the GAPE amount of \$1.2m) approved for inclusion in the transitional allowable revenue for FY2018 emanating from the FY2017 Cyclone Debbie event.

2. Total GAPE revenue includes GSE

## Network financial and operating metrics

	1HFY2019	1HFY2018	Variance	2HFY2018
Tonnes (m)	116.5	116.6	-	113.0
NTK (bn)	28.8	29.0	(1%)	27.9
Operating Ratio	63.6%	59.1%	(4.5ppt)	62.0%
Maintenance/NTK (\$'000 NTK)	2.2	2.0	(10%)	2.4
Opex/NTK (\$'000 NTK)	12.3	12.4	1%	13.6
Cycle Velocity (km/hr)	22.9	23.6	(3%)	23.3
System Availability	81.1%	80.6%	0.5ppt	83.5%
Average Haul Length (km)	248	248	-	247

# Additional Information

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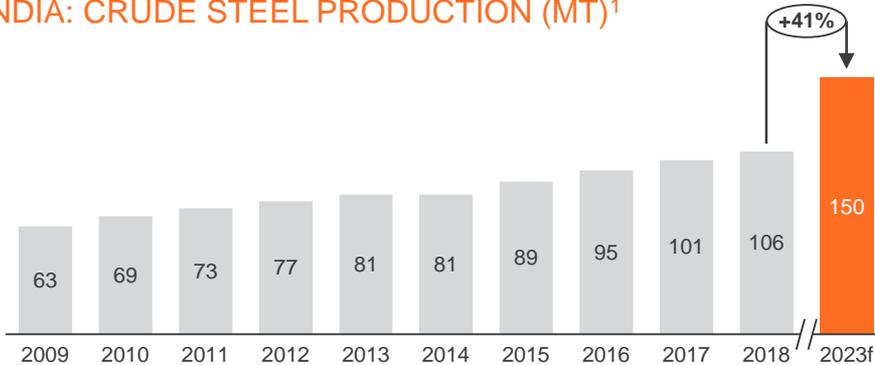
## Coal Market



# Australian export coal demand

The fundamentals of metallurgical and thermal coal remain strong, driven by steel and energy demand growth in Asia, supporting growth in Australian exports of ~2% pa over the next decade

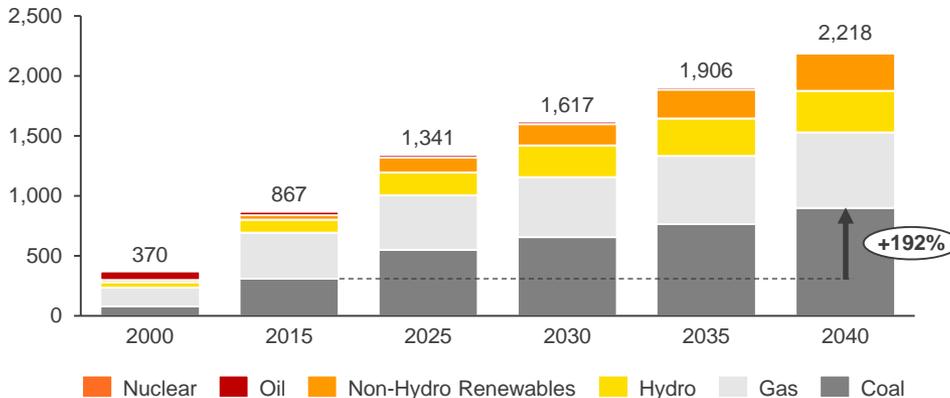
## INDIA: CRUDE STEEL PRODUCTION (MT)<sup>1</sup>



### Metallurgical Coal

- › Steel production drives demand
- › India achieved another record result in 2018 with production of 106 million tonnes and was the largest export market for Australian metallurgical coal in FY2018<sup>3</sup>
- › India coking coal import reliance was 89% for FY18<sup>4</sup>
- › Investment in infrastructure and manufacturing in India will continue to drive demand for steel and therefore metallurgical coal

## SOUTHEAST ASIA: ELECTRICITY GENERATION (TWh)<sup>2</sup>



### Thermal Coal

- › Energy generation drives demand
- › Over 95% of Australian thermal coal exports are destined for Asia<sup>3</sup>. It is this region that continues to add energy generation capacity.
- › The International Energy Agency estimates Southeast Asia coal-fired electricity generation to increase by 192% between 2015 to 2040. 16GW of coal-fired capacity currently under construction in the region<sup>5</sup>.
- › It is recognised that renewable energy will increase in the energy mix over the long term however, thermal coal is expected to grow in absolute terms, in key export nations such as Australia

Sources:

1. India Crude Steel Production (historical) - World Steel Association, India Crude Steel Production (2023 projection) – Office of the Chief Economist, Resources & Energy Quarterly (March 2018)  
 2. Southeast Asia Electricity Generation - International Energy Agency (World Energy Outlook 2018, New Policies Scenario)  
 3. Australian Bureau of Statistics  
 4. India Ministry of Coal, Provisional Coal Statistics (2017-18). Note: Financial year is April to March. Only washed coal (not raw) is included in the import reliance calculation  
 5. Platts UDI Electric Power Plants Database (September 2018)

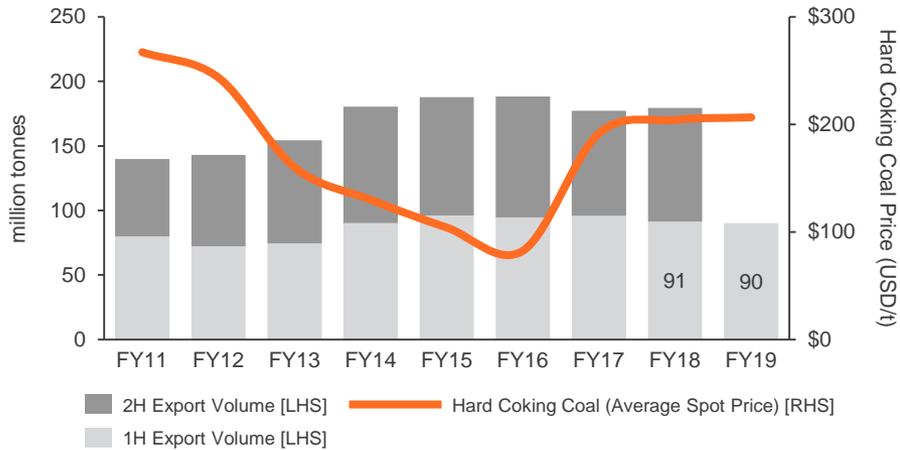
# Australia FY2018 coal supply summary



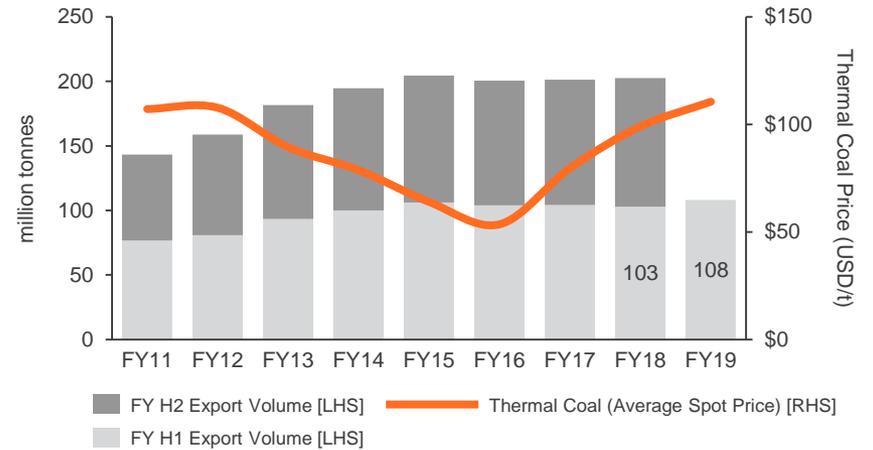
**Sources/Notes:**  
**Coal Production:** Volume (saleable coal), state split and coal type sourced from Office of Chief Economist (OCE) Resources and Energy Quarterly December 2018. 'Other' adjusted (and volume reallocated to QLD) to align with state government reporting. **Domestic Consumption:** Volume calculated using production (OCE) less exports (OCE). **Export Volume** and coal type sourced from OCE. Export state split percentage sourced from port/terminal reporting and applied to OCE volume. **All Coal Export (By Destination):** Includes anthracite volume, sourced from Australian Bureau of Statistics (ABS) Customised Report. **All Coal Export (By Port):** Sourced from respective port/terminal reporting. **Metallurgical/Thermal Export (By Destination):** Sourced from ABS, Customised Report. **Employment:** Includes direct employment (only), sourced from ABS Labour Force (Detailed) November 2018. **Australian Electricity Generation Share:** Data for FY17 (GWh, black coal only), sourced from Department of the Environment & Energy, Australian Energy Update 2018. **Export Revenue:** Sourced from ABS, Customised Report. **QLD Royalties:** Sourced from QLD Treasury Mid-Year Fiscal & Economic Review 2018-19. **NSW Royalties:** Sourced from NSW Department of Planning & Environment.

# Coal market | Australia

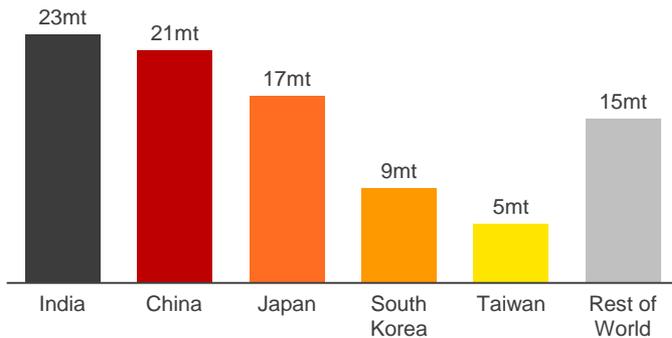
## AUSTRALIA: METALLURGICAL COAL EXPORT



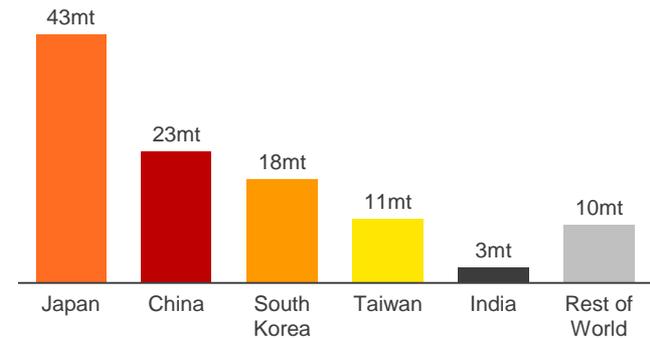
## AUSTRALIA: THERMAL COAL EXPORT



## AUSTRALIA: METALLURGICAL COAL EXPORT (1H FY2019)



## AUSTRALIA: THERMAL COAL EXPORT (1H FY2019)



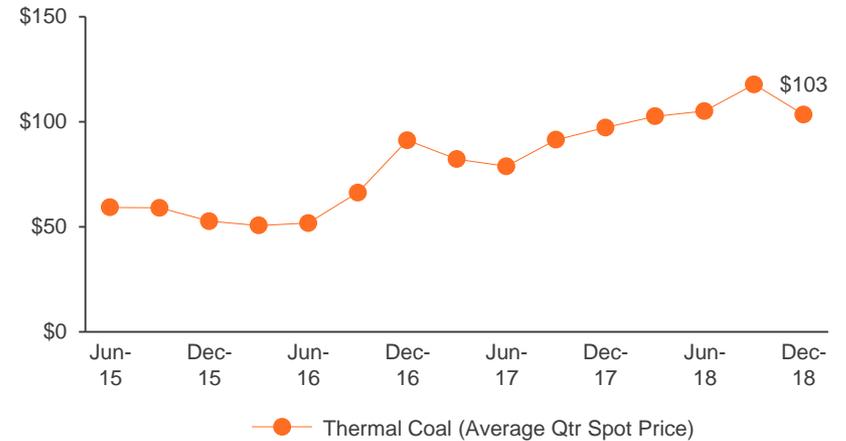
Sources/Notes: Export Volume (and country split) - Australian Bureau of Statistics, Customised Report. Hard Coking Coal Price - Platts (Peak Downs Region product). Thermal Coal Price - Intercontinental Exchange (Newcastle 6,300 Gross As Received product).

# Coal price | Coal capital and exploration expenditure

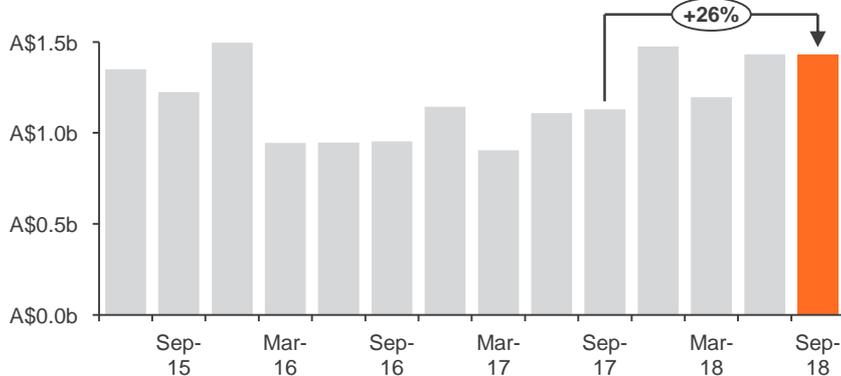
**HARD COKING COAL SPOT PRICE (US\$/t FOB)**



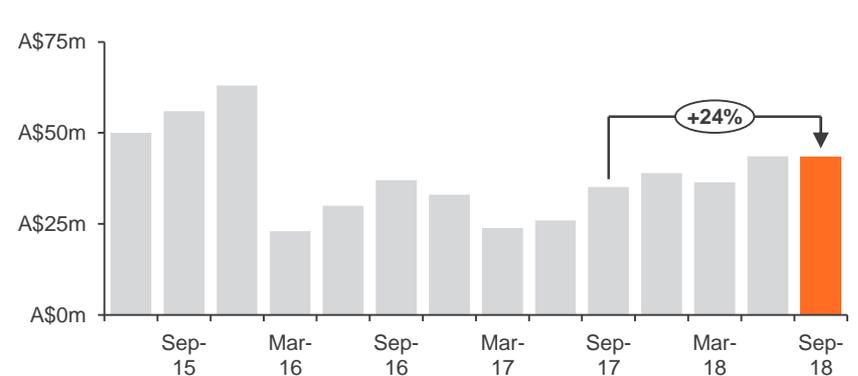
**THERMAL COAL SPOT PRICE (US\$/t FOB)**



**COAL CAPITAL EXPENDITURE (AUD)**



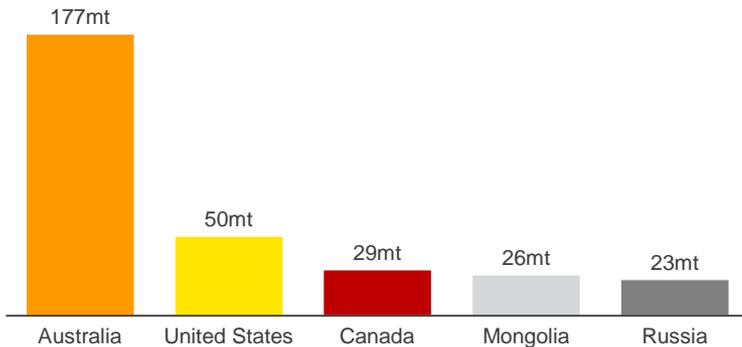
**COAL EXPLORATION EXPENDITURE (AUD)**



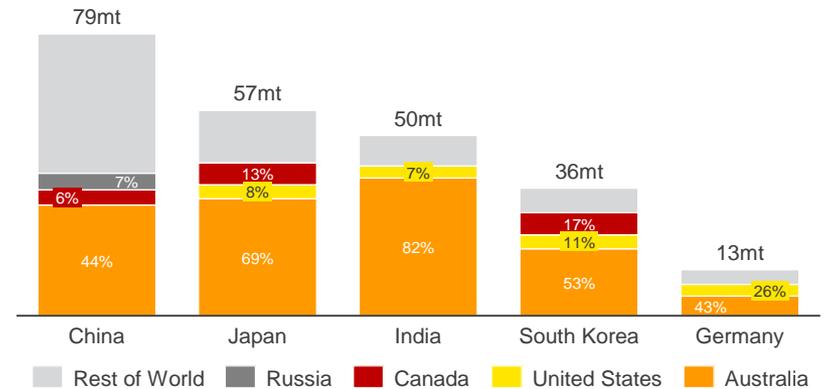
Sources/Notes: Hard Coking Coal Price – Platts (Peak Downs Region product). Thermal Coal Price - Intercontinental Exchange (Newcastle 6,300 Gross As Received product). Coal Capital & Exploration Expenditure: Australian Bureau of Statistics. FOB = Free On Board

# Coal demand | Metallurgical coal

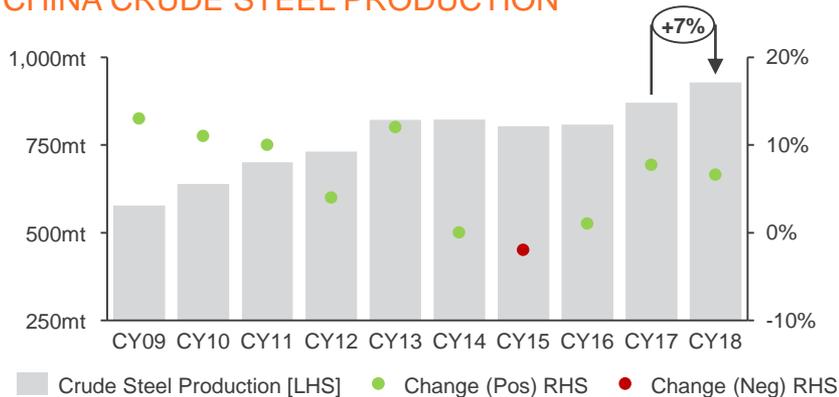
MAJOR COKING (METALLURGICAL) COAL EXPORT NATIONS: 2017



MAJOR COKING (METALLURGICAL) COAL IMPORT NATIONS (AND SOURCE): 2017



CHINA CRUDE STEEL PRODUCTION



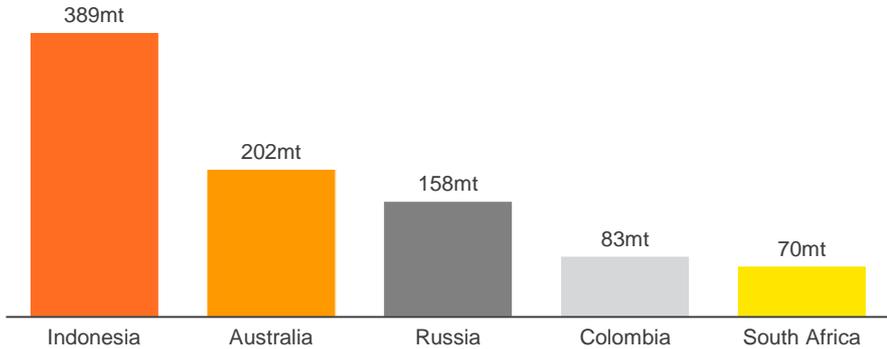
INDIA CRUDE STEEL PRODUCTION



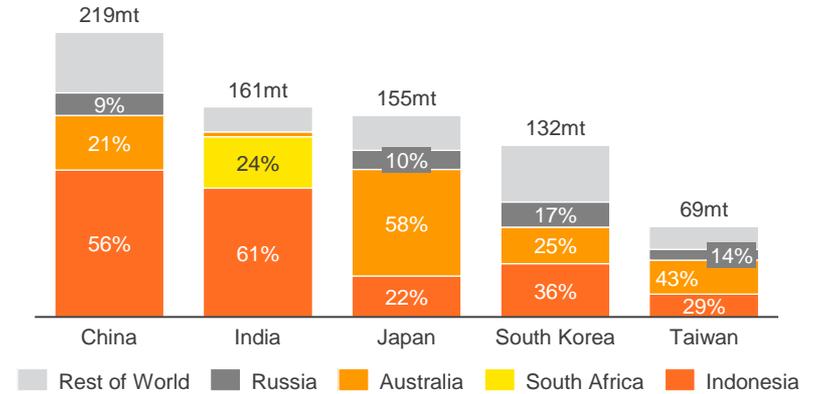
Sources/Notes: Major Coking (Metallurgical) Export/Import Volume (By Nation) - International Energy Agency World Coal Information 2018. Volume includes both seaborne and landborne trade. Top five export nations represents 93% of global trade. Top five import nations represents 84% of global trade. Steel Production - World Steel Association

# Coal demand | Thermal coal

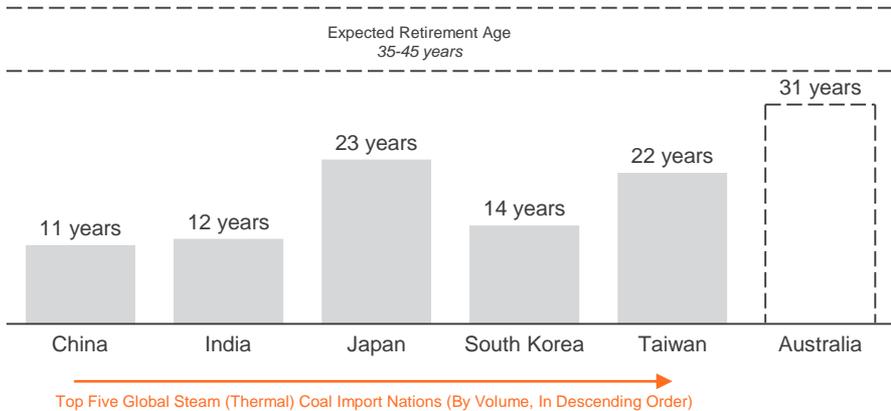
MAJOR STEAM (THERMAL) COAL EXPORT NATIONS: 2017



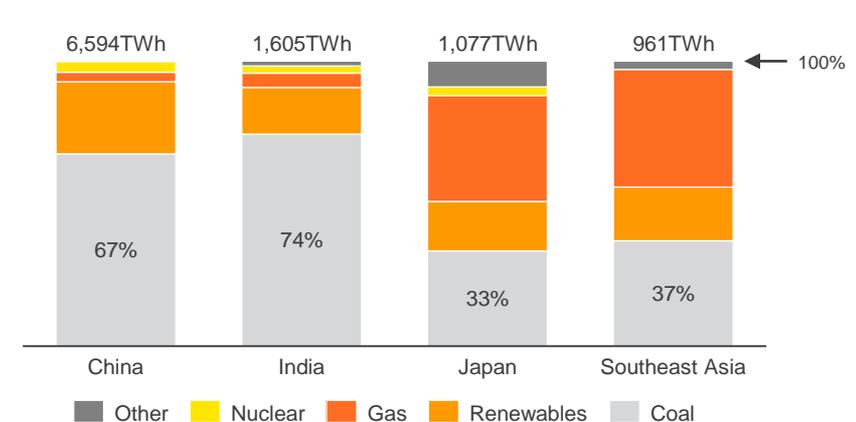
MAJOR STEAM (THERMAL) COAL IMPORT NATIONS (AND IMPORT SOURCE): 2017



AVERAGE AGE OF COAL-FIRED ELECTRICITY CAPACITY



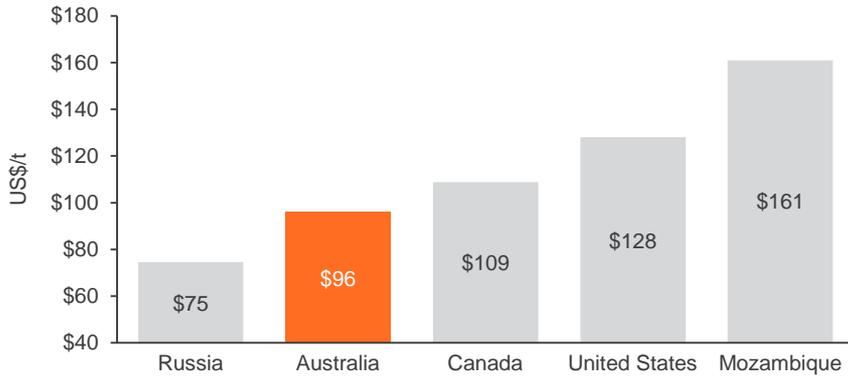
ELECTRICITY GENERATION MIX: 2017



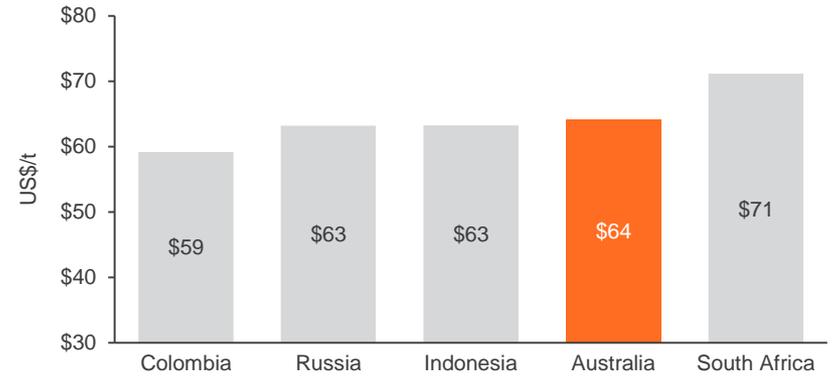
Sources: Major Steam (Thermal) Export/Import Volume (By Nation) - International Energy Agency World Coal Information 2018. Volume includes both seaborne and landborne trade. Top five export nations represents 84% of global trade. Top five import nations represents 62% of global trade. Average Age of Coal-Fired Electricity Generation Capacity - Platts UDI Electric Power Plants Database (September 2018). Australia included for comparison purposes. Electricity Generation (Mix) - International Energy Agency World Energy Outlook 2018.

# Australia coal competitiveness

**METALLURGICAL COAL CASH COSTS** (US\$/t, CFR INDIA, 2018)

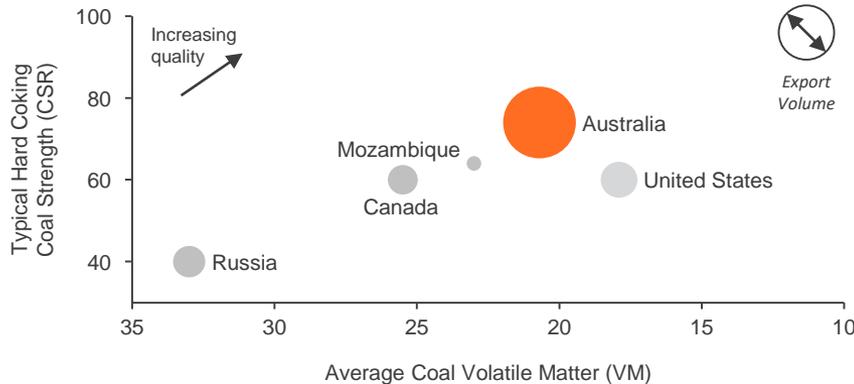


**THERMAL COAL CASH COSTS** (US\$/t, CFR JAPAN, 2018)

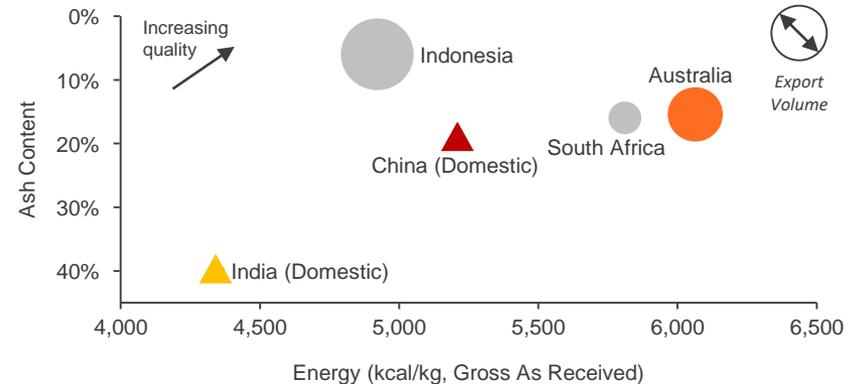


Note: Thermal Cash Costs are energy-adjusted to 6,300kcal/kg (Gross As Received)

**METALLURGICAL COAL QUALITY**



**THERMAL COAL QUALITY**



Sources/Notes: **Cash Costs:** Wood Mackenzie Coal Cost Curves (Dec 2018), Wood Mackenzie Global Coal Markets Tool (2018 2H), Sea freight export terminal assumptions: US – East Coast, Canada – West Coast, Australia – Hay Point (metallurgical) & Newcastle (Thermal), Russia - East. **Metallurgical Coal Quality:** Wood Mackenzie Global Coal Markets Tool (2018 2H). **Thermal Coal Quality:** Wood Mackenzie Coal Cost Curves (2018, Dec 2018 data), Wood Mackenzie Coal Supply Data Tool (Q4 2018), India Ministry of Coal Provisional Coal Statistics 2016-17, IEA Coal Medium-Term Market Report 2016, Indonesia Coal Mining Association, Richards Bay benchmark specifications (Platts)

# Additional Information

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## Regulation



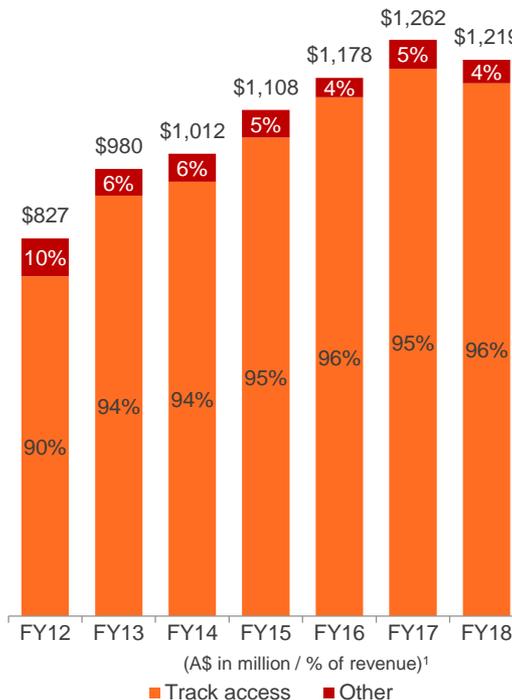
# Regulated Revenues within a stable & well-established Regulatory Regime

## WELL ESTABLISHED REGULATORY REGIME

- › The provision of transportation services by rail on the CQCN is regulated by the Queensland Competition Authority (QCA)
- › The CQCN is a vital part of the Central Queensland coal supply chain
- › The form of regulation is a conventional revenue cap

## STABLE REGULATED REVENUE BASE

- › Over 90% of Aurizon Network revenue is from track access payments
- › Access revenue growth and contribution have remained stable over time



## WELL DEVELOPED BUILDING BLOCK APPROACH TO REVENUE DETERMINATION

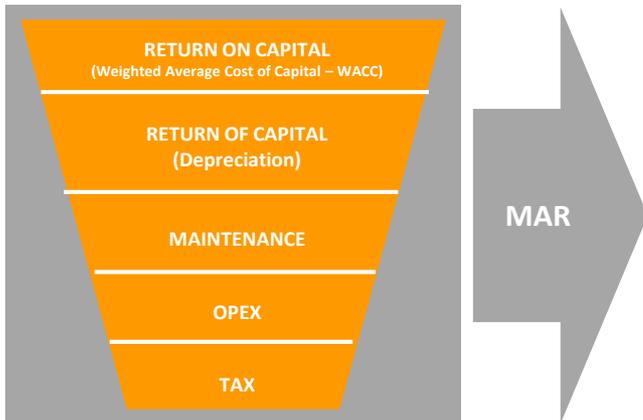
- › RAB is approved by the QCA on a Depreciated Optimal Replacement Cost (DORC) basis
- › “Building block” approach adopted to determine the CQCN’s maximum allowable revenue
- › Reference tariffs determined, taking into consideration forecast volumes and under and over recovery in prior periods



<sup>1</sup> FY12 and FY13 re-stated to reflect the internal restructure of Aurizon Network – refer ASX release 13 January 2014

# The CQCN Regulatory Framework Provide Revenue Protection Through a Building Block Approach

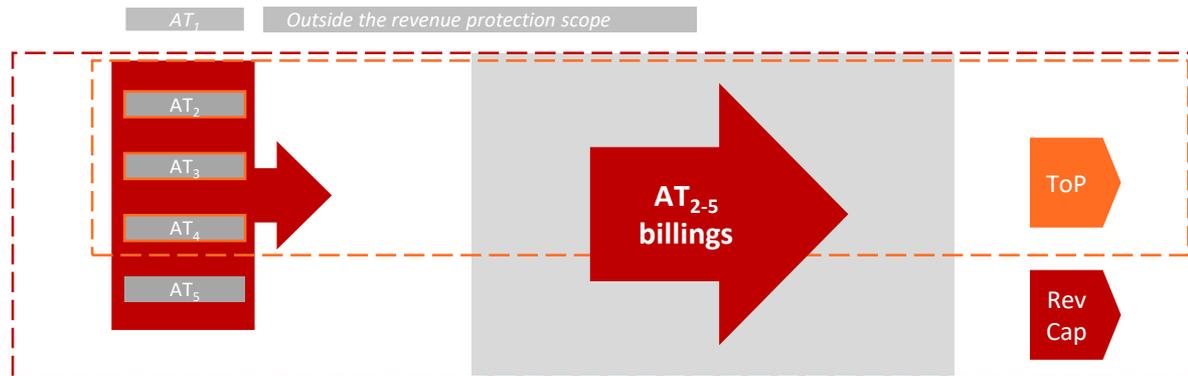
## MAXIMUM ALLOWABLE REVENUE



These building blocks represent Capital and operational costs that Aurizon Network can recover for CQCN access

The QCA approves the Maximum Allowable Revenue (MAR) that can be earned by Aurizon Network.

## REGULATORY REVENUE (FORECASTED) FOR EACH YEAR OF UNDERTAKING PERIOD



Revenue for each year determined by individual system, based on regulatory approved forecasted volumes

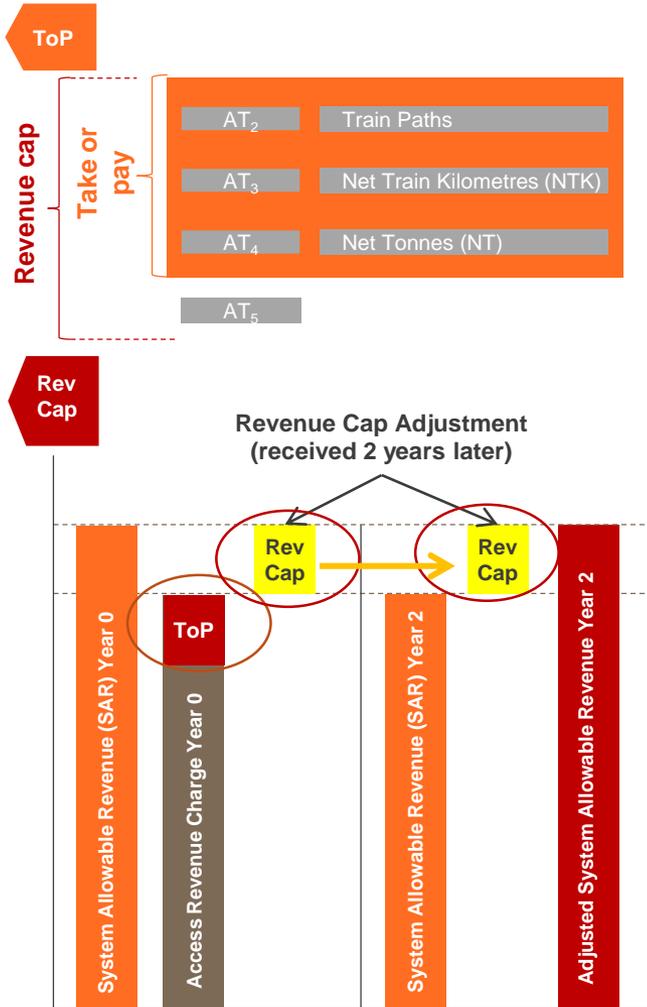
These five different reference tariffs reflecting different recovery categories

### Total Actual Revenue (TAR)

Total Actual Revenue for revenue protection calculation purposes = System Allowable Revenue (SAR) (including ToP if triggered) adjusted for rebates, cross system traffic and transfer/relinquishment fees

- › Aurizon Network’s regulated revenue is protected through a combination of contractual and regulatory mechanisms that are included in the Access Undertaking and access agreements
- › These mechanisms come into effect when revenue shortfalls occur due to actual tonnage railed being less than regulatory approved tonnage forecasts

# ... with Take-or-Pay Protection Should Revenues Fall Short (With a Revenue Cap)



## 1 Take-or-pay mechanisms

- › Primary revenue protection mechanism available to Aurizon Network
- › Allows Aurizon Network to recover revenue shortfall directly from the access holder

## 2 Revenue cap mechanism

- › Comes into effect in the event take or pay mechanisms do not recover a revenue shortfall
- › Revenue cap mechanism allows for remaining shortfall to be recovered two years later through a WACC adjusted tariff
- › In the event that total allowable revenue collected exceeds the Maximum Allowable Revenue (MAR), the revenue cap mechanism will return the surplus revenue two years later through an adjusted tariff

## 3 Socialisation of counterparty risk

- › Counterparty risk occurs when certain mines are no longer in operation
- › If a counterparty fails, the total allowable revenue will be shared among the remaining users within each system, therefore Aurizon Network will continue to earn its aggregate regulated revenue

# Glossary

Metric	Description
Access Revenue	Amounts received by Aurizon Network for access to the Network infrastructure under all Access Agreements
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
Footplate hours	A measure of train crew productivity
Free cash flow	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
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)
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
QCA	Queensland Competition Authority
ROIC	Return on Invested Capital. Rolling 12-month underlying EBIT/(Net PP&E including assets under construction + Investments accounted for using the equity method + current assets less cash, less current liabilities + net intangibles)
ToP	Take-or-Pay. Contractual ToP 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

