

Rio Tinto to install carbon free aluminium smelting cells using first ELYSISTM technology licence

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[Rio Tinto](#) will install carbon free aluminium smelting cells at its Arvida smelter in Québec, Canada, using the first technology licence issued by the ELYSIS joint venture. This investment will support the ongoing development of the breakthrough ELYSIS™ technology and allow Rio Tinto to build expertise in its installation and operation.

Rio Tinto will design, engineer, and build a demonstration plant equipped with ten pots operating at 100 kiloamperes (kA). The plant will be owned by a new joint venture in which Rio Tinto and the Government of Québec, through Investissement Québec, will invest \$179 million (CAN\$235 million) and \$106 million (CAN\$140 million) respectively as equity partners, for a total investment of US\$285 million (CAN\$375 million).

This facility will use the same technology that has been successfully demonstrated at the ELYSIS Industrial Research and Development Center in Saguenay-Lac-St-Jean. This pilot operation will be a critical step in Rio Tinto's learning journey towards full scale industrialization of the ELYSIS™ technology.

The plant will have the capacity to produce up to 2,500 tonnes of commercial quality aluminium per year without direct greenhouse gas emissions, with first production targeted by 2027. It will be located adjacent to the existing Arvida smelter, allowing the use of the current alumina supply and casting facilities.

Rio Tinto Aluminium Chief Executive Jérôme Péresse said: "This investment will further strengthen Rio Tinto's industry-leading position in low-carbon, responsible aluminium in North America with our hydro-powered smelters and our recycling capacity. Becoming the first to deploy the ELYSIS™ carbon-free smelting technology is the next step in our strategy to decarbonize and grow our Canadian aluminium operations. In addition to delivering even lower-carbon primary aluminium for our customers, this investment will allow Rio Tinto to build its expertise on installing and operating this new technology, while the ELYSIS joint venture continues its research and development work to scale it up to its full potential."

Québec Minister of Economy, Innovation and Energy; Minister for Regional Economic Development; and Minister for the Metropolis and the Montréal Region, Pierre Fitzgibbon, said: "ELYSIS™ is a truly disruptive technology for the industry, and it's thanks to Québec expertise that we are the first in the world to produce GHG-free aluminium. This is a technological innovation with unprecedented benefits for our aluminium sector, which remains an undisputed world leader."

The Honourable François-Philippe Champagne, Canada's Minister of Innovation, Science and Industry, said: "Canada has all it takes to be the global green supplier of choice, which is why our government is collaborating with key industry actors like Rio Tinto to produce low carbon aluminium. Groundbreaking projects such as the ELYSIS™ smelting technology will ensure Canada remains at the forefront of the economy of tomorrow while also staying focused on its carbon reduction goals. When economic benefits are paired with a commitment to developing green solutions, it's a win for Canadian industry, our cleantech ecosystem and our workers."

ELYSIS joint venture partner Alcoa will have the option to purchase from Rio Tinto a portion of the aluminium produced over the first four years at the Arvida demonstration plant through an offtake agreement.

The joint venture is continuing its research and development program to scale up the ELYSIS™ technology and has completed the construction of larger prototype 450 kA cells at the end of an existing potline at Rio

Tinto's Alma smelter. ELYSIS has begun commissioning these industrial prototype cells, with the start-up sequence set to begin in 2024.

This announcement is authorised for release to the market by Andy Hodges, Rio Tinto's Group Company Secretary.

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