



A New **COMMITMENT**.
A New **PROCESS**.
A New **PARTNER**.

AVALON ADVANCED MATERIALS INC.



2025 SUSTAINABILITY REPORT

DECEMBER 2025

FORWARD-LOOKING INFORMATION

This report contains "forward-looking information" within the meaning of applicable Canadian securities legislation. Forward-looking information includes, but is not limited to, information with respect to Avalon Advanced Materials Inc's. ("Avalon or the "Company") future plans and objectives, sustainability initiatives, mineral resource estimates, the development of the Company's material lithium projects, the advancement of projects towards a development decision, the Company's plans with respect to the exploration and development of its properties, the continued exploration and drilling initiatives and having the necessary funding required to complete these initiatives, the prospectivity of exploration targets; the expected receipt of permits; permitting timelines, the future price of commodities, foreign exchange rates and currency fluctuations, requirements for additional capital; obligations to consult with Indigenous communities, and government regulation of mining operations. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "add" or "additional", "advancing", "anticipates" or "does not anticipate", "appears", "believes", "can be", "conceptual", "confidence", "continue", "convert" or "conversion", "deliver", "demonstrating", "estimates", "encouraging", "expand" or "expanding" or "expansion", "expect" or "expectations", "forecasts", "forward", "goal", "improves", "increase", "intends", "justification", "plans", "potential" or "potentially", "promise", "prospective", "prioritize", "reflects", "robust", "scheduled", "suggesting", "support", "top-tier", "updating", "upside", "will be" or "will consider", "work towards", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might", or "will be taken", "occur", or "be achieved". Forward-looking information is inherently subject to known and unknown risks, uncertainties, and other factors that may cause actual results, activities, performance, or achievements of the Company to differ materially from those expressed or implied by such forward-looking statements. These include, but are not limited to, risks associated with mineral exploration and development, such as environmental hazards, the impact of economic conditions on capital expenditures, challenges in obtaining required permits and approvals, financing uncertainties, fluctuations in the estimation of mineral resources, volatility in the price of lithium and other specialty minerals, lack of operating history and revenue, negative cash flow, land title disputes, market price variability of the Company's securities, economic feasibility and commercial viability of mineral resources, inflationary pressures, uncertain global economic conditions, geopolitical risks, successful collaboration with Indigenous communities, potential future

pandemics or health crises, reliance on management and skilled personnel, ongoing geopolitical conflicts such as the war in Ukraine, extensive government and environmental regulations, dependence on artificial intelligence technologies in operations, volatility in financial markets, uninsured risks, climate change impacts, potential legal proceedings, and other risks identified in the Company's annual information form dated November 28, 2025, under the section "Description of the Business – Risk Factors." Forward-looking information is based on the reasonable assumptions, estimates, analysis and opinions of management made in light of its experience and perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made, but which may prove to be incorrect. Although the Company believes that the assumptions and expectations reflected in such forward looking information are reasonable, undue reliance should not be placed on forward-looking information because the Company can give no assurance that such expectations will prove to be correct. In addition to other factors and assumptions identified in the AIF, assumptions have been made regarding, among other things: management of certain of the Company's assets by other companies or joint venture partners, the Company's ability to carry on its exploration and development activities without undue delays or unbudgeted costs, the ability of the Company to obtain sufficient qualified personnel, equipment and services in a timely and cost-effective manner, the ability of the Company to operate in a safe, efficient and effective manner, the ability of the Company to obtain all necessary financing on acceptable terms and when needed, the accuracy of the Company's resource estimates and geological, operational and price assumptions on which these are based and the continuance of the regulatory framework regarding environmental manners. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions that may have been used. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

Land

ACKNOWLEDGEMENT

Avalon Advanced Materials Inc. acknowledges that our work takes place on the traditional territories of First Nations and Métis peoples. We respect Indigenous rights and are committed to strengthening existing partnerships and building new, long-term relationships that create shared social and economic benefits.

Since joining Avalon, my focus has remained on positioning the company as a Canadian leader in critical minerals mining and processing. Over the past year, we have made meaningful progress toward this goal—strengthening our partnerships, advancing our lithium processing technology, and exploring new pathways for sustainable growth.

At the core of Avalon's lithium strategy is Lake Superior Lithium Inc., our flagship project in Thunder Bay, Ontario. Working closely with our technology partner, Metso, Avalon has successfully demonstrated the production of battery-grade lithium hydroxide (LiOH) through an innovative, low-emission process that avoids the use of sulfuric acid. This advancement marks an important step forward in our efforts to establish a cleaner and more efficient midstream lithium processing capability in Ontario.

Our collaborative work with Metso has also generated analcime, a unique by-product of the lithium conversion process with promising potential as a low-carbon additive for cement and concrete. Early research suggests that incorporating analcime could help reduce the environmental footprint of the construction sector—supporting greener infrastructure and more sustainable Ontario roads. Rather than treating it as waste, Avalon is working toward a potential zero-waste model, where every material generated from production contributes to a cleaner circular economy.

Beyond lithium, Avalon continues to advance its Nechalacho Rare Earth Elements (REE) and Zirconium Project in Thor Lake, Northwest Territories. Nechalacho



Message from
our
LEADER

hosts a comprehensive suite of light and heavy rare earth elements—including neodymium, praseodymium, dysprosium, and terbium—that are essential to clean technologies such as wind turbines, electric vehicles, and high-efficiency electronics. The project positions Avalon to play a broader role in the global energy transition by supporting the responsible sourcing of materials that enable decarbonization and sustainability across multiple industries.

As we continue to build momentum, partnerships will remain central to our progress. Together with industry leaders, research institutions, and local communities, Avalon is advancing initiatives that will help foster responsible resource development, enhance regional economic growth, and contribute to Canada's clean energy future.

This year's Sustainability Report reflects on that progress and outlines our continued commitment to innovation, environmental stewardship, and collaboration as we work toward creating a more sustainable and resilient critical minerals sector for all Canadians.



A handwritten signature in black ink, appearing to read "Scott Monteith".

SCOTT MONTEITH
PRESIDENT & CEO, DIRECTOR

Message from
our
LEADER



Table of Contents

Advancing Innovation and Circular Solutions for a Sustainable Future: A Message From The CEO	04
Major Milestones in 2025	06
A New Commitment	07
About Avalon Advanced Materials	08
A New Process	09
Water and Energy Use	10
Waste and Emissions	13
Community Engagement	15

Major Milestones 2025

February

28% INCREASE IN MEASURED AND INDICATED MINERAL RESOURCES AT SEPARATION RAPIDS

February 27 — Announced an increase in measured and indicated mineral resources at flagship Separation Rapids joint-venture lithium project



August

APPOINTMENT OF NEW CFO

August 21 — Announced appointment of seasoned executive Lorin Crenshaw to role of CFO



July

STRATEGIC INVESTMENT

July 25 — Closed \$1,300,000 Lind Financing



November

SUCCESSFULLY RECOVERED 15 RARE EARTH ELEMENTS

November 24 — Avalon and Engina Successfully Recovered 15 Rare Earth Elements with Breakthrough Processing Technology for Nechalacho Project, NWT Canada



October

ALKALINE LEACH PROCESS DEMONSTRATION SUCCESSFUL

October 9 — Successfully Produced Lithium Hydroxide and Analcime Using Metso's Alkaline Leach Process

A New COMMITMENT

Avalon Advanced Materials has a long history in Canada's critical minerals sector, with significant lithium and rare earth assets across Ontario and the Northwest Territories. Under new leadership, we are focused on bringing these assets into production and maximizing their long-term value as demand for critical minerals rises.



ABOUT AVALON ADVANCED MATERIALS

Avalon Advanced Materials Inc. is a Canadian critical minerals company advancing innovative solutions to power the clean energy transition. We are committed to building a resilient, low-carbon supply chain by integrating modern processing technologies, reducing environmental impact, and responsibly developing the resources essential to electrification, advanced manufacturing, and defence applications.

In 2025, we continued to advance a portfolio of lithium, rare earth, and zirconium projects, each designed to strengthen North America's supply chain security while supporting sustainable economic development. Through collaboration, technology adoption, and a focus on circular resource use, Avalon is shaping a future where critical minerals are produced with transparency, efficiency, and environmental stewardship at the core.



Lake Superior Lithium Inc.

Aims to support the rapidly expanding electric vehicle market by establishing a state-of-the-art lithium hydroxide processing facility in Thunder Bay, Ontario.

Nechalacho Project

Located at Thor Lake, Northwest Territories, this project aims to provide a stable supply of zirconium and rare earth minerals, supporting advanced technological industries while securing North American supply chain and national security.

Separation Rapids Ltd

A joint venture between Avalon and SCR-Sibelco NV, spanning three strategic locations in Kenora and Fort Hope, focused on commercializing high-purity petalite-lithium deposits to serve the global glass, ceramics, and EV battery markets.

Our
PROJECTS

WATER AND ENERGY USE

Avalon is committed to continually improving our environmental performance by reducing emissions, using resources efficiently, and protecting biodiversity. We conduct detailed assessments for advanced projects and rely on robust baseline ecological data to guide responsible decision-making.

WATER MANAGEMENT

Avalon conducts, or will conduct, robust assessments of potential impacts for its advanced projects, collecting and utilizing extensive baseline ecological data, timelines, and quality assurance protocols.



2024 Water and Energy USE SUMMARY

In 2024, Avalon is estimated to have consumed a total of 12,407,104 kWh of electricity, 22,580 klb of steam, 964,762 ton-hours of chilled water, and 31,206 m³ of water across its operations at 130 Adelaide, Richmond-Adelaide Centre. Avalon's estimated proportional share of resource consumption for the leased 3,581 ft² space totaled 32,384 kWh of electricity, 84 klb of steam, 1,937 ton-hours of chilled water, and 137 m³ of water.

Resource Type	Whole Building Consumption	Avalon's Proportionate Share
Electricity	12,407,104	32,384 kWh
Steam	22,580	84 klb
Chilled Water	964,762	1,937 ton-hours
Water	31,206	137 m ³

Energy MANAGEMENT

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Resource	Consumption (2024)	GJ
Electricity	32,384 kWh	116.58
Steam	84 klb	~9.2*
Chilled Water	1,937 ton-hr	~24.5*



WASTE AND EMISSIONS

WASTE MANAGEMENT

Our goal is to minimize waste and manage all materials responsibly. Whenever possible, we divert waste from landfills and pursue circular-economy solutions that reduce both environmental impact and cost.

Through our partnership with Metso, we will adopt a more sustainable lithium conversion process that eliminates sodium sulphate by-product. Instead, it produces analcime—an inert aluminum silicate—and calcium carbonate. This process has been successfully tested, and we look forward to putting it into operation.

Waste Generated	
FY 2024	
Cardboard	105.8 MT
Paper	146.8 MT
Organics	259.9 MT
Total (All Wastes)	1,136 MT

GREEN HOUSE GAS AND AIR EMISSIONS

As a leader in sustainability in the exploration and development industry, Avalon recognizes that energy management is a key component of responsible mining and contributes to our social license to operate. It also significantly contributes to improving project economics.

Therefore, Avalon will ensure adequate resources and skills to optimize energy use and associated greenhouse gas (GHG) reduction.

.	CO2e kg	CO2e t
Scope 1	25,957.55	25.96
Scope 2		
Scope 3	7730.07	7.73
Total	33,687.62	33.69

*SEPARATION RAPIDS REPORTS SEPARATELY

COMMUNITY ENGAGEMENT

Avalon remains an active partner to Indigenous communities across our project areas. We prioritize respectful, culturally appropriate engagement and work closely with local leadership to ensure community interests, values, and rights are reflected in our planning and operations.



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