

# Minerals critical for the energy transition

**Investor Presentation** 

May 2022



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The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') sets out minimum standards, recommendations and guidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves. The information contained in this presentation has been presented in accordance with the JORC Code and references to "Inferred Resources" and "Indicated Resources" are to those terms as defined in the JORC Code.

Information in this presentation relating to Exploration results and Mineral Resources is based on information compiled by Mr Lauritz Barnes (a consultant to Aurora Energy Metals Limited and a shareholder) who is a member of The Australian Institute of Mining and Metallurgy and The Australian Institute of Geoscientists. Mr Barnes 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 under the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Barnes consents to the inclusion of the data in the form and context in which it appears.

This announcement has been authorised for release on the ASX by Greg Cochran, Managing Director.





# Unique Uranium & Lithium Focus

A project with uranium and lithium mineralisation in separate geological horizons

# Minerals critical for the energy transition

Demand expected to increase with shift away from fossil fuels

# Significant testwork and exploration programs planned

Uranium metallurgical testwork and studies; lithium exploration program

# Experienced board and management

Extensive industry experience with a history of project development and value accretion

# Corporate Overview



Raised \$8M at \$0.20 per share

Capital Structure (post transaction, on an undiluted basis)

1AE

**ASX Code** 

\$28.5M

Market Cap (at \$0.20 per share)

~\$7.7M

Cash (est. post transaction)

142.6m

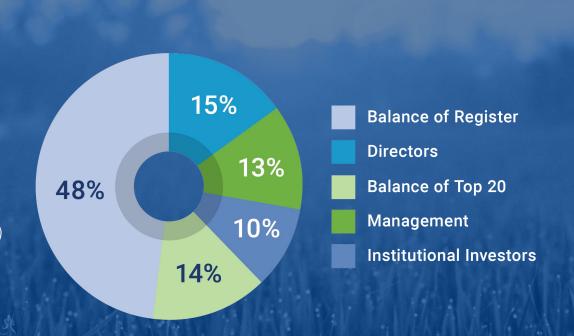
Shares on Issue

8.8m

Options (6m @ \$0.20; rest at \$0.30)

~\$20.8m

Enterprise Value





# Board & Management

Extensive industry experience with a history of project development and value accretion



A mining engineer with over 40 years' industry experience. Has held senior executive positions with North Ltd, Newcrest Mining Limited, Oxiana/Oz Minerals Limited and Citadel Resource Group Limited. Peter's experience covers operations, projects and business development and general corporate activities including financial services.

He has served on several ASX listed and private mining boards and is currently Non-Executive Chairman of White Rock Minerals Ltd and Helix Resources Ltd and previously of Kidman Resources Ltd and Doray Minerals Ltd.

Peter is a member of the AICD and the AusIMM and holds a B.E. (Mining hons).



A highly experienced international mining executive with over 30 years' experience in technical and commercial roles, general management and executive positions globally.

Most recently, Greg was CEO of Reward Minerals and prior to that Managing Director of Namibian-focussed uranium developer Deep Yellow Limited (2011-16). He has extensive uranium experience, having also spent four years with Uranium One Inc (2006-09).

He is a graduate member of the AICD and a Fellow of the AusIMM. He holds a MSc. in Mining Engineering and Mineral Economics from the University of the Witwatersrand and an MBA from Cranfield School of Management (UK).



Mr Cooke has over 30 years' experience in resource exploration and mining throughout Australia and internationally, initially as part of BHP Minerals Business Development Group and the last 20 years managing public resource companies as part of the Mitchell River Group (MRG).

MRG successfully incubated numerous resource companies and developed mining operations over the past twenty years, including Sally Malay Mining (now Panoramic Resources), Albidon, Mirabela Nickel and Exco Resources.

He holds a first-class honours degree in Geology and a bachelor's degree in Science from the University of Western Australia and is a member of the Australian Institute of Geoscientists.



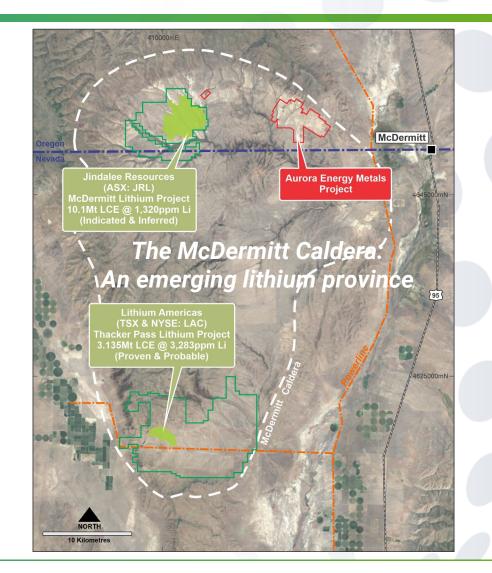
A member of CPA Australia who graduated from the University of Western Australia in 2008 with a Bachelor of Economics. Majored in International Business Economics and Money and Banking.



# Aurora Energy Metals Project ("AEMP") Overview



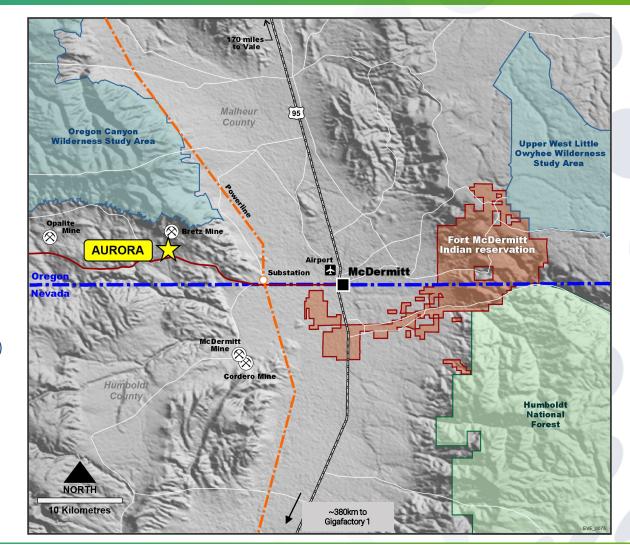
- Located in the McDermitt Caldera, a major emerging lithium province.
- An existing, well-defined, significant Uranium Mineral Resource in shallow volcanics, with a high grade core at unconformity, below overlying lakebed sediments.
- Lithium mineralisation intersected above the uranium resource (e.g. 15.5m @ 1308ppm Li, 11.0m @ 1201ppm Li) hosted in lakebed sediments.
- Deeper lakebed sediments (~200m) in downthrown (graben) block close to the uranium resource.
- Lithium mineralisation similar to nearby projects, such as Jindalee Resources'
  McDermitt Li Project<sup>a</sup> (ASX:JRL, Indicated & Inferred MRE 1.43Bt at 1,320ppm Li for 10.1Mt LCE).
- Potential for two geologically separate resources to be simultaneously delineated and developed, providing economies of scale.



#### AEMP – Uranium



- Volcanic-hosted deposit, discovered in 1979.
- Over 600 drillholes completed, plus extensive metallurgical testwork and studies.
- Near surface, flat-lying geometry amenable to very low strip ratio openpit mining.
- Low-cost mining possible due to free-dig lake sediment overburden.
- Majority of uranium contained within fine fraction, amenable to low-cost scrubbing and screening upgrades.
- Excellent infrastructure with sealed roads and renewable power (hydro) nearby.
- Well understood and established regulatory and permitting process with State and Federal agencies.



#### AEMP – Uranium



- Conventional open pit mine:
  - Shallow, low-strip ratio operation.
  - Overburden potentially free-dig.
- Indicated Resource:  $36.7 \text{ Mlb U}_3O_8$  at 253 ppm  $eU_3O_8$ .
- Higher grade, upper core zone of 18 Mlb at 444 ppm eU<sub>3</sub>O<sub>8</sub>.

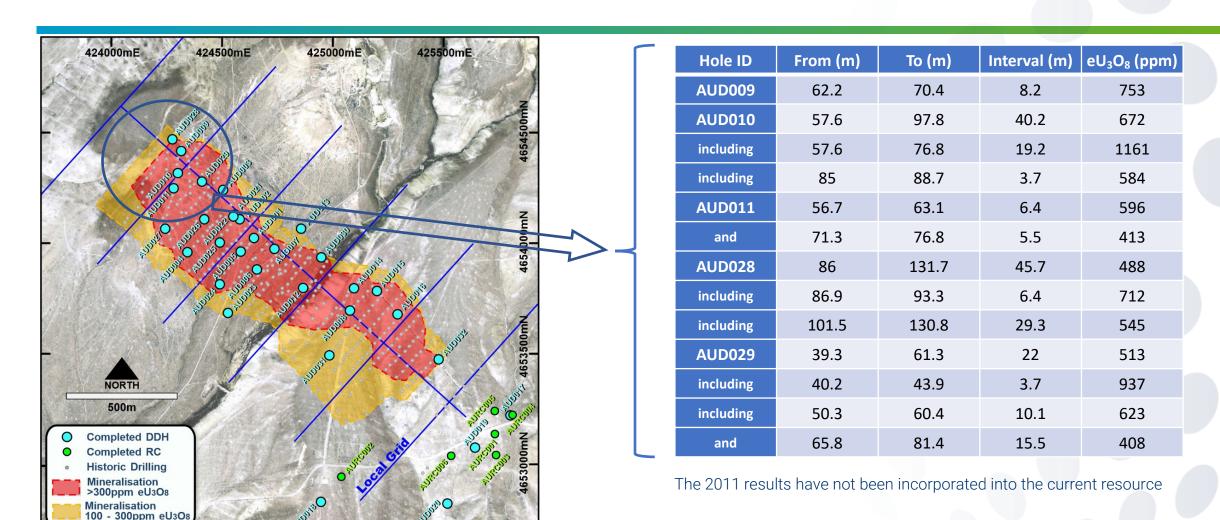
- On-site full or partial processing plants.
- Overburden is mineralised:
  - Lakebed sediments with lithium-bearing clays could be stockpiled and processed later.



Previous Conceptual Layout (Uranium Only)

# AEMP – Uranium – Potential Resource Upside

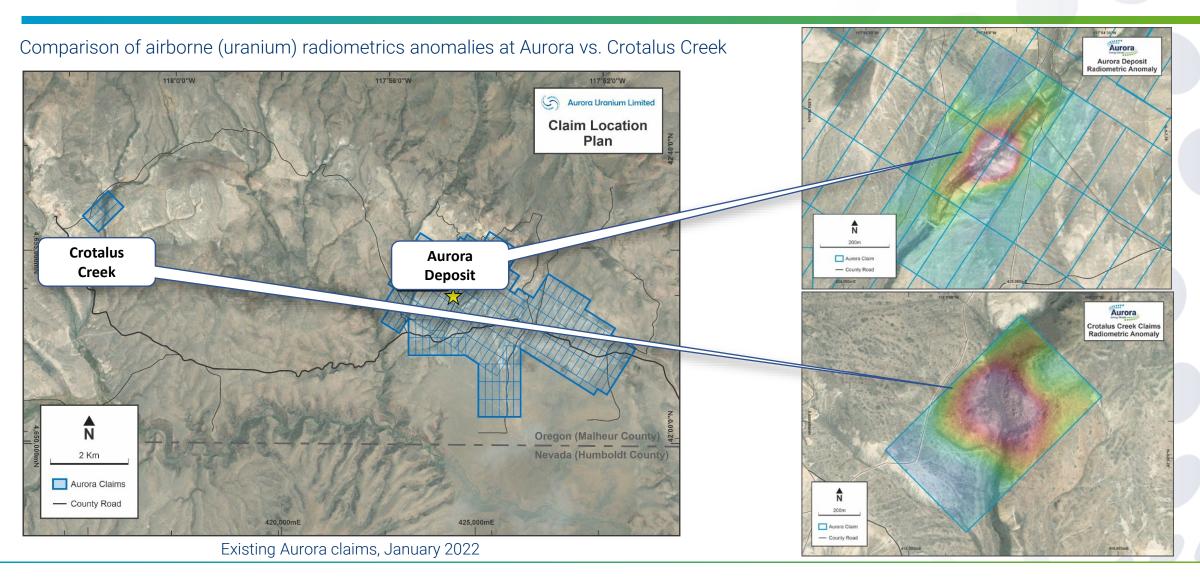




Location of 2011 drill holes overlain on imagery and resource outline

# AEMP – Uranium Exploration Potential

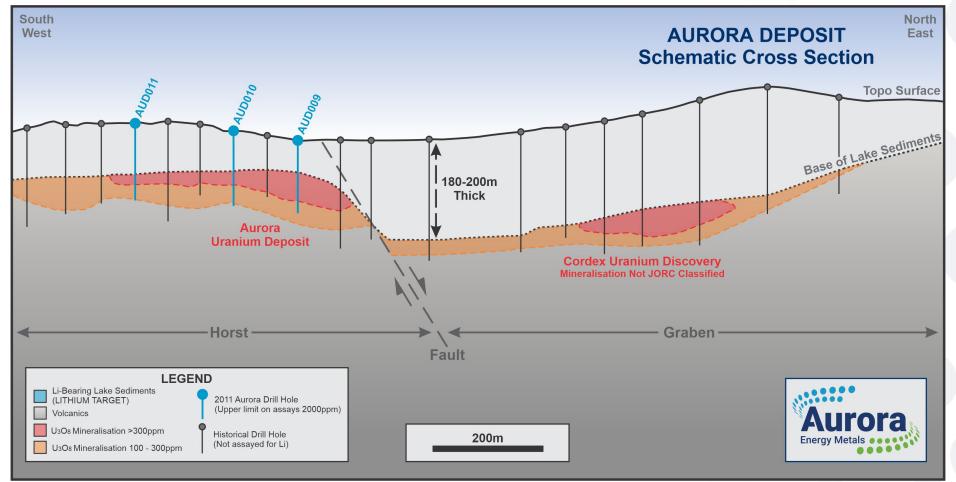




## AEMP – Uranium <u>and</u> Lithium



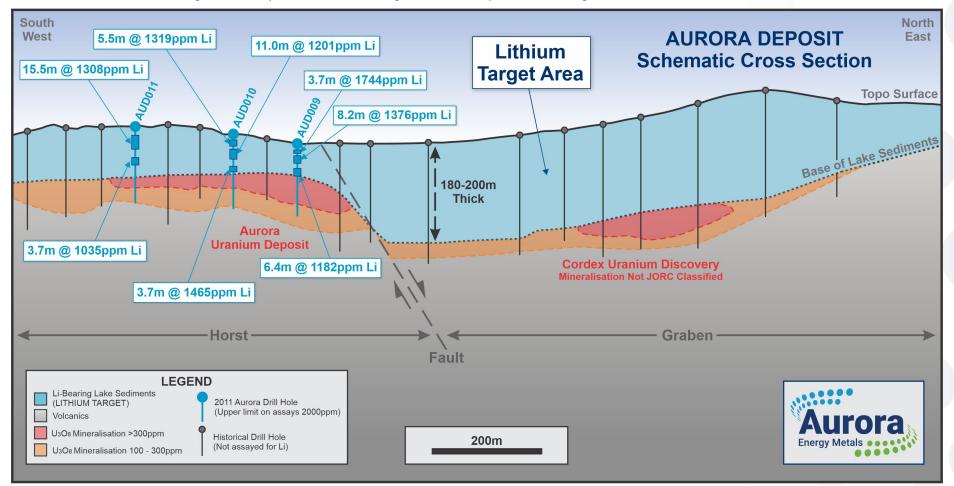
- Historically, uranium was the only target since the 1970's
- Aurora's priority in 2011 was to confirm previous uranium exploration



## AEMP – Uranium <u>and</u> Lithium



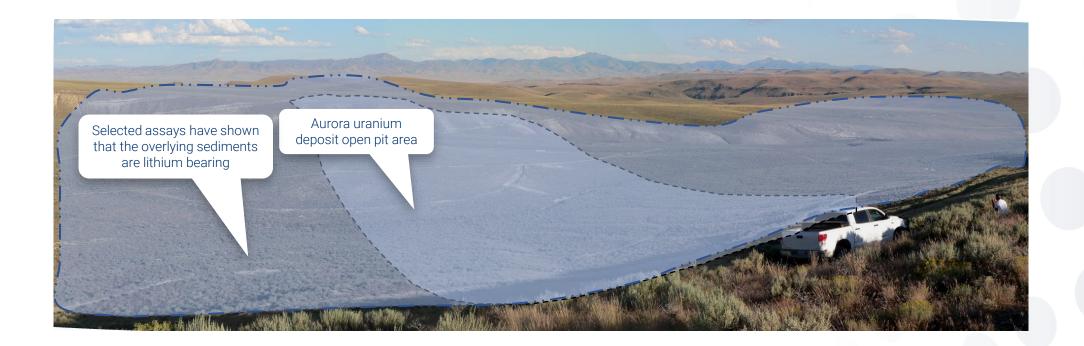
- But with Lithium Americas' progress on its Thacker Pass Projects, Aurora assayed for lithium
- Lithium was confirmed, allowing the interpretation of a large lithium exploration target area



# AEMP – Lithium Exploration Potential



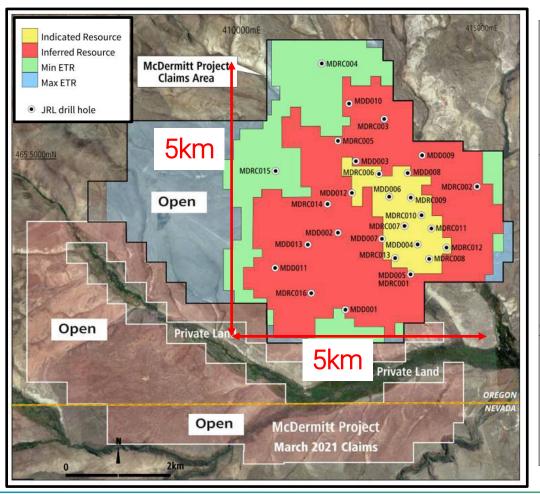
• Almost the full extent of the project area is prospective for lithium

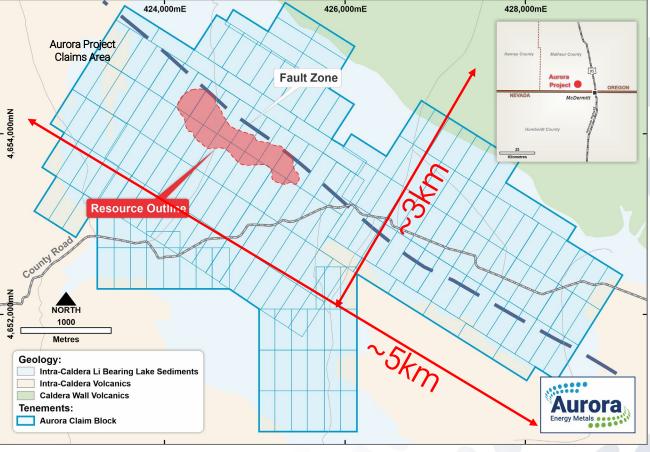


# AEMP – Lithium Exploration Potential



• AEMP's current claim area is similar in size to Jindalee's McDermitt Lithium Project

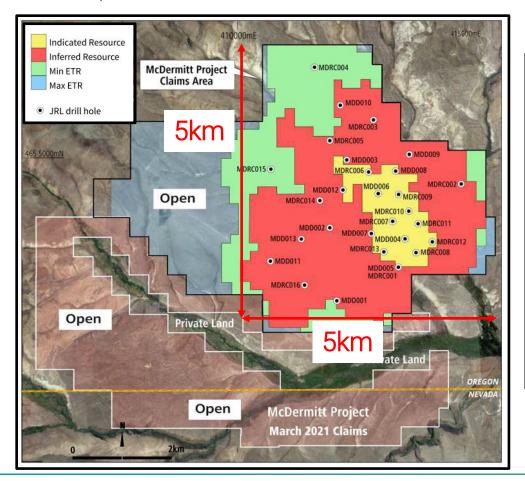


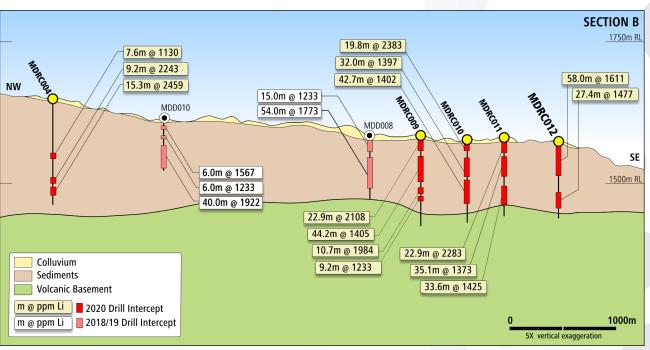


## McDermitt Lithium Project - Jindalee



 Jindalee's exploration program has demonstrated that lithium is present in wide intersections from close to/at surface to depths of well over 100 metres





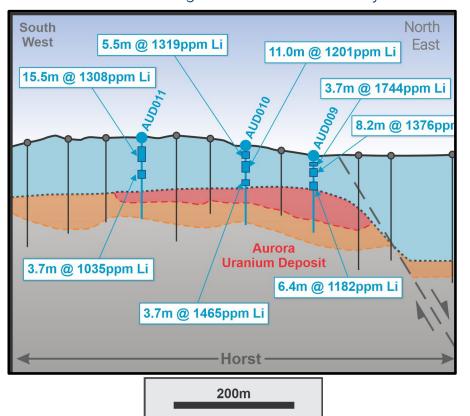
A typical McDermitt Project Cross Section

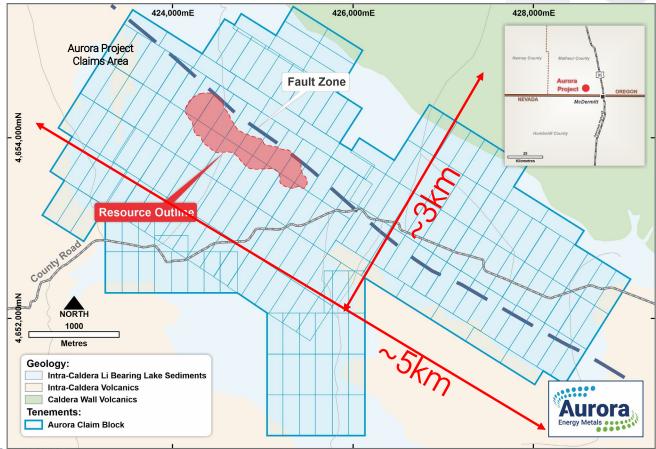
# AEMP – Lithium Exploration Potential



Aurora's holes were also assayed for lithium, with comparable results

Cross Section showing selected lithium assay results





Note: Lithium assays had an upper detection limit of 2,000 ppm<sup>1</sup>

#### Work Plan – Uranium News flow





- Drill permitting for existing uranium resource area (Q2 CY2022).
- Convert existing mineral resource to Measured status (Q3 CY2022).
- Drill program to test potential resource extension (& generate core for metallurgical testwork – TBD) (Q3 CY2022).
- Conduct metallurgical testwork review (Q3 CY2022).
- Metallurgical testwork (Q4 CY2022)
- Pre-Feasibility Study (H1 2023).



2011 drilling program

#### Work Plan – Lithium News flow





- Re-assay existing core from sediments overlying existing uranium mineral resource (Q3 CY2022).
- Drill permitting for area surrounding uranium resource (graben) (Q2/Q3 CY2022).
- Drill program (Q3 CY2022).
- Define lithium exploration target (assuming success from drill program) (Q4 CY2022).
- Targeting maiden lithium mineral resource (H1 CY2023).



# Recent US Political Developments Support Industry



Bipartisan support for programs supporting critical minerals gathering momentum

In addition to the "Federal Consortium for Advanced Batteries National Blueprint" which was released recently, the "Permitting Action Plan" was announced on 10 May.

As the Biden administration continues to release additional funds from the Infrastructure Investment and Jobs Act, White House officials are also trying to speed-up project approval processes.

#### The Permitting Action Plan has 5 principle components

- Coordinating permitting activities among multiple federal agencies
- Setting clear goals for reviews and permitting schedules and deadlines
- Connecting early in the process with states, localities and tribal nations
- Making federal agencies more responsive by developing tools to help guide stakeholders through the project review process
- Increasing agencies' resources to handle assessments of projects' effects on the environment, local communities and impact on climate change

"These five elements will result in better permitting outcomes, enhanced predictability for project sponsors and increased accountability across federal agencies." Brenda Mallory, chairwoman of the White House Council on Environmental Quality.

#### Sources:

The White House Briefing Room. FACT SHEET: Biden-Harris Administration Releases Permitting Action Plan to Accelerate and Deliver Infrastructure Projects On Time. On Task, and On Budget, May 11, 2022.

Engineering News-Record. White House Rolls Out 'Action Plan' to Speed Project Permitting. May 11, 2022.



# Investment Proposition









Four key reasons to invest in Aurora Energy Metals

Minerals critical for the energy transition

Large advanced project with dual commodity focus

Accelerated exploration program planned

Quality management team



# Appendices

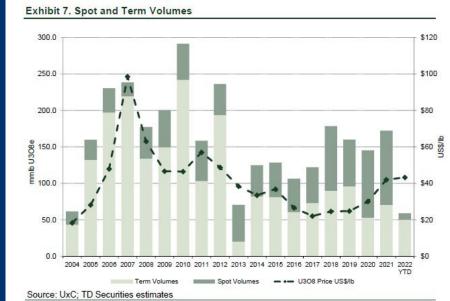
### Nuclear Power

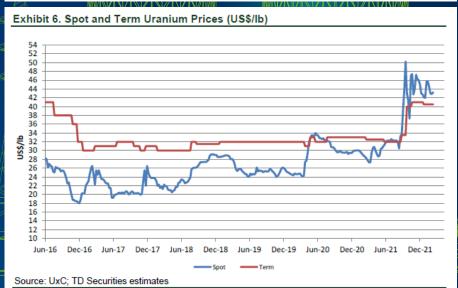
#### **Emissions Free Baseload Power**

- Nuclear provides safe and reliable, emissions free baseload power and is a key pillar in the clean energy transition.
- · Nuclear power is important to achieve net zero goals.
- The world's existing nuclear fleet and new build reactors require an increasing supply of uranium, yet uranium production has declined.
- The US nuclear power industry is still the world's largest uranium consumer, with little domestic supply, providing a domestic opportunity for Aurora.

Emmanuel Macron recently announced a renaissance for the French Nuclear Industry:

"What our country needs is the rebirth of France's nuclear industry"



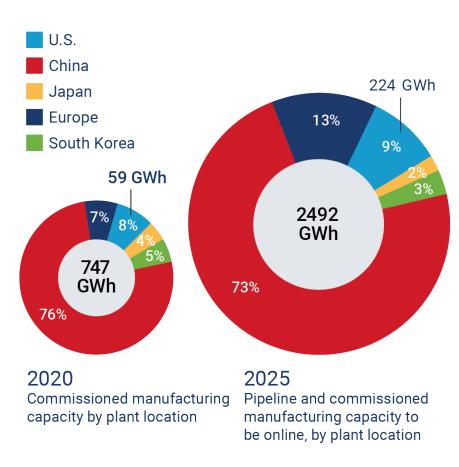




## Global Lithium Demand and Supply

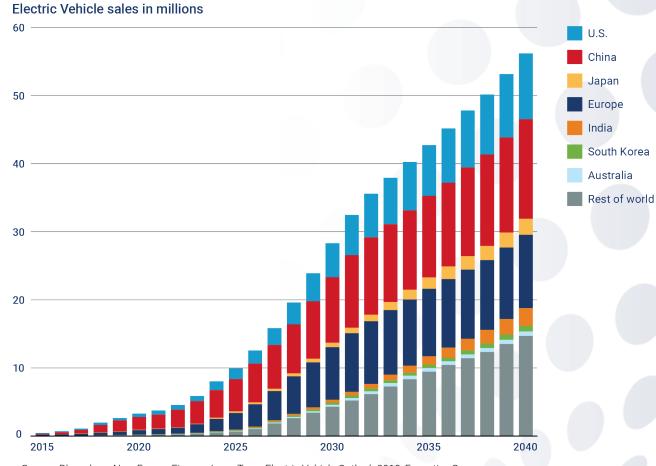


#### Global EV lithium-ion cell manufacturing capacity



Source: "Lithium-Ion Battery Megafactory Assessment", Benchmark Mineral Intelligence, March 2021.

# Annual Sales of Passenger EVs (Battery Electric Vehicles (BEVs) and Plug-in Hybrid Electric Vehicles (PHEVs)



Source: Bloomberg New Energy Finance Long-Term Electric Vehicle Outlook 2019, Executive Summary.

# US Vision for the Lithium-Battery Supply Chain



#### Federal Consortium for Advanced Batteries National Blueprint

"By 2030, the United States and its partners will establish a secure battery materials and technology supply chain that supports long-term US economic competitiveness and equitable job creation, enables decarbonization, advances social justice, and meets national security requirements."

#### Goals to Achieve the Vision

AURORA'S FOCUS

Goal 1: Secure access to raw and refined materials and discover alternatives for critical minerals for commercial and defence applications

Goal 2: Support the growth of a US materials-processing base able to meet domestic battery manufacturing demand

Goal 3: Stimulate the US electrode, cell, and pack manufacturing sectors

Goal 4: Enable US end-of-life reuse and critical materials recycling at scale and a full competitive value chain in the U.S.

Goal 5: Maintain and advance U.S. battery technology leadership by strongly supporting scientific R&D, STEM education, and workforce development

Source: Federal Consortium for Advanced Batteries National Blueprint for lithium batteries 2021-2030, U.S Department of Energy.

# Uranium Resource Summary



- Total Resource of 38 Mlb @ 248 ppm eU<sub>3</sub>O<sub>8</sub>\*.
- Indicated Resource of 36.7 Mlb @ 253 ppm eU<sub>3</sub>O<sub>8</sub>\*.
- Shallow high-grade zone, Indicated Resource of 18 Mlb @ 444 ppm eU<sub>3</sub>O<sub>8</sub>\*.
- High grade zone surrounded by low grade mineralisation; extends mineralised zone at depth.

	Indi	cated Res	ource	Inferred Resource			Total Resource		
Resource Zone	Mt	eU <sub>3</sub> O <sub>8</sub> ppm	Mlb eU <sub>3</sub> O <sub>8</sub>	Mt	eU <sub>3</sub> O <sub>8</sub> ppm	Mlb eU <sub>3</sub> O <sub>8</sub>	Mt	eU <sub>3</sub> O <sub>8</sub> ppm	Mlb eU <sub>3</sub> O <sub>8</sub>
High Grade Zone <sup>1</sup>	18.4	444	18.0	-	-	-	18.4	444	18.0
Low Grade Zone <sup>2</sup>	47.3	179	18.7	3.6	151	1.2	50.9	177	19.9
Total	65.7	253	36.7	3.6	151	1.2	69.3	248	37.9

- <sup>1</sup> High grade zone estimated using a 300 ppm eU<sub>3</sub>O<sub>8</sub> cut-off Note: Appropriate rounding applied <sup>2</sup> Low grade zone estimated using a 100 ppm eU<sub>2</sub>O<sub>8</sub> cut-off
- \* The term  $eU_3O_8$  refers to an equivalent uranium oxide grade that is based on the conversion of a radiometric gamma log determination of radioactive mineral abundance to a calculated uranium content. True  $U_3O_8$  values are obtained from direct chemical assay results.



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