

ELYSIS Research and Development Center in Saguenay

Construction work officially launched

SAGUENAY, AUGUST 16, 2019 – Today, ELYSIS marked the start of construction on its Research and Development Center in Saguenay, where technical experts will continue to advance the breakthrough technology that eliminates all direct greenhouse gas emissions (GHG) from the aluminum smelting process.

Representatives from the governments of Québec and Canada and senior leaders from ELYSIS, Alcoa and Rio Tinto attended the event at the planned facility, located within Rio Tinto's Complexe Jonquière, the site of the Arvida smelter, Vaudreuil refinery and Arvida Research and Development Centre. The \$50 million (CAD) construction project is expected to be fully operational in the second half of 2020, employing 25 technical experts.

Created thanks to a ground-breaking partnership between two global industry leaders, Alcoa and Rio Tinto, the ELYSIS joint venture is at the heart of a new revolutionary process to make aluminum. This disruptive process, supported in its development by Apple, will eliminate all direct GHG emissions from the traditional aluminum process, and instead emit pure oxygen. The ELYSIS™ technology has the potential to considerably reduce the environmental footprint of the global aluminum industry.

ELYSIS will continue to work closely with the Rio Tinto technology design team in France and Alcoa's Technical Center (ATC), near Pittsburgh in the United States, where this patented technology was invented by Alcoa. Since 2009, Alcoa has been producing research-scale metal at ATC with no direct carbon emissions from the smelting process.

Alcoa's Technical Center provides support to ELYSIS for the materials used to manufacture proprietary materials for the new anodes and cathodes that are essential to the ELYSIS™ process. The Rio Tinto technology team in France is creating commercial scale designs for the ELYSIS™ technology so it can be retrofitted into existing smelters or used for new ones.

The technology in a few words

- The ELYSIS™ technology **answers the global trend** toward manufacturing **products with a smaller carbon footprint**, from smartphones to cars, planes and building materials.
- The new process will **reduce the operating costs** of aluminum plants while **increasing their production capacity**. It can be **used both in new plants and existing facilities**.
- In Canada alone the ELYSIS™ technology has the potential to **reduce annual GHG emissions by 7 million tons**, equivalent to removing 1.8 million cars from our roads.
- ELYSIS also has the exclusive right to sell the materials used in manufacturing the new generation anodes and cathodes, which will last more than **30 times longer** than traditional components.

Quotes

— “The launch of construction for the ELYSIS Research and Development Center marks a significant step towards bringing this technology to the market by 2024. We are looking forward to the work that will take place in Saguenay–Lac-Saint-Jean, a region internationally recognized for its expertise and know-how.”

- Vincent Christ, CEO, ELYSIS

— “The work being done to further develop this breakthrough technology here in Saguenay–Lac-Saint-Jean is at the forefront of the global aluminium industry. It can help to drive the global transition to a low-carbon economy, create significant value and allow customers to meet the growing consumer demand for responsible products.”

- Gervais Jacques, managing director Atlantic Operations, Rio Tinto Aluminium

— “ELYSIS is a source of great pride for all Alcoa employees. We look forward to seeing the technology reach the market and today's announcement is an important step to further strengthen the sustainable value chain of the Quebec aluminum industry.”

- Jean-François Cyr, President, Alcoa Canada, and Vice President, Operations – Americas, Alcoa Aluminum

— “Saguenay–Lac-Saint-Jean aluminum producers are world leaders. They contribute to the growth of our economy and support good jobs for the middle class. That's why we are very proud to be a partner of the ELYSIS joint venture by investing \$ 60 million in this major project, which will have benefits here in Saguenay–Lac-Saint-Jean, across Quebec and Canada, and well beyond our borders. More than ever, we have ambition for our regions!”

- The Honourable François-Philippe Champagne, Minister of Infrastructure and Communities

— “The Saguenay–Lac-Saint-Jean region is known for the exceptional leadership and expertise of its local businesses, especially those in the aluminum industry. It is therefore with great pride that our government, in its role as an ELYSIS project partner, salutes the construction of this research center, through which we will continue to demonstrate the extent of our talent and ability to innovate in the field of primary aluminum production.”

- Andrée Laforest, Minister of Municipal Affairs and Housing and Minister Responsible for the Saguenay–Lac-Saint-Jean Region

— “I am proud that our government supports our hard-working aluminum workers here in Saguenay–Lac-Saint-Jean, and the innovative, world-class products they produce. Our investment is a recognition of the quality of our local workforce and a recognition of their important contribution to our local communities and to Canada.”

- Richard Hébert, Parliamentary Secretary to the Minister of Small Business and Export Promotion

About ELYSIS

ELYSIS is a technology company that was created thanks to a ground-breaking partnership between two global industry leaders – Alcoa and Rio Tinto. ELYSIS' goal is to revolutionize the way aluminium is produced across the globe. Our process eliminates all direct greenhouse gases from aluminium smelting, and instead produces pure oxygen. Alcoa, Rio Tinto, the Government of Canada, the Government of Quebec and Apple provided a combined investment of \$188 million (CAD) to create ELYSIS and to see this technology reach commercial maturity in 2024. Learn more at www.elysis.com.

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