



September 17, 2024

Avalon Unveils Video Rendering for the Thunder Bay Lithium Project Following PEA Completion

TORONTO, ON - [Avalon Advanced Materials Inc.](#) (“Avalon” or the “Company”) (TSX: [AVL](#) and OTCQB: [AVLNF](#)) is pleased to share the release of a new [video rendering](#) showcasing the design and layout of the proposed processing facility at the Lake Superior Lithium Project in Thunder Bay, Ontario (the “Project”).

The video rendering highlights the facility's innovative battery-grade lithium hydroxide conversion process, starting with spodumene transported via rail to storage. The material is then heated in a calciner to transform it into beta spodumene. After cooling and grinding, it undergoes pressure leaching to produce lithium carbonate, which is converted and purified into lithium hydroxide. The final product is crystallized, dried, and packaged for market. The video also illustrates the management of the byproduct, analcime, which is temporarily stored on-site before being transported off-site for alternative uses. The design provides a foundation for future expansions and represents flexibility in meeting the evolving needs of the Project.

The [video rendering](#) and detailed findings of the Preliminary Economic Assessment (“PEA”) are available on Avalon’s website.

The rendering follows the successful completion of the Project’s PEA, which demonstrates strong economic viability and strategic importance to the North American electric vehicle (EV) supply chain.

Key Highlights of the [PEA](#):

- After-tax Net Present Value (“NPV”): \$4.1 billion at an 8% discount rate.
- After-tax Internal Rate of Return (“IRR”): 48% over 30 years
- Total Capital Cost (“CAPEX”): \$1.3 billion

“With the completion of the PEA, we are one step closer to realizing a project that is an investment in advanced manufacturing for Ontario, and an investment in the energy security for North America. The video rendering is a materialization of our plans to establish this important project,” said Scott Monteith, CEO of Avalon.

About Avalon Advanced Materials Inc.

Avalon Advanced Materials Inc. is a Canadian advanced manufacturing company focused on vertically integrating the Ontario lithium supply chain. The Company, through its joint venture with SCR-Sibelco NV, is currently developing its Separation Rapids lithium deposit near Kenora, ON, while also continuing to advance the Snowbank lithium and Lilypad lithium-caesium projects. Avalon is also working to develop its Nechalacho rare earths and zirconium project located in the Northwest Territories. This deposit contains critical minerals for use in advanced technologies in the communications and defense industries among other sectors.

In addition to these upstream activities, Avalon is executing on a key initiative to develop Ontario's first midstream lithium hydroxide processing facility in Thunder Bay, ON, a vital link bridging the lithium resources of the north with the downstream EV battery manufacturing base in the south.

For questions, please email the Company at ir@AvalonAM.com or contact Ms. Rachel Naji, Investor Relations Manager at 416-364-4938.

Cautionary Statement Regarding Forward-Looking Information

This news release contains "forward-looking information" within the meaning of applicable Canadian securities legislation. Forward-looking information includes, but is not limited to statements about the Project, including the planned processes and flow of materials, and that the design provides a foundation for future expansions and represents flexibility in meeting the evolving needs of the Project, the video rendering being a representation of the Project, and information with respect to the results of the PEA, including the expected NPV, IRR, CAPEX and OPEX thereof. 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 subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including risks associated with project development such as: environmental hazards and economic factors as they affect the cost and success of the Company's capital expenditures, the ability of the Company to obtain required permits and approvals, the ability of the Company to obtain financing, , the ability to source feedstock for the Company's proposed lithium processing facility at reasonable prices or at all, the price of lithium hydroxide, no operating history, no operating revenue and negative cash flow, land title risk, the market price of the Company's securities, the Company's commercial viability, inflation and uncertain global economic conditions, uncertain geo-political shifts and risks, successful collaboration with indigenous communities, future pandemics and other health crises, dependence on management and other highly skilled personnel, , extensive government and environmental regulation, reliance on artificial intelligence technology to influence mining operations, volatility in the financial markets, uninsured risks, climate change, threat of legal proceedings, as well as those risk factors discussed or referred to in the annual information form of the Company dated November 28, 2023 (the "AIF") under the heading "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 project 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 operational and price assumptions on which these are based and the continuance of the regulatory framework regarding environmental matters. 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.