Annual General Meeting

21 October 2021







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#### Mineral Resources and Ore Reserves

The information in this presentation that relates to Mineral Resources is extracted from the Company's ASX announcement dated 7 June 2017 (Detailed Resource Assessment Completed) and was completed in accordance with the guidelines of the JORC Code (2012). The information in this presentation that relates to Ore Reserves is extracted from the Company's ASX announcement dated 16 March 2020 (Major Increase in Mine Life for the Nolans Project) and was completed in accordance with the guidelines of the JORC Code (2012). Arafura Resources confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the original market announcements continue to apply and have not materially changed. Arafura Resources confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

#### **Production Targets and Forecast Financial Information**

The information in this presentation that relates to production targets and financial information is extracted from the Company's ASX announcement dated 11 May 2021 (Nolans Project Update). The production target is based on 12% Proved Reserves, 62% Probable Reserves and 26% inferred resources as reported in the Company's ASX announcement dated 11 May 2021. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised. Arafura confirms that all material assumptions underpinning the production target and forecast financial information derived from the production target set out in the Company's ASX announcement dated 11 May 2021 (including any assumptions referred to in the Company's ASX announcement dated 11 May 2021 that were used from the DFS as set out in the Company's ASX announcement dated 7 February 2019 (Nolans Project Definitive Feasibility Study) or from the Updated Mining Study as set out in the Company's ASX announcement dated 16 March 2020 (Major Increase in Mine Life for the Nolans Project)), continue to apply and have not materially changed.





NdPr Market Update

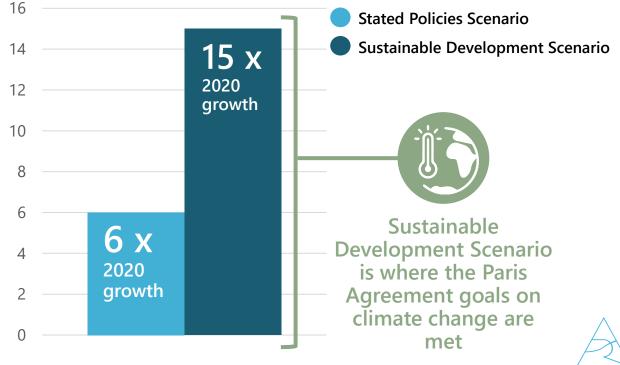


## NdFeB Magnets

A Vital Cog in the Electric Vehicle Revolution

- EV market growth is exponential: 10 to 40 times in the next 20 years which will require 6-15 times more rare earth elements
- EV traction motors can use upwards of 1kg of Rare Earth Elements (NdPr, Dy, Tb)
- Just 0.05% of the vehicle cost: but it can't run without it

## Rare Earth demand growth from new EV sales by scenario 2040 compared to 2020



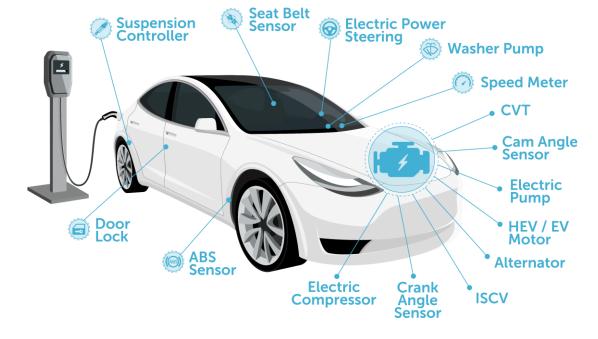
## A lesson in the Auto Semiconductor Shortage

- → The shortage has caused **billions of dollars in lost** revenue for the Auto industry
- → It highlights how a tiny cog in the supply chain can disrupt the global market

## The Looming NdPr Shortage

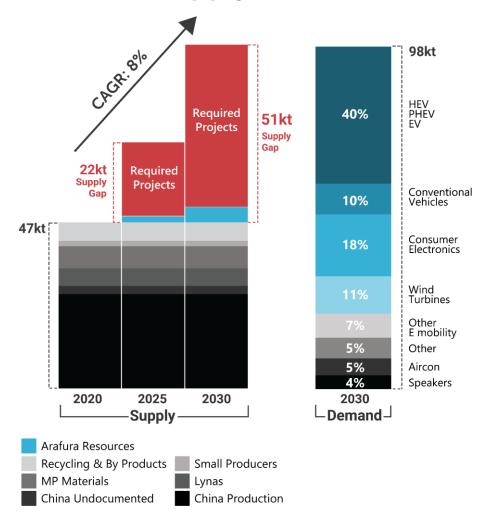
- → China is the only country in the world to have a domestic supply chain solution (Mine to EV)
- → Global industry is heavily reliant on China who produce ~85% of NdPr and consume 60%
  - There is **high urgency** for the non-chinese auto sector to **secure future supply of NdPr** otherwise **global shortages are imminent**

#### NdFeB Magnet Components in an EV





### NdPr Supply & Demand



Source: Arafura internal Supply Demand forecast referencing against data from CRU, Rare Earth Market Study 2020; Roskill, Rare Earth Market Analysis 2018, Adamas Intelligence, Rare Earth Market Outlook to 2030.

## Increasing DEMAND\* (2020 data)

- Automotive sector is forecast to consume nearly 50% of NdFeB supply
- 2030 demand forecast assumes ~34 million
   EVs
- 24 million EVs at risk in 2025 if new supply isn't secured

## **SUPPLY Shortage**

Market analysts forecast a supply gap in 2030 that represents 109% of global supply today which is in excess of

**11 Nolans Projects** 



















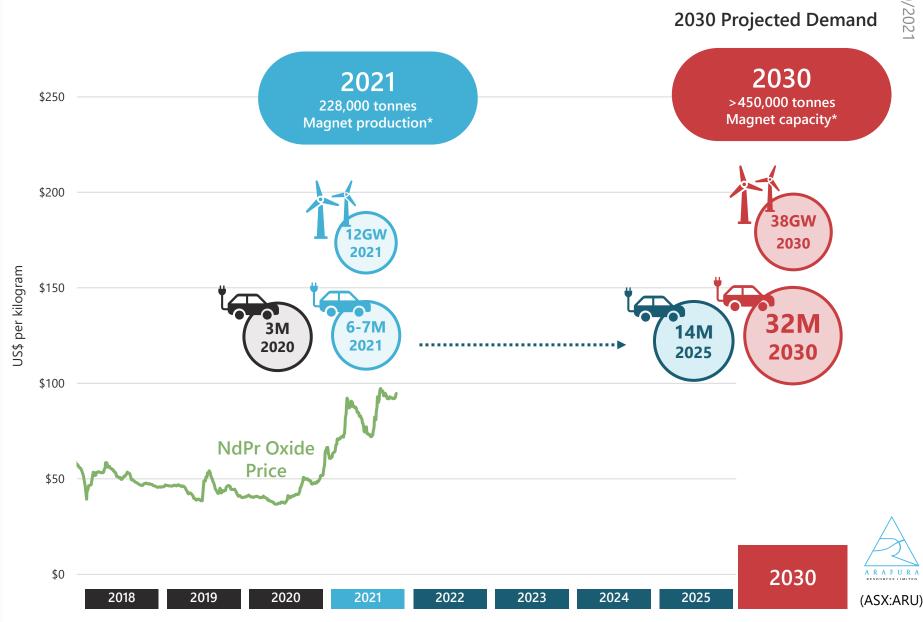






### Demand Driving NdPr Prices

- Chinese magnet makers unable to deliver on some long-term fixed price contracts
- OEM's starting to align procurement with publicly stated targets
- May see OEM buy-in to secure future NdPr for own requirements
- Offtake arrangements with Arafura provides supply guarantee



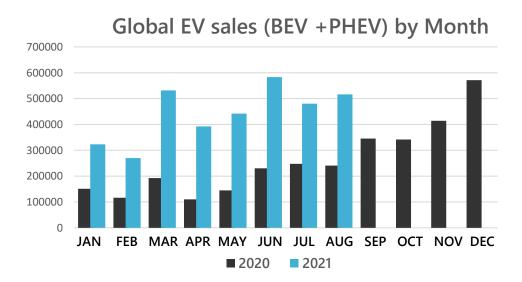
## Supply also impacting Price

- Chinese inventory stockpiles down by ~60% since mid-2020
- Chinese producers near full capacity
- Supply chain issues highlighted by growing EV sales
- Governments are implementing Critical Minerals Initiatives and supply chain de-risking to facilitate policies and targets for E-mobility and renewables

### NdPr Oxide Output & Price EXW China



Source: Lynas, BAINFO, Asian Metals







# Funding & Offtake



## Funding Strategy Leverages Global Focus on Critical Material Supply Chains







Most countries targeting low carbon transport and renewable energy to achieve net-zero emissions.

Increased focus on the need for diversified and robust critical material value chains.

Arafura has secured conditional letters of support for senior debt facilities:

- Export Finance Australia (**EFA**) for a 15year facility for **\$200m**<sup>1</sup>.

- Northern Australia Infrastructure Facility (**NAIF**) for a 15- year facility for \$100m<sup>1</sup>. Targeting Export Credit Agency's (ECAs) that will provide debt and debt guarantees for well structured projects that supply critical materials for the manufacture of EVs and renewable technologies.

Original Equipment Manufacturers (OEMs) looking to **engage upstream to secure raw materials.** Offtake discussion has expanded to include strategic investment<sup>2</sup>

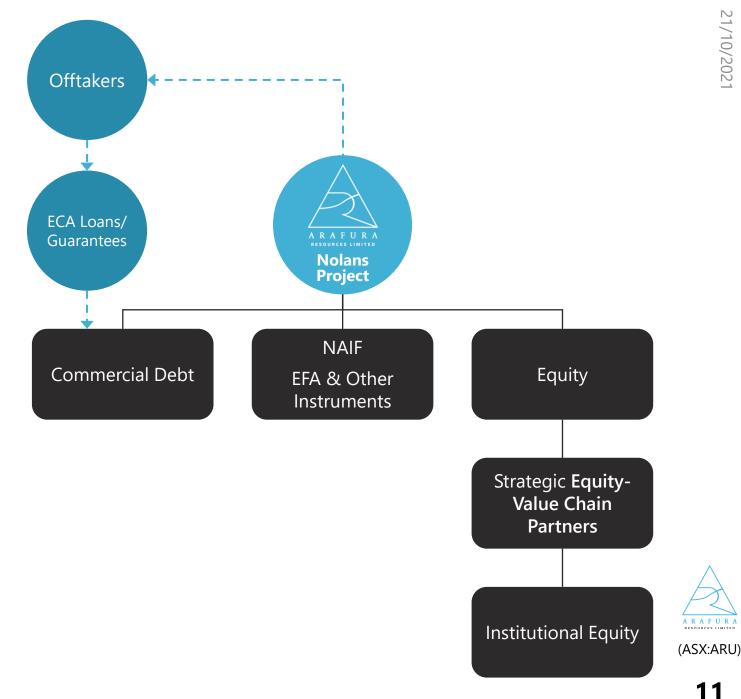
(ASX:ARU)

<sup>&</sup>lt;sup>1</sup>Conditional letters of support are non-binding and conditional upon internal credit approval, negotiation of lender agreements and further due diligence enquiries (among other conditions).

<sup>2</sup>The Company at this stage, has no certainty as to the timing and likelihood of negotiations with potential strategic equity partners successfully concluding or binding agreements being entered. Details of any binding arrangements will be announced to the ASX if (and when) formal agreements have been executed.

## **Targeted Funding** Structure

- ECA debt and guarantees will be critical but not the entire funding solution
- Portfolio of funding sources
- ✓ Offtake, debt and strategic equity all interlinked and driving schedule



## Offtake Strategy

Targeting NdPr users not aligned with *Made in China* 2025 strategy

- Progressing Offtake agreements with customers seeking supply security with a sustainable NdPr producer
- Prices rising materially as supply tightens

Nolans aims to supply ~5% of global demand for NdPr oxide



Arafura is in discussions with **10 parties** for >260% of Planned Production<sup>1</sup> with a view to secure 85% as binding offtake











Current indicative sales opportunities					
USA	Europe	Japan	Korea	China	
10	1,800t <sup>1</sup>				
OEM	OEM	E-Motor	OEM/Motor	MOU JingCi	
Magnet	Wind Turbine Manufacturer	Magnet	Trader	Material Science	
	E-Motor			MOU Tianhe Magnetics	



<sup>1.</sup> Planned Production refers to the average annual production from Nolans of 4,440 tpa (Refer ASX Announcement dated 11 May 2021). Volumes allocated to China may be reduced where offtake is secured in other jurisdictions.

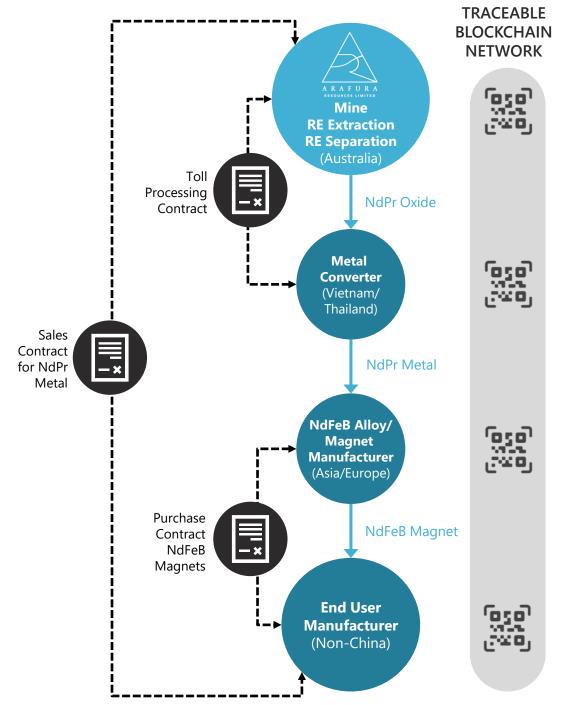
Arafura will keep the market informed of entry into any binding offtake arrangements.

## Nolans Supply Chain Model

Sustainable producer of NdPr to align to "green procurement" strategy

- Offtake Model proposes 'Toll Processing' of metal providing a complete traceable and verified supply chain solution to satisfy end users sustainability requirements
- Offtake Model proposes delivery of NdPr metal into End Users existing supply chain
- Provides customers with security of NdPr supply, verified traceable supply and optionality to direct material to a chosen magnet maker

ARU has an MoU with SE Asia based toll metal converter and aiming to execute a tolling agreement



## **ESG** - Current activities and initiatives

"Arafura's ESG commitment is to be a trusted global leader and supplier of choice for sustainably mined and processed rare earth products, helping our customers deliver clean and efficient technologies. We are committed to delivering positive intergenerational economic, environmental and social benefits to our stakeholders."



### Prioritise GHG Emissions and Water Management

- Water reduction strategy
- GHG Emissions Audit and reduction study
- Renewable energy Solar power initiative, Commitment to Net Zero GHG



### Finalise Update of Sustainability Report

- Signatory of the UN Global Compact
- Comprehensive report that satisfies requirements of global ESG ratings agencies and reporting standards
- Due 2H 2021



### Pending Member in IRMA

 Arafura will complete the IRMA Ready assessment standard as soon as it is launched



### Traceability – Blockchain Technology

- Aligned with customers' ESG expectations
- Will allow tracing of Nolans sustainably produced products through entire supply chain to customers



### Innovation and Technology

- Downstream value add opportunities
- Ongoing R&D, low carbon metallisation process
- Options for hydrogen or other energy storage solutions





How Are We Progressing?

## **Project Economics**

Mining and Production		
Mine Life (years)	38	
NdPr Oxide (tpa)	4,440	
SEG/HRE Oxide (tpa)	474	
Phosphoric Acid (tpa 54% P <sub>2</sub> O <sub>5</sub> MGA)	144,393	
Financial	US\$	A\$
Capital Cost (\$m)	768	1,056
NdPr Oxide (US\$/kg)	87	120
Rare Earth Sales Revenue (\$m/pa)	388	534
Phosphoric Acid Sales Revenue (\$m/pa)	58	79
Mining Costs (\$m/pa)	(30)	(42)
Processing Costs (\$m/pa)	(105)	(145)
General and Administration Costs (\$m/pa)	(15)	(21)
EBITDA (\$m/pa)	257	354
KPI Analysis	US\$	A\$
Operating Cost \$/kg NdPr	33.91	46.60
Operating Cost \$/kg NdPr net of P <sub>2</sub> O <sub>5</sub> credit	24.76	34.06
NPV <sub>8</sub> after tax (\$m)	1,011	1,402
IRR after tax (%)	18.1%	

Refer to ASX Announcement Nolans Project Update dated 11 May 2021 which assumes a long-term NdPr oxide price of US\$87/kg. Average production and costs are calculated as the arithmetic annual average following the anticipated two year ramp up and excluding the final years of production from low grade stockpiles.

- Definitive Feasibility Study (DFS) update released in May 2021
- ✓ Post-tax NPV<sub>8</sub> of A\$1.4 billion and IRR of 18.1%
- Capital cost A\$1,056m
- ✓ Annual average EBITDA of A\$354m
- Low-cost producer at US\$24.76/kg NdPr
- Robust economics at current NdPr oxide price US\$90.84/kg\*



<sup>\*</sup> Asian Metals (1 July – 30 September 2021 average price).









**Security of Tenure & Social License to Operate** 



**Technical** 







Customer verification of oxide products



Australian Government provide conditional letters of support for \$300M in debt



\$45.5M Successful capital raising completed to begin FEED



Offtake engagement (advanced discussions underway)



Project funding (commenced senior debt process & strategic equity)



Hydrometallurgical Plant FEED commenced August



**Non-Process Infrastructure FEED early works** progressing



Arafura's Owners' team including personnel from KBR and Wave ramping up



## Nolans Key Development Milestones

\*Milestone targets are indicative and subject to change and are contingent upon funding, offtake activities and general market conditions

1. FID and First Production are both subject to outcomes with offtake and financing.

2. Conditional letters of support are non-binding and conditional upon internal credit approval, negotiation of lender agreements and further

due diligence enquiries (among other conditions).



NAIF & EFA provide conditional letters of support for \$300M in debt<sup>2</sup>



Cap raise complete & FEED commenced in 2H 2021



Conclude agreements with offtakers, Export Credit Agencies & project funding



Targeting Final Investment Decision (FID) by 2H 2022<sup>1</sup>



Targeting first production in late 2024<sup>1</sup>

## **Contact Information**



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