

Avalon Advanced Materials Separation Rapids Lithium Project progresses, EV investors look north for critical materials

written by InvestorNews | October 15, 2020

It is not very often that an investor can buy a company with exposure to both lithium and key magnetic rare earths. One company that offers exposure to both is [Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF) ('Avalon'). Avalon has five critical materials projects across Canada, providing investors with exposure to **lithium, rare earths (neodymium, dysprosium)**, cesium, tantalum, feldspars, tin and indium.

With the electric vehicle (EV) boom set to take off, companies such as Tesla are planning to grow EV production by 50%pa reaching 20 million new EVs pa by 2030. At [Tesla Battery Day](#) Tesla suggested an aggressive industry wide target of 10TWh of Li-ion batteries pa by 2030 to meet EV demand (assumes a switch to 100% EVs).

Tesla says that's a 100 fold increase on 2019 levels. This suggests demand for EV metals (such as lithium and the magnetic rare earths) looks likely to surge this decade and create a super-cycle for the EV metal miners.

100% electric transportation requires 100x growth in EV battery production this decade



[Source](#): Tesla Battery Day video

Avalon's focus projects for lithium (Separation Rapids, Lilypad) and rare earths (Nechalacho)



[Source](#)

Avalon's Separation Rapids Lithium Project is located 70 km by road north of Kenora, Ontario, Canada. It holds one of the largest "complex-type" lithium-cesium-tantalum pegmatite deposits in the world. A [PEA](#) was completed in 2018 resulting in a pre-tax NPV8% of [\\$156m](#), post tax IRR of 22.7%, CapEx C\$77.7m with a 20 year mine life. In a [recent news](#) Avalon has been doing metallurgical test work with the overall objectives of reducing costs, improving recoveries and optimizing lithium product quality. Avalon has previously developed a proprietary process flowsheet to produce a high purity lithium hydroxide product from petalite. The process limits waste by recycling of the sulphuric acid solvent. Avalon and partners are now optimizing the final stages of the process, which involves the use of electrolysis to produce lithium hydroxide. The results will enable finalizing equipment selection and design. A further 2,500 tonne bulk sample extraction program is set to commence next. With Ontario Premier Doug Ford [recently announcing](#) Ontario's interest in establishing new battery materials supply chains in the province, Avalon is investigating collaborative opportunities to establish a lithium processing facility in Northwestern Ontario.

Avalon's Lilypad Cesium Property, located 150 km northeast of Pickle Lake, Ontario, is an exploration stage project with cesium-lithium-tantalum mineralization. It has the potential to be a secondary lithium supply source for Avalon. Avalon has [recently re-activated the Project](#) due to increasing demand for

cesium. Planned follow-up work will initially involve mineralogical and analytical testwork, which will be followed by metallurgical process testwork to identify the most efficient methods for concentrating the pollucite ore and recovering by-product tantalum and lithium.

Avalon's flagship Nechalacho Rare Earth Elements Property is located at Thor Lake, Northwest Territories, Canada. Avalon's main focus is the deeper HREE Basal Zone at the property. The Basal Zone retained by Avalon contains a rich polymetallic rare metals resource, with potential for economic recovery of several rare earth elements. A [Feasibility Study](#) was completed in 2013 on the Basal Zone resulting in a pre-tax NPV10% of \$1.35 billion (post-tax NPV10% of \$900m). The post-tax IRR was 19.6%. CapEx was \$1.575b. Sales of the five critical REO (neodymium, europium, terbium, dysprosium and yttrium) account for over 82% of the separated REO revenues. Avalon has also retained a 3% NSR on the near surface T-Zone and Tardiff Zone at the Nechalacho Rare Earth Elements Property, [bought by](#) Cheetah Resources back in 2019. Avalon could also potentially collaborate with the newly planned SRC Rare Earths Processing Facility to be established in Saskatchewan with plans to be operational by late 2022.

EVs are coming in all shapes and sizes and they will require huge amounts of EV metals such as lithium and rare earths

Avalon Advanced Materials Inc. stock is [up 87.5%](#) over the past year and trades on a market cap of C\$26m.