

# **Disclaimer**



### Forward-Looking Statements

Neither Alumina nor any other person warrants or guarantees the future performance of Alumina or any return on any investment made in Alumina securities. This document may contain certain forward-looking statements, including forward-looking statements within the meaning of the US Private Securities Litigation Reform Act of 1995. The words "anticipate", "aim", "believe", "expect", "project", "estimate", "forecast", "intend", "likely", "should", "could", "will", "may", "target", "plan" and other similar expressions (including indications of "objectives") are intended to identify forward-looking statements. Indications of, and guidance on, future financial position and performance and distributions, and statements regarding Alumina's future developments and the market outlook, are also forward-looking statements.

Any forward-looking statements contained in this document are not guarantees of future performance. Such forward-looking statements involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Alumina and its directors, officers, employees and agents, that may cause actual results to differ materially from those expressed or implied in such statements. Those risks, uncertainties and other factors include (without limitation): (a) material adverse changes in global economic conditions, alumina or aluminium industry conditions or the markets served by AWAC; (b) changes in production or development costs, production levels or sales agreements; (c) changes in laws, regulations or policies; (d) changes in alumina or aluminium prices or currency exchange rates; (e) constraints on the availability of bauxite; and (f) the other risk factors summarised in Alumina's Annual Report 2016. Readers should not place undue reliance on forward-looking statements. Except as required by law, Alumina disclaims any responsibility to update or revise any forward-looking statements to reflect any new information or any change in the events, conditions or circumstances on which a statement is based or to which it relates.

This Presentation is for information purposes only and is not a prospectus, product disclosure statement or other disclosure or offering document under Australian or any other law. It does not constitute an offer, invitation or recommendation to acquire Alumina securities in any jurisdiction and neither this Presentation nor anything contained in it will form the basis of any contract or commitment.

### Past Performance

Past performance information contained in this Presentation is given for illustrative purposes only and should not be relied upon as (and is not) an indication of future performance.

### No Liability

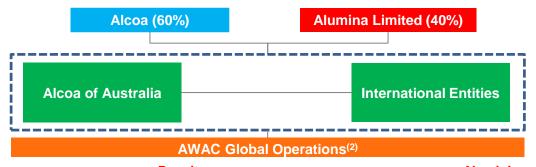
The information contained in this Presentation has been prepared in good faith and with due care but no representation or warranty, express or implied, is provided as to the currency, accuracy, reliability or completeness of that information.

# **Alumina Limited**

## An investment in the AWAC joint venture







Location (4)	Bauxite Mines <sup>(3)</sup>	Alumina Refineries	Aluminium Smelters <sup>(5)</sup>	
Australia	Huntly & Willowdale	Kwinana, Pinjarra & Wagerup	Portland (55%)	
Brazil	Trombetas (9.6%) & Juruti	Sao Luis (Alumar) (39%)	-	
Guinea	Sangaredi (23%)	-	-	
USA	-	Point Comfort (6)	-	
Spain	-	San Ciprian	-	
Saudi Arabia Al Ba'itha (Ma'aden), 25.		Ras al Khair (Ma'aden), 25.1%	-	

<sup>(1)</sup> AWAC is a JV comprised of a number of companies, of which Alcoa of Australia owns and operates the Australian assets.

<sup>(2)</sup> AWAC also owns and operates a shipping business which provides transport for AWAC's alumina business and 3<sup>rd</sup> parties.

<sup>3)</sup> AWAC has other bauxite exploration interests.

<sup>(4)</sup> The mining and refining operations in Suriname were fully curtailed by 30 November 2015 and in January 2017 AWAC announced they would be permanently closed.

<sup>(5)</sup> Point Henry smelter permanently closed on 1 August 2014.

<sup>(6)</sup> The refining capacity at Pt Comfort was fully curtailed by 30 June 2016.

# Alumina Limited Business strategy





Ma'aden Refinery (AWAC has a 25.1% interest in the refinery and associated mine)



Ship loading in Brazil

# Alumina Limited is a pure investment in the upstream segment of the aluminium value chain

Only business activity is 40% investment in AWAC

# Alumina Limited provides the cleanest look through to AWAC's underlying performance

Each AWAC entity is required to pay distributions to JV partners in accordance with JV agreements

Financial policies ensure minimal leverage maintained in Alumina Limited

Alumina Limited's holding costs are also minimal

Alumina Limited's dividend policy is to distribute free cash flow

# Alumina Limited has rights and powers not normally attributable to a minority shareholder

JV agreements protect Alumina Limited's shareholder interests

A super-majority vote is required to enact certain material changes to the operations of the Enterprise

# **Alumina Limited**

### Is well positioned in the upstream aluminium value chain



### **Industry context**

Primary aluminium demand growth strong: 4% for 2016 and 5% for 2017

Alumina market is broadly balanced and expected to be tighter by year end, potential winter curtailments in China

Opportunities for stable long term bauxite suppliers Refining issues in medium term

- China: Cost and availability of bauxite (domestic and imported)
- RoW: Long lead times and no financial incentive for new capacity

### AWAC has a leading position

Largest RoW alumina producer and third party supplier and in lowest cost quintile

Largest and first quartile of cost bauxite miner: record production, abundant resource, optionality of brownfield expansions to match market

### AWAC's strategy is delivering

De-link alumina pricing: 84% in 2016, 92% from 2018

Further improving alumina refining cost position

Developing a new business line in bauxite

### Alumina Limited provides a unique look-through vehicle

Unique, largely pure investment in bauxite and alumina

Positioned for upside: industry context, asset position and strategy

Very low levels of debt

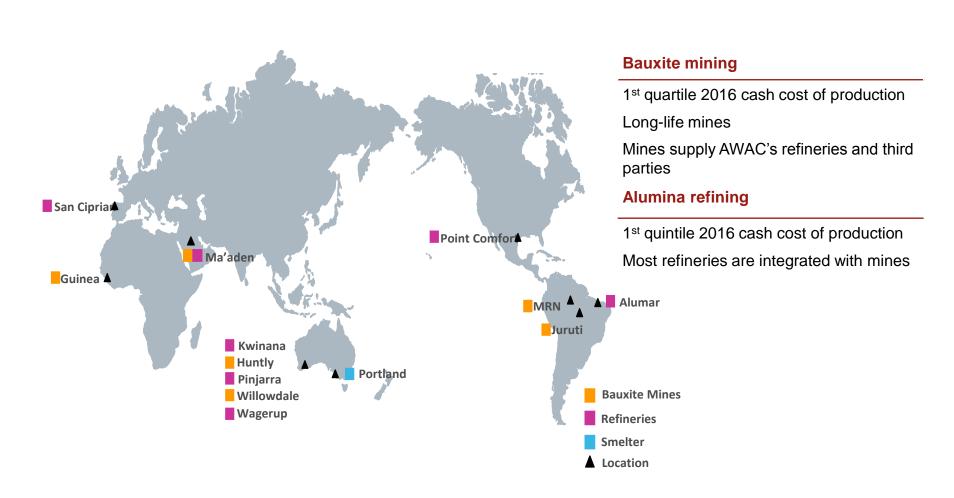




### Global leader in bauxite and alumina



### AWAC is premier owner and operator of tier 1 bauxite mines and alumina refineries



## **Operational and growth objectives**







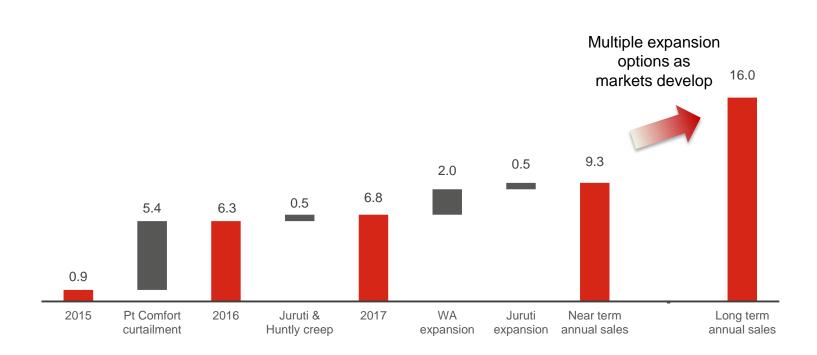
... while maintaining a conservative capital structure

# **AWAC**Growing third party bauxite sales



Potential third party bauxite sales (million bdmt <sup>(1)</sup> pa)

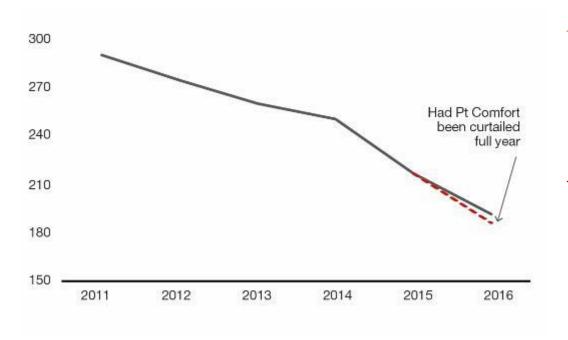
Near term increase requires minimal capital



# Refinery cost improvement



### Cash cost of alumina produced (\$/t)



### Reduce costs through:

Portfolio restructuring (1)

Productivity focus and creep projects

Reduce capital intensity

# Capitalise on improving relative cost position:

New capacity is more and more reliant on distant bauxite sources

# Reducing capital intensity: bauxite residue press filtration





Residue presses



Mobile spreader

### Traditional method requires solar drying of residue

Large storage areas needed

Water applied to prevent dusting

### Press filtration creates high density cake

Reduces storage area needed

Limits dusting

### Kwinana is the first refinery to implement (2016)

Capex was \$115m

Avoids additional c.\$100m capex over next 10 years

Refining life extended by c.15 years

## Reducing capital intensity: bauxite residue press filtration





Press filtration building



Radial stacker

### **Press filtration has many benefits**

Safer method of residue storage

Reduces future capex and frequency

Uses less land, extending life of assets, reducing future remediation costs

Improves water management

Faster recovery of caustic soda

Reduces dusting

Potential secondary product of sand

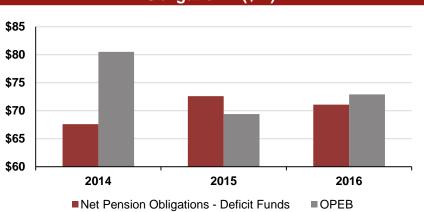
### **Evaluation underway for other refineries**

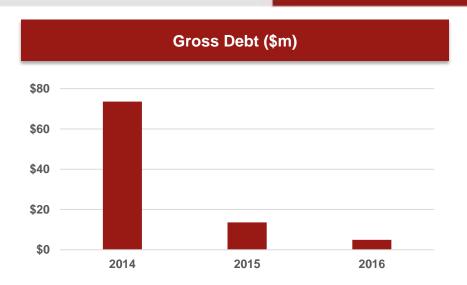
Initial focus is on WA operations

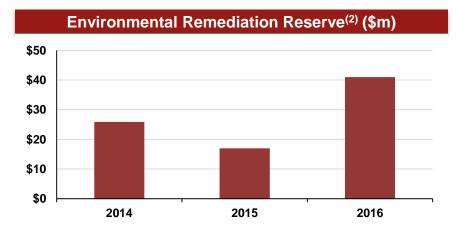
# **Conservative capital structure**

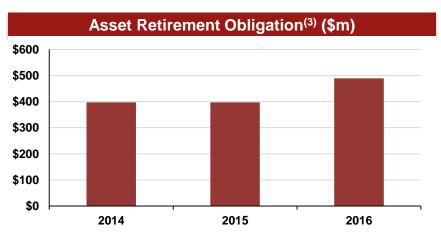


### Net Pension Obligation & Other Post Retirement Obligation<sup>(1)</sup> (\$m)









- (1) Suriname pension plans and other post retirement obligations have not been adjusted for the impact of closure.
- (2) A liability is recorded for environmental remediation when a cleanup program becomes probable and the costs can be reasonably estimated.
- Recorded AROs related to legal obligations associated with the normal operations of bauxite mining, alumina refining, and aluminium smelting facilities. These AROs consist primarily of costs associated with spent pot lining disposal, closure of bauxite residue areas, mine reclamation, and landfill closure.





# **Overview of recent changes**



Improves Alumina's influence over its investment in AWAC

### **Timing**

From 1 November 2016



- a) Enhanced governance rights
- b) Improved capital efficiency

Increases Alumina's strategic flexibility and autonomy as a corporate entity

Upon change of control



- a) Removal of exclusivity and the addition of sole risk rights (change of control of Alumina or Alcoa)
- b) Offtake rights for bauxite and alumina (change of control of Alumina)



# Alumina's influence over investment in AWAC



# Enhanced governance rights

- Super majority voting requirement (80%) for
  - Acquisitions or divestitures, expansions and curtailments exceeding certain value (\$50 million) or volume limits (0.5mt alumina, 2mt bauxite); other matters
- Improved information sharing
- More streamlined process for resolving disputes

# Improved capital efficiency

- Greater certainty of cash flow from AWAC
  - Each AWAC JV entity will pay a minimum of 50% of the prior quarter's profit and surplus cash above \$140 million (total group) will also be distributed on a quarterly basis
- Ability to debt fund AWAC
  - Debt will be raised to fund growth projects with certain limits



# Increasing strategic flexibility and autonomy



### Removal of exclusivity

- Immediately on and from a change of control of Alumina Limited or Alcoa Corp the exclusivity and non-compete provisions will terminate:
  - removes takeover impediment for industry acquirers
  - either partner may also, on a sole risk basis:
    - expand an existing AWAC operation;
    - develop a new project on AWAC tenements; or
    - pursue a project outside of AWAC

Offtake rights

 Upon a change of control of Alumina Limited, the acquirer (or consortium member) is entitled to offtake as follows:

### Alumina:

- its net short position; plus
- up to 1Mtpa of alumina, which it may sell as it sees fit;

### Bauxite:

its net short position of bauxite for internal consumption;

Both subject to a cap of Alumina Limited's equity share of AWAC's production and net of AWAC's own consumption and existing third party agreements





# **Uncertainties in the outlook**

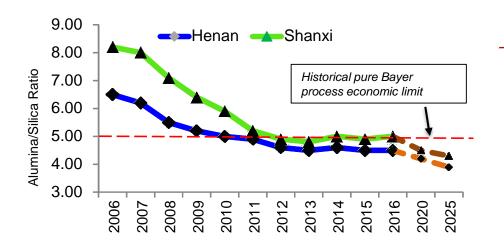


		Short Term	Medium Term	Long Term
Bauxite price	- Low cost supply from Indonesia, Malaysia and/or Vietnam	-	-	
	<ul> <li>Increasing supplies from Guinea or Brazil at higher cost</li> </ul>			
	<ul> <li>Higher freight rates (due to increased bauxite shipping, availability of ships and fuel increases)</li> </ul>			
	<ul> <li>Ongoing difficulties accessing bauxite in India as its smelting expands</li> </ul>			
	<ul> <li>Social licence requiring more sustainable practice in developing countries supplying bauxite</li> </ul>			
Alumina price	- Chinese environmental policy (in particular coal usage, red mud)			
	- Yuan devaluation	-		
	<ul> <li>Low cost technology breakthrough on low A:S bauxite or fly ash</li> </ul>			-
	- Chinese Government curbing uncompetitive industry capacity	û	Û	
	Disorderly outflow of high aluminium stocks	-	-	

# Chinese bauxite imports

# Forecast to grow by 68mtpa by 2025

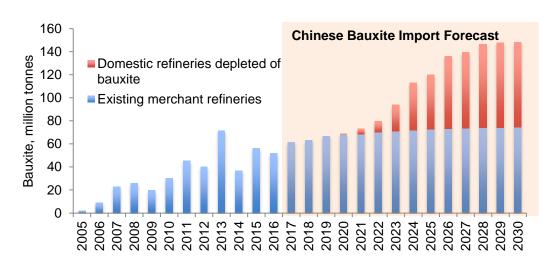




### Declining domestic bauxite quality adding to growth

Decline affecting key alumina producing provinces

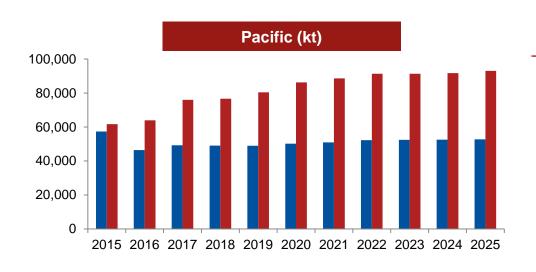
Shanxi, Henan likely to relocate refining largely to coast (e.g. Shandong, Liaoning, Guangxi)

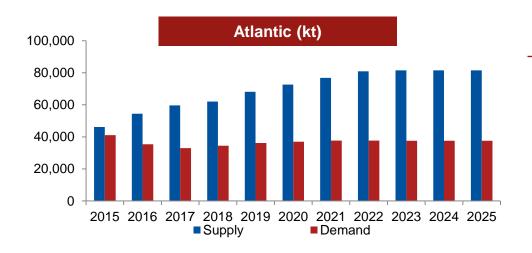


Source: Top: CM Group, January 2017 Bottom: CM Group, February 2017

# Third party bauxite balance Atlantic bauxite meeting shortfall in Pacific







### Cost of third party bauxite expected to increase

Chinese bauxite imports forecast to grow sharply from 2020

More large-scale greenfields mines with reliable supply needed

Base supply from Pacific, likely at higher cost, given social pressures

Guinea likely marginal supplier to China, given deposits and grades

Atlantic bauxite freight rate exposure; foreign exchange impacts

### Alumina production to shift

Main growth forecast to be in Asia and Middle East closer to smelting growth

Source: CRU, January 2017

# Malaysian moratorium on mining

### Extended to 30 June 2017





Loading bauxite from stockpile in Kuantan, April 2017



Roads to Kuantan Port, April 2017

### Miners with a permit are allowed to export

Bauxite exports are expected to be up to c.8.0mtpa

Washing is prohibited in Kuantan

Mining costs have risen and prices are low

Margins are too thin, especially given grade variability

### The moratorium is working

Exports are much less than high of 24mtpa (Kuantan 2015)

The government is collecting its taxes

The environment is clean by comparison

# Indonesian export ban Temporary relaxation





Government No.1/2017 Regulation



ESDM No.5/2017



ESDM No.6/2017



Ministry No.19/2017 of Trade

### Temporary relaxation and not a lifting of the ban

Relaxes the ban for five years

Very specific and tight regulatory requirements

Benchmark bauxite prices established to calculate taxes

### **Objectives of government**

Increase investment in infrastructure

Increase the participation of locals and generate jobs

Protect the environment

Generate more tax revenue

Incentivise value-add projects

Government Regulation No. 1, effectively relaxed the ban ESDM Decree No.5 & 6, further explains the conditions for exports Ministry of Trade No. 19, presents Benchmark Prices

# Indonesian export ban Temporary relaxation





Antam's CGA project (PT ICA) in Tayan, Indonesia Source: PT ICA



PT Well Harvest Winning Alumina Refinery in Kendawangan, Indonesia Source: CM Group

### Licensee who has or will build value-add plant can export

Must be a direct shareholder of the value-add project Only two existing projects that could qualify

### Only washed bauxite can be exported

Minimum  $Al_2O_3 = 42\%$ 

Existing projects represent c.4mtpa of potential exports

# Independent companies to monitor progress of value-add projects

New value-add projects with genuine intention to build will be allowed to export bauxite

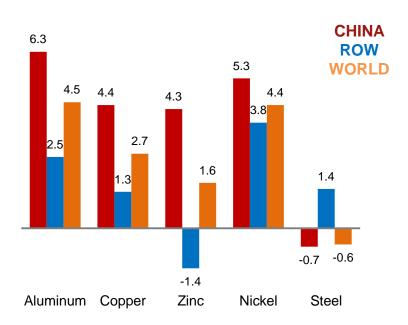
Evaluations against key milestones will be performed

Must achieve at least 90% of the assessed milestone

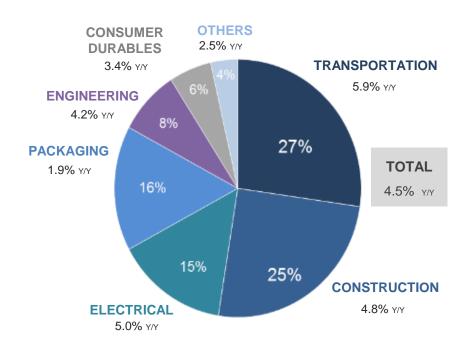
# Aluminium demand remains strong Led by transportation and construction



2016 Annual Consumption Growth by Metal %



2016 Global Aluminium Consumption Growth by End Use Sector



# **Announced refinery projects Modest supply growth outside of China**



### **Upcoming Alumina Growth Projects**

REGION	COUNTRY	COMPANY  Emirates Global Aluminum	LOCATION  KIZAD, Al Taweelah	2017 2018	2019	2020	TYPE Greenfield	Comments  First phase set to be completed in 2018. A Phase II could double capacity to 4.0 million tpy.
Asia exc China	Indonesia	Hongqiao Well Harvest Winning Alumina	Ketapang, West Kalimantan	1,000			Greenfield	Phase I started operating late 2015. Ramp up to full capacity in 2016. Second 1mt phase was scheduled for 2017 but has not been committed to.
		Inalum/Antam/Chalco	West Kalimantan		1,000	1,000	Greenfield	The refinery is planned to hit the market in 2019-2020.
	Laos	Yunnan Aluminum	Paksong	1,000			Greenfield	The company obtained approval from China's NDRC to build the project in Laos. Yunnan is currently waiting for the green-light from the Laotian government.
China	China	China Various Greenfield	Various	500 7,200	800	0	Greenfield	
	China	China Various brownfield	Various	3,700 0	0	0	Brownfield	

TOTAL WORLD 5,200 10,200 1,800 1,000

TOTAL CHINA 4,200 7,200 800 0

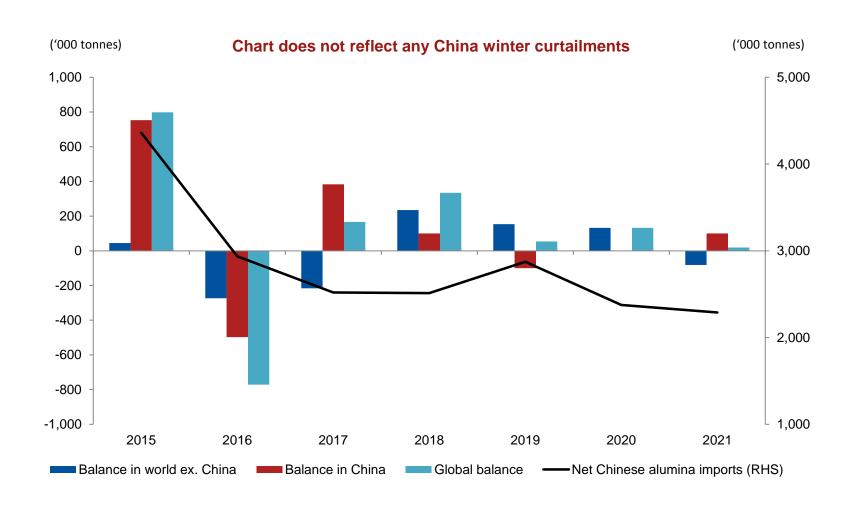
TOTAL ROW 1,000 3,000 1,000 1,000

Source: HARBOR Aluminium, April 2017

# **Alumina balance**

# Asia smelting growth to keep alumina market tight





Source: CRU, March 2017

# **Potential China curtailments**

## Seeking to reduce haze and smog in Northern China





Beijing Smog, January 2017

Million tonnes	Alumina	Aluminium
Production 2017	68.2	36
Affected annual production	27.2	10.6
30% Cut	8.2	3.2
Net effect (4 months)	2.7	1.1

Source: CM Group

### **Ministry of Environmental Protection proposing curtailments**

30% reduction in aluminium and alumina production Curtailment to be during the winter heating season Affects Beijing, Tianjin, Hebei and surrounding areas

### Alumina cuts expected to exceed aluminium's

MEP proposal to affect key alumina provinces

Net effect could be 2.7 to 3.4 mt of alumina lost<sup>(1)</sup>

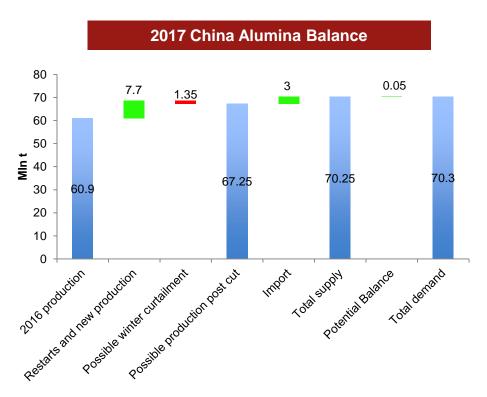
High utilisation rates reduce opportunity to ramp up elsewhere

<sup>(1)</sup> Net effect over the winter heating period of 4-5 months

## **Potential China curtailments**

# Seeking to reduce haze and smog in Northern China





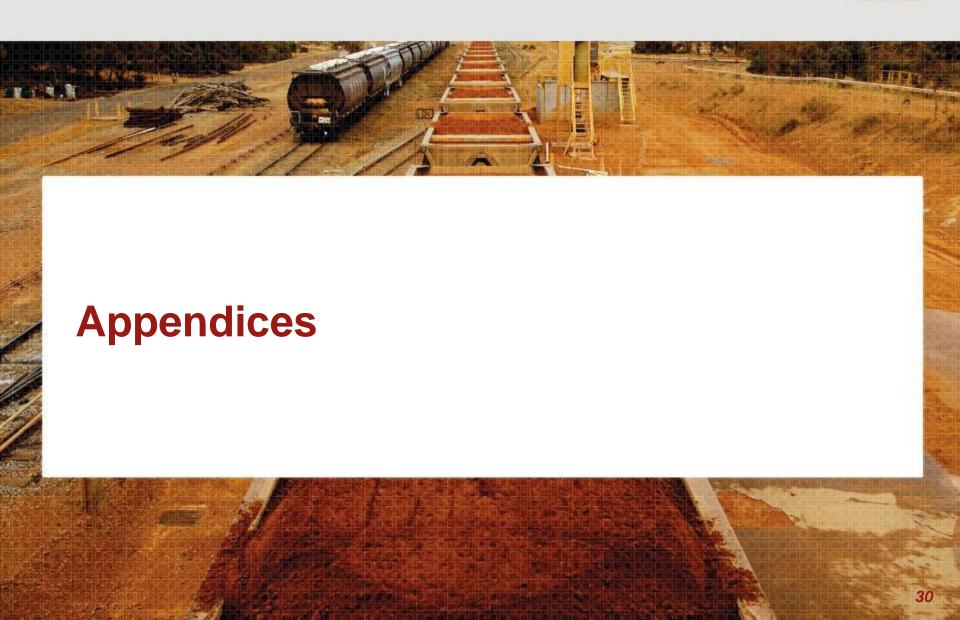
### Assuming winter cut takes full effect (2 months in 2017)

### Potential industry actions and impacts

SOEs likely to enact final curtailment proposal
Small, high cost private companies could close
Large private companies could lobby for change
Expansion or relocation plans could change
Production costs could increase

Source: CM Group





# **AWAC**Alumina refinery portfolio



Country	Refinery	Ownership	AWAC share of nameplate capacity <sup>(1)</sup> (MTPY)	Percentage of AWAC total nameplate capacity	Bauxite mine integration
Australia	Kwinana Pinjarra Wagerup	AWAC (100%)	2.2 4.2 2.6	63%	✓
Brazil	Sao Luis	AWAC (39%) Rio Tinto Alcan Inc (10%) Aluminio (15%) South32 (36%)	1.4	10%	✓
Spain	San Ciprian	AWAC (100%)	1.5	11%	[2]
US	Point Comfort [3]	AWAC (100%)	2.3	16%	[2]
Total			14.2	100%	

AWAC's share of Ma'aden alumina refinery nameplate capacity is 450,000 tonnes and is expected to be at full operating capacity in 2017

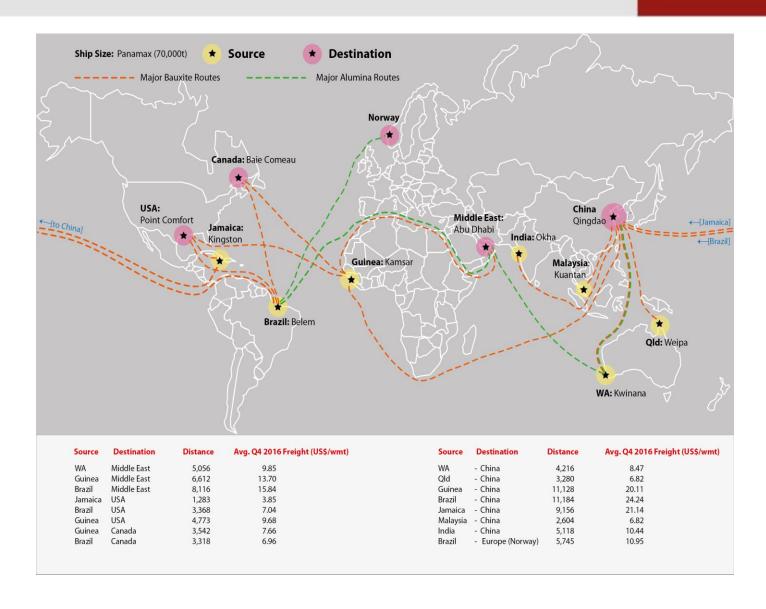
<sup>(1)</sup> Nameplate capacity is an estimate based on design capacity and normal operating efficiencies and does not necessarily represent maximum possible production. Excludes additional creep opportunities.

<sup>(2)</sup> Bauxite is supplied from mines in which AWAC has an equity interest

<sup>(3)</sup> The refining capacity at Pt Comfort was fully curtailed by 30 June 2016.

# Key bauxite/alumina freight routes

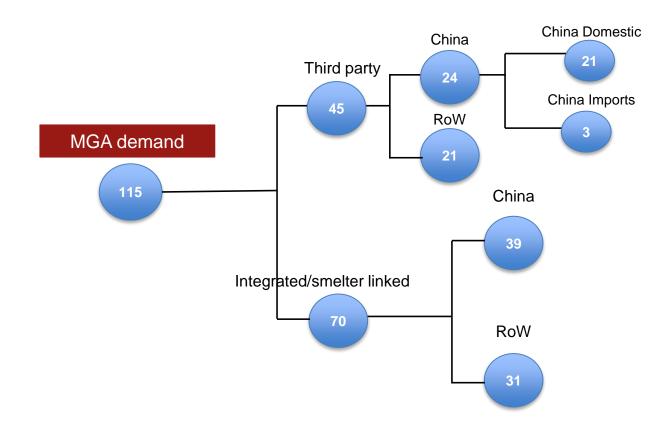




# 2016 Metallurgical Grade Alumina Market



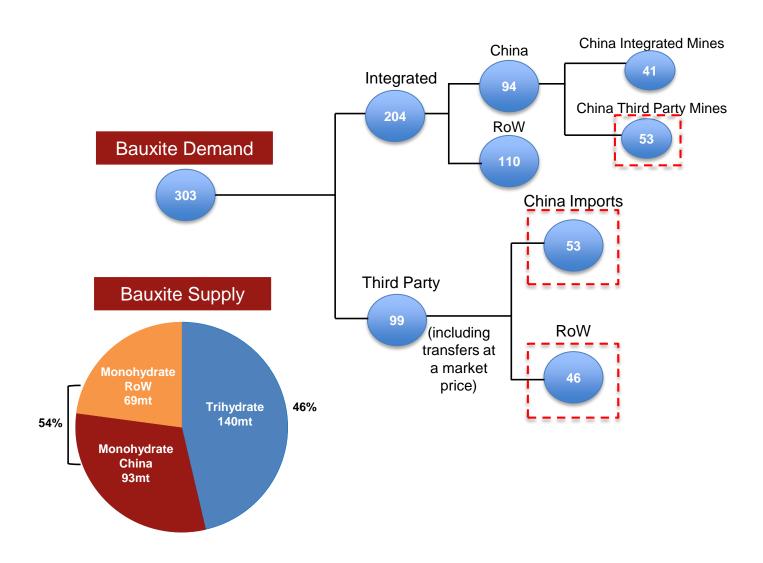
**Overview** 



# **2016 Bauxite Market**

### **Overview**





Source: CRU, December 2016