

# Developing critical materials for the green economy in a sustainable way is the Avalon Advanced Materials' highway

written by InvestorNews | April 21, 2021

[Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF) is a new breed of resource company that places environmental stewardship at the top of the list of priorities as opposed to it being an afterthought. The Company has embraced the principles of sustainability as core to its business practice and has made a strong commitment toward implementing corporate social responsibility best practices and recently secured [a top 5% ESG Risk rating](#) amongst its peer companies from Sustainalytics.

Avalon is a Canadian mineral development company that operates primarily in Canada with a focus on the metals and minerals for use in clean energy and new technology including lithium, rare earths, cesium, tin, indium, gallium, germanium, tantalum and zirconium. The Company is in various stages of developing three of its five mineral resource properties with particular emphasis on lithium, cesium and rare earths.

Avalon's most advanced project is the 100% owned Separation Rapids Lithium Project, located in the Paterson Lake Area of Ontario. The Separation Rapids deposit is a potential source of lithium minerals for use in the glass and ceramics industry as well as lithium compounds for the battery industry. The company completed a Pre-Feasibility Study in 1999 to produce petalite (the predominant lithium mineral at Separation Rapids) for glass-ceramics. A new Preliminary Economic Assessment model was

created in 2016 to produce lithium battery materials, which was subsequently updated in 2018 based on new glass-ceramic markets. The simplified business model with initial focus on lithium mineral concentrates for glass and ceramics has an initial CAPEX of C\$77.7 million (475,000 tpa mill capacity) for a 20 year operational life with average annual revenues of C\$90 million and average annual costs of C\$60 million for an NPV pre-tax (8% discount rate) of \$156 million and an IRR (pre-tax) of 27.1%.

Building on the Separation Rapids opportunity, [Avalon recently announced it has entered into a Letter of Intent](#) (LOI) with Fort William First Nation (FWFN) to collaborate on the development of a lithium battery materials refinery located on industrial lands owned by FWFN in Thunder Bay, Ontario. This facility would be designed to accept lithium mineral concentrates from Avalon's Separation Rapids Lithium Project (70 km north of Kenora) and Rock Tech's Georgia Lake Lithium Project (145 km northeast of Thunder Bay), as well as potentially other emerging, new lithium mining operations in northern Ontario, to produce lithium hydroxide and other lithium battery materials.

Another example of what makes Avalon different than most resource companies is the binding [LOI signed in February](#) for four industrial minerals properties and a demonstration-scale processing plant located at Matheson, Ontario to process the tailings from a historic phosphate mining operation at the site. Work done has demonstrated that the tailings contain phosphate levels ranging from 15-20%  $P_2O_5$  and can be sold "as is" for use in various agricultural fertilizer products. Additionally, analytical work done on the tailings indicates the presence of significant concentrations of rare earths, scandium and zirconium, which preliminary tests indicate will be recoverable through additional processing. The phosphate-rich tailings are already generating revenues and additional processing of the tailings could provide significant potential for future revenue

growth. This is a great example of Avalon's core values working in harmony. The company gets access to a closed mine site with potential to recover critical minerals like rare earths from the mine wastes, while remediating the long term environmental liability.

Avalon is a leader among mineral developers in adopting best practices to reduce its environmental footprint, prevent water contamination and engage with local communities. This focus gives Avalon a strategic advantage when it comes to securing grants, funding and partnerships with governments and First Nations, let alone the evolving investment community. Aligning the company with its stakeholders' values reduces risk and creates opportunities like the Fort William First Nation LOI. Just remember, [it's not easy being green](#), but it can be profitable.