



AUSTRALIAN **BAUXITE** LIMITED

ALCORE Limited
AlF₃ for aluminium smelters, recycling & lithium-ion batteries

ASX: ABX

ASX ANNOUNCEMENT

24 June 2021

Alcore CEO Presents at Gold Coast Investment Showcase

In accordance with the requirements of Listing Rule 3.1, Australian Bauxite Limited (ASX: ABX) (ABx) provides the following update for its 87%-owned subsidiary ALCORE Limited (**Alcore**).

We submit the attached material being presented at the Gold Coast Investment Showcase being held at the Surfers Paradise Marriott Resort, 158 Ferny Ave, Surfers Paradise QLD on 24 June 2021.

Mr Mark Cooksey, CEO of Alcore, is making the presentation at 2.50 pm on Thursday 24 June 2021.

Shareholders and the public are welcome to attend our exhibition and presentation.

Due to Covid-19 travel restrictions you may view the presentation by [clicking here](#).

This announcement has been approved for release by the Board of Australian Bauxite Limited.

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Note: AlF₃ is a strategically important mineral because it is an essential ingredient for aluminium smelting. It is also being investigated for advanced lithium-ion batteries. Australasian aluminium smelters rely entirely on imported AlF₃. Australia is the only large producer of aluminium metal in the world that does not have its own AlF₃ production facility.

Disclaimer Regarding Forward Looking Statements

This ASX announcement (Announcement) contains various forward-looking statements. All statements other than statements of historical fact are forward-looking statements. Forward-looking statements are inherently subject to uncertainties in that they may be affected by a variety of known and unknown risks, variables and factors which could cause actual values or results, performance or achievements to differ materially from the expectations described in such forward-looking statements.

ABx does not give any assurance that the anticipated results, performance or achievements expressed or implied in those forward-looking statements will be achieved.

ALCORE Limited

AlF₃ for Al-smelters & lithium-ion batteries

Reducing import reliance for aluminium smelting

Gold Coast Investment Showcase

Dr Mark Cooksey
CEO

24 June 2021

Disclaimer

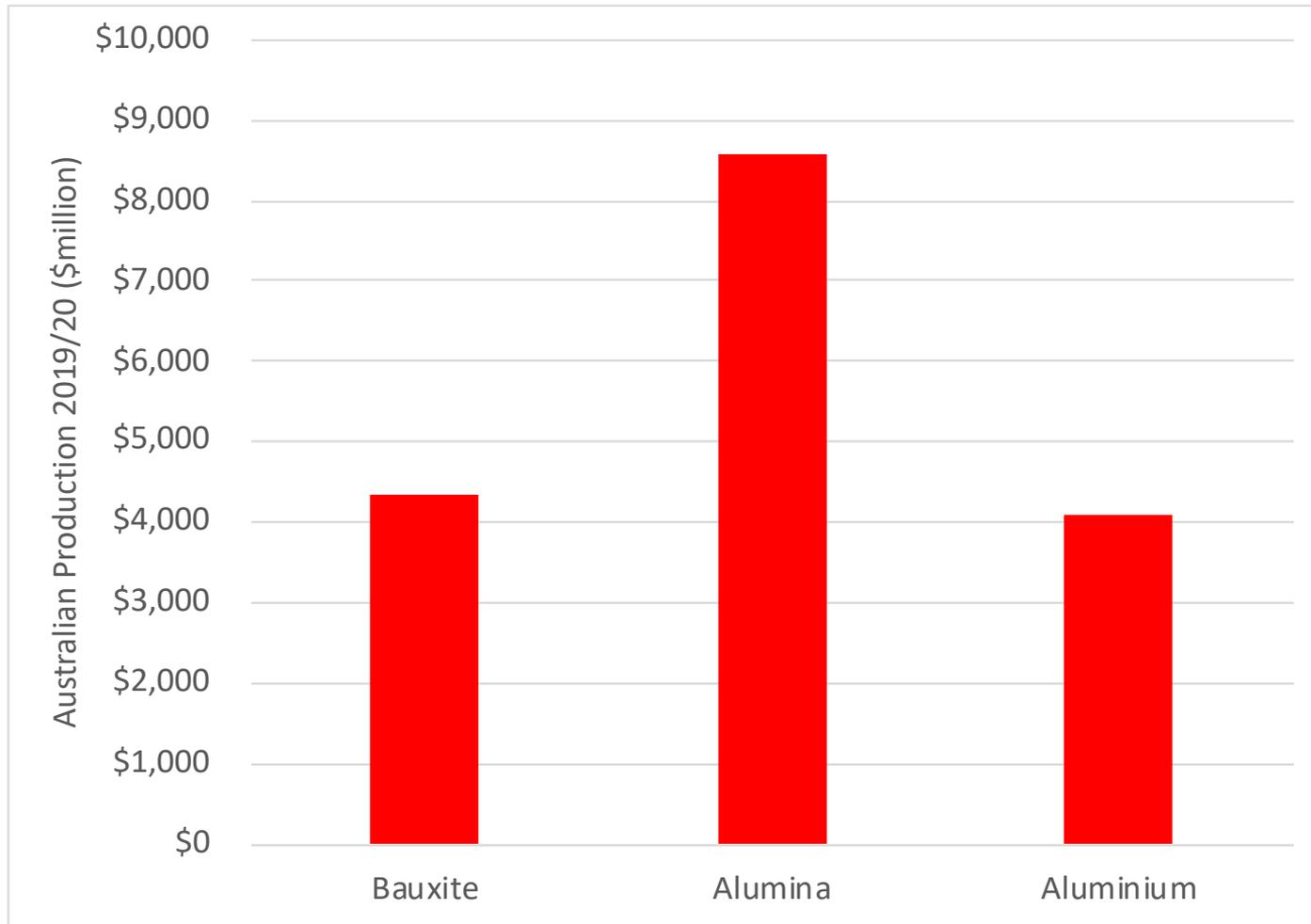
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Prices for aluminium fluoride (AlF_3) were sourced from Asian Metals, China Customs and verified by comparison with prices from Bloomberg. The price actually achieved will depend upon market conditions at the time of sale.

Australian aluminium industry



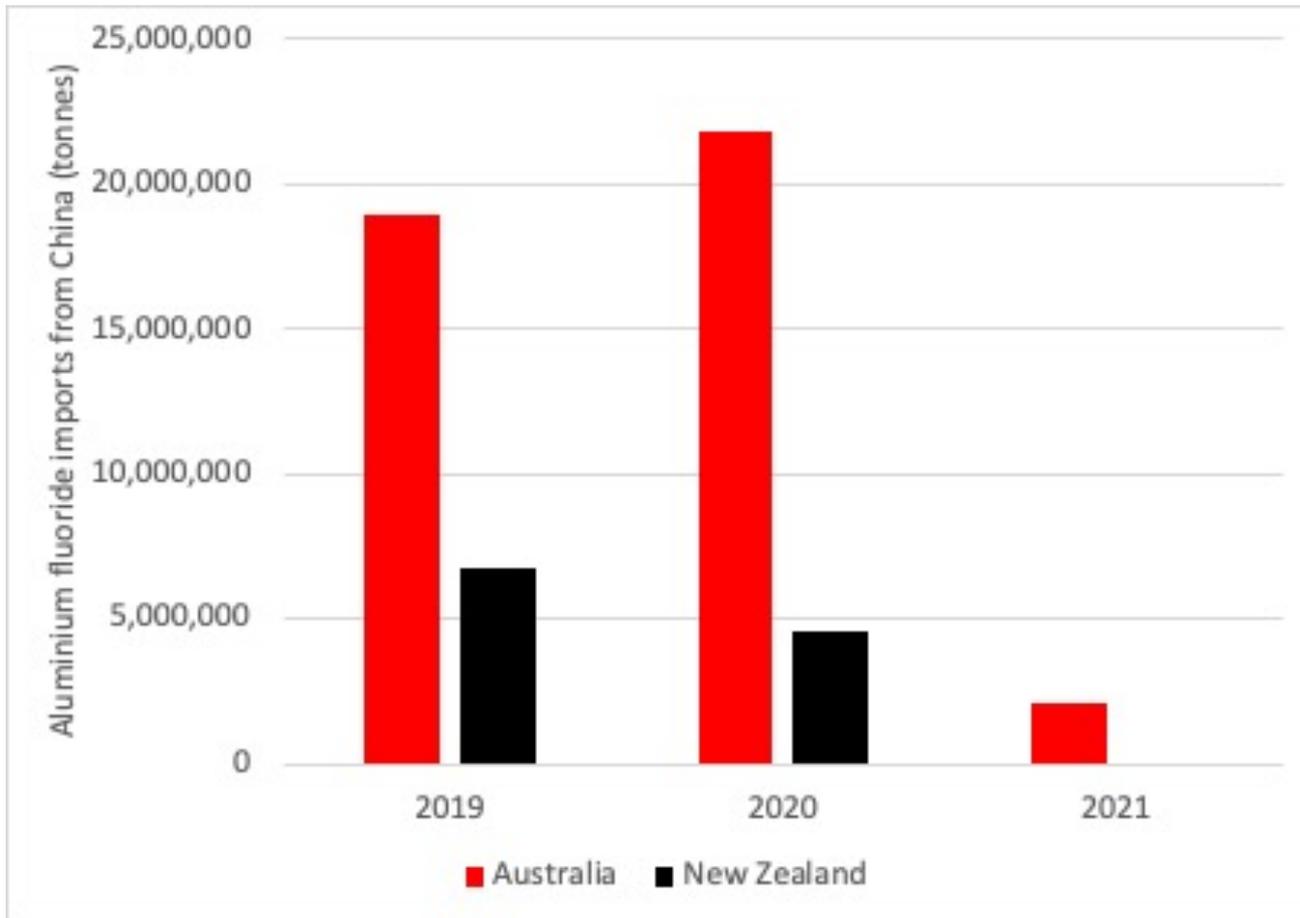
- Global aluminium production is 60 million tonnes per year
- Australia produces 1.6 million tonnes at four smelters (\$4 billion)

Aluminium fluoride (AlF₃)

- **Essential for aluminium smelting**
 - 1.2 million tonnes produced globally per year worth US\$1.5 billion
 - 50% produced in China for Chinese smelters; none in Australia
 - Australia/NZ import 100% of requirements, mostly from China
- **High value**
 - US\$1,000-1,800 per tonne
 - Traditionally produced from high-cost aluminium hydroxide and fluorspar
- **Achievable specifications**
 - Product purity risk is low
- **Mature Market**
 - Dozens of customers globally



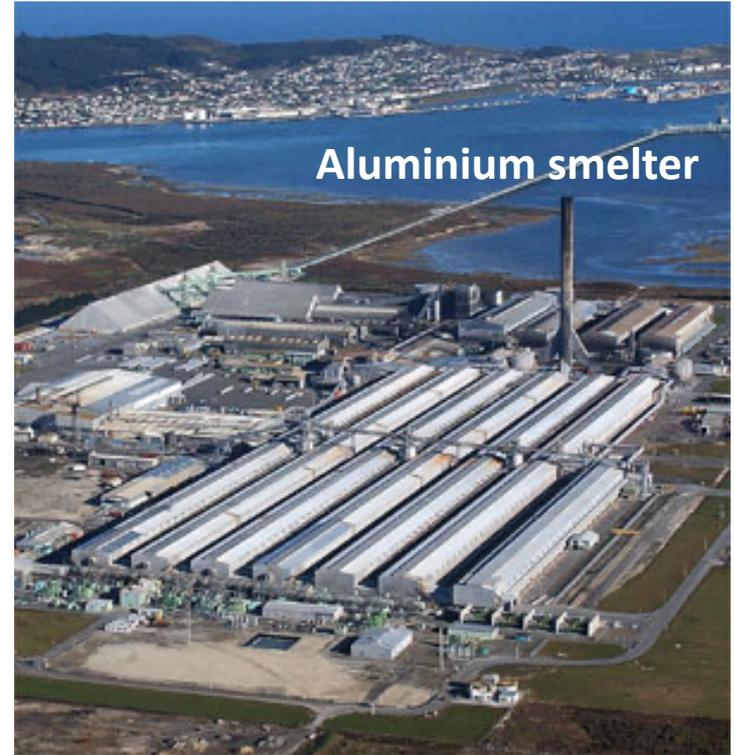
Australia/NZ AlF_3 imports from China



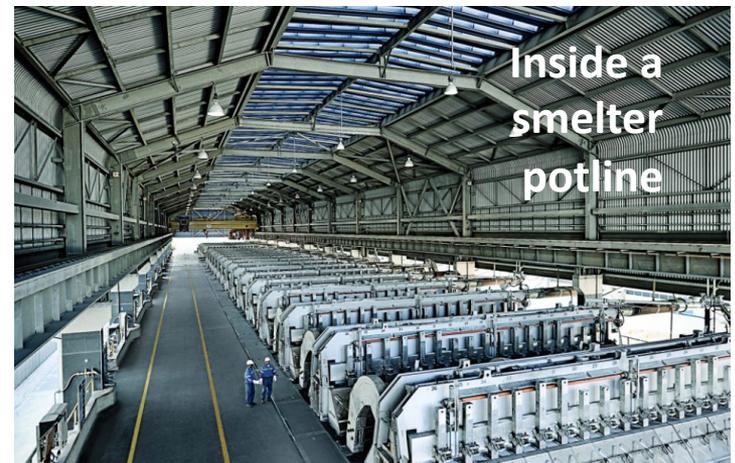
- Australia/NZ typically largest importer of AlF_3 from China, but minimal imports from China in 2021

Aluminium Smelter Wastes

- Fluorine is lost as ‘tapped bath’ waste
- Market for tapped bath has moved into oversupply
- China indicating ban on imports of tapped bath
- ‘Dross’ is another significant waste; many smelters have stockpiles of dross



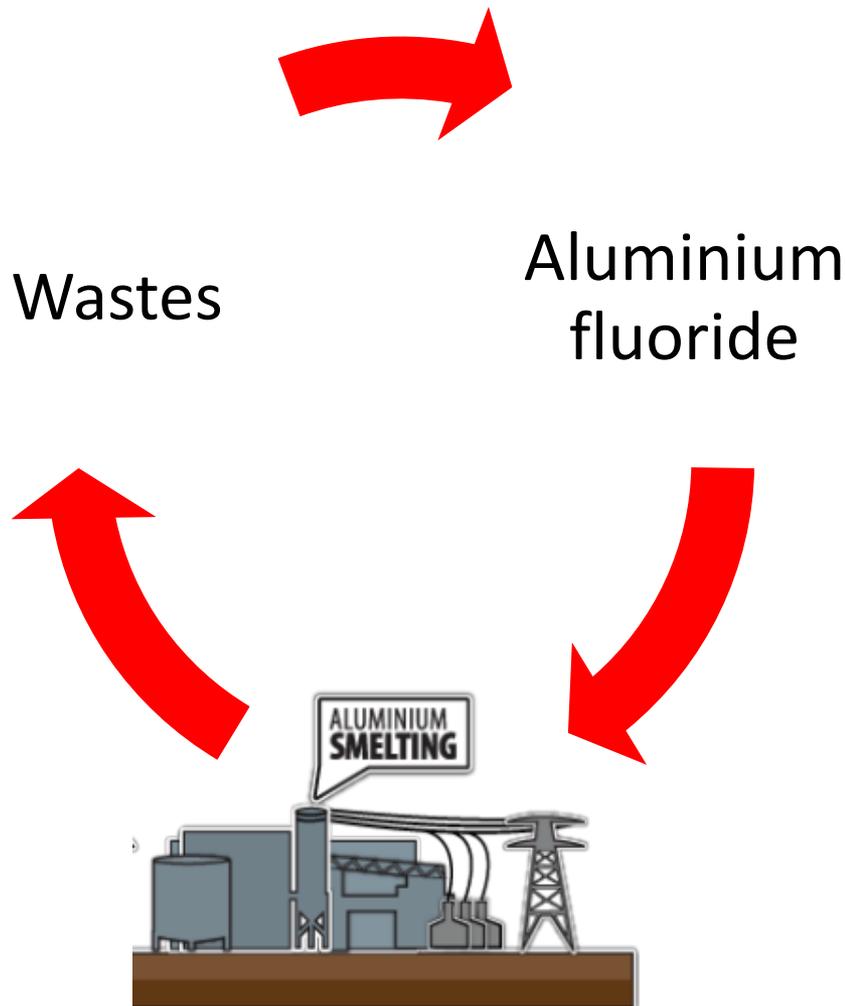
Aluminium smelter



Inside a smelter potline

Aluminium Fluoride (AlF₃)

An essential chemical for aluminium smelting

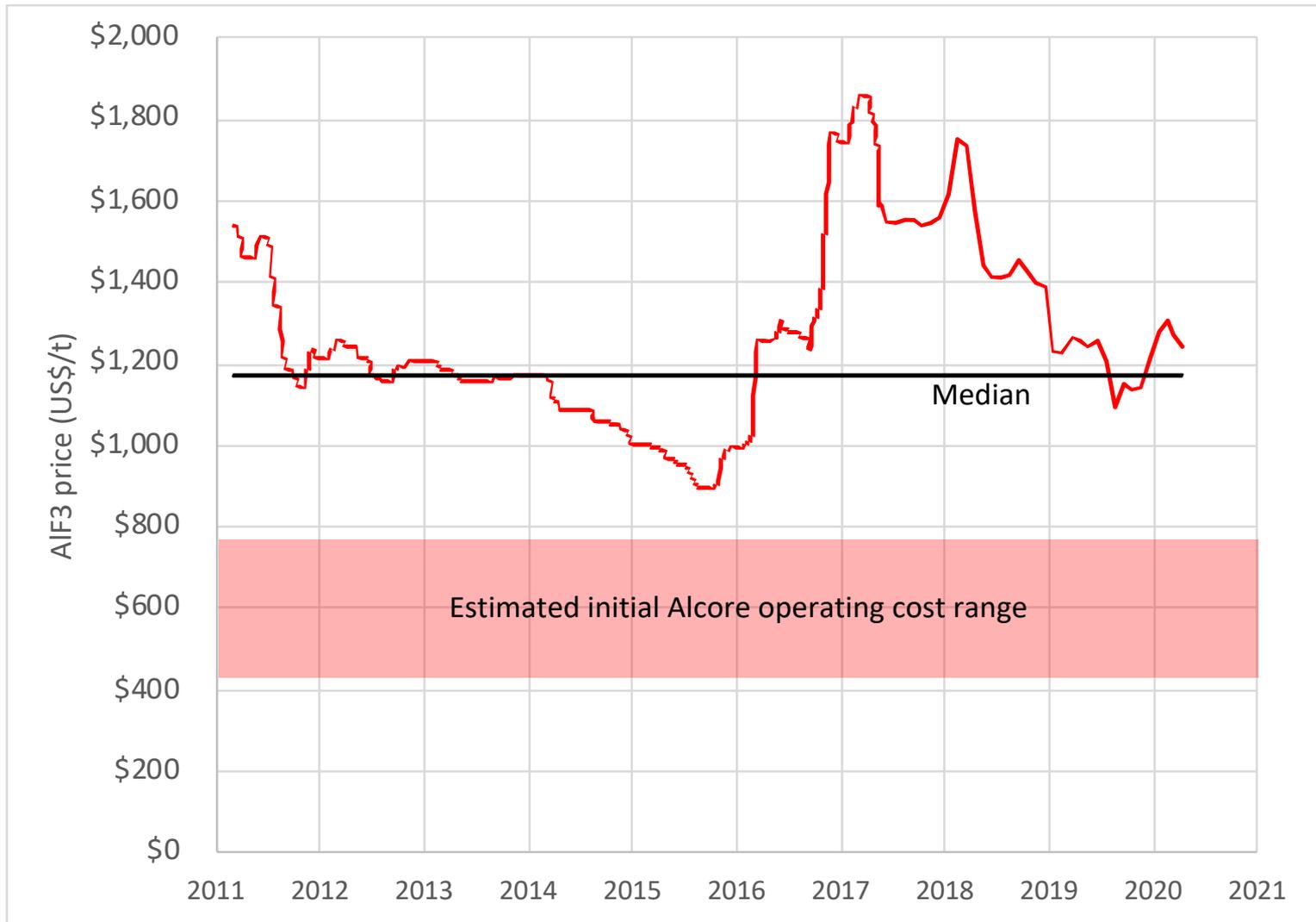


Alcore will use aluminium smelter wastes to produce aluminium fluoride in Australia

Commercialisation plan

- First Alcore plant planned for Bell Bay industrial area northern Tasmania, near existing hydro-powered aluminium smelter
- Initial capacity 10,000 t/y aluminium fluoride:
 - To initially supply ~35% of Australasian demand
 - Will expand to 30,000-60,000 t/y, subject to customers, low-cost feedstock sources and/or additional locations
- Initial production can use aluminium hydroxide feedstock for good returns and lower risk
- Bauxite and dross show promise as lower-cost feedstocks to substantially increase profitability

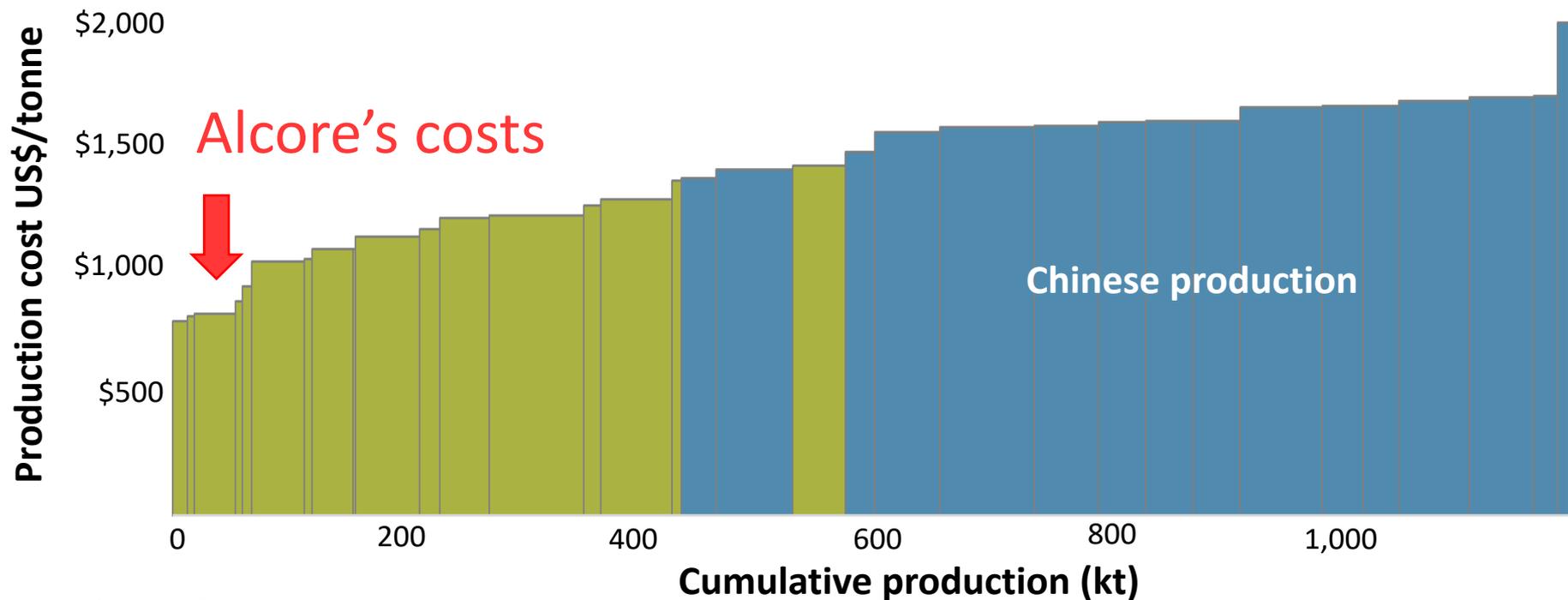
AlF₃ Prices and Costs



Source: China Customs

Process Economics

- Current AlF_3 production costs are US\$1,000/t to US\$1,700/t
- Raw materials typically 75% of production cost, mainly fluorspar and aluminium hydroxide
- Alcore is low-cost because of its lower-cost raw materials



Source: Roskill

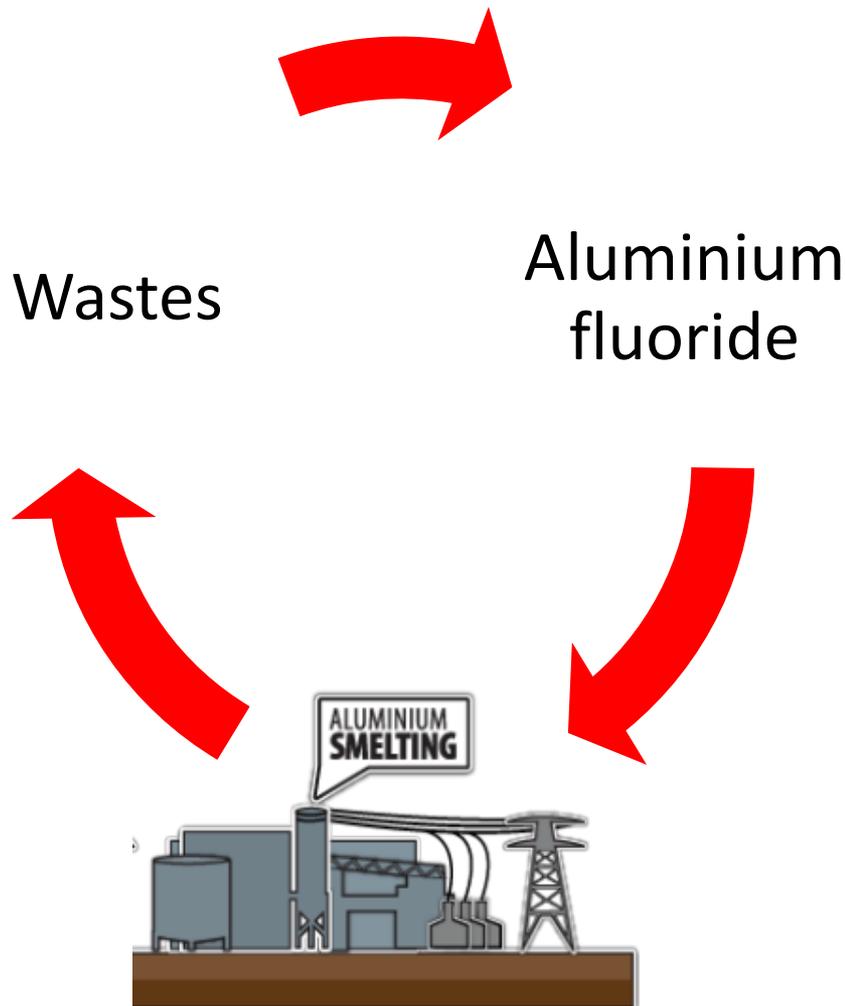
Technical Status

- Alcore laboratory commenced operations 1 July 2019
 - Only laboratory in Australia suitable for operation with concentrated fluorine acids
- Critical prerequisites have been confirmed in laboratory
 - Recovered fluorine from tapped bath
 - Produced aluminium fluoride from aluminium hydroxide
 - Produced AlF_3 from dross & bauxite
- Commencing engineering validation, including pilot plant



Alcore

Reducing import reliance for aluminium smelting

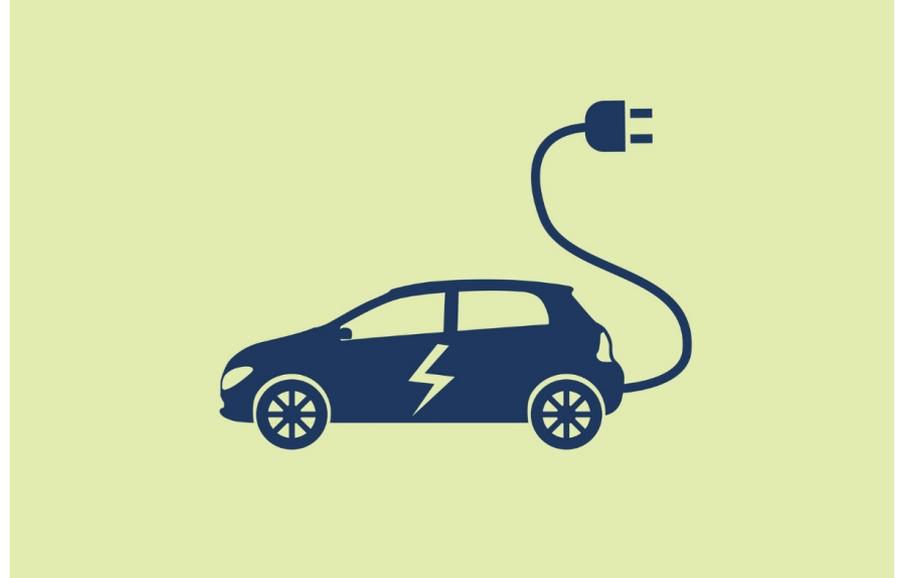


Alcore will use cheaper raw materials in a proprietary process to produce commercial grade AlF_3 at low cost in Australia

Alcore

Beyond AlF_3 for aluminium smelting

- Co-products, e.g. industrial chemicals
- Aluminium fluoride for lithium-ion batteries
- Range of fluorochemicals



Thank you

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