sunrise
energy metals







Scandium — critical by design

September 2026



Disclaimer

Forward looking statements and forecasts

This Presentation contains certain "forward-looking statements" and comments about future matters. Forward-looking statements can generally be identified by the use of forward-looking words such as, "expect", "anticipate", "likely", "intend", "should", "could", "may", "predict", "plan", "propose", "will", "believe", "forecast", "estimate", "target", "outlook", "guidance" and other similar expressions within the meaning of securities laws of applicable jurisdictions. Indications of, and guidance or outlook on, future earnings or financial position or performance, including forecast financial information derived from a production target and technical studies, are also forward-looking statements. You are cautioned not to place undue reliance on forward-looking statements. Any such statements, opinions and estimates in this Presentation speak only as of the date hereof, are preliminary views and are based on assumptions and contingencies subject to change without notice, as are statements about market and industry trends, projections, guidance and estimates. Forward-looking statements are provided as a general guide only.

There can be no assurance that actual outcomes will not differ materially from these forward-looking statements. Any such forward looking statement also inherently involves known and unknown risks, uncertainties and other factors and may involve significant elements of subjective judgement and assumptions that may cause actual results, performance and achievements to be materially greater or less than estimated. These factors include, but are not limited to: the failure to obtain access to land required for development of the Syerston Scandium Project ('Syerston'); failure to complete and commission the mine facilities, processing plant and related infrastructure in the time frame and within estimated costs currently planned; variations in global demand and price commodities and materials; fluctuations in exchange rates between the U.S. Dollar, and the Australian dollar; the failure of Sunrise's suppliers, service providers and partners to fulfil their obligations under construction, supply and other agreements; unforeseen geological, physical or meteorological conditions; natural disasters or cyclones; changes in the regulatory environment; industrial disputes; labour shortages; political and other factors; the inability to obtain additional financing, if required, on commercially suitable terms; global and regional economic conditions; the recruitment and retention of key personnel, industrial relations issues and litigation. Readers are cautioned not to place undue reliance on forward-looking statements. The information concerning possible production in this announcement is not intended to be a forecast. They are internally generated goals set by the board of directors of Sunrise. The ability of the company to achieve any targets will be largely determined by the Company's ability to secure adequate funding, implement mining plans, resolve logistical issues associated with mining and enter into any necessary off take arrangements with reputable third parties. Although Sunrise believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements, or that Sunrise's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by Sunrise or management or beyond Sunrise's control. Forward looking statements in this announcement speak only at the date of issue. Subject to any continuing obligations under applicable law or the ASX Listing Rules, Sunrise does not undertake any obligation to release publicly any updates or revisions to any forward-looking statements.

Except as required by law or regulation Sunrise undertakes no obligation to finalise, check, supplement, revise or update forward-looking statements or to publish prospective financial information in the future, regardless of whether new information, future events or results or other factors affect the information contained in this Presentation.

JORC Code

It is a requirement of the ASX Listing Rules that the reporting of ore reserves and mineral resources in Australia comply with the Joint Ore Reserves Committee's Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code"). Investors outside Australia should note that while ore reserve and mineral resource estimates of Sunrise in this Presentation comply with the JORC Code (such JORC Code-compliant ore reserves and mineral resources being "Ore Reserves" and "Mineral Resources" respectively), they may not comply with the relevant guidelines in other countries and, in particular, do not comply with (i) National Instrument 43-101 (Standards of Disclosure for Mineral Projects) of the Canadian Securities Administrators (the "Canadian NI 43-101 Standards"); or (ii) Item 1300 of Regulation S-K, which governs disclosures of mineral reserves in registration statements filed with the SEC. Information contained in this Presentation describing mineral deposits may not be comparable to similar information made public by companies subject to the reporting and disclosure requirements of Canadian or US securities laws.

Mineral Resources, Ore Reserves and Production Targets

This Presentation contains estimates of Sunrise's Mineral Resources, Ore Reserves and production targets and forecast financial information derived from those. The information in this Presentation that relates to Mineral Resources, Ore Reserves and production targets and forecast financial information has been extracted from the Feasibility Study for Syerston. Sunrise confirms that it is not aware of any new information or data that materially affects the information included in that announcement. All material assumptions and technical parameters underpinning the Mineral Resources, Ore Reserves and production targets and forecast financial information in that ASX announcement continue to apply and have not materially changed. Sunrise confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from those announcements.

Exploration Results

The information in this Presentation that relates to the Company's Exploration Results has been extracted from the Company's previous ASX announcements. Copies of those announcements are available at www.asx.com.au or https://sunriseem.com/investor-centre/asx-announcements/. Sunrise confirms that it is not aware of any new information or data that materially affects the information included in this Presentation that relates to the Company's Exploration Results.

Competent Persons' Statements

The information in this document that relates to Mineral Resources at Syerston is based on information compiled by Mr Stuart Hutchin who is a Member of the Australian Institute of Geoscientists (#5285), and a full-time employee of Mining One Pty Ltd. Mr Hutchin has sufficient experience that 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'. Mr Hutchin, in his capacity as an employee of Mining One Pty Ltd, consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The information in this announcement that relates to the Ore Reserves at Syerston is based on and fairly represents information and supporting documentation prepared by Mr Joseph Tachie-Menson, a Competent Person who is a full-time employee of Mining One Pty Ltd. Mr Tachie-Menson is a Member of the Australasian Institute of Mining and Metallurgy. Mr Tachie-Menson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken to qualify as a Competent Person as defined in the JORC Code, 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Tachie-Menson consents to the inclusion of such information in this announcement in the form and context in which it appears.

Scandium - the technology enabler





Scandium has emerged over the past decade as an enabler of key technologies:

- **Fuel cells** are emerging as a clean, scalable and rapidly deployable solution to AI power generation

- High frequency **wireless networks** are increasingly built on a scandium backbone

- **Aerospace** component manufacturing is moving to 3D printing platforms, requiring new and improved alloys

- Emerging **semiconductor technologies** for non-volatile memory, photo-optics and sensors

U.S. Department of War Funding

The U.S. Department of War's Office of Strategic Capital has announced a conditional loan commitment for up to US$400m for the Syerston Scandium Project

- **Transformational U.S. Government backing:** 25-year conditional debt commitment for up to US$400 million to advance Syerston through initial build and expansion.
- **Downstream integration:** The debt facility can support downstream investment in both alloy and semiconductor markets.
- **Offtake:** The DoW secures a right of first offer on Sunrise's output, prioritizing demand for U.S. companies in the defense industrial base.
- **US Listing**: Sunrise has commenced a process to list on a US exchange (while maintaining its ASX listing) to facilitate access to deeper and more liquid capital markets.



Robert Friedland, Chairman

"This is a landmark moment for Sunrise and Australia's mining industry, and the financing aligns with the goals of the U.S.-Australia Partnership on critical minerals. The world has entered an era in which access to critical minerals will shape industrial strength, technology leadership and national security.

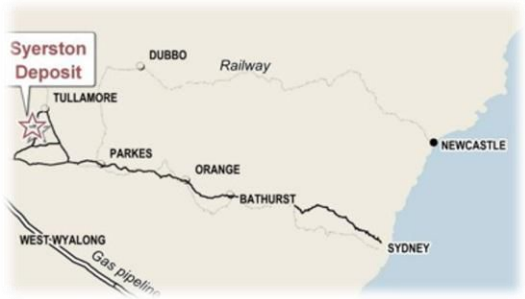
Scandium is one of the clearest examples, supporting the technologies, industries and defence capabilities that will shape the coming decades.

Refer to the Company's ASX Announcement of 10 August 2026 and U.S. Department of War's Media Release of 7 August 2026 (LINK).

Sunrise Energy Metals – at a glance

Syerston Scandium Project

The Syerston Scandium Project hosts one of the world's largest and highest-grade scandium deposits located in NSW, Australia



Syerston contains enough scandium oxide to meet decades of growing demand from markets including fuel cells, aerospace alloys and semiconductors

Project Status

Fully permitted primary scandium mine

Early site works
commenced

2H 2028
first production target

60tpa Sc_2O_3 initial production capacity

Expansion options
can be supported by the large resource base

Corporate

US$1.9bn
market cap (at 1 September 2026)

Zero
debt

US$110m
in cash and US$18m in unexercised options (at 10 August 2026)

U.S. Listing under consideration, to provide closer integration with defence sector customers and access to more liquid capital markets

Finance and Strategic Investment

U.S. Department of War's
Office of Strategic Capital has announced a 25-year conditional debt commitment for
US$400m
for the Syerston Scandium Project

U.S. Export-Import Bank
conditional Letter of Interest up to
US$67 million
in financing

Strategic Investment in Agni Semiconductor
a developer of non-volatile memory chips for defence and AI markets

Note: AUD balances converted to USD at 0.70x

Syerston — the world's first primary mine supply

Safe Jurisdiction

Located in Australia with key permits in place

Status

Final Investment Decision scheduled for 2H 2026

Flow Sheet

Extensive metallurgical testing and piloting

High Grade Reserves[1]

644ppm scandium grade in ore reserves, >2kt oxide

Production Volume

Initial target of 60tpa Sc_2O_3 (3N quality spec)

Construction Timeline

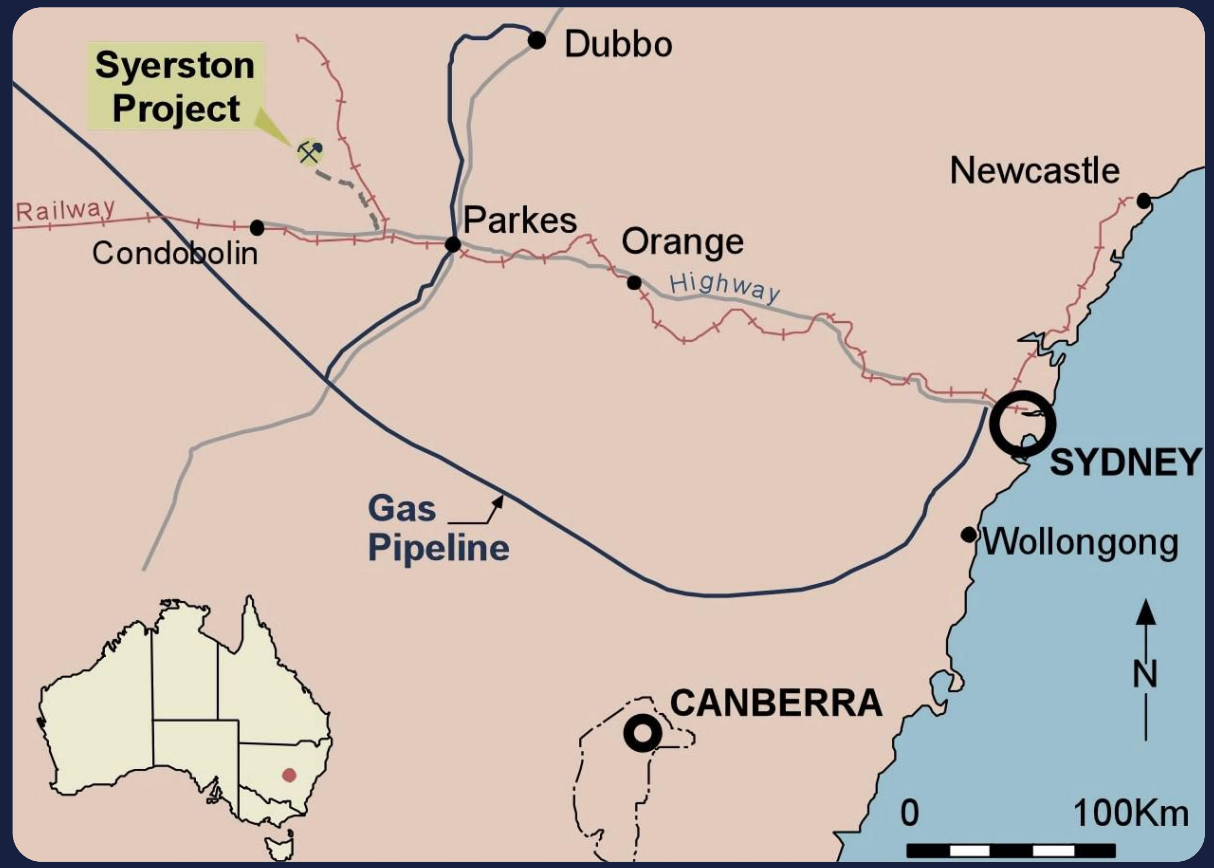
24 months, targeting 2H 2028 first production

Expansion Options

Large resource base supports modular expansion

Simple Mining

Shallow resource (~30m) with a low strip ratio



1. Refer to the Company's ASX Announcements of 9 Sept 2025, 3 March 2026 and 23 July 2026 for details of the Syerston Mineral Resource Estimate

Syerston — early works activities commenced

Land and key approvals secured — Completed



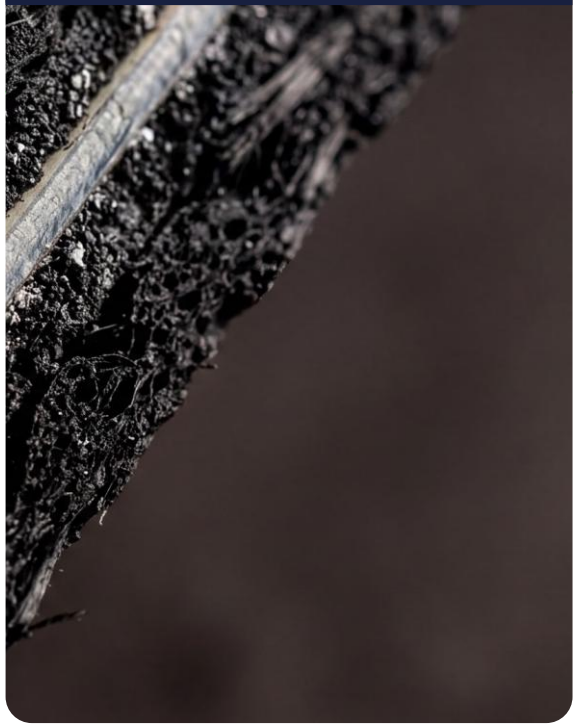
Mineral Resources updated and defined — Completed



Updated feasibility study — Completed



Production targeted for 2H 2028



Power and water options secured — Completed



Processing test works and piloting — Completed



Early site works commenced — Underway



Scandium demand - the growing macro thematics

"The scandium market amounts to only a few dozen tons annually, but the strategic stakes are massive. Securing technological overmatch for deterrence and for the next war requires assured control of the obscure industrial ecosystems that manufacture those weapon systems in the first place."

- Bazilian, Amoah & Matisek, *Modern War Institute at West Point,* 28 May 2026

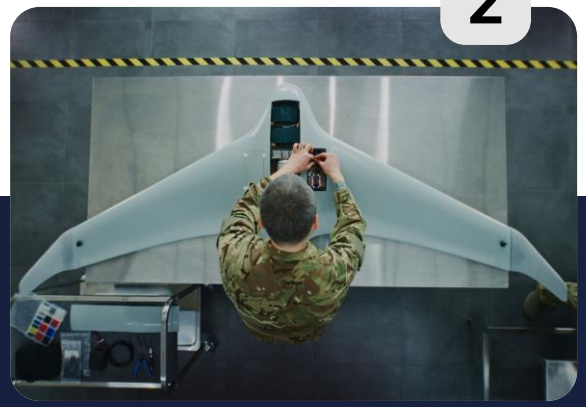
1



Artificial Intelligence

Currently the largest use-case by volume, scandium extends the life cycle and efficiency of solid oxide fuel cells, which are emerging as a key source of rapidly-scalable power generation for AI data centers.

2



Aerospace and Defence

Scandium transforms the properties of aluminium in 3D-printed components. Aerospace and defence are driving growing demand for advanced alloys that are lighter, stronger and more heat-resistant.

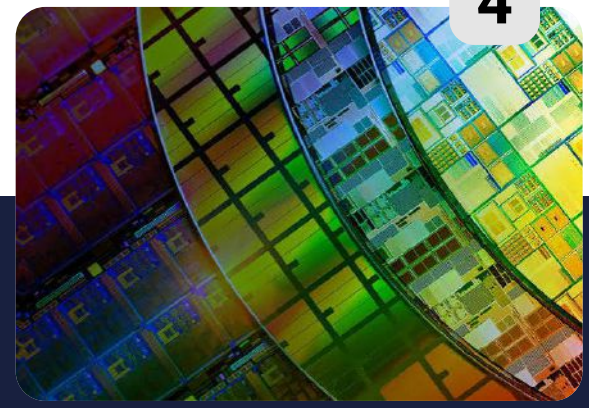
3



Wireless Communications

Scandium, with its ability to enhance the piezoelectric properties of microelectronic mechanical (MEM) devices, has become the key enabler of 5G/6G wireless communications technology.

4



Semiconductors

The next generation of semiconductor technologies will emerge from advances in materials science, with scandium poised to play a critical role in non-volatile memory and photo-optics / optical sensors.

1 Solid Oxide Fuel Cells and AI

AI data center growth is driving demand for clean, rapidly-deployable power generation.

Fuel cells **operate independently of legacy grid capacity,** accelerating development timelines, improving energy resilience and mitigating community opposition.

Scandium-stabilized zirconia improves ionic conductivity in the fuel cell and supports higher efficiency, reliability and life cycle.

“The structural bull case [for fuel cells] rests almost entirely on this one project [Syerston] landing.”

- Crossroads Capital LLC Report, *Situational Awareness Collides with Physical Awareness — Exposing a Supply Wall and Hidden China Risks*, July 2026



2 Aerospace & Defence

Next-generation aircraft and **Unmanned Aerial Vehicle's (UAV)** require advanced alloys that reduce weight while maintaining the strength needed for demanding missions.

Additive manufacturing (3D printing) is making large in-roads to aerospace component manufacturing.

AlSc powders provide some of the highest strength-to-weight ratios of any printable material, supporting complex geometries for **hypersonics, satellites, structural parts and propulsion systems**.

"Addition of scandium to aluminium gives the highest increase in strength per atomic percent of all alloying elements."

- K. Venkateswarlu, et al, *The characteristics of aluminum–scandium alloys*, Materials Science and Engineering (2010)





3 Wireless Communications

With a **5x higher piezoelectric effect** than competing materials, aluminum-scandium-nitride (AlScN) is the material of choice in radio frequency (RF) filtering chips.

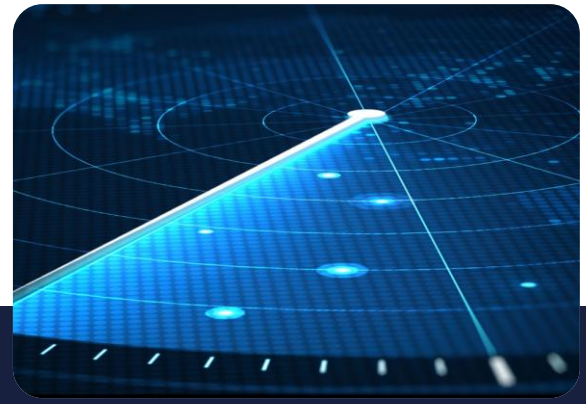
Developing the **next generation of wireless communications infrastructure** is increasingly viewed as a necessary condition for both commercial success and military capability

Scandium builds the connected world

Current ····· **2026 – 2028** ····· **2030 – 2032**







"A relatively unknown material, Scandium-doped Aluminum Nitride, is partly responsible for the 5G and IoT (Internet of Things) revolution and will be at the heart of a wide array of futuristic sensors and communication for IoT."

- Hart & VanHeerden, *Targeting 5G and IoT with the Right Material*, 5 March 2024

Wireless Communications

- There is no scalable substitute for AlScN in 5G/6G RF filtering
- The data intensity of Network Edge computing needs higher frequency
- China is now challenging the US in high-frequency, wireless technologies

Power Electronics

- Sc-doped GaN HEMTs emerging for applications requiring high power output
- Atmospheric attenuation of signal becomes an issue at higher frequencies

Defence networks

- Battlefield networks require low-latency, data-intensive transmission and reception
- AlScN is emerging in new defence system architecture, including tunable filtering and multiple-in multiple-out (MIMO) signaling

4 Semiconductors

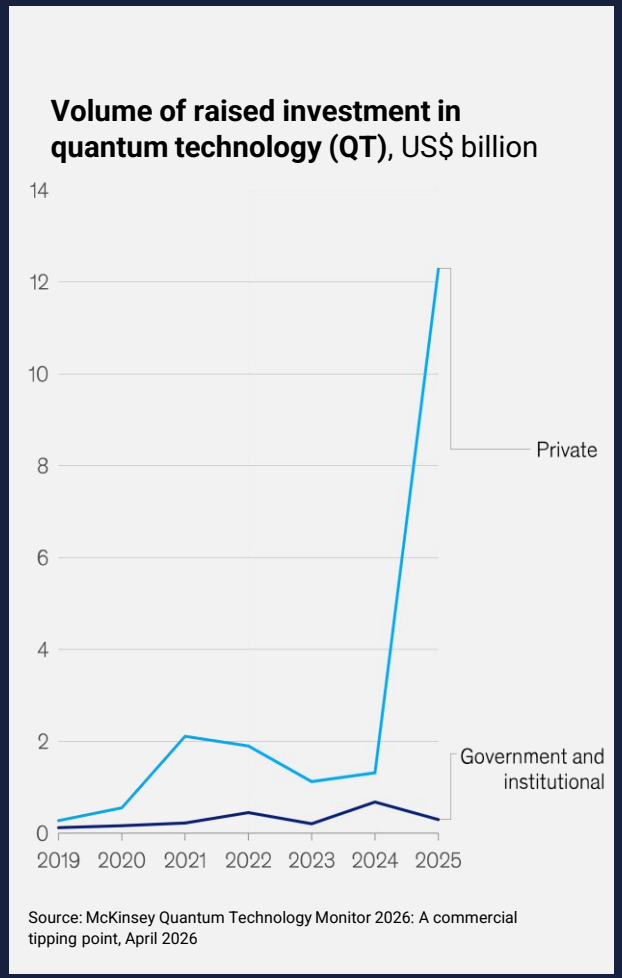
The extreme **piezoelectric and ferroelectric properties** of AlScN make it a strong candidate in next-generation memory chips, photo-optics, accelerometers, actuators, gyroscopes, optical sensors and quantum.

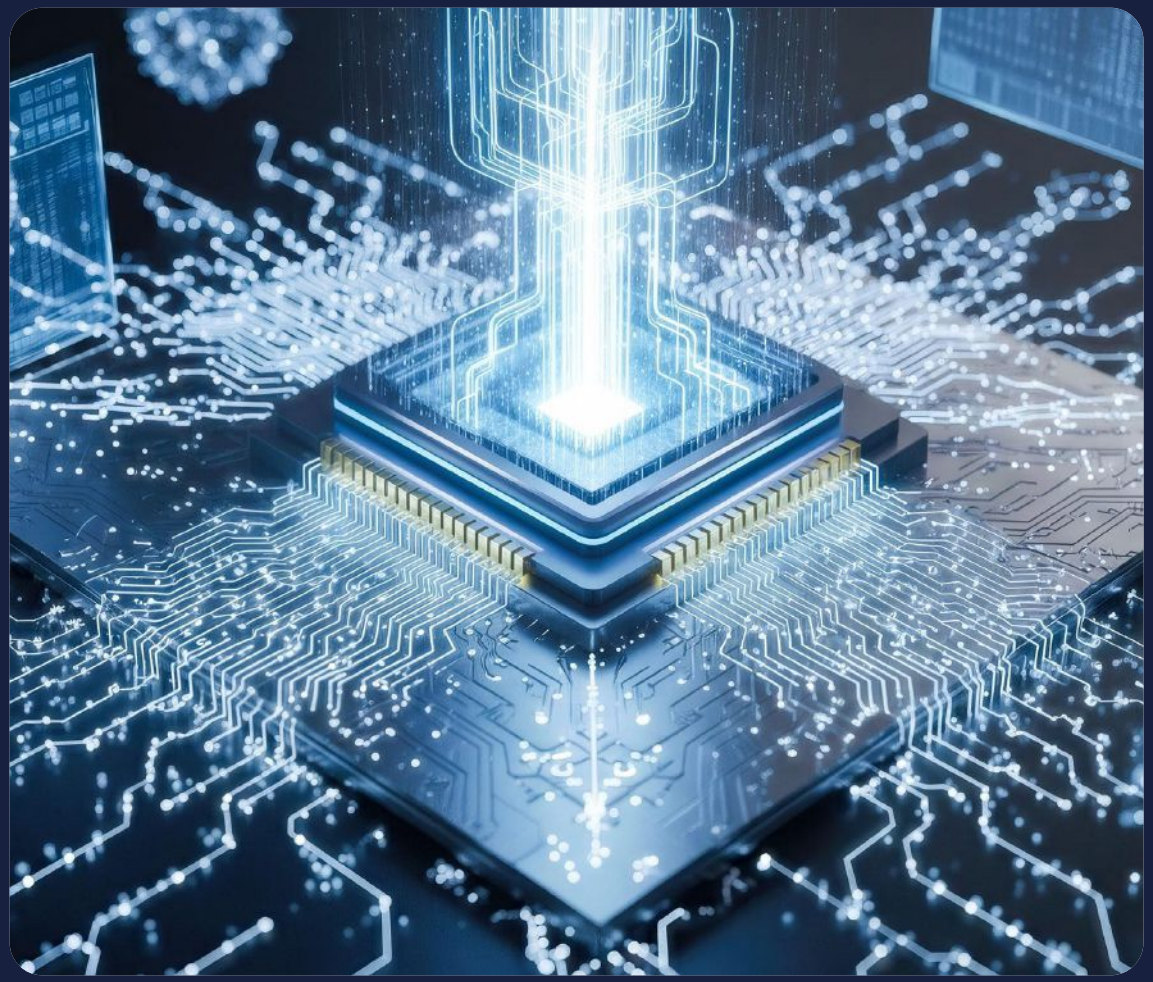
AlScN is **CMOS-compatible**, allowing it to be manufactured using standard chip production processes.

"Aluminium scandium nitride is a remarkable material, combining the manufacturability of nitride semiconductors with strong, switchable ferroelectric polarisation, doing so in a thin-film format that integrates cleanly with standard CMOS back-end-of-line processing."

- Dr. Deep Jariwala, Chief Scientific Officer, Agni Semiconductor LLC

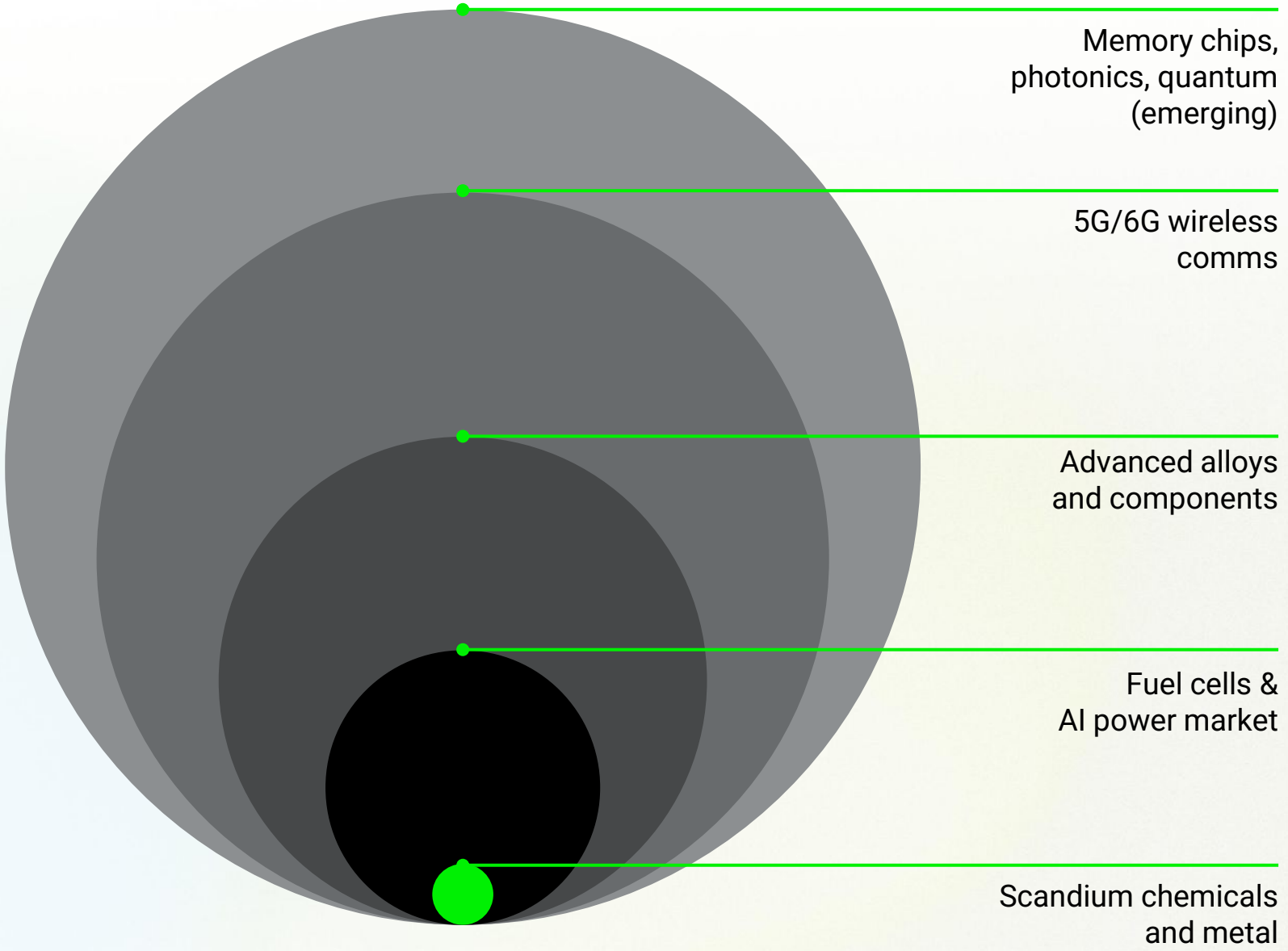
Private investment in quantum technology start-ups is booming, driven by capital market deals





Scandium – servicing trillion dollar end markets

Restrictions on scandium supply have knock-on effects through highly strategic, trillion-dollar end-markets.

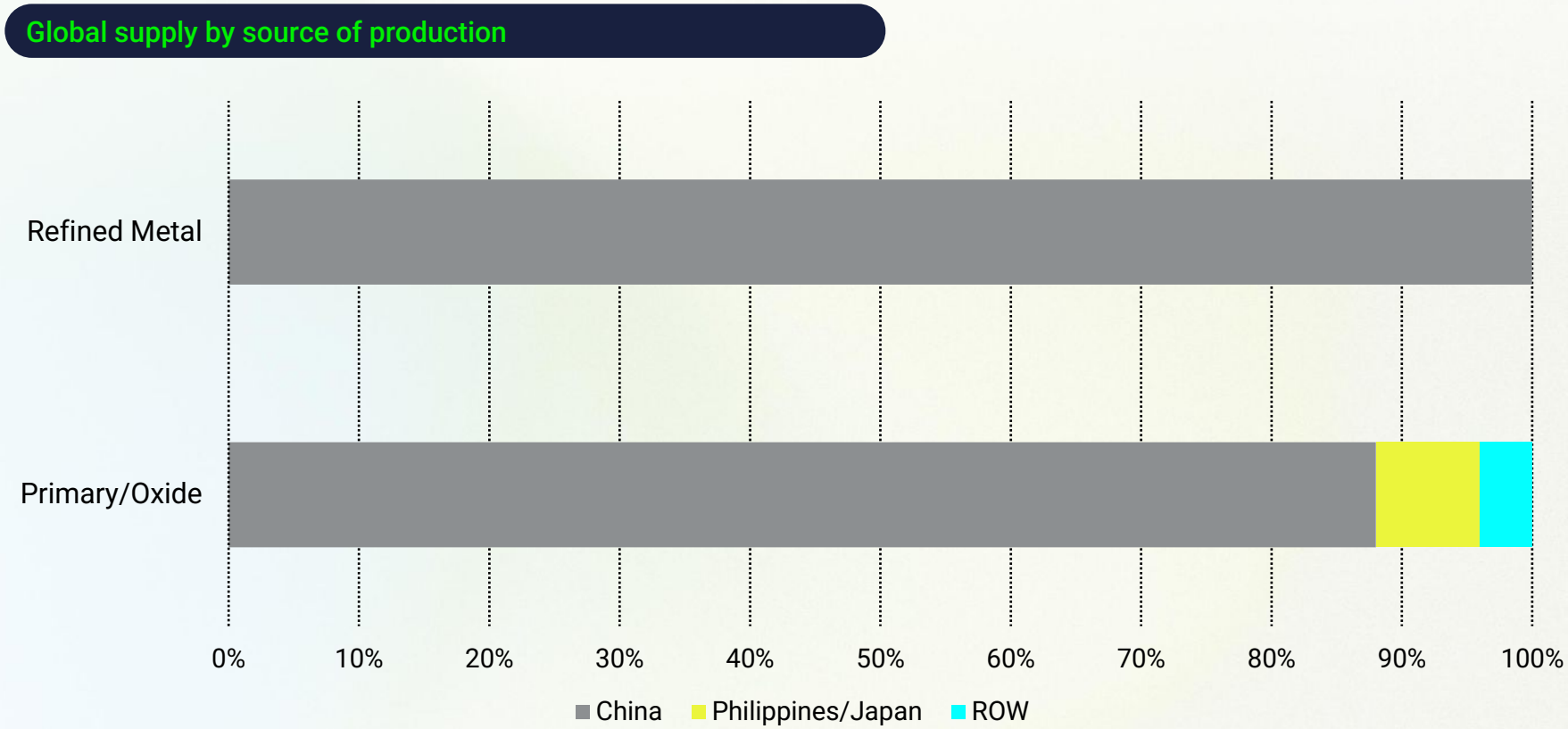


The geopolitics of supply risk

China produces over **85% of all refined scandium units** globally.

China has declared scandium a **'dual use item'** and restricted exports of the metal since mid 2025 – export must be approved by **China's Central Military Commission**

Presidential Executive Order 14415 **restricts US defense contractors from sourcing critical minerals and specialty metals, from geopolitical adversaries**, including China.



Source: USGS, Mineral Commodity Summaries 2024 – Scandium, and company estimates based on supplier discussions.

Lockheed Martin Corporation Partnership





LOCKHEED MARTIN

Sunrise and Lockheed Martin are cooperating to establish an Australia-US scandium supply chain to support Lockheed’s product development efforts.

Lockheed Martin has secured an option to purchase the first 15 tonnes per annum of scandium oxide from the Syerston Project over an initial five-year period (circa 25% of forecast production), subject to formalizing offtake terms.

Testing and qualification work aims to accelerate adoption of scandium containing components in Lockheed Martin product platforms.

Strategic Investment in Agni Semiconductor Inc



> Our investment in Agni reflects the next step in Sunrise's strategy of moving from a pure strategic metal producer to an active participant in the technologies that will shape future demand for scandium."

Robert Friedland, Chairman, Sunrise Energy Metals

- Sunrise has made a **US$5 million strategic equity investment** in Agni Semiconductor, a US-based developer of next-generation non-volatile memory using aluminium scandium nitride ferroelectric diode (FeD) technology.
- The **high temperature tolerance** of Agni's FeD chips (c. 600°C) positions them as a key component in a >US$2.5B defence sector market – hypersonics, nuclear, satellites, missiles.
- Nothing matches AlScN with its combination of **high memory density and low-energy consumption**, positioning Agni's FeDs as leading contender for next-generation AI computing systems.
- Sunrise's investment is intended to accelerate Agni to commercial-scale production, providing it with a western source of scandium supply and establishing a base for western AlSc sputtering target development.

Agni Semiconductor Inc – FeD for true compute-in-memory

7x faster

Read/write latency vs. incumbent non-volatile memory (NVM)

Sub-10 ns demonstrated

15x denser

Stable 5-bit cell

<0.2 um^2 per bit, 10x smaller cell area than RRAM

200x lower power

Voltage-switched write energy <50 fJ/bit

No DRAM-style refresh

Compute-in-memory (TCAM search) benefits

AGNI

50%

lower search energy
0.6 vs 1.2 fJ per bit / search

60%

lower write energy
vs incumbent non-volatile memory (NVM) technologies

<100 ps

search delay
5× faster TCAM search

10^9+

Cycle endurance + high temp tolerance (600°C+)

Sources: Nano Letters 22, 7690–7698 (2022); ACS Nano 18, 15925–15934 (2024); Nature Electronics 7, 348–355 (2024). TCAM refers to Ternary Content Addressable Memory, the industry standard benchmark.

Sunrise – building the supply chain

A large, scalable resource base

- A multi-decade source of scalable supply in a safe jurisdiction
- An insurance policy against geopolitical supply disruptions
- Multi-decade OSC funding support to underwrite future development plans

Servicing high growth, strategic markets

- AI, fuel cells, aerospace and defence, wireless communications and semiconductors
- Scandium is often non-substitutable
- Western supply addresses historic customer concerns that limited scandium adoption

Targeted investment in the downstream

- Investing in partnerships and emerging technologies to drive scandium adoption
- Targeting sector leaders and experienced management teams who bring a wide moat

INDUSTRY LEADERSHIP

+

STRATEGIC CAPITAL

+

DOWNSTREAM PARTNERSHIPS

=

VALUE GENERATION

The Clonagh Trend Project, Cloncurry

Large Scale Position

Three Exploration Permits (EPMs) covering 606 km^2 and two applications covering 90 km^2 in the world-class Cloncurry district in Queensland, Australia.

Maureen-Lola Target

4Q26 diamond hole campaign targeting Cu anomalism on the Gidyea Suture — a major fluid pathway associated with mineralisation at Ernest Henry.

Geophysical Targeting

Reprocessing of historical MT, seismic, magnetic, gravity and VTEM datasets has refined structural and depth-to-basement models.

Dianne Target

Planned diamond hole testing a 4km NNE-trending conductor coincident with a gravity high and strong historical copper anomalism from water sampling.

Initial Drilling

2025 program of 31 air-core holes for 871m, targeting shallow REDOX and polymetallic signatures that may indicate buried copper mineralisation at depth

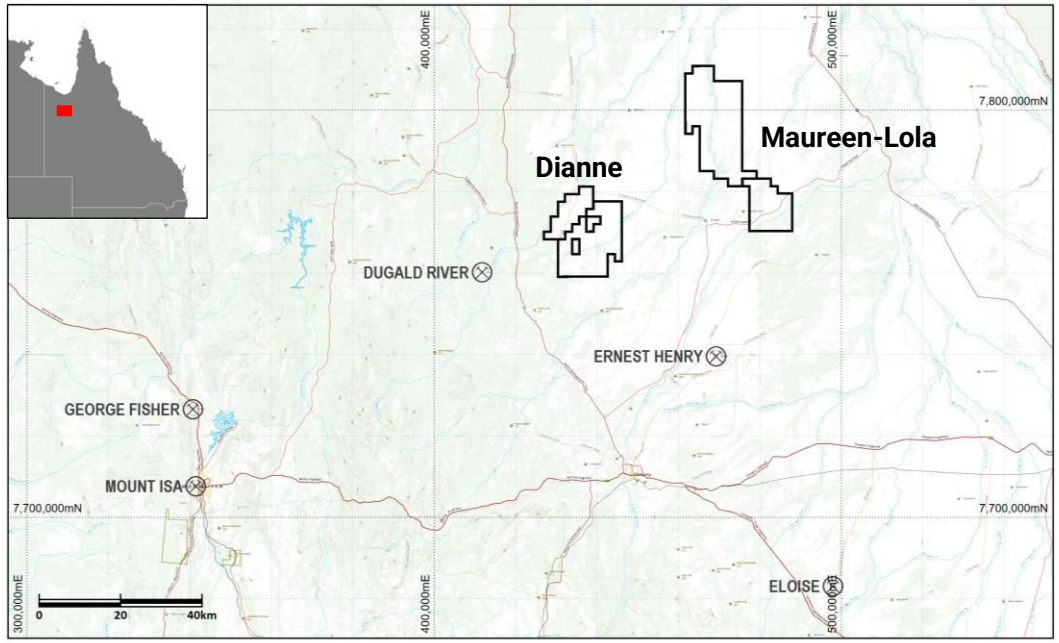
Catalysts

Diamond drilling at Maureen–Lola and Dianne planned for 4Q 2026

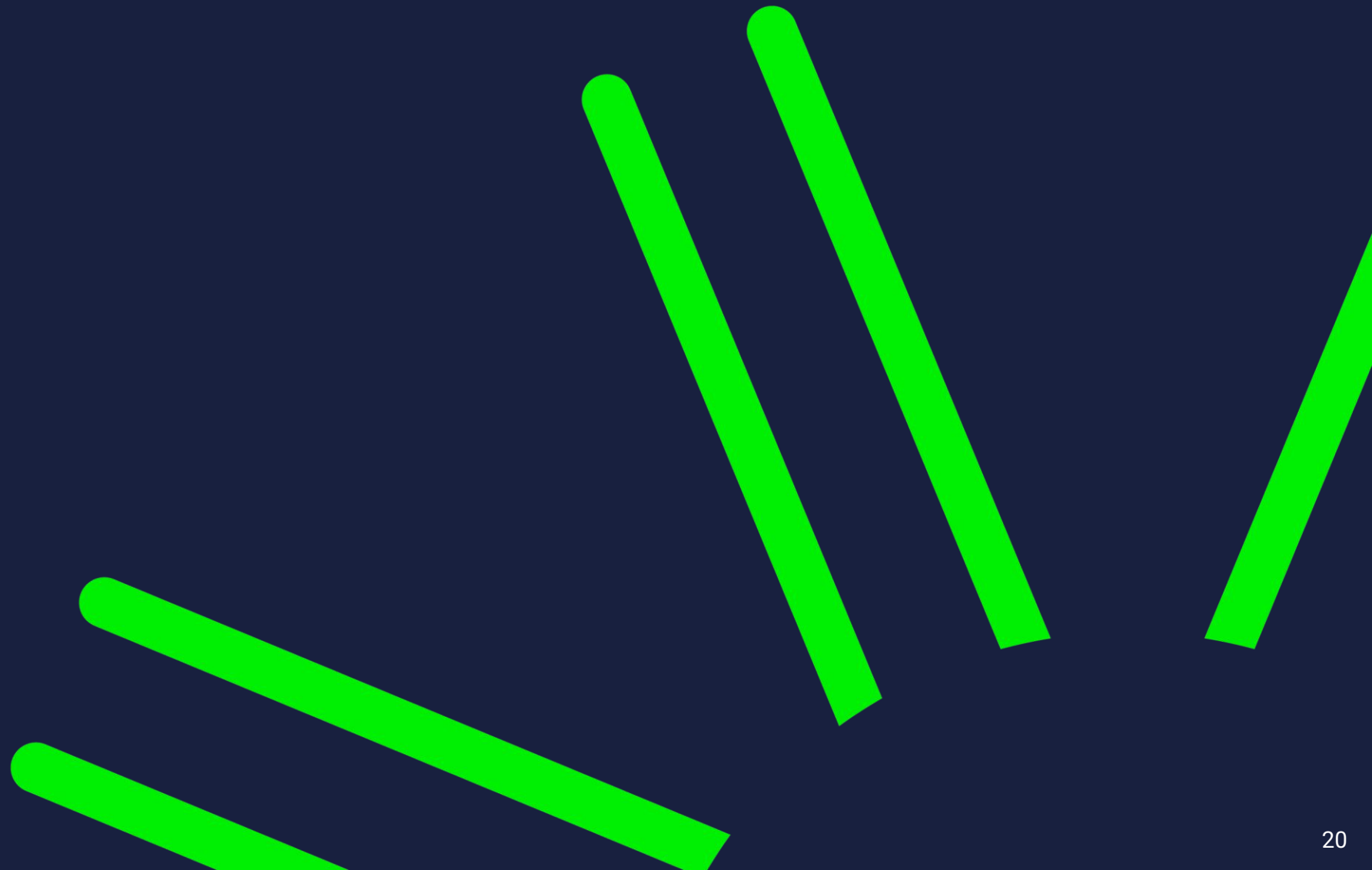
Earn-in

Sunrise Energy Metals has optioned these tenements via a conventional earn-in JV arrangement with Continental Copper – sole funding $3M for 51% or $8M for 75%.

The Clonagh Trend JV, Cloncurry, Queensland



Appendix



Scandium – 101

Scandium (Sc), the 21st element on the periodic table, is the lightest transition metal.
It is common in the earth's crust, but at very low concentrations.

Consequently, scandium has rarely been produced via mining – usually waste reprocessing or as by-product of other mining operations.

A lack of diversified supply options, and concerns that production cannot scale fast enough to meet new demand, has limited Sc adoption despite its intrinsic industrial value.

Sc has a potent ability to transform the properties of other elements and compounds, especially as an alloy in aluminium and in piezoelectric and ferroelectric applications.

Corporate — overview

Board and Executive Team



Robert Friedland
Chairman and
Non-Executive Director



Sam Riggall
Managing Director
and CEO



Stefanie Loader
Lead Independent
Non-Executive Director



Peter Arnell
Non-Executive Director



Eric Finlayson
Non-Executive Director



Trevor Eton
Non-Executive Director



John Mullumby
Chief Financial Officer

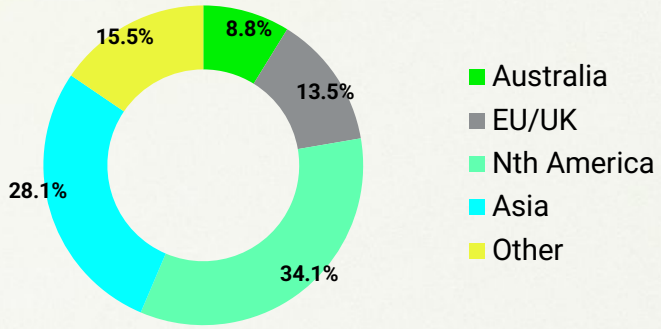


Melanie Leydin
Company Secretary

Sunrise Energy Metals Limited[1]

ASX Code	ASX:SRL
OTCQX Code	OTC:SREMF
Shares on Issue	169.4M
Share Price[2]	A$16.97
Market Capitalization[2]	A$2.86B
Cash	c. A$115M
Debt	NIL
Unexercised options / ESOP	11.8M

Shareholders by Geography[3]



1. As at 30 June 2026
2. As at 1 September 2026.
3. As at 31 July 2026

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