



23 March 2017

## INTRODUCTION TO LYNAS PRESENTATION

As noted in the Company's announcements dated 24 January 2017 and 28 February 2017, Lynas Corporation (ASX:LYC, OTC:LYSDY) is now producing NdPr at design rates. For the information of all stakeholders, we have prepared the attached "Introduction to Lynas" Presentation, which summarizes the current status of the Lynas business.

**For all media enquiries please contact Renee Bertuch from Cannings Corporate Communications on +61 2 8284 9990.**

Andrew Arnold  
Company Secretary



Lynas Corporation HQ  
PT17212 Jalan Gebeng 3, Kawasan Perindustrian Gebeng, 26080 Kuantan, Pahang Darul Makmur, Malaysia  
Tel: +60 9 582 5200 +60 9 582 5800  
Fax: +60 9 582 5291 +60 9 582 5292  
[www.lynascorp.com](http://www.lynascorp.com)  
ACN 009 066 648



# Introduction to Lynas Corporation

March 2017



**SAFE FOR PEOPLE  
SAFE FOR THE ENVIRONMENT  
SECURE FOR CUSTOMERS**



# Disclaimer



This Presentation has been prepared by Lynas Corporation Limited (ABN 27 009 066 648) (Lynas or the Company) This Presentation contains summary information about Lynas and its subsidiaries (Lynas Group) and their activities current as at the date of this Presentation. The information in this Presentation is of general background and does not purport to be complete or to comprise all the information that a shareholder or potential investor in Lynas may require in order to determine whether to deal in Lynas shares. It should be read in conjunction with Lynas Group's other periodic and continuous disclosure announcements lodged with the Australian Securities Exchange (ASX), which are available at [www.asx.com.au](http://www.asx.com.au). This document is not a prospectus or a product disclosure statement under the Corporations Act (Cth) 2001 (Corporations Act) and has not been lodged with ASIC.

## **Not investment or financial product advice**

This Presentation is for information purposes only and is not financial product or investment advice or a recommendation to acquire Lynas shares and has been prepared without taking into account the objectives, financial situation or needs of individuals. Before making an investment decision, prospective investors should consider the appropriateness of the information having regard to their own objectives, financial situation and needs and seek financial, legal and taxation advice appropriate to their jurisdiction. Lynas is not licensed to provide financial product advice in respect of Lynas shares. Cooling off rights do not apply to the acquisition of Lynas shares.

## **Financial data**

All dollar values are in Australian dollars (A\$) unless stated otherwise and financial data is presented within the financial year end of 30 June 2016 unless stated otherwise. Any pro forma historical financial information included in this Presentation does not purport to be in compliance with Article 11 of Regulation S-X of the rules and regulations of the US Securities and Exchange Commission.

## **Future performance**

Past performance information given in this Presentation is given for illustrative purposes only and should not be relied upon as (and is not) an indication of future performance. This Presentation contains certain "forward-looking statements". The words "expect", "should", "could", "may", "will", "predict", "plan", "scenario", "forecasts", "anticipates" "estimates" and other similar expressions are intended to identify forward-looking statements. Indications of, and guidance on, future earnings and financial position and performance are also forward-looking statements. Forward-looking statements, opinions and estimates provided in this Presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Such forward-looking statements including projections, guidance on future earnings and estimates are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance. There can be no assurance that actual outcomes will not differ materially from these forward-looking statements.

## **Investment Risk and other risks**

An investment in Lynas shares is subject to investment and other known and unknown risks, some of which are beyond the control of Lynas Group, including risk factors associated with the industry in which Lynas Group operates, such as: nature of mineral exploration and production; mineral and ore reserves; operations risks; project development risks; market price and demand risk; credit and market risks; regulatory, political and environmental risks; tax and other risks generally relating to equity investment.

## **Not an offer**

This Presentation does not constitute an offer to sell, or the solicitation of an offer to buy, any securities in the United States. Any securities described in this Presentation have not been, and will not be, registered under the U.S. Securities Act of 1933 (the "Securities Act").

## **Disclaimer**

Lynas and its affiliates, officers, employees, agents and advisers have not authorised, permitted or caused the issue, dispatch or provision of this Presentation to any third party. Lynas, its related bodies corporate and their respective affiliates, officers, employees, agents and advisers to the maximum extent permitted by law, expressly disclaim all liabilities in respect of any expenses, losses, damages or costs incurred by you as a result of the information in this Presentation being inaccurate or due to information being omitted from this Presentation, whether by way of negligence or otherwise, and make no representation or warranty, express or implied, as to the fairness, currency, accuracy, reliability or completeness of information. The information in this Presentation remains subject to change without notice.

# Topics Covered



- Introduction to Lynas
- Safety, Environment and Community
- Operations:
  - Malaysia
  - Western Australia
- Sales & Marketing
- Recent Financial Performance

# LYC Share Price Since Sept 2014



September 2014 – March 2017



# Introduction to Lynas



- Lynas mines and processes Rare Earth elements
  - Lynas mines Rare Earths and completes first stage processing at Mt Weld Western Australia
  - Concentrate is shipped to Malaysia where it is refined by separating the various RE elements
  - Sales are primarily to customers in Japan and China
  - Rare Earths are used in a variety of industries. The key end use segment for Lynas is the automotive industry.
- EXCHANGES: ASX (code LYC), OTC (code LYSDY)
- SHARES: 3,657m on issue
- MARKET CAP: A\$366m as at 21 March 2017
- CASH: A\$38.5m (incl. restricted cash) as at 31 December 2016
- DEBT: US\$200m JARE facility  
US\$225m Convertible Bond facility

# What are Rare Earths?



Rare Earths are a moderately abundant group of 15 metallic elements known as the Lanthanide series (atomic numbers 57 through to 71) plus Yttrium (39). Although Scandium (atomic number 21) is not a Rare Earth element, it is commonly included because of its similar properties. They range in crustal abundance from cerium, at 60 parts per million, to thulium and lutetium, the least abundant Rare Earth elements at about 0.5 parts per million. Rare Earth elements have many valuable properties.

**Periodic table of the elements**

Atomic number, Symbol, Atomic weight, and element names are shown in the table. The lanthanide and actinide series are highlighted in blue.

- Chemical** - Unique electron configuration
- Catalytic** - Oxygen storage and release
- Magnetic** - High magnetic anisotropy and large magnetic moment
- Optical** - Fluorescence, high refractive index
- Electrical** - High conductivity
- Metallurgical** - Efficient hydrogen storage in rare earths alloys

# How are Rare Earths used?





# Rare Earths: Improved Environmental Outcomes

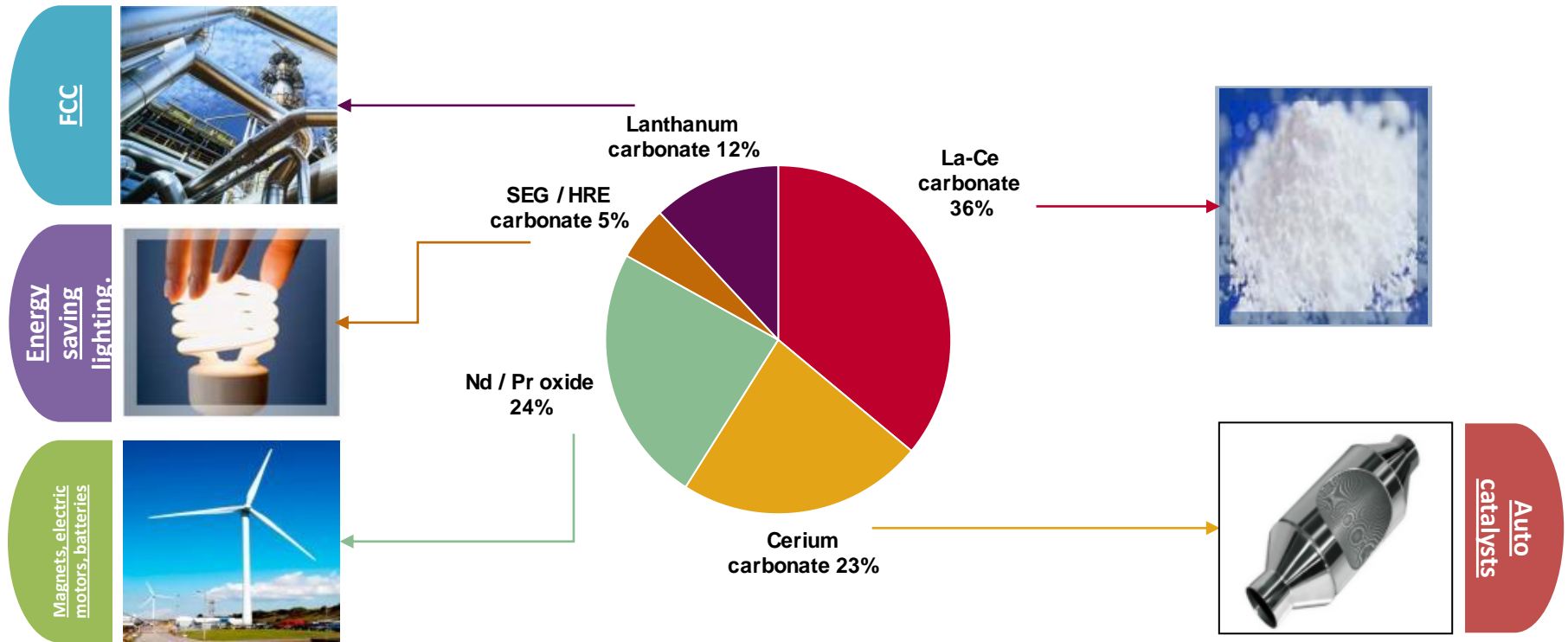


Where	RE Property	Allows	Final Impact
Wind turbines	Permanent magnet generators	No gear box (Cost) Better yield in light winds	Energy produced at lower cost
Cars	Permanent magnets motors	Electricity savings Weight Reduction	Saves energy
	Electricity storage	HEV Batteries	
	Catalytic reduction	Depollution systems	
Appliances	Permanent magnets motors	Electricity savings	Saves energy
Lighting	Efficiency (x3)	Energy Savings	Saves energy
	Life time (x5)	Resources	
Electronics	Smaller components	Improved functionality	Efficient operation
Medical	Magnetic, chemistry, luminescence	IRM, PET scans, Kidney disease	Improved diagnostics and health outcomes

# Lynas' products are used in a broad range of applications



## Breakdown of product mix and their main uses



# Safety



- Lynas has implemented extensive processes to ensure that production is safe for employees, safe for the environment and community and secure for our customers
- Lynas has a good safety record which we seek to continue to improve
  - Lost time injury frequency rate (“LTIFR”) of 1.4 per million hours worked for the 12 months to December 2016
  - Implementation of extensive safety programmes on both sites
- Lynas operations are externally certified
  - Western Australia Operations
    - OHSAS18001:2007, ISO 14001:2004 and ISO 9001:2008
  - Malaysia operations
    - OHSAS18001:2007, ISO 14001:2004 and ISO 9001:2008
    - International Atomic Energy Association (IAEA) has confirmed that LAMP operations are intrinsically low risk

# Water Management at Mt Weld

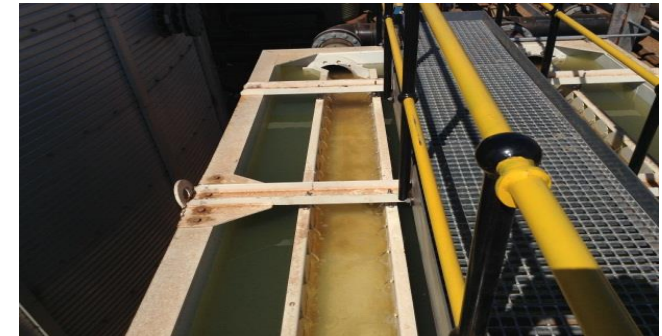


The Concentration Plant at Mt Weld requires high quality water which is produced from water extracted from the aquifer which exists across within the carbonatite pipe and across the rare earth ore zone.

The groundwater is processed via Reverse Osmosis with the salt concentrate reporting to an evaporation pond.

To assist with tailings management and reduce water consumption rates, water is recovered from the tailings ponds and reprocessed to remove very fine solid and sediment and other impurities.

Lynas is utilising modern technologies for the clarification and microfiltration of water. The objectives are to achieve higher water utilisation rates and reduce the area for tailings storage.



# Lynas has designed environmental assurance in all stages of its operations in Malaysia



<u>Environmental Issue</u>	<u>Potential Environmental Impact of RE Processing</u>	<u>Lynas Industry Leading Environmental Solution</u>
<p><b>Gas Emissions</b></p>	<ul style="list-style-type: none"> <li>RE processing plants can release significant quantities of harmful gases such as SO<sub>2</sub> and SO<sub>3</sub> into the atmosphere</li> </ul>	<ul style="list-style-type: none"> <li>5 stage gas scrubbing facility to minimise harmful gas emissions</li> <li>Lynas SO<sub>2</sub> and SO<sub>3</sub> emissions are 87% and 98% below permissible limits respectively<sup>(1)</sup></li> </ul>
<p><b>Waste Water Emissions</b></p>	<ul style="list-style-type: none"> <li>RE processing plants consume large amounts of water and acids which can lead to harmful contamination of waterways</li> </ul>	<ul style="list-style-type: none"> <li>Neutralisation processes to remove acidity, metals and other contaminants from its processed water</li> <li>Lynas effluent quality measurements are all significantly below permissible limits</li> </ul>
<p><b>Solid Residues</b></p>	<ul style="list-style-type: none"> <li>RE processing plants generate large quantities of solid waste</li> <li>Processes to minimise and reuse the solid materials are an important aspect of sustainable operations</li> </ul>	<ul style="list-style-type: none"> <li>Commercial uses being developed for all of its solid residue streams</li> </ul>



# Lynas is a safe, positive and committed contributor to its local communities



## Malaysia

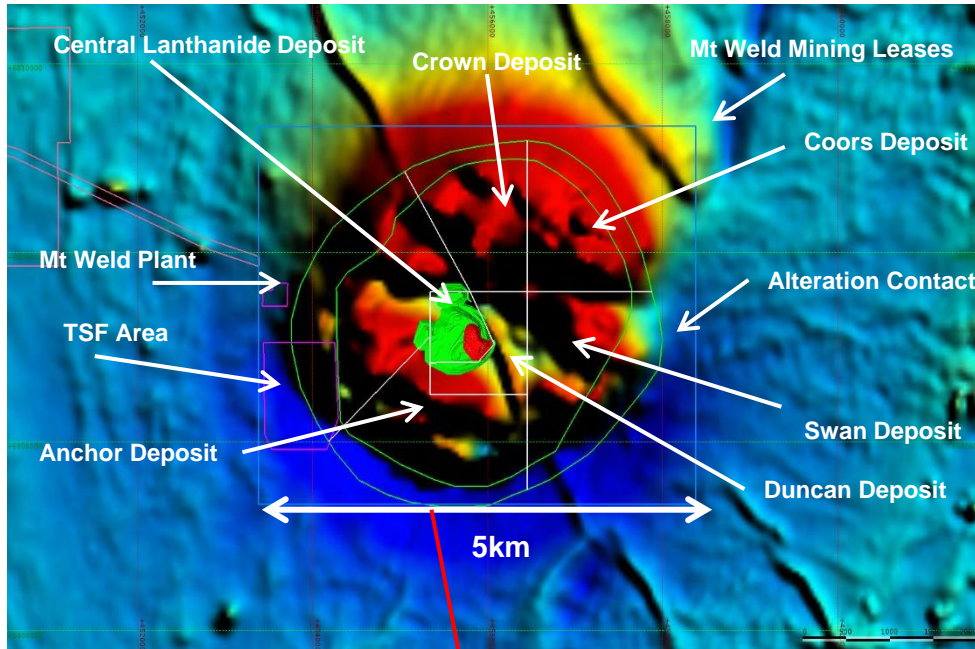
- Lynas has designed environmental assurance in all stages of its operations
- Lynas operations are measured independently:
  - Four years of data show no increase in background radiation levels at the plant or in surrounding areas
  - All emissions are below allowable safe limits
- Lynas is open and transparent with information relating to its operations
  - Lynas has complied with all requirements of its license and all regulatory standards
  - Lynas publishes relevant information in 2 locations which is available to the public and to the relevant authorities
- Lynas has invested over RM 2.7bn in Malaysia and continues to spend over RM 300m each year in Malaysia
- Lynas is an active member of the local community:
  - Lynas employs over 600 local staff
  - Lynas engages actively in community support programs
- Lynas is continuing to invest in research and development activities for the productive use of LAMP by products, primarily in soil conditioner products
- Lynas executives live in Kuantan

## Western Australia

- Lynas engages with local government and community groups to contribute directly to the local economy
- Lynas has recently moved to a mining camp in Laverton allowing increase formal and informal community participation



# The Mount Weld Carbonatite Intrusion World Class REE and Rare Metals Deposit



- Central Lanthanide Deposit, the highest grade operating Rare Earths mine in the world with a current operating LOM JORC reserve of 20+ years
- Duncan Deposit, the largest high grade Dysprosium resource in the world
- Crown and Coors Deposits, the highest grade undeveloped Niobium resource in the world
- All deposits currently limited by drilling extent
- All deposits close to Mt Weld processing infrastructure <5km



# Resources and Reserves



Mt Weld contains one of the world's largest and highest grade Rare Earth deposits

- The Ore Reserves are sufficient to sustain economic total production of 22k tpa REO for over 25 years
- The tenements include undeveloped Heavy Rare Earths, Niobium and Phosphate deposits

Lynas is currently completing its 2<sup>nd</sup> Mining campaign, the first since 2008

## Mt. Weld Mineral Resources (2.5% REO cut off)

Mineral Resources	Ore (Mt)	REO (%) <sup>1</sup>	Cont. REO (kt)
Measured	10.1	9.1%	940
Indicated	8.7	7.1%	620
Inferred	4.5	4.0%	180
<b>Total</b>	<b>23.2</b>	<b>7.4%</b>	<b>1,740</b>

## Mt. Weld Ore Reserves (4% REO cut off)

Ore Reserves	Ore (Mt)	REO (%) <sup>1</sup>	Cont. REO (kt)
Proven	5.7	11.9%	680
Probable	4.2	9.3%	391
<b>Total</b>	<b>9.9</b>	<b>10.8%</b>	<b>1,071</b>



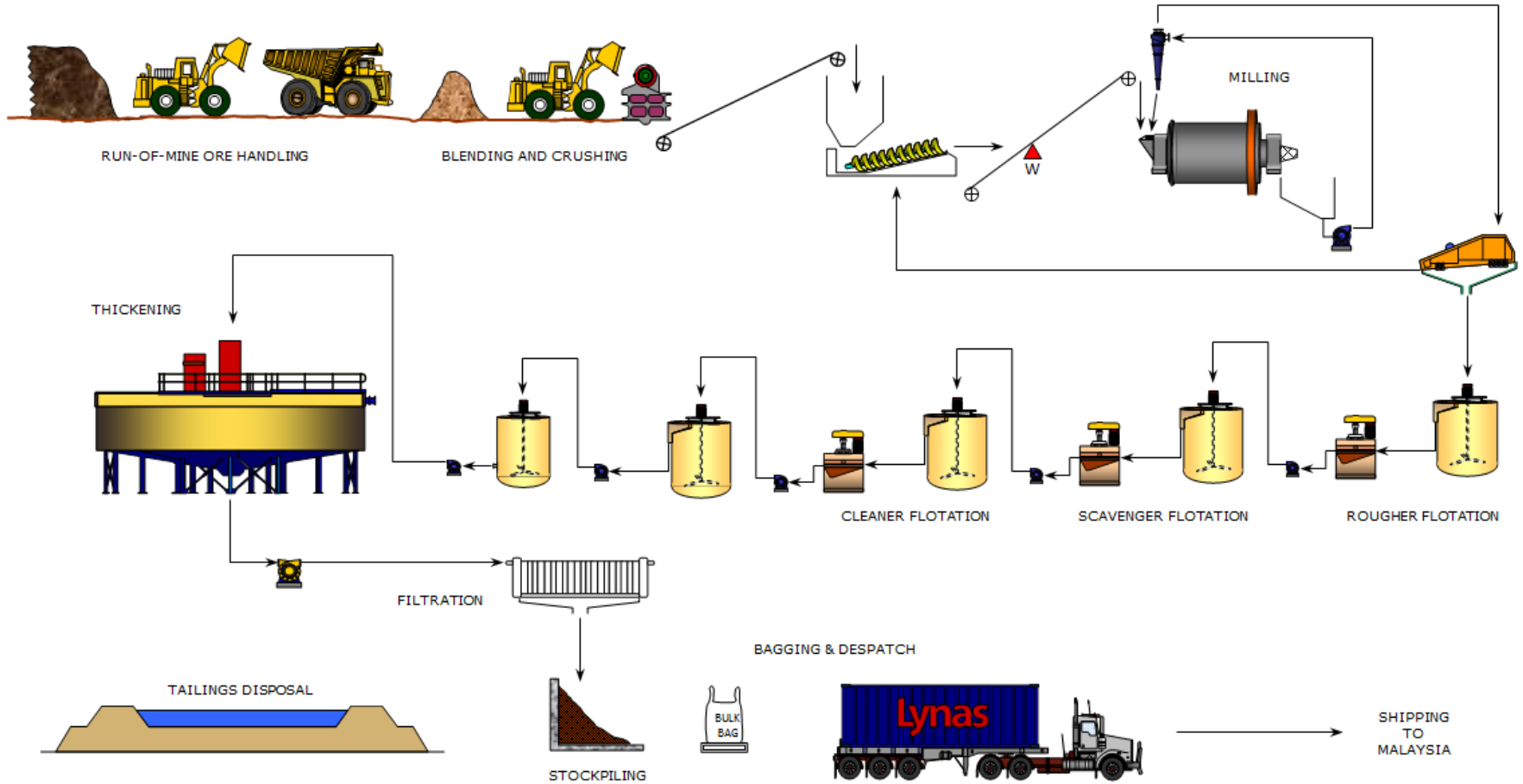
Note: The above data is at 31 December 2016

Figures may not sum due to rounding

<sup>1</sup> REO (%) includes all the lanthanide elements plus yttrium



# Concentration Process



# The concentrate is shipped from Fremantle WA to the LAMP, in Kuantan, Malaysia



# Step 1: Cracking & Leaching

RE Fe Phosphate + H<sub>2</sub>SO<sub>4</sub>  $\xrightarrow{\text{High temperature}}$  RE Sulfate solution



4 rotary kilns where the reaction occurs



2 state of the art waste gas treatment units



# Step 2: Solvent Extraction (SX)

## Separate RE Sulphate into individual elements



Leaching

RE Sulphate → SX 1 → Heavy RE Chloride

241 – MgO Neutralization

De-Fe RE Chloride

SX 3

SX 2

SX 5

SX 7

SX 6

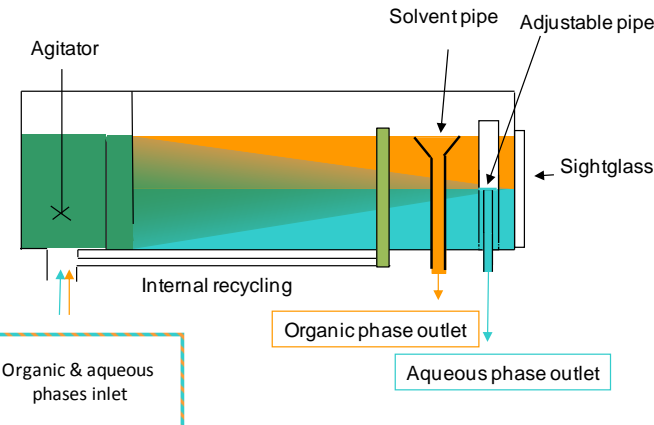
LaCe Chloride

La Chloride

Ce Chloride

PrNd Chloride

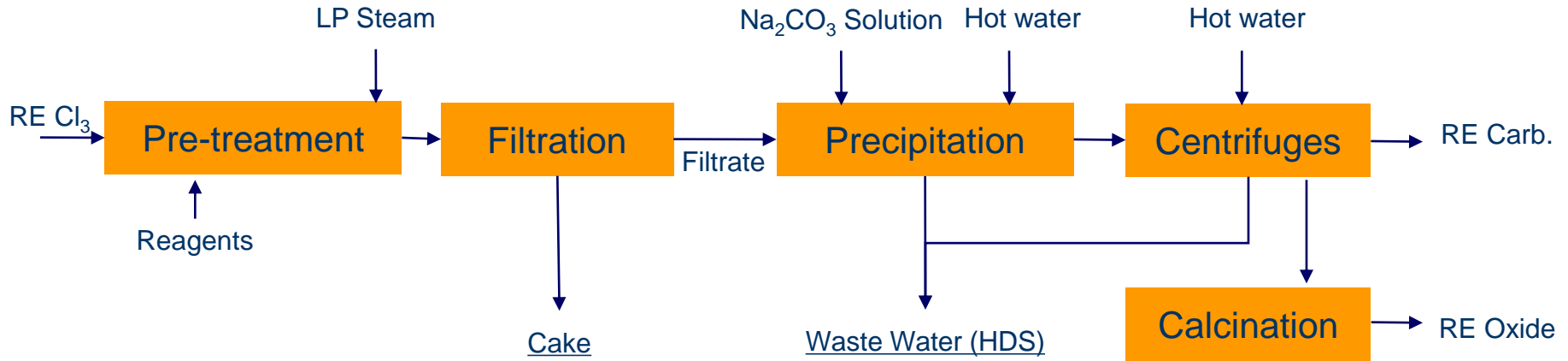
SEG/HRE Chloride



# Step 3: Product Finishing

Convert RE Chloride into carbonate/oxide

Pack and Ship

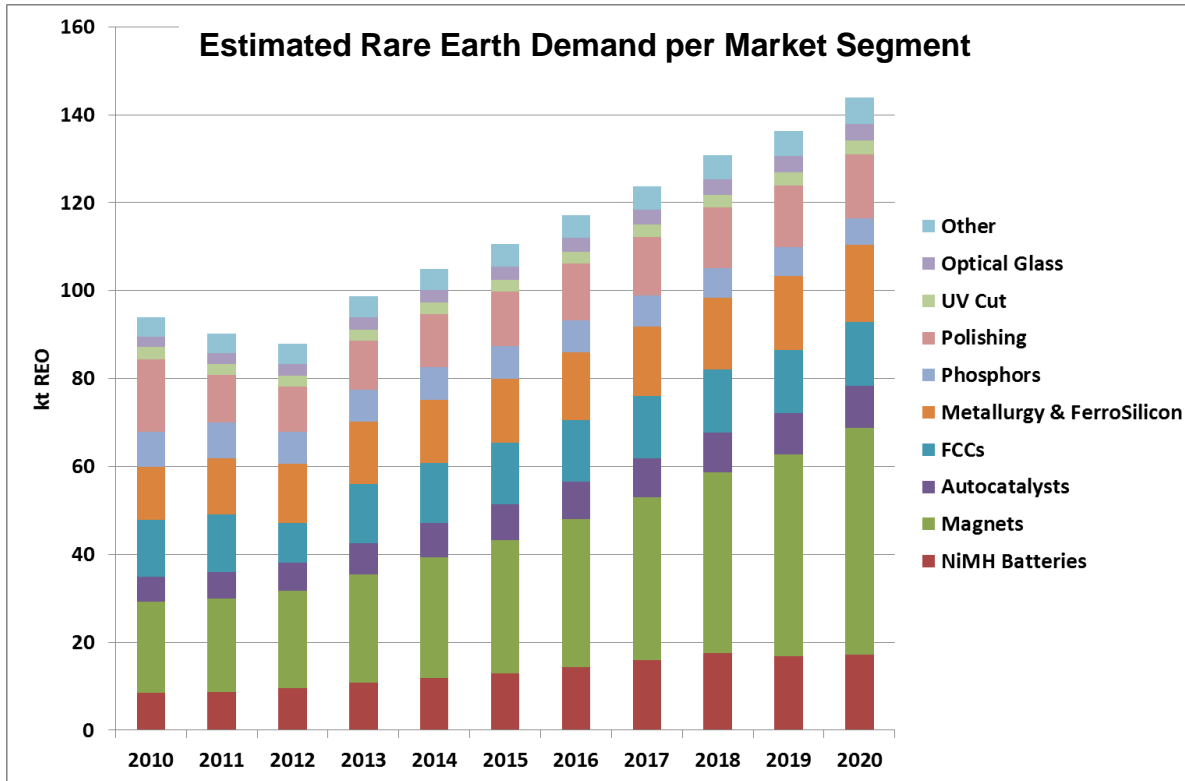


# The Global Rare Earths Market



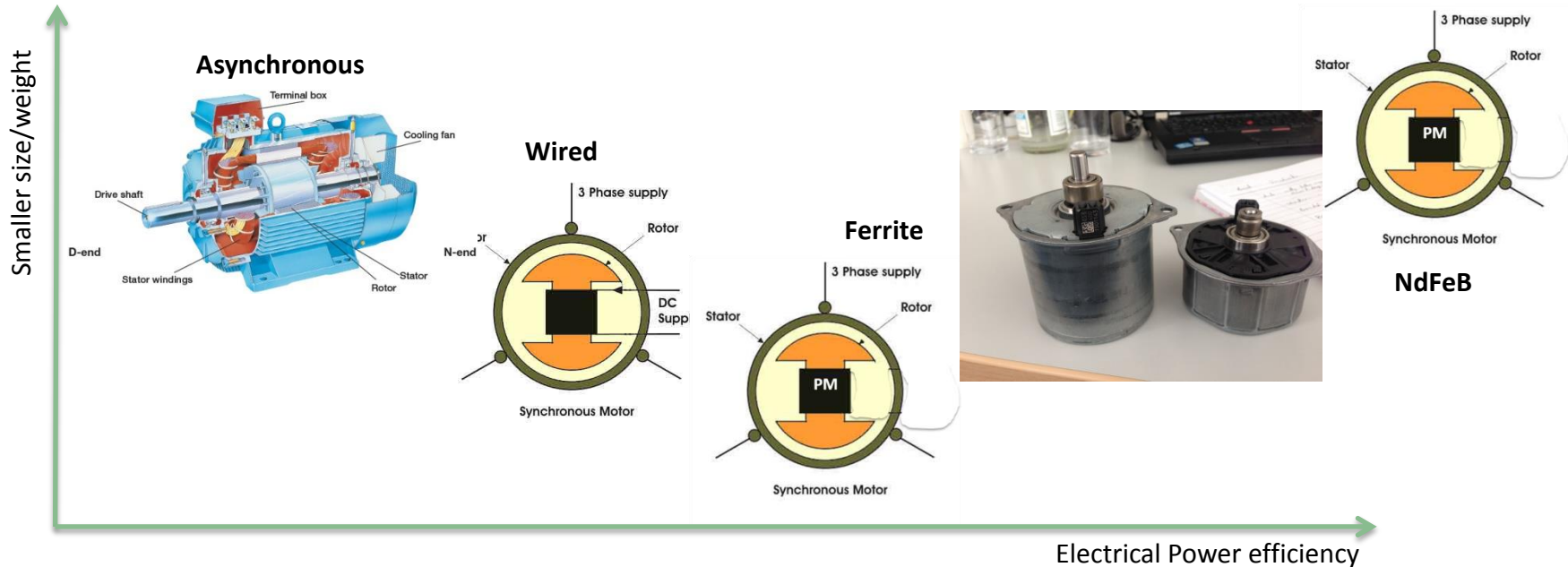
- Rare Earths are essential inputs to many important future facing technologies:
  - To reduce car gas emissions
  - In electrical and hybrid cars, and renewable energies such as wind turbines
- China dominates rare earths production and is vertically integrated in all sections of the supply chain
- Japan is the most significant outside China market for Rare Earths
- There is demand for a non-Chinese reliable source
- There have been recent signs of improving trends in published market prices for NdPr

# The Rare Earth Market is growing especially in magnets



- **1/3 Processed in CHINA for CHINA**
- **1/3 Processed in CHINA for ROW: ROW Industry Challenge**
- **1/3 Processed in ROW for ROW**

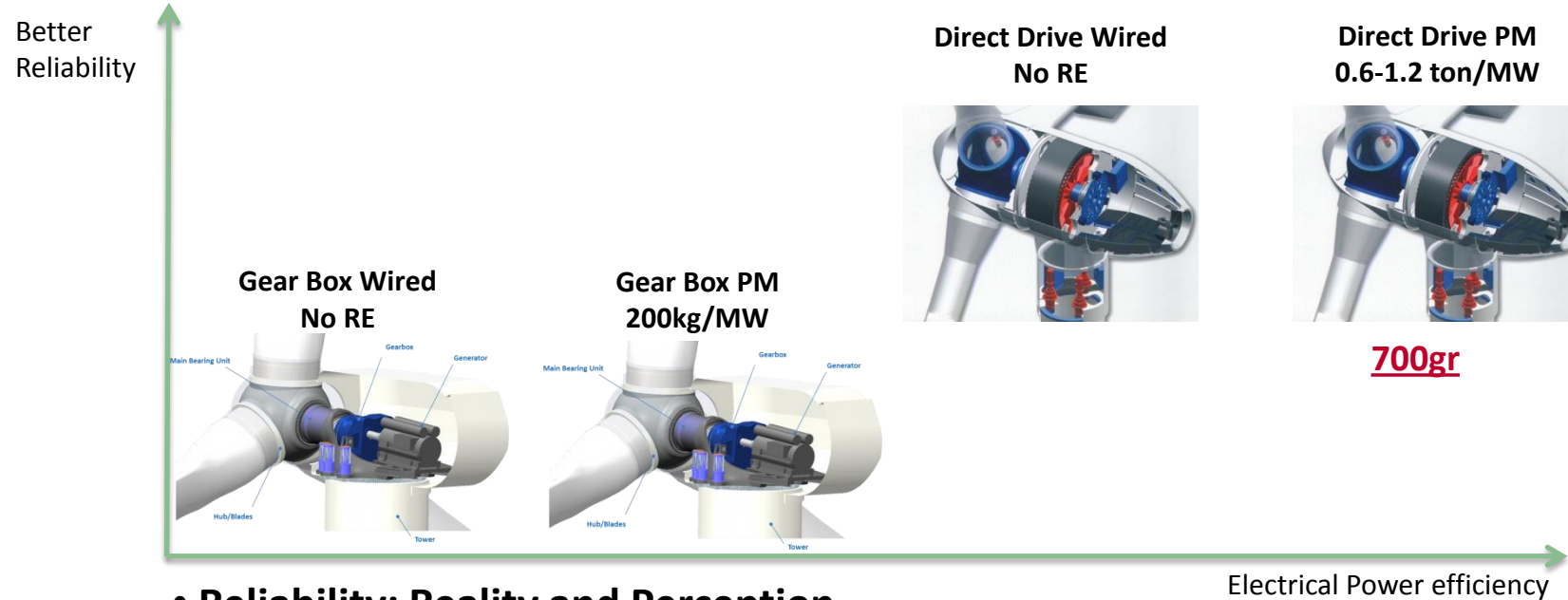
# RE Magnets are the best choice for small/medium motors



- **NdFeB benefits fully leveraged with e-cars**
  - Weight reduction = Reduced consumption (std cars)
  - Better efficiency = smaller batteries (e-cars)
- **Challenge: Support NdFeB technology growth**
  - Car makers/OEMs: Need transparency and visibility
  - Magnet makers: Strong interest in keeping the system opaque



# RE magnets improve performance and reliability of Wind Turbines



## • Reliability: Reality and Perception

- Direct Drive is efficient in light winds
- Unlike DD, Gear Box technology requires regular maintenance
- Gear Box is a fully proven technology = safe business models
- **Direct Drive penetration should accelerate as it accumulates experience**
  - Secure Permanent Magnet Cost versus Electro Magnet
  - High sensitivity of end market to environmental performance from mine

# Lynas can differentiate as a supplier



- Quality and environmental assurance from mine to customer is important in key growth segments (Automotive, Wind turbines)
  - **Lynas offers assurance and traceability of all product**
- RE products can be differentiated based on quality and performance
  - **Lynas is working with target customers who seek to innovate in their markets**
- Permanent magnet use is not yet at optimal levels
  - **Lynas is working with Magnet makers to increase product usage**
- Customers in Japan, Europe and the US are seeking an independent reliable supplier
  - **Lynas is the only non Chinese miner and separator of rare earths**
- Customers require supply reliability and price predictability
  - **Lynas offers long term contracts tailored to customer needs**
- Market growth depends on pull through from consumer markets
  - **Lynas is directly engaged with OEMs and end users**



# In the 1<sup>st</sup> 6 months of FY17, Lynas posted new records on all key measures



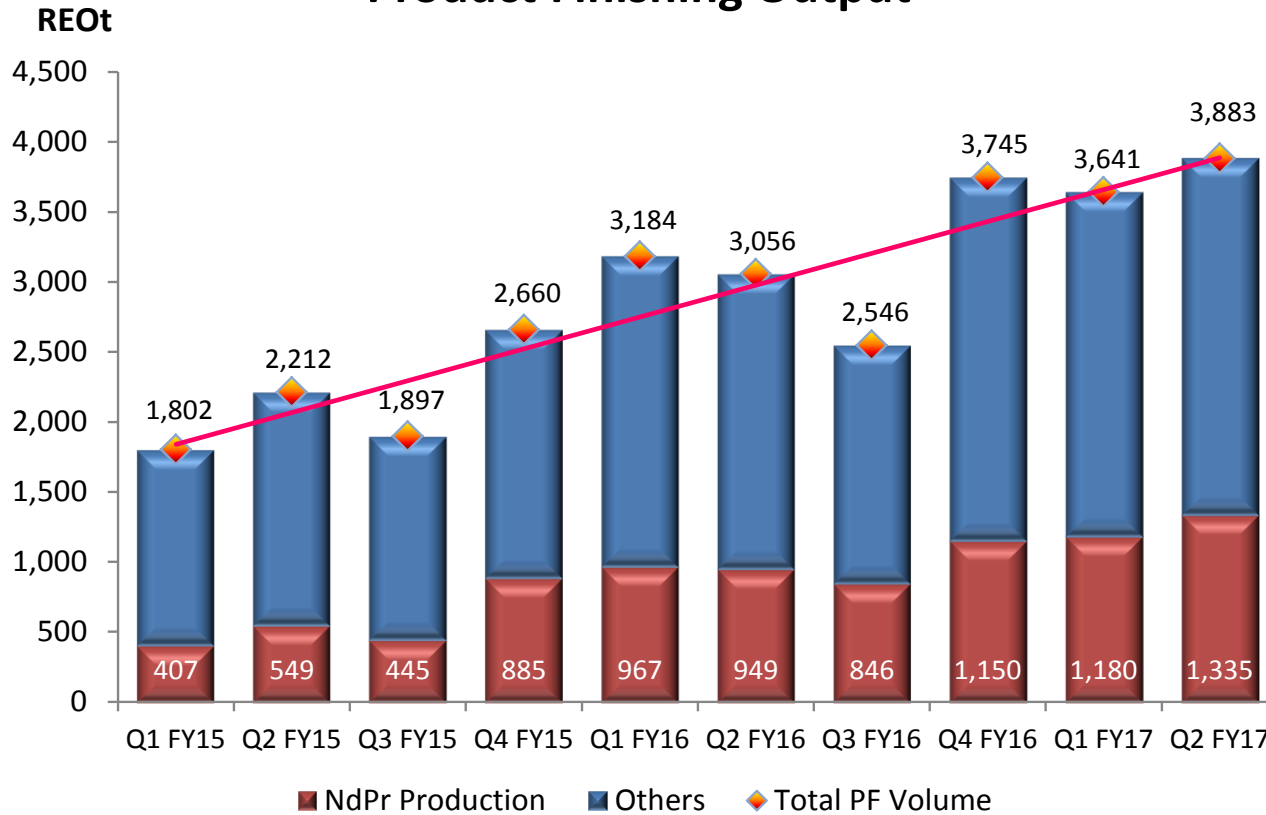
	July-Dec 16	July-Dec 15	% Change
Production			
- Finished Product (RTS)	7,579 t	6,337 t	↑ 20%
- NdPr (RTS)	2,506 t	1,905 t	↑ 32%
Sales Volume			
- Total	6,431 t	5,773 t	↑ 11%
- NdPr	2,473 t	1,923 t	↑ 29%
Sales Revenue	A\$119 m	A\$96 m	↑ 24%
Cash Collected	A\$116 m	A\$106 m	↑ 9%
Cash Costs			
- Total	A\$110 m	A\$99 m	↑ 11%
- \$/kg	A\$14.5/kg	A\$15.6/kg	↓ 7%
Cash Flow before Financing and AELB	A\$5.7 m	A\$0.3 m	
EBITDA	\$2.5m	(\$15.4m)	

# Product Finishing Ramp Up

## NdPr at design rate for Oct-Dec Quarter

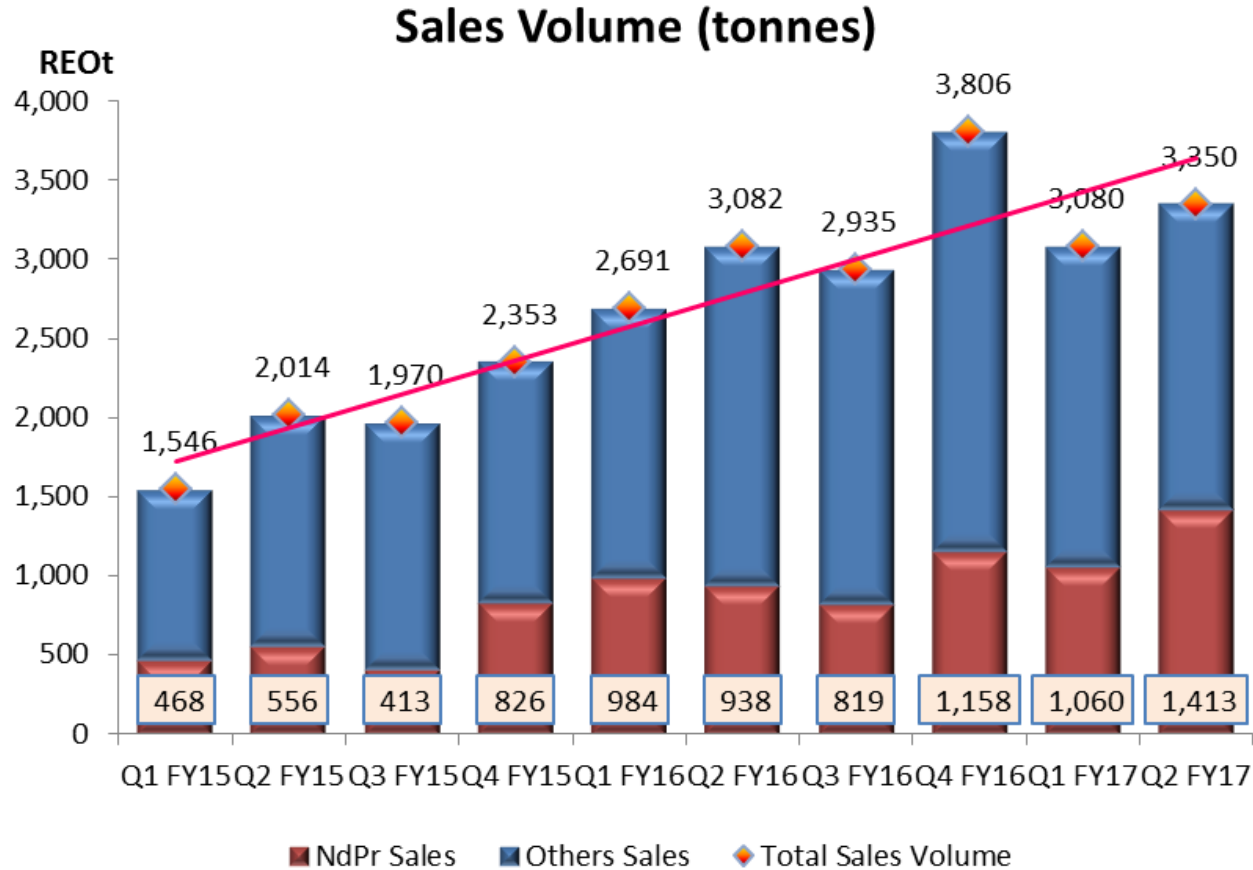


### Product Finishing Output

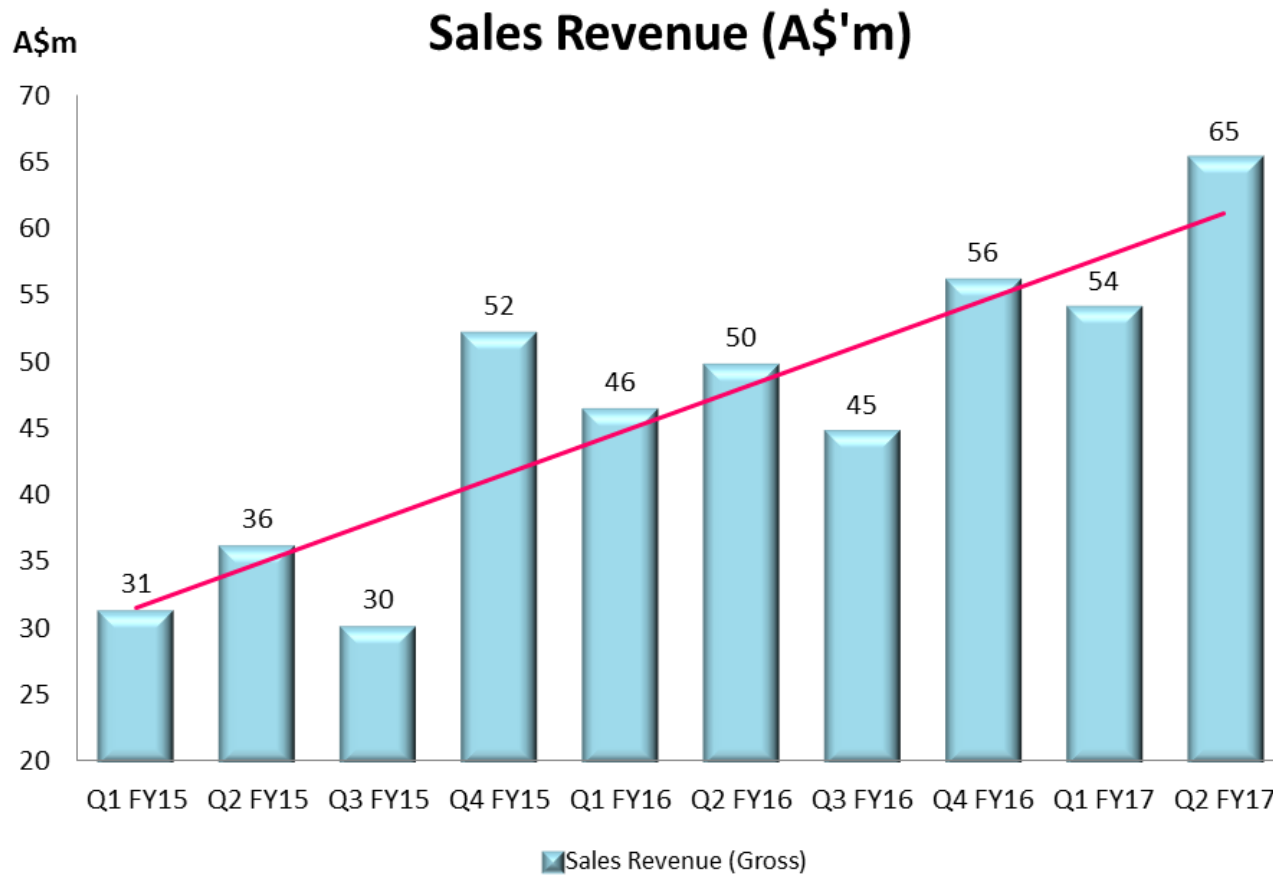


# Sales Volume Trend

NdPr in line with production

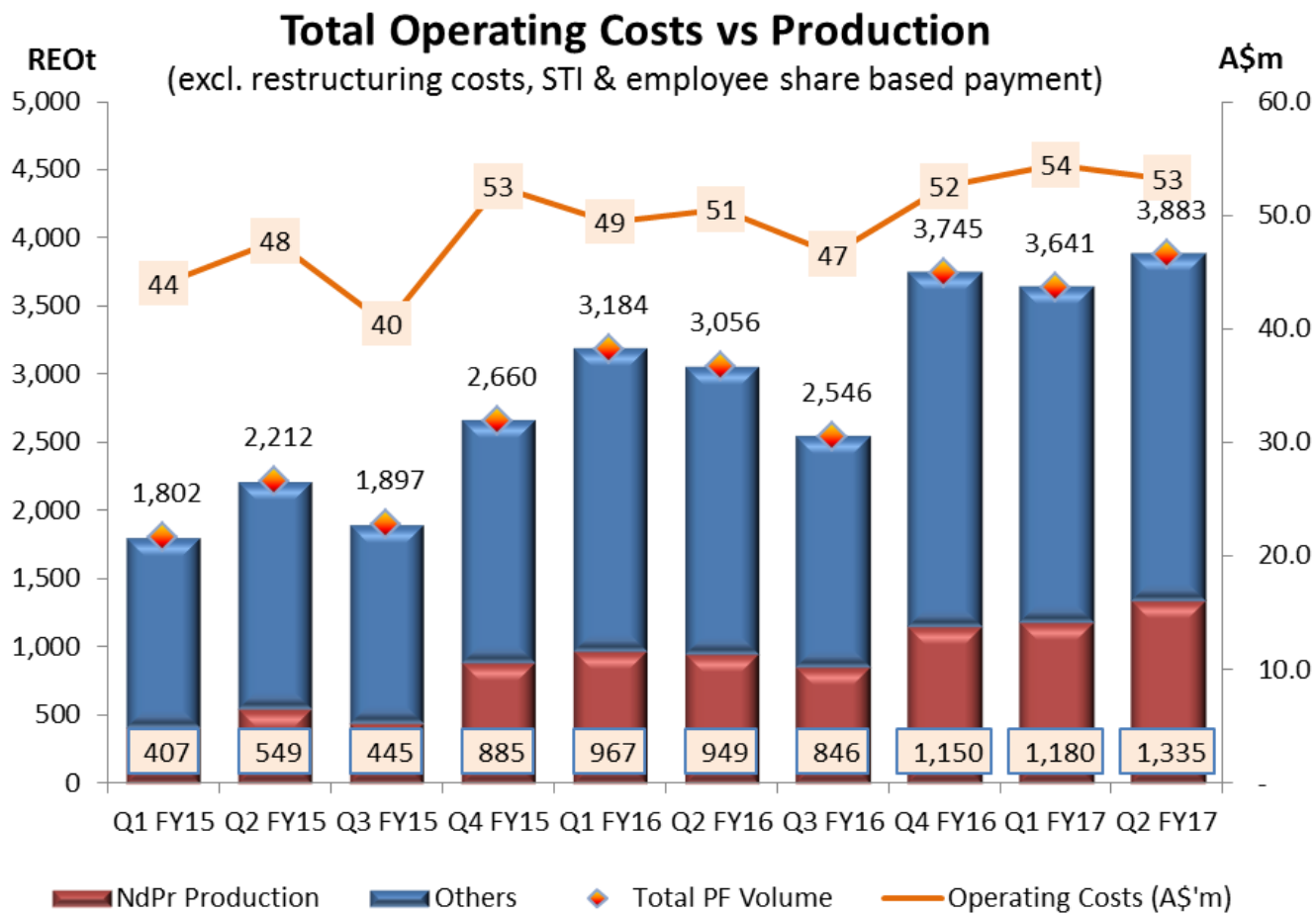


# Sales Revenue

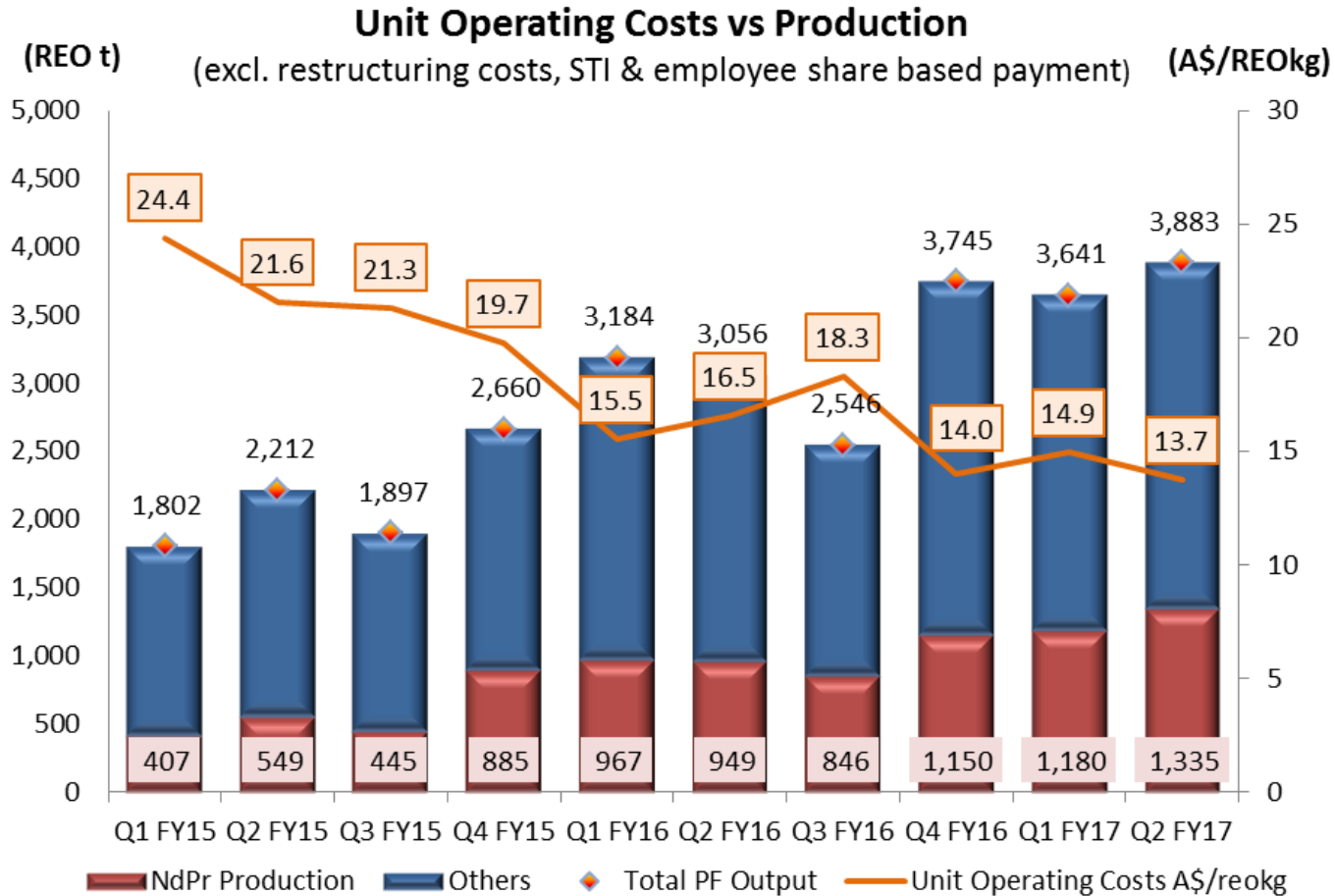


# Operating Costs (Prod. costs + Overheads)

NdPr increased > 200%, operating cost increased 20%



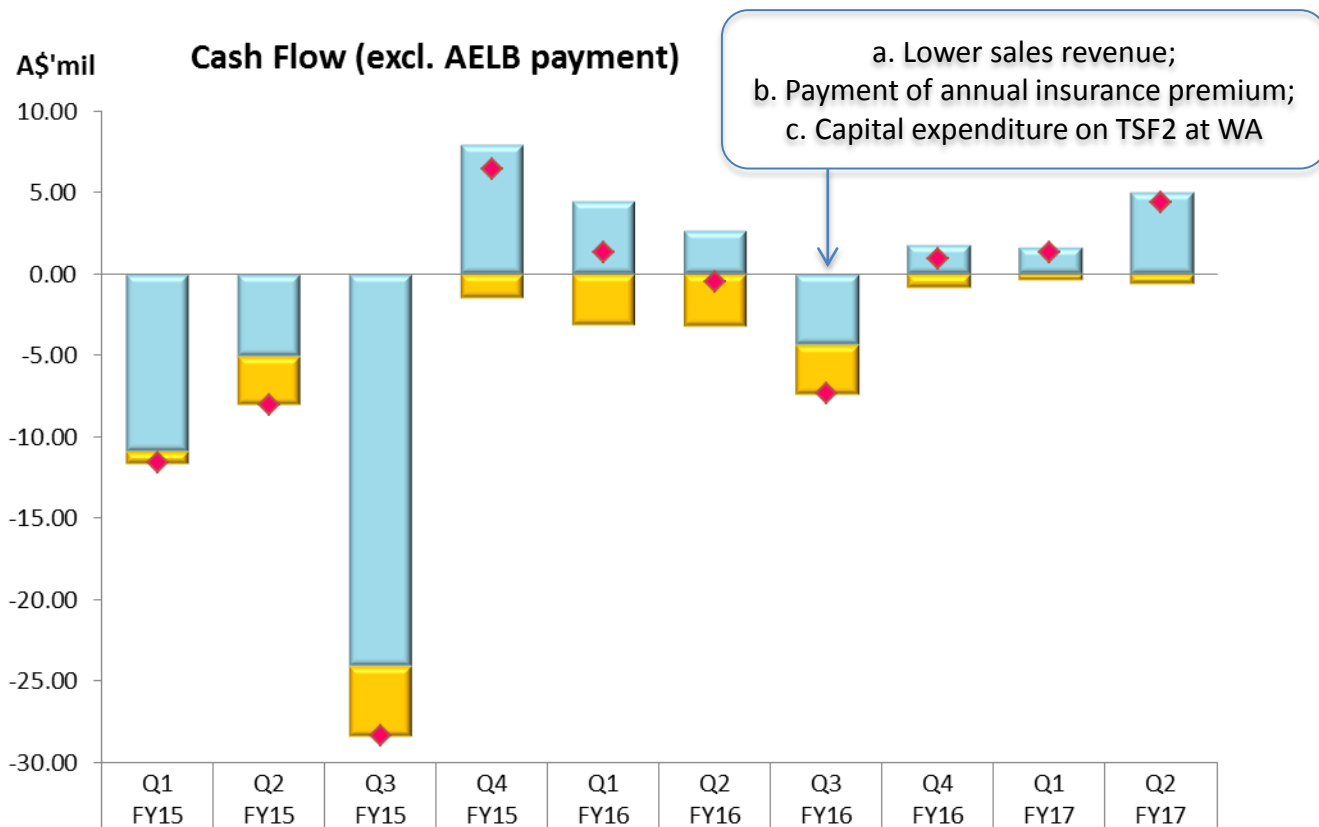
# Unit Operating Costs Trend





# Cash Flow

## excluding AELB deposit payment



Net investing cash flow	-0.8	-3.0	-4.4	-1.5	-3.2	-3.2	-3.0	-0.9	-0.4	-0.7
Net operating cash flow **	-10.8	-5.1	-24.0	7.9	4.5	2.7	-4.4	1.8	1.7	5.0
Total operating & investing cash flow	-11.6	-8.0	-28.4	6.4	1.3	-0.5	-7.4	0.9	1.3	4.4

\*\*Investing Cash Flow is CAPEX



# The recent debt restructure improved the terms of Lynas' debt facilities



- Extension to debt maturity dates
  - JARE (US\$200 million) 30-6-2020
  - Convertible Bond (US\$225 million) 30-9-2020
- The JARE interest rate reduced to 2.5% per annum. The convertible bond interest rate reduced to 1.25% per annum.
- No fixed principal repayments from unrestricted cash prior to maturity.
- Cash sweep for unrestricted cash balances above A\$40 million.
- The Conversion Price for the Convertible Bonds was reduced to A\$0.10 at an exchange rate of A\$1.00=US\$0.75.
- The Bondholders were issued 348,843,836 warrants with a strike price of A\$0.05 per Share.

# Lynas' Position



- Now a credible, reliable non-Chinese source of Rare Earths from mine to customer
- Recognised environmental credentials
  - Environmentally assured and traceable supply source – from mine to customer
- Strong commercial relationships with customers in Japan:
  - JARE is our senior secured lender
  - Sojitz is our commercial trading partner
  - High share with Japanese magnet makers
- Developing commercial relationships with end users in all geographies
- Strong commercial relationships with selected customers in China who value Lynas' quality, reliability and environmental provenance from mine to customer

# Competent Person's Statement



## COMPETENT PERSON'S STATEMENTS— MINERAL RESOURCES

The Mineral Resources and Ore Reserves Statement in this Presentation is based on, and fairly represents, information compiled by Mr. Brendan Shand who is a consultant geologist to Lynas Corporation. Mr. Shand is a Member of The Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking, to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Shand consents to the inclusion in the document of the information in the form and context in which it appears.

## COMPETENT PERSON'S STATEMENTS— ORE RESERVES

The information in this Presentation which relates to the Central Lanthanide Deposit Ore Reserve estimate accurately reflects information prepared by Competent Persons (as defined by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves). The information in this document relating to the Central Lanthanide Deposit Ore Reserves at the Mt Weld Rare Earths Project is based on information resulting from Feasibility-level updated Ore Reserve works carried out by Auralia Mining Consulting Pty Ltd. Mr. Daniel Tuffin completed the Ore Reserve estimate. Mr Daniel Tuffin is a Member and Chartered Professional (Mining) of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify him as a Competent Person as defined in accordance with the 2012 Edition of the Australasian Joint Ore Reserves Committee (JORC). Mr Tuffin consents to the inclusion in the document of the information in the form and context in which it appears.



# Rare Earths Market Data: Disclaimer



- The slides in this presentation containing Rare Earths market data have been sourced from independent analysis of end application demand, along with Lynas estimates of quantities of Rare Earths end use in various key applications.
- Although Lynas believes that the outcomes expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance. Forward-looking statements are based on assumptions and contingencies which are subject to change without notice. Factors that could cause actual results to differ materially from those in forward-looking statements include new Rare Earths applications, the development of economic Rare Earths substitutes, and general economic, market or business conditions. While Lynas has made every reasonable effort to ensure the veracity of the information presented, Lynas does not guarantee the accuracy and reliability of the estimates, forecasts and conclusions contained herein. Accordingly, the Rare Earths market data in this presentation should be used for general guidance only. There can be no guarantee that actual outcomes will not differ materially from forward-looking statements.