Arafura Resources Limited

Up and coming supplier of NdPr to permanent magnets used in the growing clean energy industry

November 2017

Perth Western Australia

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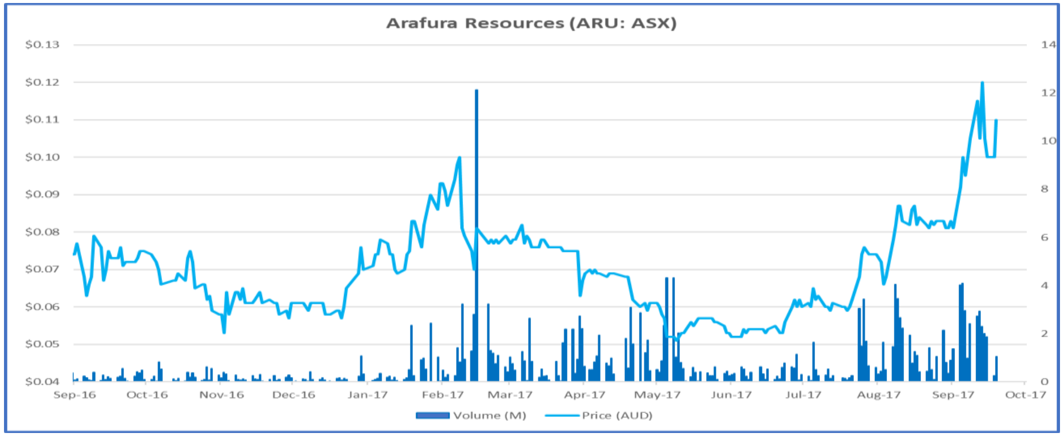
The information in this presentation that relates to Exploration Results or Mineral Resources is based on information compiled by Mr Kelvin Hussey BSc (Hons). Mr Hussey is a Member of the Australian Institute of Geoscientists and he has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code)". Mr Hussey consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

Mr Hussey is a full-time employee of Arafura Resources.

Investment Highlights & Capital Structure

- ASX listed company developing the **Nolans Rare Earths Project** in the Northern Territory, **low geopolitical risk, 30+ year** mining and chemical processing operation
- Nolans is one of the **largest and richest deposits of Neodymium-Praseodymium (NdPr)** rare earths in the world and its forecast operating costs are in the **lowest quartile**
- NdPr is the critical raw material used in the production of **high-strength permanent magnets** used extensively in the **automotive, clean energy, electronics and healthcare sectors**
- Arafura has the capability of meeting **5-10% of global demand for NdPr**
- Nolans has been afforded **major project status** by the Northern Territory and Australian governments
- Nolans is in **advanced feasibility and environmental assessment**



ASX Code	ARU
Share Price (31-Oct-17)	A$0.105
Issued Shares	575.8m
Market Cap	A$60.5m
Cash (30-Sept-17) +Placement	A$15.3m
Debt	Nil
Enterprise Value	A$45.2m

Top 5 Shareholders	
JP Morgan Nominees	20.47%
ECE Nolans Investment Co	19.05%
HSBC Custody Nominees	2.59%
Citicorp Nominees	2.31%
BNP Paribas Nominees	0.85%

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The NdPr Market

Overview

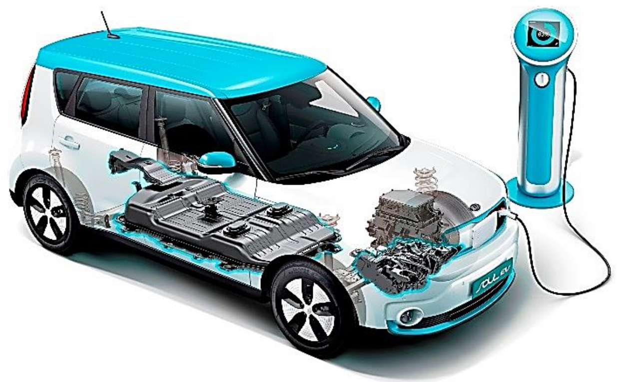
Secure Supplier of NdPr to Permanent Magnets Used in Clean Energy

- **NdPr is a key component** in the manufacture of high-strength NdFeB permanent magnets used in electric vehicles (EVs), wind turbines, portable electronic devices, and many industrial applications
- EVs use an additional **1 kg of NdPr per electric motor** over a standard vehicle's use of 0.7kg.
- NdPr accounts for 26.4% of Nolans rare earths composition by volume and **85% by value**
- China has generally controlled the production of NdPr but recently analysts are forecasting for **China to become a net importer**
- Structural changes are being implemented in China to **weed out illegal operators, close unsustainable operations,** and push bigger players to consolidate

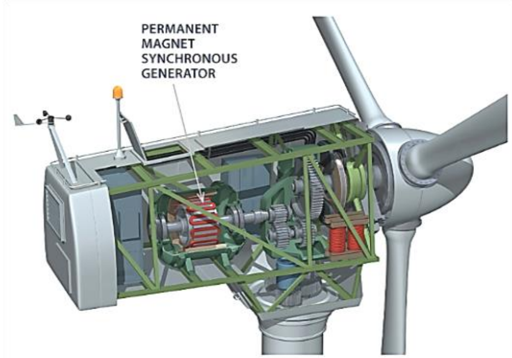
NdPr Snapshot – Clean Energy Applications

EV Drivetrain: **1kg of NdPr**

Electric Vehicles: **41 million by 2040 each containing 1.7kg of NdPr**

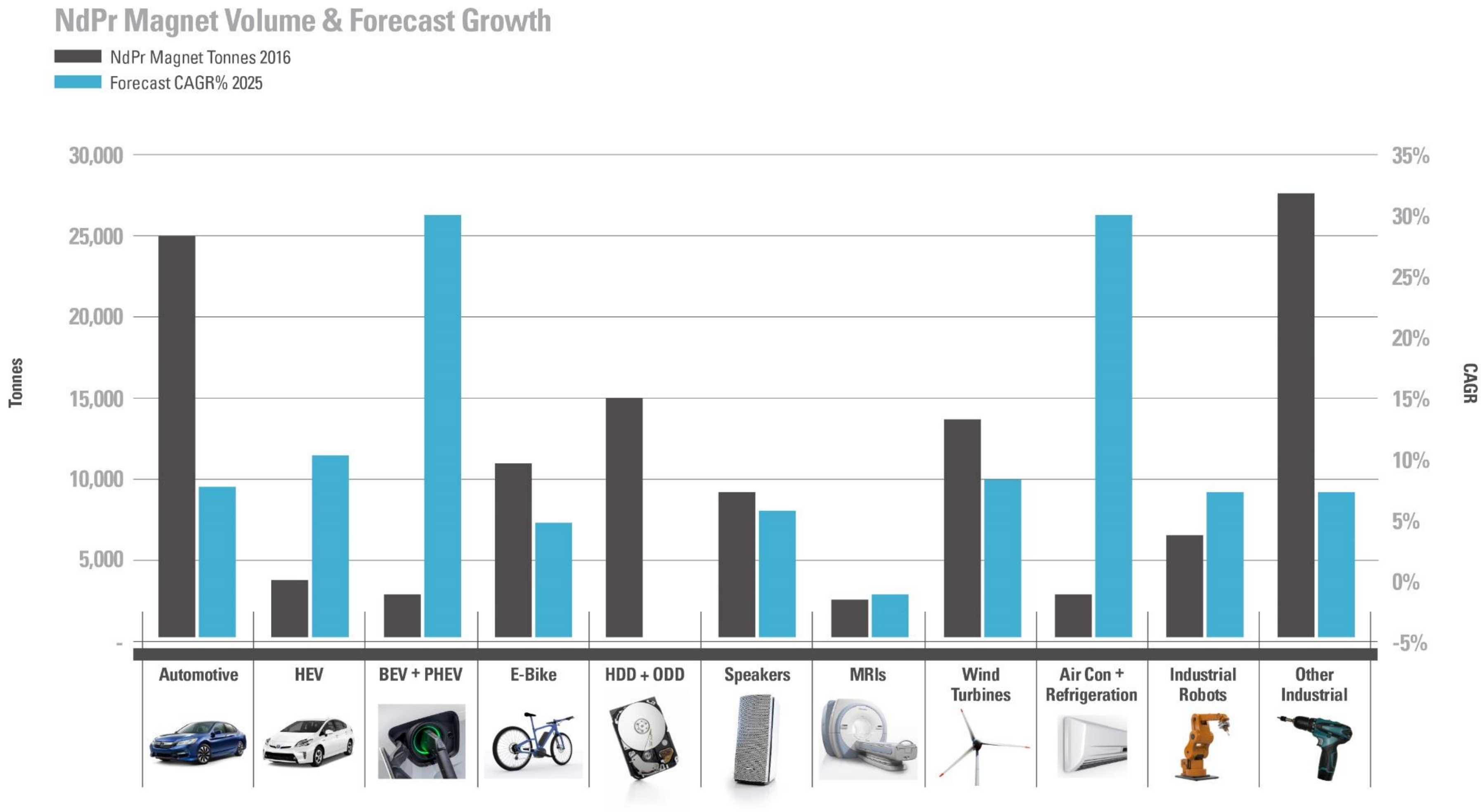


Wind Turbines: **Up to 150kg of NdPr per MW**



Electric Bicycles: **30 million in 2017 each containing 0.1kg of NdPr**

Established Markets & Growing Applications



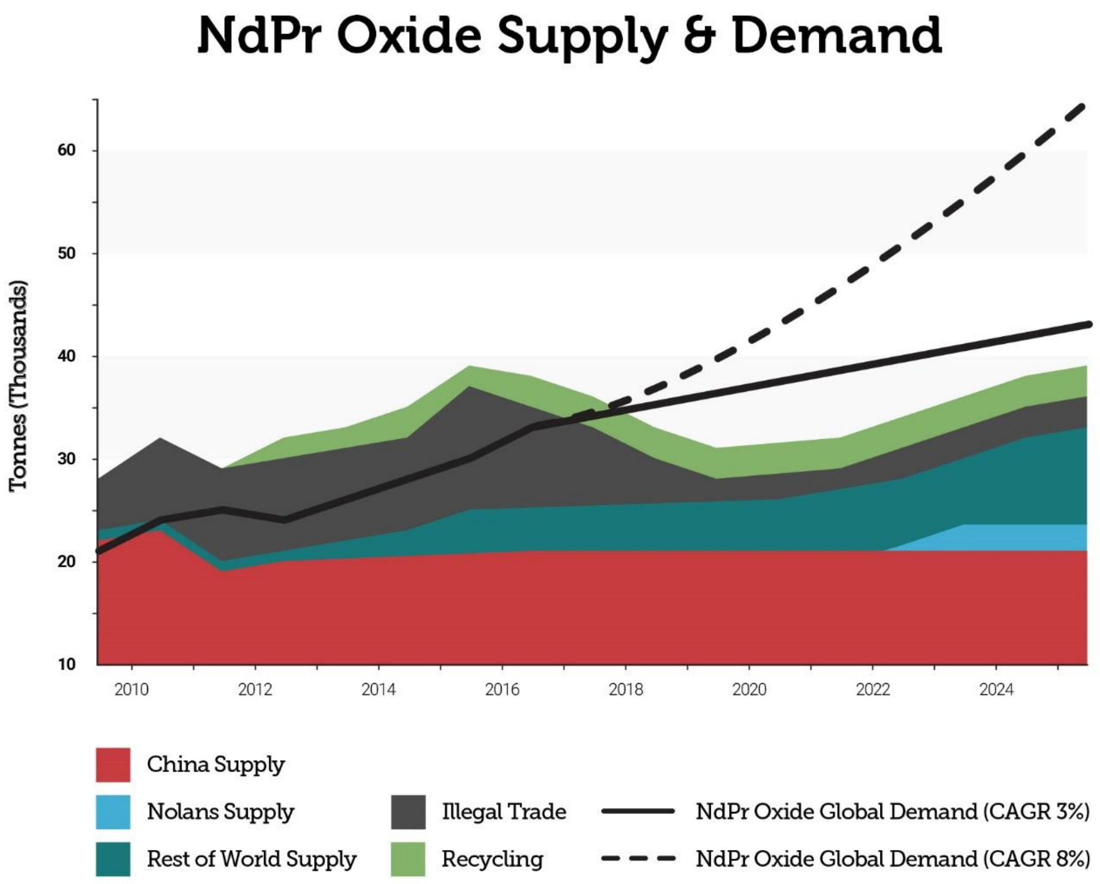
Source: Adamas Intelligence, Arnold Magnetic Technologies, Japanese industry participants, Roskill

Automakers EV Growth Strategy

Manufacturer	PMSM	AACIM	NOTES
Audi	✓		25% of US sales from EVs by 2025
BMW	✓		EV range to extend to Series 3 and X4 for next generation of models
BYD	✓		World's largest manufacturer of EVs
Ford	✓		40% EVs by 2020
General Motors	✓	✓	Alliance with Lyft to create an integrated network of on-demand autonomous vehicles. China accounts for one-third of GM's total production
Honda	✓		Targeted two-thirds of sales by 2020. Honda Daido Steel heavy Dy free magnets
Hyundai	✓		26 hybrid, plug-in, fuel cell and EV models by 2020
Mitsubishi	✓		Electric powered SUVs
Nissan/Renault	✓		10% EVs by 2020
Tesla X & S		✓	Independent manufacturer – disruptive technology?
Tesla 3	✓		Mass market affordable EV
Toyota	✓		Gasoline to hydrogen fuel by 2050
Volkswagen	✓		25% EVs by 2025

PMSM = Permanent Magnet Synchronous Motor
AACIM = Asynchronous AC Induction Motor

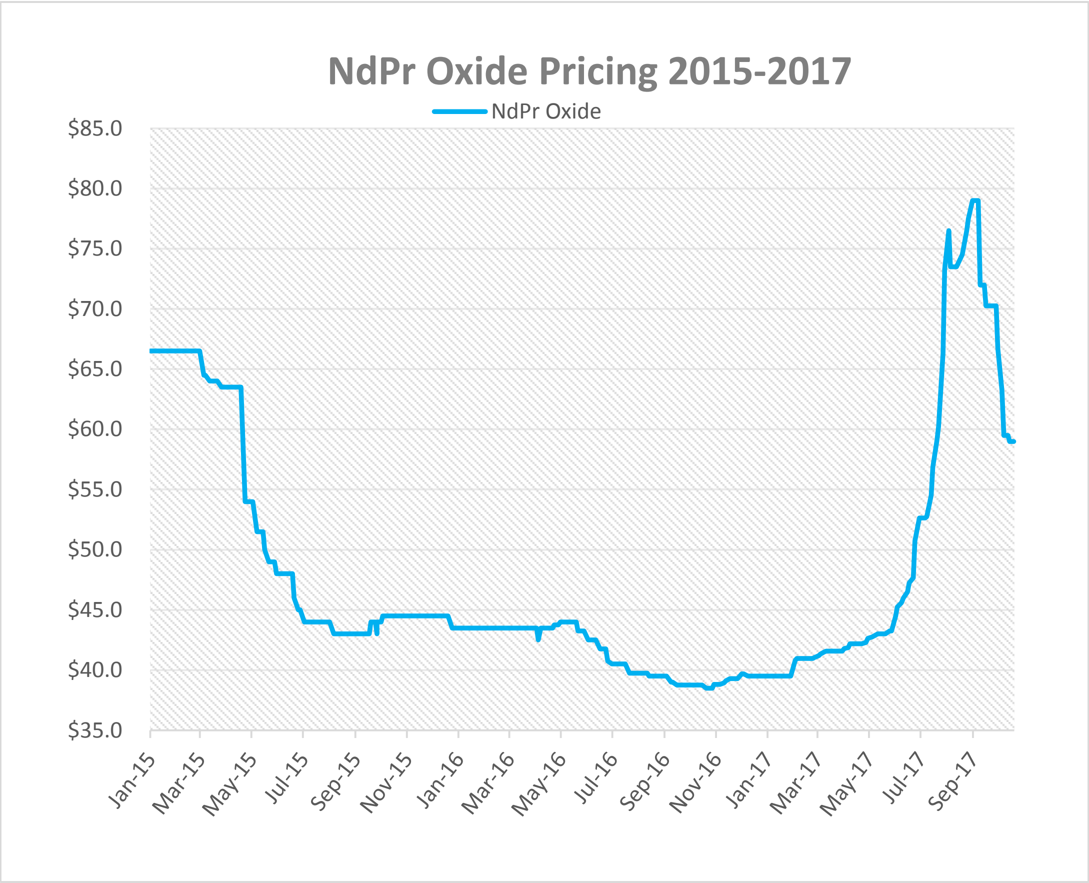
The NdPr Supply Opportunity



- Enforced closure of illegal and unsustainable mines and smelting
- China "big 6" consolidation creates a more sophisticated supply chain
- Improved chain of custody for raw material supply
- China rehabilitation costs yet to be realised

Source: ACREI, Adamas Intelligence, corporate filings and presentations, IMCOA, rare earth end users, Roskill

NdPr Price – Supply & Environmental Reform

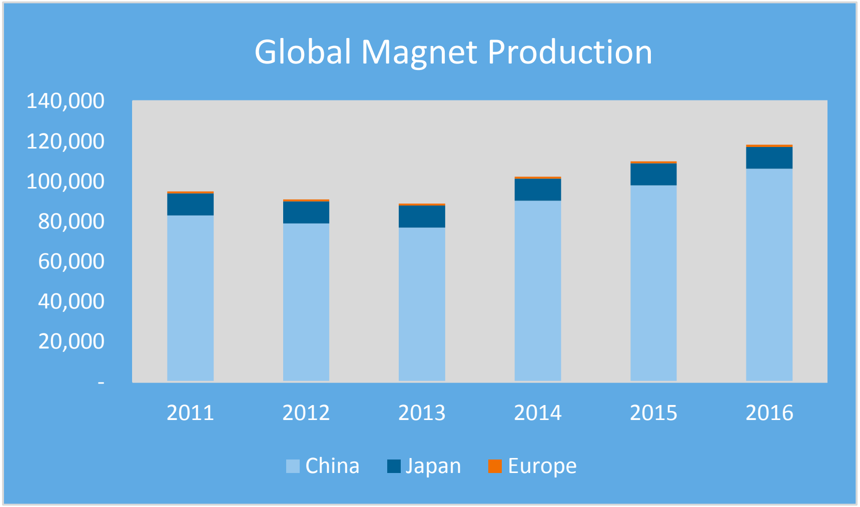


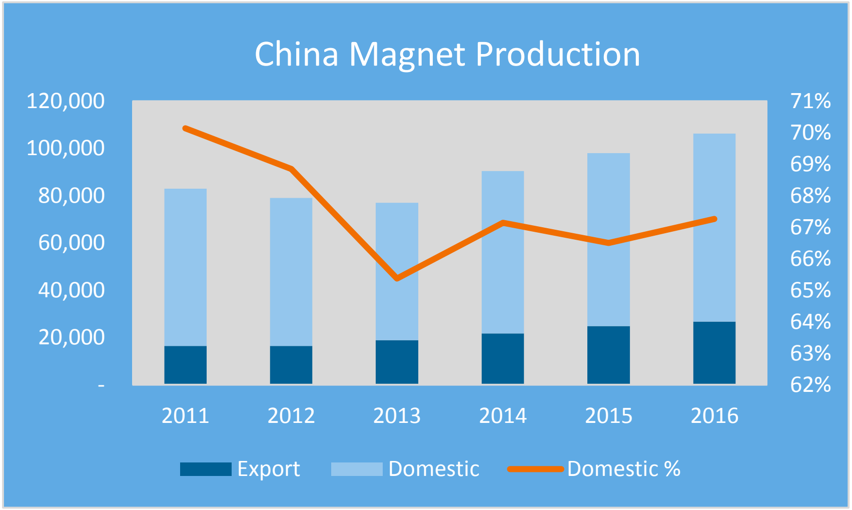
Source: Independent price reporting agency

- Enforced closure of illegal and unsustainable mines and smelting
- China "big 6" consolidation creates a more sophisticated supply chain
- Improved chain of custody for NdPr supply
- China rehabilitation costs yet to be realised
- Supply initiatives have positively impacted NdPr price in 2017
- Emerging demand for NdFeB magnets may also impact demand- supply balance

Emerging Demand Dynamic

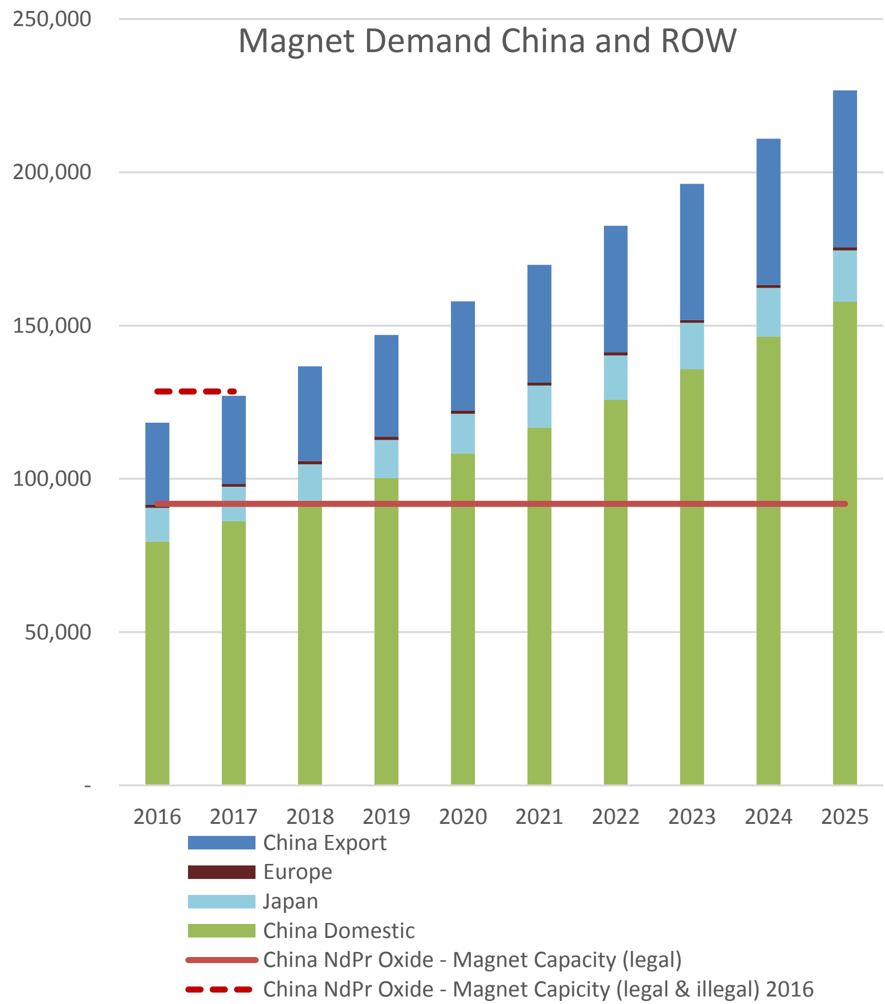
- Steady increases in global magnet production 2014 to 2016, NdPr price movement indicates **continued growth for 2017,** production growth dominated by China
- To maintain magnet production growth China will require **increased volumes of NdPr raw materials**, which conflicts with **contracting NdPr production**
- **China's domestic magnet consumption is increasing** as it pursues clean energy objectives, if NdPr feedstock is not expanding China exports may be impacted
- Will illegally produced NdPr continue to keep supply and demand balanced?





Source: ACREI, Argus Metals and industry sources

Demand Growth- China a net importer?



Source: ACREI, Adamas Intelligence, corporate filings and presentations, IMCOA, rare earth end users, Roskill

- China 2025 Strategy- integration and movement along the supply chain
- China pursuing global leadership in EV manufacture, as a priority
- Commercial Activity and expansion of non- China NdPr supply;
  - China RE producers are now looking to foreign assets to expand production (ASX:GGG; ASX:NTU)
  - China backed syndicate places winning bid to acquire Mountain Pass assets
  - Noble Resources acquires 14.5% of Mkango – Malawi focused RE development
  - Rainbow RE, Gakara project in Burundi- Thyssenkrupp mineral concentrate offtake
- Nolans to provide meaningful NdPr oxide production in the **lowest cost quartile, high** NdPr enrichment and advanced project development status

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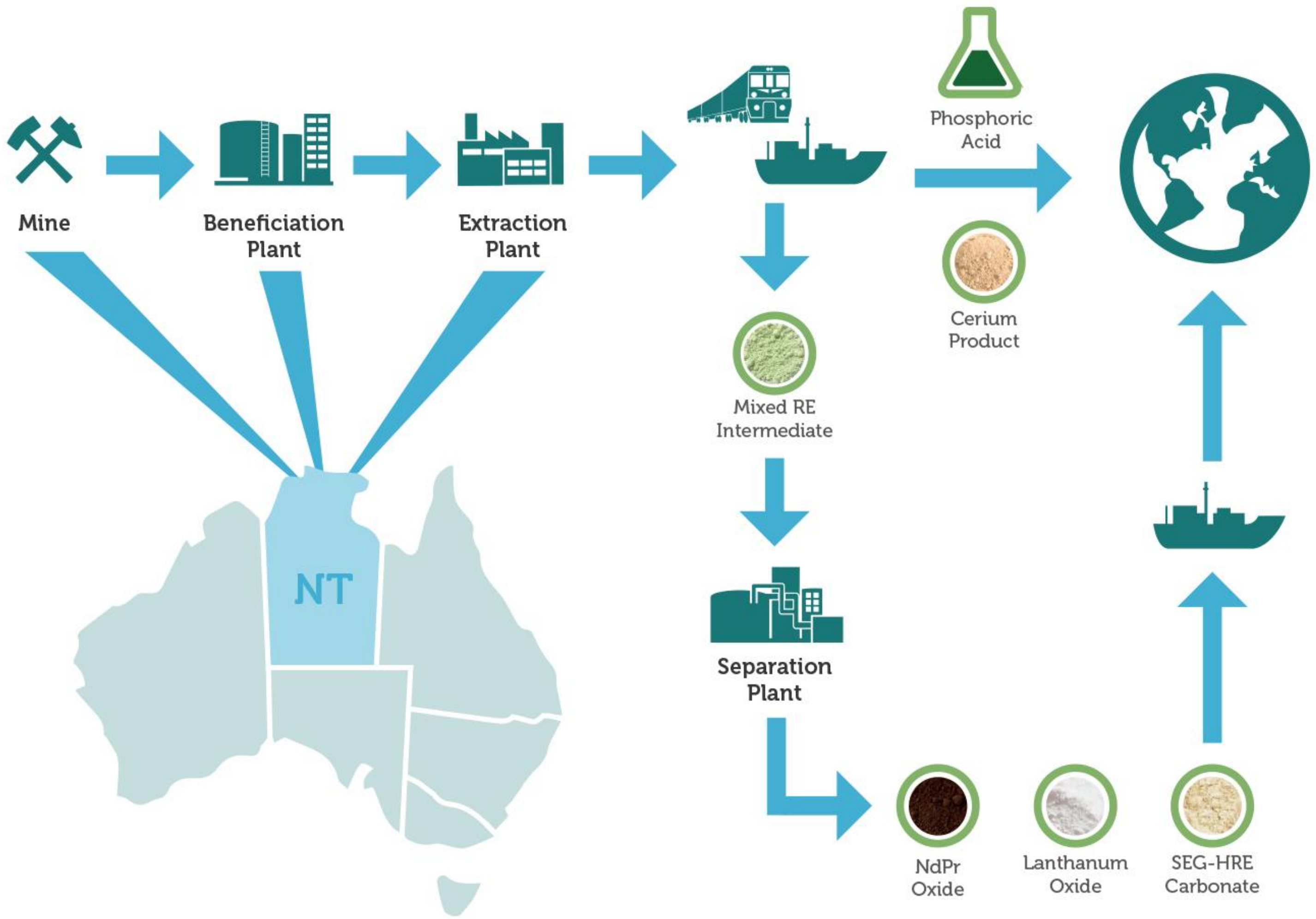
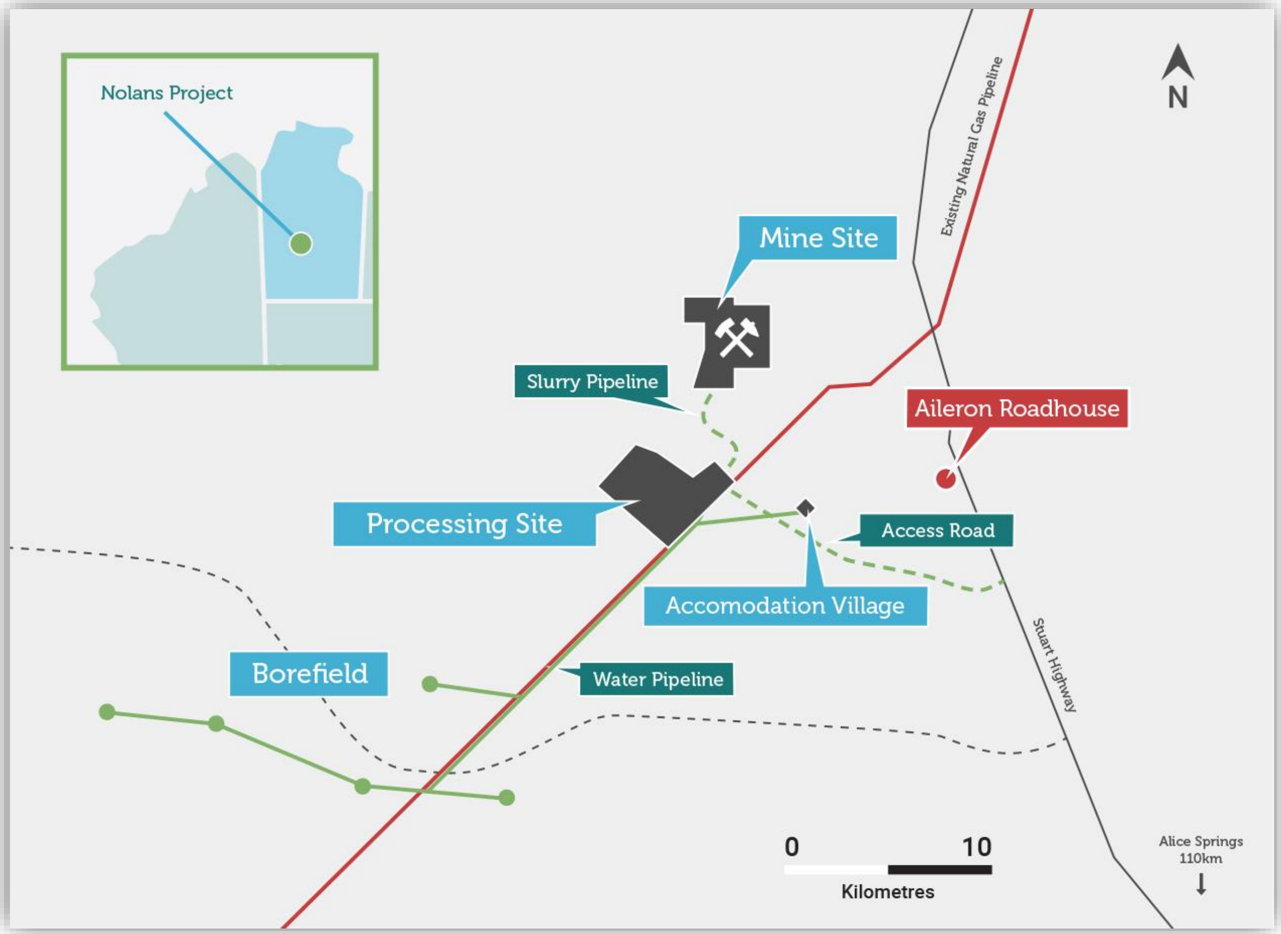
The Nolans Project

Project Configuration



Close To Key Infrastructure



- Stuart Hwy – **10 km east**
- Alice Springs railyard, airport and other services – **135 km south**
- Amadeus gas pipeline – **adjacent to processing site**
- Water supply – **30 km south**
- Tailings and process wastes **remain at site**

Project Metrics

- **Ultra competitive operating costs** US$6.23/kg TREO or US$24.38/kg NdPr oxide – lowest amongst peers
- Phosphoric acid recovered to **reduce commodity risk**
- **High rare earths recovery**

Mining & Processing		
ROM feed (tpa)		525,000
Mine life (years)		30+
Recovery (ROM to final product)	Total RE	76%
	NdPr	75%
	La	75%
	SEG-HRE	68%
Production		
TREO equivalent (tpa)		14,000
NdPr oxide (tpa)		3,600
La oxide (tpa)		2,660
SEG-HRE carbonate (tpa TREO equilvalent)		660
Phosphoric Acid (tpa MGA)		110,000
Financial		
Capital cost (US$m)		$680
Operating cost (US$m pa)		$125
Operating cost (US$/ kg TREO)		$8.89
Operating cost (US$/ kg TREO; less credit phos acid)		$6.23
Operating cost (US$/ kg NdPr; less credit phos acid)		$24.38

Refer Arafura ASX release 7 June 2017 for additional and qualifying information on the Mineral Resources that underpin the production target and provides the material assumptions on which the production target is based

The Company confirms that all material assumptions underpinning the forecast financial information derived from its 14,000 tpa TREO production target and the production target itself, continue to apply and have not materially changed since the 7 June 2017 ASX release

Based on 14,000 tpa TREO production processing Measured and Indicated Mineral Resources as per appendix A

Pilot Scale Work Completed In 2017

PHASE 1 Beneficiation

PHASE 2 Phosphate Extraction

PHASE 3 Bulk Pre-Leach

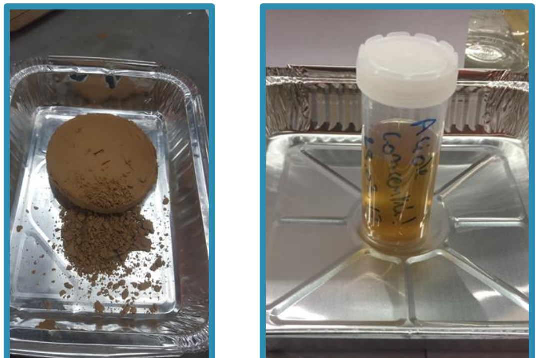
Beneficiation Pilot Plant

Phosphoric Acid Regeneration Circuit

Bulk Pre-Leach Pilot Plant

TREO Grade	7.0%
TREO Recovery	>80%
NdPr Oxide Grade	1.8%
NdPr Oxide Recovery	>82%
P_2O_5 Grade	29%
P_2O_5 Recovery	>90%
Al_2O_3 Grade	<3.2%
Fe_2O_3 Grade	<1.9%
Mass Pull	55%

High-Phosphate Concentrate



Rare Earth & Phosphoric Acid Products

NdPr-Rich Pre-Leach Residue

Remaining Piloting Activities 2017-18

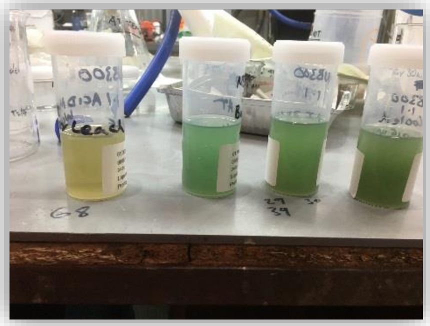
Acid Bake Phase 4 commenced

PLR and Acid Mixing

Baked Mixture Feeding

Acid Bake

Cooled Sulphated Product



Water Leach Liquor

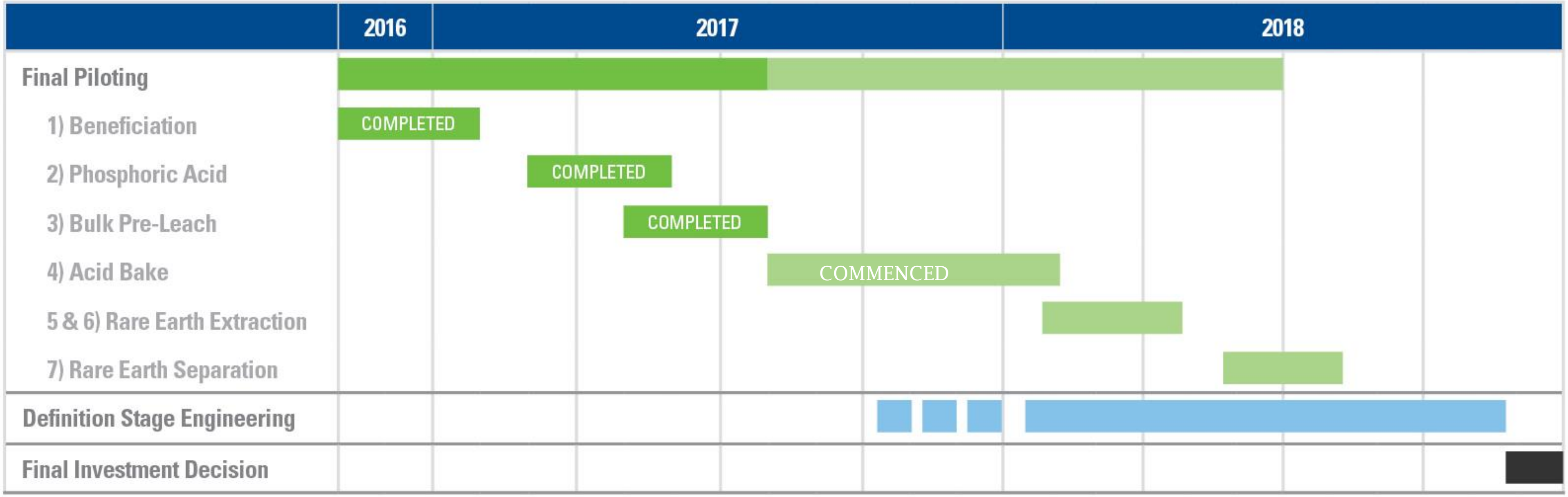
Phase 5,6,7 planning

RE Purification and Precipitation pilot
Phase 5

RE Dissolution and Crystallization pilot
Phase 6

RE Separation pilot
Phase 7

Piloting & Final Feasibility



2018 Targets

- Finalisation of piloting
- Environmental Approvals – supplement lodged with NTEPA
- Advance offtake arrangements
- Completion of definition stage engineering and DFS
- Engage with strategic partners for capital equipment & project funding

Nolans Funding Strategy

- Export Credit Agencies (ECA) will be key to providing government backed funding and guarantees, leveraged against the strategic link of NdFeB magnet production
- ECA funding linked to offtake arrangements, capital equipment supply and construction
- ECA linked project finance will be catalyst to attract equity at corporate and/ or project level

Offtake & Procurement

- Offtake contract- long term
- Capital Equipment Procurement

Export Credit Agency

- Funding and guarantees linked to offtake & procurement
- Long life
- Ultra low OPEX
- Low sovereign risk

Commercial Bank

- Long life project
- strong cashflow
- Offtake/ ECA – reduced market & credit risk

Project Equity

- Debt finance is a significant enabler
- Lower market risk
- Lower funding risk
- Market & technical Validation

Summary

Attribute	Arafura
High growth and high value NdPr magnet focus	✓
NdPr production planned to coincide with projected supply gap	✓
Located in a jurisdiction with low geopolitical risk and with strategic support	✓
Long-life, low-risk resource with planned output that supports >30 years of production	✓
Close to vital transport, energy and water infrastructure	✓
Efficient, high recovery flowsheet proven from mine to market: final piloting phase commenced	✓
Regulatory approvals well advanced: environmental, water, Native Title	✓
Lowest production cost to remain competitive in a cyclical downturn	✓

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ARAFURA RESOURCES LIMITED

LOW EMISSION AND TECHNOLOGY MINERALS CONFERENCE

November 2017

Perth Western Australia

Appendix A: Mineral Resources

RESOURCES	TONNES M	RARE EARTHS TREO %	PHOSPHATE P_2O_5 %	NdPr Enrichment %
Measured	4.9	3.2	13	26.1
Indicated	30	2.7	12	26.4
Inferred	21	2.3	10	26.5
TOTAL	**56**	**2.6**	**11**	**26.4**

1% TREO cut-off grade. Numbers may not compute exactly due to rounding. "NdPr enrichment" is the proportion of TREO comprising Nd_2O_3 and Pr_6O_{11}.