### ASX ANNOUNCEMENT



16 July 2024

### **Investor Presentation**

Lithium Australia Ltd (ASX:LIT) ("Lithium Australia" or the "Company") is pleased to provide an updated Investor Presentation. No new information is disclosed in this presentation.

A copy of the Investor Presentation is attached and can be viewed on the Company's website.

Authorised for release by the Board.

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#### **About Lithium Australia**

Lithium Australia is aiming to lead and enable the global transition to sustainable lithium production. The Company operates Australia's market leading battery recycler, produces critical battery material lithium ferro phosphate (LFP), and has developed a patented lithium extraction technology. Lithium Australia's revenue-generating recycling business and technologies are well-placed to capitalise on growing global lithium-ion battery demand and provides diversification benefits to global supply chains.

Divisions of Lithium Australia



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### Litchium Australia Asx : LIT

# Energising a better world

Investor Presentation July 2024

Lithium Australia Limited securities are listed on Australian Securities Exchange (ASX Codes: LIT, LITOA, LITOB)

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"We are proactively executing on our strategic initiatives, including 1) increasing utilisation rates and enhancing operational efficiencies in recycling, 2) making rapid progress with LieNA® JDA activities which is on track to be completed in 2024, 3) actively pursuing commercialisation opportunities to monetise our unique LFP technology, and 4) securing partners for growth.

An investment in Lithium Australia represents a compelling opportunity to be leveraged to the rapidly growing battery supply chain and retain significant upside potential via our unique technologies, while also ensuring limited exposure to cyclical swings in commodity pricing."



**Simon Linge** Managing Director & CEO of Lithium Australia

### Lithium Australia's Unique Value Proposition

Energising a better world by leading and enabling the global transition to sustainable electrification



Notes: 1. See ASX announcement, '*New battery recycling agreement with LG Energy Solution*', 18 March 2024; 2. See ASX announcement, '*Exclusive battery recycling agreement Volvo Group Australia*', 5 June 2024; 3. See ASX announcement, '*Exclusive battery recycling agreement with Hyundai Glovis*', 25 March 2024; 4. See ASX announcement, '*Lithium Australia's recycling operations achieve maiden operating cash profit*', 11 July 2024 5. See ASX announcement, '*Landmark joint development agreement with Mineral Resources*', 7 August 2023



### Where we focus today

Lithium Australia is scaling up in the growing battery industry and focused on high value opportunities across the lithium value chain

Exploration and Mining	Lithium Chemicals	Battery Materials	Battery Manufacturing	Battery Recycling
Passive investments in exploration assets	Joint Development Agreement with Mineral Resources (ASX:MIN)	Actively seeking partners for scale up towards commercialisation	Relationships secured with leading battery manufacturers	Market leading, revenue generating lithium-ion battery (LIB) recycler
	(D)/1			
Overview	Proprietary technology to process fine and low-grade materials to improve mining yields by up to 50% <sup>1</sup>	Validated LFP / LMFP <sup>3</sup> product serves as an alternative supply source for global battery manufacturers		Provision of recycling services. Growing LIB volumes underpinning positive operating cashflows and then national expansion strategy
Commercial model	Licensing to domestic and global miners at a gross product royalty rate of 8% <sup>2</sup>	Positioned for either licensing or owned and operated commercial scale plants		Prioritise upstream fees and complement with additional downstream sales

Notes: 1. Assumes existing mine concentrator is 60%: 60% to 90% Li recovery increase assumes lithium extraction technology recovers 75% of lithium units going to tails; 2. Company cautions that although it considers this to be a reasonable expectation, there is no guarantee that this rate will be achieved; 3. LFP: Lithium ferro phosphate, LMFP: Lithium manganese ferro phosphate



## ふ Battery 名 Recycling

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### Leading Australian battery recycler

Revenue-generating battery recycling business generating operating cashflows



#### Battery supply chain strategy in action

End-of-life Lithium-ion batteries received through strategic recycling agreements with leading EV / ESS<sup>1</sup> manufacturers

#### High and growing barriers to entry

Established operations with high compliance and safety requirements and growing government regulations

### Select recycling customers



### **Recycling collection volumes and mix (tonnes)**<sup>2</sup>



Notes: 1. EV: Electric Vehicle, ESS: Energy Storage Systems; 2. Company analysis



### Rapidly growing LIB collections to drive utilisation

Recycling agreements with leading OEMs<sup>1</sup> to drive uplift in collection volumes and utilisation rates



Notes: 1. OEM: Original equipment manufacturer ; 2. Company analysis

### Attractive recycling revenue model

Revenue generated from providing collection / processing services and sale of recycled materials

### **Recycling revenue streams**

#### **Upstream fees**

- Fees charged for the collection and processing of batteries, and provision of complimentary services
- Upstream fees expected to grow as a proportion of revenue mix going forward
- Relatively stable earnings given service-based revenue

### **Downstream sales**

- Processing of Lithium-ion batteries includes production of Mixed Metal Dust (MMD) for downstream sales at market prices, with profit share arrangements in place
- Battery processing also yields additional revenue from other metals sold at market prices (e.g. aluminium, copper, steel etc.)

### Cash receipts and cash gross profit (A\$m)<sup>1</sup>



Notes: 1. Derived from respective Appendix 4C (Receipts from customers less product manufacturing and operating costs) and Appendix 5B (Receipt from customers less production)



### SungEel HiTech: MMD off-take agreement

Off-take agreement secured for at least 60% of MMD production, with JDA discussions underway

### Off-take agreement<sup>1</sup>

- Signed 3-year Mixed Metal Dust (MMD) off-take agreement effective from 1 July 2024
- SungEel HiTech will purchase a minimum of 60% of LIT's annual MMD production – subject to minimum quality requirements
- Discussions underway on a joint development agreement (JDA), incorporating a potential investment – initially focused on upgrading recycling equipment and expansion of processing capacity

### SungEel HiTech



### Key highlights

#### Accelerates recycling growth strategy

The off-take agreement is synergistic with Lithium Australia's rapidly growing LIB<sup>2</sup> collection volumes and MMD production, helping drive sustainable earnings growth

#### Significant addressable market

LIT continues to serve the growing demand for MMD – underpinned by growing LIB collections and future uplift in product volumes

#### **Potential investment**

Opportunity to fund the expansion of LIT's recycling capability and capacity in a non-dilutive manner – with execution of JDA targeted in 2024

Notes: 1. See ASX announcement, 'Lithium Australia signs MMD off-take agreement with SungEel HiTech', 13 June 2024; 2. LIB: lithium-ion battery



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### Strategic battery recycling outlook

### Strategic battery recycling outlook

#### Foundation Phase - Complete

- ✓ Revenue of A\$6.5m in FY2024<sup>1</sup>
- ✓ >1,500 tonnes of battery collections in FY24
- ✓ Off-take agreement for MMD secured
- Stabilising commercial model and offer to market
- Recycling agreements signed with Volvo, Hyundai Glovis, and LG Energy Solution
- ✓ Improved MMD yield per tonne by up to 25%<sup>2</sup> via process optimisation works

### **Build Phase (1 year)**

- Continue to increase contribution mix of large-format LIBs in battery collections
- Improve MMD conversion efficiency
- Sustain positive operating cashflows
- Optimise existing customer contracts
- Secure further recycling agreements with tier 1 EV and ESS<sup>3</sup> manufacturers
- Secure strategic and financing partners to facilitate scale up

### Growth Phase (2-3 years)

- Expand collections and processing capacity through development of centralised Victoria facility
- Increase battery processing capacity to match collection volumes
- Build national collection and storage capacity through "spoke" network
- Explore international options for expansion

Notes: 1. See ASX announcement, 'Lithium Australia's recycling operations achieve maiden operating cash profit', 11 July 2024; 2. See ASX announcement, 'Quarterly Activities Report December 2023', 31 January 2024; 3. EV: Electric vehicle, ESS: Energy storage systems.



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### LieNA<sup>®</sup> value proposition

Patented extraction technology offers ~50% higher lithium extraction efficiency

### Driving greater profitability for miners

Unique method of processing un-used fine and low-grade spodumene, potentially yielding higher levels of lithium output

#### ✓ Improves sustainability

Materially less wastage as fine and low-grade spodumene typically ends up as waste streams

### Increases mine asset value

Miners can extract significantly more lithium from the same spodumene resources, increasing mine value

#### ✓ Moves down value chain

Allows miners to capture more of the value chain by processing spodumene on site into a lithium chemical

Notes: 1. Assumes existing mine concentrator is 60%: 60% to 90% Li recovery increase assumes lithium extraction technology recovers 75% of lithium units going to tails.





### LieNA<sup>®</sup> commercialisation pathway

MinRes JDA targeting completion by end 2024, with a clear commercialisation pathway forward

### **Joint Development Activities**





Notes: 1. The Company cautions that although it considers this to be a reasonable expectation, there is no guarantee that this rate will be achieved; 2. Estimated revenue for the 50:50 JV based on: typical operation with 20,000tpa processing capacity (company assumption), achieving an average sale price of US\$13,000/t (Source: SMM, Lithium Carbonate (99.5% Battery Grade), 26 June 2024 converted at prevailing CNY/USD rate) at an 8% royalty rate



## Battery Materials

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### Lithium Ferro Phosphate (LFP) value proposition

Rapidly growing battery chemistry with strong adoption across global EV and ESS manufacturers<sup>1</sup>



### **Critical input for battery manufacturers**

LFP is a cathode material which represents most of input costs in the manufacture of LIBs

### Lower cost batteries

LFP batteries are ~25% cheaper than traditional nickelbased batteries, with prices continuing to decline<sup>2</sup>

#### Longer life cycle

Relative to traditional batteries, LFP batteries have around *double* the longevity of traditional battery chemistries<sup>3</sup>



#### Lucrative economics and scalable

Potential annual revenue of US\$319m assuming a 25,000 tpa<sup>4</sup> commercial plant and an LFP price of ~US\$12.75/kg<sup>5</sup>



Notes: 1. Wood Mackenzie Energy Storage Services 2020; 2. IEA, Global EV Outlook (2024); 3. WhichCar, EV battery types explained (2023); 4. Company estimate: 25,000 tonnes per annum; 5. Avenira Limited (ASX; AEV) Announcement (Scoping Study, 2 March 2023), Ave. LFP Basket; 6. BloombergNEF, Electric Vehicle Outlook (2022)



### LFP market dynamics

Favourable market dynamics provides strong tailwinds for LIT's Battery Materials business



### **Rapid LFP adoption<sup>1</sup>**

LFP batteries are being rapidly adopted by EV and ESS manufacturers due to the chemistry's superior qualities

### **Existing supply chain risk**

>95% of LFP production is controlled by China, posing a significant geo-political supply chain risk for global EV manufacturers



### **Global Ex-China LFP industry still in its infancy**

We are one of the few developers with patented technology outside of China



#### Sustainability and safety pressures

Ethical and safety concerns behind cobalt and nickelbased batteries are pressuring manufacturers to adopt alternatives, such as LFP batteries

Notes: 1. IEA, Global EV Outlook (2024).



Global EV sales by battery chemistry<sup>1</sup>



### Well positioned for commercial discussions

LIT's LFP product has been externally validated and is seeking value creation opportunities

### Proven LFP product

Independently assessed and validated against commercially available products by leading battery researcher NOVONIX<sup>1</sup>

#### Proprietary cost-competitive process

Proprietary production process, developed over 10+ years, ready for LFP manufacturing at scale on a competitive basis

#### ✓ Partner ready

Securing of off-take and / or development partners remains the focus before scale up of manufacturing. Samples have been provided to >20 potential customers

### Reducing supply chain risks

Governments globally are actively seeking to lower dependency on China, which produces >95% of all LFP

Notes: 1. See ASX announcement, 'Final testing for Lithium Australia's LFP cathode material', 22 September 2023

### Validated product





### LFP commercialisation pathway

Alternative commercialisation pathways driven by partnership with government or strategic partner

	Completed	Short to medium-term	Long-term
Government Partnership	<ul> <li>Pilot plant operational and producing ~1-2 tpa of LFP</li> <li>LFP product independently validated by</li> </ul>	<ul> <li>Secure government funding for Australian demonstration plant</li> <li>Secure LFP off-take agreements</li> <li>Development and operation of LFP demonstration plant to produce ~250 tpa</li> </ul>	<ul> <li>Development and operation of initial commercial scale plant to produce ~25,000 toa</li> </ul>
International Stratogic	<ul> <li>NOVONIX</li> <li>Progressed partnership discussions, as demonstrated by MOU's with First Phosphate<sup>1</sup> and Centrex<sup>2</sup></li> </ul>	<ul> <li>Secure international strategic partner for offshore semi-commercial facility</li> <li>Secure LFP off-take agreements</li> <li>Development and operation of LFP semi-commercial plant to produce</li> </ul>	<ul> <li>Scale up to achieve more than 100,000 tpa of LFP / LMFP<sup>3</sup> production over the long-term</li> </ul>

Notes: 1. See ASX Announcement, 'Lithium Australia signs MOU with First Phosphate', 7 December 2023. 2. See ASX Announcement, 'Lithium Australia signs MOU with Centrex regarding the development of LFP manufacturing', 16 April 2024 3. LMFP: Lithium Manganese Ferro Phosphate.



### Key activities over the balance of 2024

Planned transformational activities seek to unlock value

**Battery Recycling** 



**Battery Materials** 



### **Lithium Chemicals**



- Sustain positive operating cashflows at current volumes.
- Finalise joint development agreement and funding with SungEel HiTech.
- Secure further lithium-ion battery recycling agreements with tier 1 partners.
- Increase mix of large-format batteries to further improve commercial outcomes.

- Secure government funding for demonstration plant; or
- Secure international strategic partner for semi-commercial facility.
- Offtake development including production of LFP / LMFP samples.
- Continue raw materials strategy to support commercial scale volumes.

- Commence final stage of pilot plant operation.
- Complete piloting to produce 5kg of final lithium phosphate product.
- Finalise engineering study report to support a demonstration scale plant.



### **Investment highlights**

**Leading Australian battery recycler:** providing sustainable solutions for the disposal of batteries, with recycling activities generating operating cashflows

**Strategic supply partnerships:** Future supply of batteries secured through strategic partnerships – which underpins upstream revenue and MMD production

**MMD off-take secured:** Downstream sales underpinned by secured off-take with SungEel HiTech for at least 60% of annual MMD production

**Rapid LieNA® commercialisation:** JDA with MinRes well progressed – with piloting and engineering study on track to be completed in 2024

**Upside potential from LFP technology:** Actively pursuing commercialisation opportunities with domestic government or international strategic partner





# Appendices

### **Corporate: Snapshot**

Strong balance sheet with cash and listed investments of A\$7 million

### Share price performance (YTD)



#### **Financial information**

Share price (12-Jul-24)	A\$0.023
52-week trading range (low / high)	A\$0.02 / A\$0.07
Shares on issue	1,222m
Market capitalisation (12-Jul-24)	A\$28.1m
Cash (31-Mar-24)	A\$4.9m
Listed investments <sup>1</sup> (31-Mar-24)	A\$2.1m
Debt (Convertible Note) (31-Mar-24)	(A\$0.9m)
Cash and listed investments (31-Mar-24)	A\$7.0m

Notes: 1. Includes Charger Metals NL (ASX: CHR) and Evion Group NL (ASX: EVG). Joint venture holdings of 30% for certain tenements held by CHR also exist.



### **Corporate: Board and management**

High profile and capable team with specialised expertise

### LIT Directors



### LIT Management



Stuart Tarrant Chief Financial Officer





Steven Marshall GM - Recycling



Andrew Skalski GM – Safety, Risk, and Integration





Andrew Napier GM - Technology Development



**David Taylor** GM – Business Development

BINGO



Julie Coleman Chief People Officer

**BHP** OPTUS



### Market: Growing global demand

Rapidly increasing demand for batteries expected to drive strong growth in lithium production



Global shift towards EVs





Strong demand growth for battery cells supports need for LIT's proprietary chemicals, materials, and recycling technologies



44 countries have committed to phasing out petrol car sales between 2035 – 2040<sup>2</sup>

Notes: 1. McKinsey & Company, Battery 2030: Resilient, sustainable, and circular (2023). 2. Coltura, Gasoline Vehicle Phaseout Advances Around The World (2023).



### Lithium Chemicals: Partnering with Mineral Resources Ltd. (MinRes)

Joint development agreement with A\$11bn<sup>1</sup> Australian miner validates lithium extraction technology

### **Strategic Partnership<sup>2</sup>**

- MinRes will fund the pilot plant operations and engineering study (up to A\$4.5m)
- LIT to provide its extraction technology, LieNA<sup>®</sup>, and will manage piloting and the engineering study
- Upon successful completion of piloting and engineering study, a new 50:50 JV will be formed between LIT and MinRes
- New JV aims to licence the technology at a headline gross product royalty rate of 8%<sup>3</sup>
- First licence will be for the demonstration plant, which is expected to be funded and operated by MinRes



### Highlights

#### **Ideal partner**

Leveraging MinRes' extensive mining operations and robust client base as an ASX50 company

### **Free-carry**

Effectively free-carries LIT to commercialisation of the technology

### Large addressable global market

Opportunity to target both brownfield and greenfield lithium mines globally

### Significant progress to date

~A\$3m of MinRes funding has been received to date, with key activities progressing<sup>4</sup>

Notes: 1. Market capitalisation as at 15 July 2024. 2. See ASX announcement, 'Landmark joint development agreement with Mineral Resources', 7 August 2023. 3. The Company cautions that although it considers this to be a reasonable expectation, there is no guarantee that this rate will be achieved. 4 See ASX Announcement, 'LIT confirms third drawdown from Mineral Resources', 5 April 2024.



### Lithium Chemicals: LieNA<sup>®</sup> process comparison

Potential to broaden the quality of feed for extraction of lithium at scale

#### Conversion Na(OH) $Na_3PO_4$ Crude Li<sub>3</sub>PO<sub>4</sub> Phosphate Caustic Selective Impurity NaCl Precipitation Removal Conversion Leach Removal Ca<sub>3</sub>PO<sub>4</sub> Sodalite Ca Silicate Pure Li<sub>3</sub>PO<sub>4</sub> Refining Li<sub>3</sub>PO<sub>4</sub> **Thermal Converter** NaOH Crude Li(OH) Glauber's Thermal Acid Bake & Impurity Caustization Crystallisation Crystallisation Removal Conversion Water Leach Na₂SO₄ Pure Li(OH) Crystallisation Crystallisation Li(OH).H<sub>2</sub>O

**Comparison to Conventional Thermal** 

#### ✓ Process

LieNA<sup>®</sup> is a disruptive process that replaces alpha to beta thermal conversion with a phase change using caustic.

### ✓ Feed grade

LieNA<sup>®</sup> process has been tested technically at a range of grades, including lower than current thermal (alpha to beta) converters can effectively process.

### ✓ Reagent regeneration

LieNA<sup>®</sup> has the potential to regenerate its key reagents.

### ✓ Equipment scale up

LieNA<sup>®</sup> operates at conditions akin to Alumina plants, providing an industrial analogue to reference for scale up and engineering design.



### **Battery Materials: Reducing supply chain risks**

World governments are actively trying to reduce dependency on China, who produces >95% of all LFP



### China dominates the market

Countries are looking to diversify their supply chain reliance



### **Government policies**

Various government policies in place to secure future access to critical materials

*We're not looking to decouple from China. We're looking to de-risk and diversify our relationship with China.... so we're not dependent on any one country for necessary product. It means protecting a narrow set of advanced technologies critical for our national security.*<sup>1</sup>

Joe Biden (46<sup>th</sup> US President)

We want to move Australia up the international value chain in critical minerals, energy and manufacturing<sup>2</sup>

Anthony Albanese, Australian Prime Minister



Australian policies

 National Battery Strategy<sup>3</sup> – Aimed at ensuring Australia's position in global battery supply chains
 Australia Critical Minerals Facility<sup>4</sup> - A\$6 billion in funding directed at critical minerals financing



 ✓ Invest into domestic energy production with Australia set to become a domestic source for critical sectors

Inflation Reduction Act (US)



EU regulatory framework for batteries

 Framework to promote a circular economy and reduce the environmental impact throughout all stages of the battery life cycle



# Thank You

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