



EXCELLING
TOGETHER



SUSTAINABLE DEVELOPMENT REPORT







A WORD FROM THE PRESIDENT AND CEO

Hello everyone,

I am pleased to present our 2018 Sustainable Development Report. As a newcomer to the smelter, I personally had the chance in 2018 to discover the company's practices and customs and the excellence of its team. All of Aluminerie Alouette's employees put their shoulder to the wheel, day after day, to produce high-quality aluminium for our customer-owners, in a responsible way. The results described in the following pages nevertheless describe a few operational difficulties encountered along the way, including problems related to our smelting pot technology. Thanks to our employees' commitment and perseverance, our operations met all internal and external standards and current environmental criteria. Injuries and health and safety hazards were also kept to a minimum. With our renewed organizational structure and modernization initiatives deployed in all sectors, our organization is certainly better adapted today to face market realities and, by extension, remain a global primary aluminium production leader for years to come.

Enjoy the report!

Patrice L'Huillier
President and Chief Executive Officer

OUR MISSION

Aluminerie Alouette, as an independent operating company, shall operate as a low-cost smelter using world-class business principles and continuous optimization of processes and assets. As a sustainable company, Aluminerie Alouette will maintain high standards of health, safety and environment in order to be recognized as a responsible employer and corporate citizen.

OUR STRATEGY

Aluminerie Alouette is driven every day by a strategy based on five principles guiding us to achieve the level of excellence that contributes to maintaining Alouette among the leading producers of primary aluminium.



PEOPLE AND CULTURE

In the course of slightly more than a quarter of a century, Alouette has certainly seen a good number of changes in its processes, team and equipment. Implementation of a new organizational structure at the end of 2018 was nonetheless a significant challenge. With a focus on efficiency, the company was redrawn. New business units in the operational and maintenance sectors were created (Anodes and Raw Materials, Metal, Asset Management and Maintenance), supported by the usual services. The new structure encourages more seamless operations and ensures optimum resource allocation. Alouette continues to count on its employees' engagement across the organization, with a view to implementing a wide array of continuous improvement projects. Close to a dozen team members received training in this area and have since become vectors for change who can promote modernization, improvement and cost-reduction ideas. Recognition for everyone's efforts to fulfill the aluminium smelter's mission is all the more important in the context of increasingly rapid project deployment. A variety of activities were thus held throughout the year to recognize the contributions of regular employees, students and subcontractors, highlight achievements and stimulate further initiatives.



PASSION AND PERSEVERANCE

HIGHLIGHTS

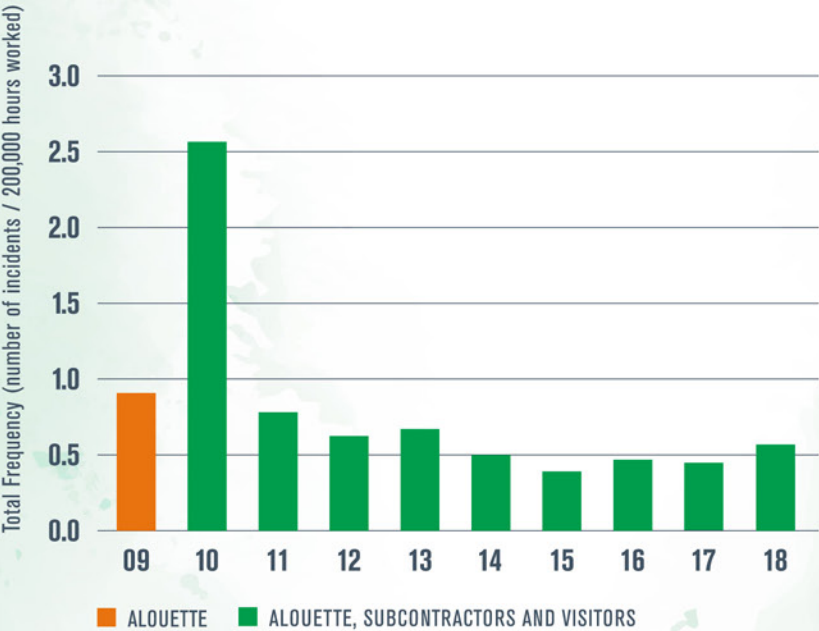
- Hundreds of employees and their families took part in COBRAL social club activities.
- The 50th and 51st Forum sessions were opportunities for management to meet and discuss issues with over 90% of employees.
- Over 60 retired employees took part in the second edition of an annual brunch in their honour.
- Five employees were trained as continuous improvement Green Belts.
- Three employees were trained as continuous improvement Black Belts.
- A total of 28,687 hours of training was given to maximize skills.
- All managers received training in detecting drug and alcohol use.
- Nine employees celebrated 25 years of service with the company.
- Seven employees were honoured at the traditional *Soirée Hommage 20 ans de service* evening.
- Over 150 employees took part in special *Francofête* activities.
- Four theme dinners were held to thank all employees.
- Four noon-hour recognition activities were an opportunity to chat with students about their experience.
- Two family fair days were a chance for employees and their families to have fun.
- Alouette was a candidate for the CNESST's *Grands Prix* in the Leader and Innovation categories.
- Participation in 2018 in the Best Business Practices Trade Show.
- Presentation at the sixth *Congrès annuel de la maintenance industrielle*.
- Supervisors received skills development training.

HEALTH AND SAFETY, ENVIRONMENT

We can't say it enough: Everyone's health and safety is our number-one priority. Even in a safe and healthy work environment, there can be a number of risks for people who take shortcuts or don't follow the rules. Over the past few years, an internally developed peer awareness program dubbed "*Intervention entre nous*" has helped raise co-workers' awareness of potentially dangerous situations. To breathe fresh air into the program, a team worked on a revamped version with a catchy slogan: "*Agir entre nous : pour faire la différence!*" ("Working together to make a difference!"). During a year-end forum, two members of the Simard family, one of them a recent recruit and the other a long-standing employee, spoke about their relationship with health and safety. A talk by Jonathan Plante, a carpenter-joiner who became paraplegic after falling from a high place on a construction site, was doubtless one of the highlights and made a lasting impression on a number of people. Employees are encouraged to apply the best operational practices on a daily basis in order to limit our operations' environmental footprint, and once again in 2018, all emissions at source and in the ambient air remained below current standards and targets. The same applies to runoff water and waste.



Total recordable injury frequency



In 2018, there were seven incidents with recordable injuries, two more than in 2017. Alouette and its employees continued their joint efforts to innovate, eliminate risks at source and, by extension, continue to target zero injuries. The risk prevention program is audited on a regular basis, involving employees in various departments. The members of the Health, Safety and Environment Committee also take part in accident investigations.

WORKING TOGETHER TO MAKE A DIFFERENCE!



HIGHLIGHTS

- 25 years with no recordable injuries for the laboratory and the warehouse
- Talk for all employees on the major impact of a work accident
- Six 100% IMPACT theme days focusing on health and safety and the environment
- Quarterly meetings held with supervisors and major subcontractors
- 96% compliance with major risk procedures
- Thousands of health, safety and environment inspections carried out with all employees
- New risk barometer at the site entrance
- Maintaining of Healthy Enterprise | Elite certification
- Numerous activities to promote healthy lifestyles
- Awareness activity conducted by Sept-Rivières regional county municipality's *Écopatrouille* (environmental patrol)
- Maintaining of *ICI ON RECYCLE!* ("We Recycle!" program) Level 3 Gold certification
- Maintaining of ISO 14001, ISO 17025 and OHSAS 18001 certifications
- Representation on Sept-Rivières regional county municipality's waste management plan follow-up committee
- No significant spills during the year
- Over \$5 million invested in health, safety and environment

RESIDUAL MATERIAL RECYCLING AND RECLAIMING

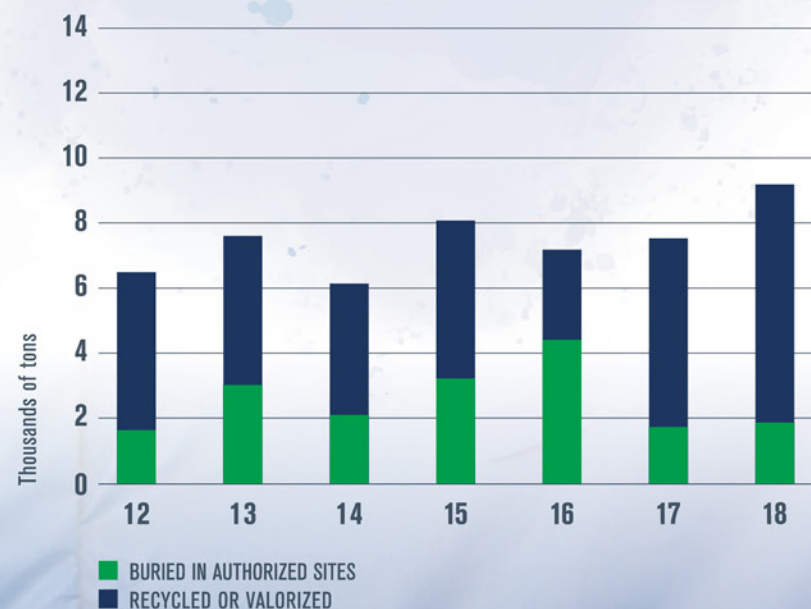


ENGAGEMENT > MISE EN ŒUVRE > PERFORMANCE

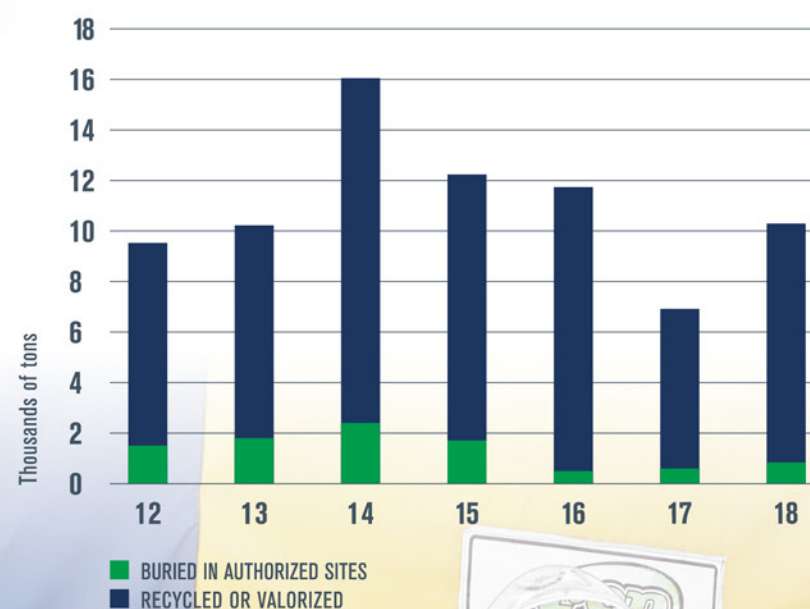
The smelter recycles or reclaims value from over 80% of the residual materials that it generates, either directly as part of its own operations or in partnership with various organizations. The figure includes spent potlining, for which recycling increased during the year. The company focuses on sound management of hazardous and non-hazardous residual materials at all times, as shown by its Level 3 *ICI ON RECYCLE!* ("We Recycle!") certification since 2010 and Gold certification since 2017.

Hazardous materials

*Excluding spent potlining



Non-hazardous materials

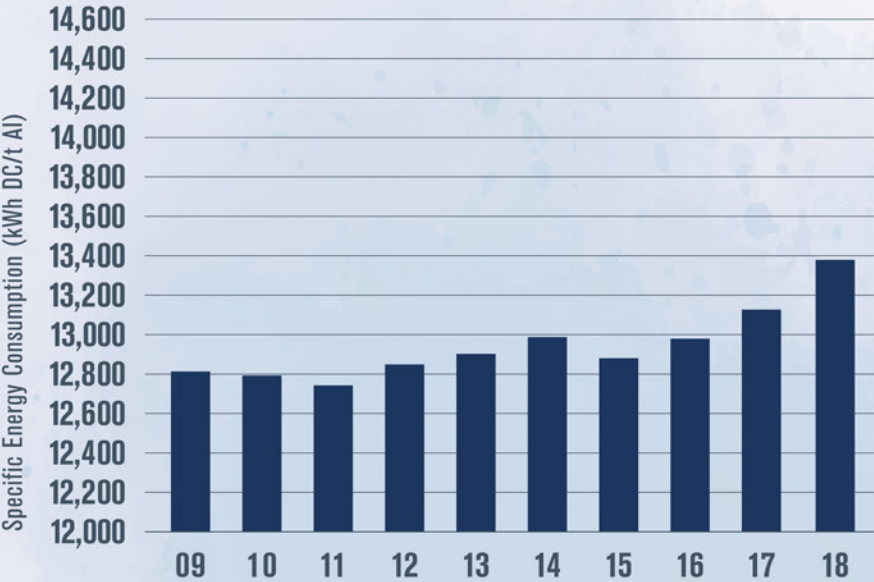


Spent potlining



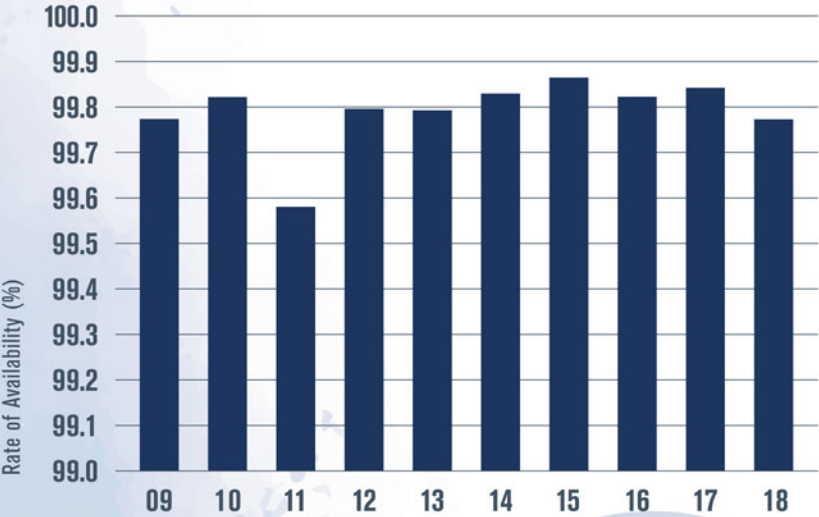
Energy consumption

Specific energy consumption in the smelting sector was 13,382 kWh (direct current) per tonne of aluminium. Despite the increase in consumption, all efforts were made to use energy responsibly and remain an industry leader in this area.



Scrubber availability

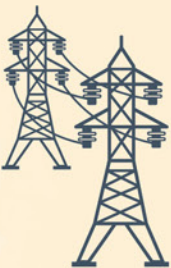
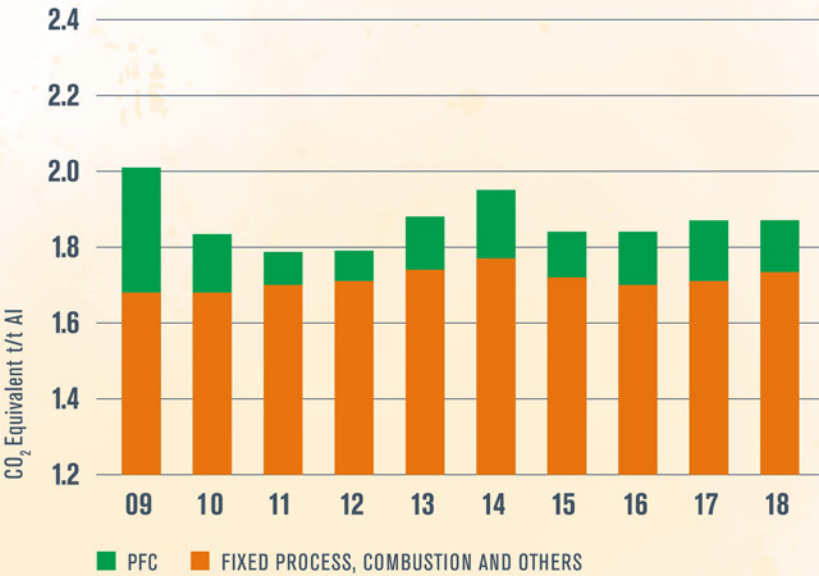
Alouette operates seven scrubbers to protect the environment. Five gas treatment centres are located in the potrooms and there are two fume treatment centres in the anode baking furnace sector. In 2018, scrubber availability once again exceeded 99.7%, including planned downtime for maintenance in order to ensure scrubber efficiency. This figure confirms that the scrubbers were carefully and efficiently operated and maintained by employees.



AIR EMISSIONS

Greenhouse gas emissions

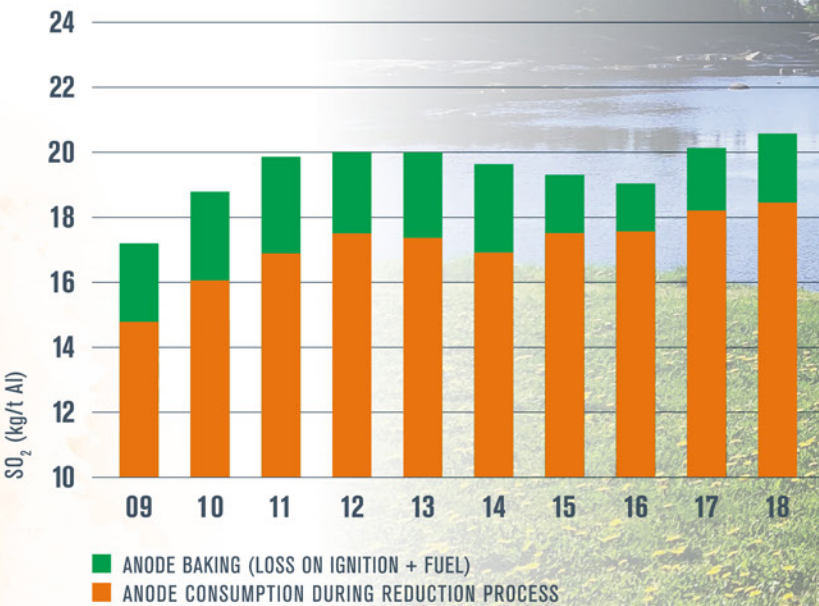
Greenhouse gas emissions linked to processes, fuels and operational instability that generate perfluorocarbons (PFCs) added up to 1.87 tonnes of CO₂ equivalents per tonne of aluminium produced (t CO₂ eq./t Al) in 2018. The company continued its efforts to reduce GHG emissions by deploying a variety of initiatives. GHG emissions linked to electricity consumption amounted to less than 0.01 t CO₂ eq./t Al. As required under Quebec's carbon market regulation, GHG inventories are verified annually by an external firm.



CANADIAN ALUMINIUM IS PRODUCED WITH THE LOWEST CARBON FOOTPRINT IN THE WORLD, THANKS TO RENEWABLE, HYDROELECTRIC ENERGY USED FOR ITS PRODUCTION.

Sulphur dioxide

En 2018, sulphur dioxide (SO₂) emissions were 20.6 kg/t Al. The sulphur content of raw materials available on the market generally remained higher than normal — a considerable problem for the entire industry. The impact of this situation was kept to a minimum thanks to excellent practices and operational stability.



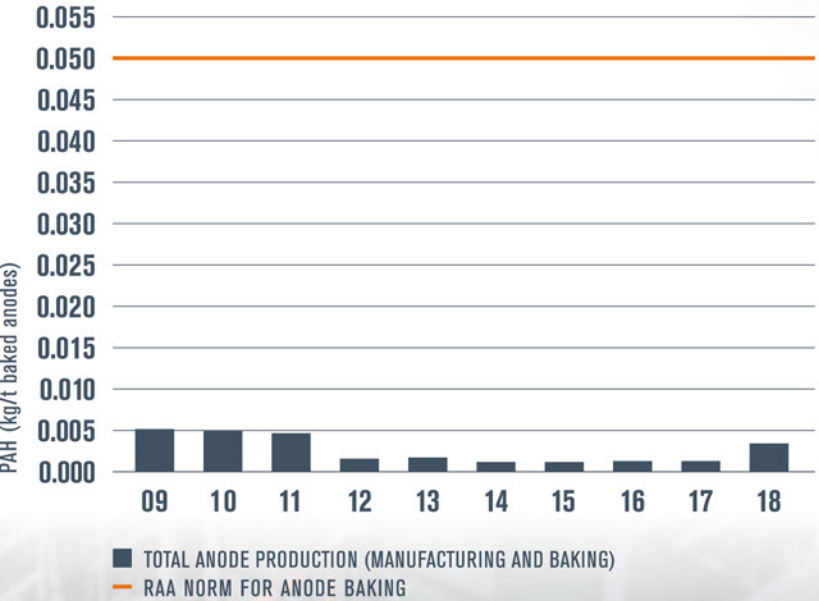
Total fluorides from reduction process

Fluoride emissions in the smelting sector were 0.46 kg/t Al. Among other factors, emissions were influenced by the start-up of a large number of smelting pots as part of the major pot retrofit program under way. Thanks to employees' efforts to maintain the best operational practices and efficient scrubber management, fluoride emissions were kept well below the regulatory limit.



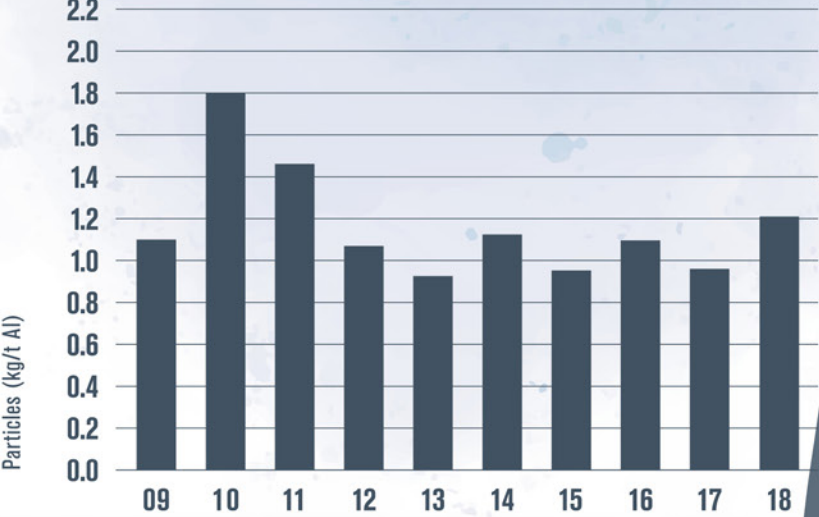
Polycyclic aromatic hydrocarbons (PAH)

Emissions of polycyclic aromatic hydrocarbons (PAHs) at the Anode Plant (manufacturing and baking) were 0.0033 kg/t of baked anodes, well below Quebec's regulatory limit for anode baking (0.05 kg/t of baked anodes).



Particles matter

Most particle emissions originate from roof vents, scrubbers and baghouses. Particle emissions were 1.21 kg/t Al in 2018. This low level may be explained by the reliability of Alouette's scrubbing equipment and the efforts devoted by the team assigned to the equipment.

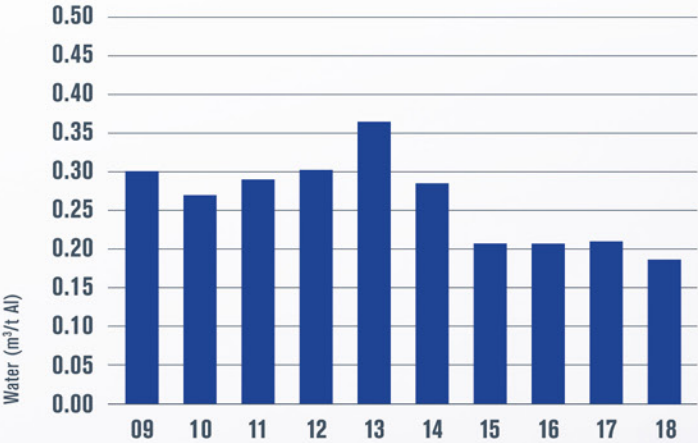


*RAA: Règlement sur l'assainissement de l'atmosphère (The Clean Air Act)

WATER

Water consumption

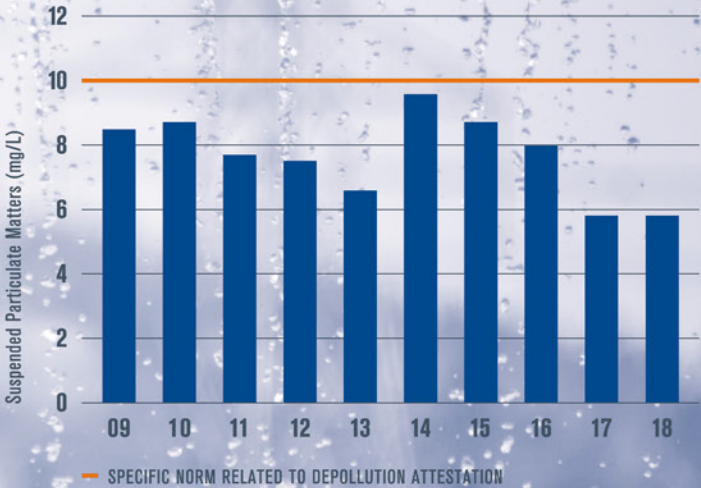
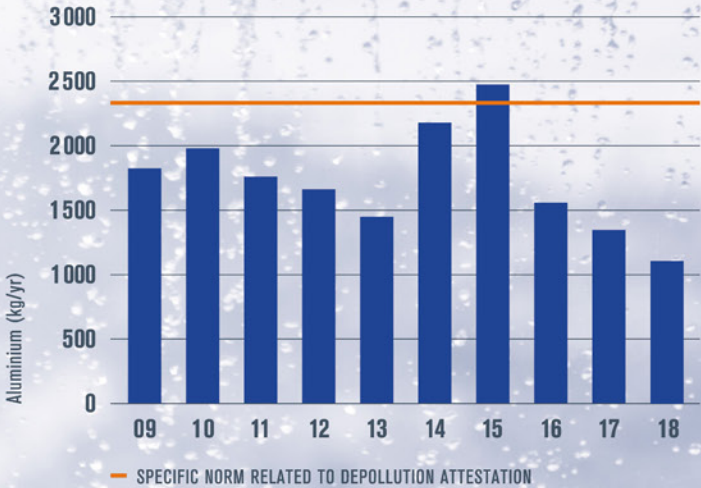
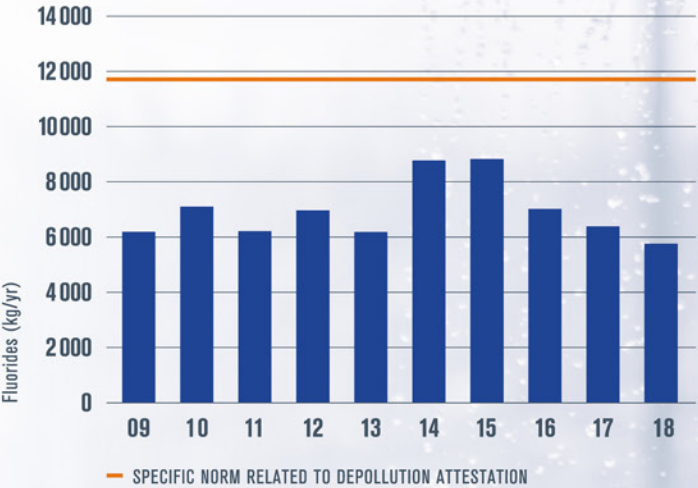
Alouette cares about responsible water management. In 2018, potable water consumption amounted to 0.19 cubic metres per tonne of aluminium. Water was used mainly for consumption and sanitary purposes, as well as to meet process cooling needs. No process water was discharged into the environment. Instead, process water was reused at the fume treatment centres, enabling a substantial savings in terms of water consumption.



IN 2018, ALOUETTE CONTINUED ITS PARTNERSHIP WITH THE SEPT-ÎLES BAY ENVIRONMENTAL MONITORING OBSERVATORY, WHICH GENERATED A GLOBAL PICTURE OF THE SITUATION.

Runoff water

The storm drainage outfall is located at the place where water leaves the settling pond. The system gathers rainwater from the site and buildings. The water undergoes continuous sampling at the outfall. The figures for 2018 point to careful application of the facilities' operational strategy.

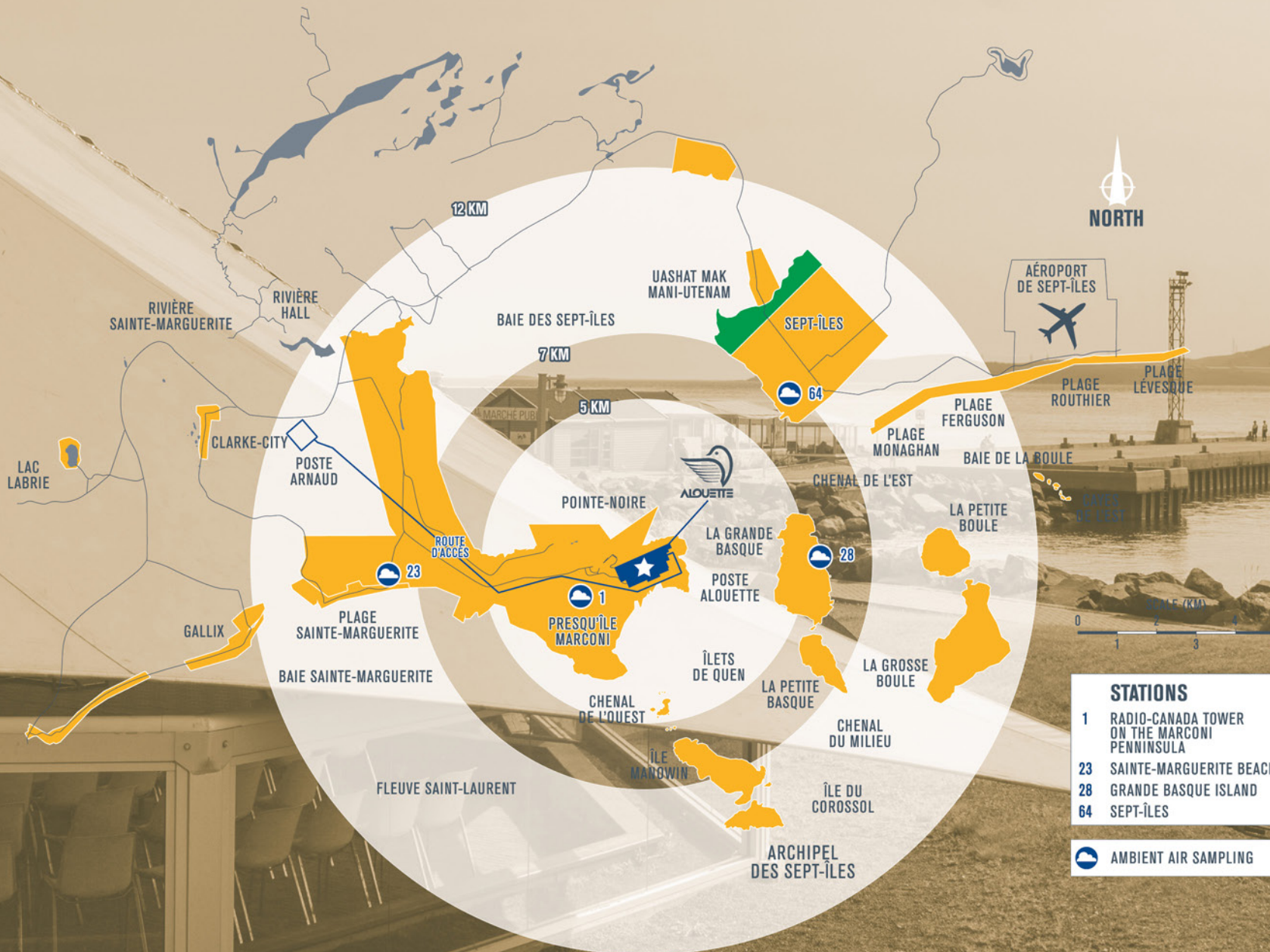
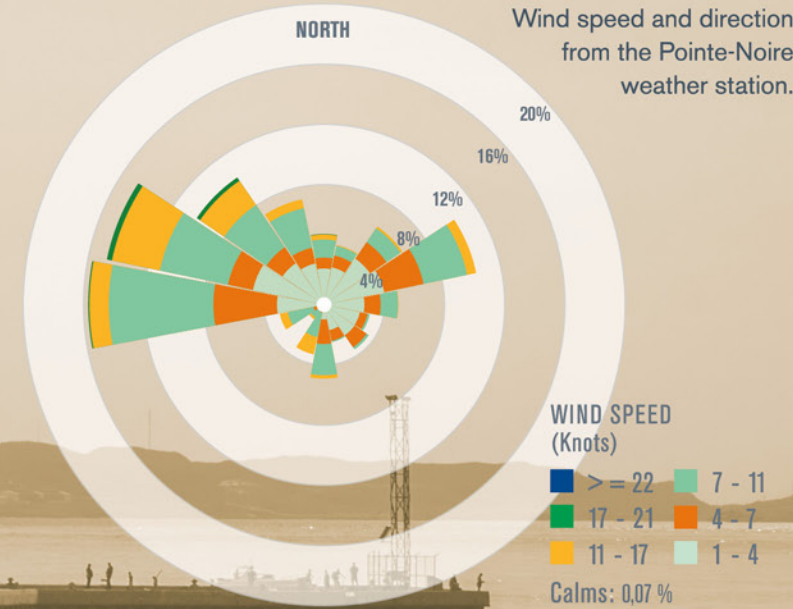


AMBIENT AIR

Alouette has four ambient air sampling stations, one of which is located right in Sept-Iles. The company operates all four stations according to Environment and Climate Change Canada's National Air Pollution Surveillance Program guidelines. Measurements taken at the stations include all air emissions, with no distinction between the respective sources of the airborne contaminants detected. The data contribute to better understanding of air quality in general, as well as the potential impact of Alouette's operations. The parameters measured are chosen together with the competent authorities, taking into consideration the main air emissions generated by aluminium smelters.

WIND ROSE

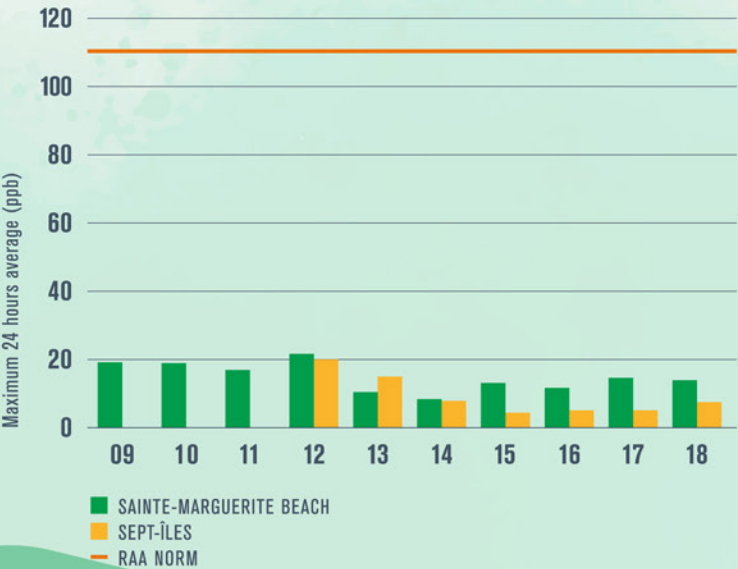
Wind speed and direction from the Pointe-Noire weather station.



MAP OF AMBIENT AIR SAMPLING STATIONS

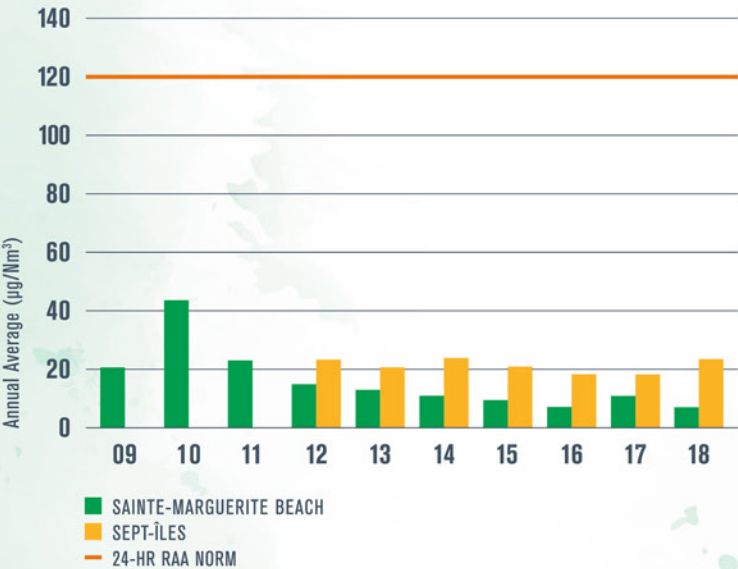
Sulphur dioxide in ambient air

In 2018, sulphur dioxide (SO₂) content in ambient air complied with the standard of an average of 110 ppb over a 24-hour sampling time. The maximum of 400 ppb over a four-minute sampling time was never exceeded during the year.



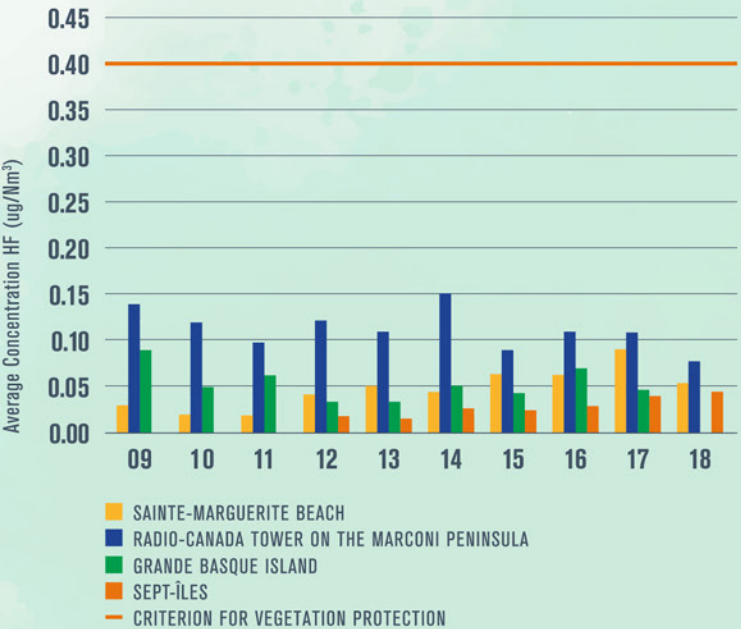
Total particles in ambient air

The chart below shows the annual averages for the different samplings. The 24-hour standard was never exceeded.



Gaseous fluoride in ambient air

Average gaseous fluoride (hydrogen fluoride) concentrations in ambient air remained below the vegetation protection criterion within a radius of 7 km around the smelter, including Grande-Basque Island and Arnaud Avenue in Sept-Îles. Assessments of the condition of vegetation in industrial and non-industrial areas are carried out annually. The latest assessment once again showed that off-site plant life was unaffected by Alouette's operations. Exceptionally in 2018, data collection at the Grande-Baie sampling station was impossible due to an equipment breakdown.



BUDDING VEGETATION IS MORE SENSITIVE TO FLUORIDE. ALOUETTE SCHEDULES THE MAINTENANCE OF ITS SCRUBBING FACILITIES OUTSIDE THIS CRITICAL BUDDING PERIOD. THIS MAINTENANCE IS ESSENTIAL FOR KEEPING THE EQUIPMENT IN GOOD WORKING ORDER, WITH A RATE OF AVAILABILITY AND PERFORMANCE (FLUORIDE AND DUST) SURPASSING 99%.

OPERATIONAL EXCELLENCE

There were already problems with AP40LE technology in 2017, prompting the Alouette team to speed up deployment of a new refurbishment program for its 594 smelting pots. Throughout 2018, the company stepped up its potlining and replacement operations, calling on the knowledge and expertise of employees in several sectors. Essential cooperation by local business partners such as Soudo Technic, Sani-Manic Côte-Nord and Métallurgie Brasco should also be highlighted. A total of 226 pots were idled during the year and 201 were restarted. Operational challenges, including problems caused by a fire and then a heatwave that caused operational delays meant that the team was kept busy even during the summer months. Despite these problems, the company continued to be a reliable partner for its customers, suppliers and even competitors. Indeed, Alouette showed corporate altruism by sharing expertise during crises experienced by other producers, scaling down its power needs as required, or manufacturing and selling anodes. As pointed out above, a number of improvement projects were deployed in both the operational and maintenance sectors. There was also a growing emphasis on “Industry 4.0” principles within the organization. Start-up of a hexapod inspection station at the Anode Rodding Plant at the end of the 2018 was a foretaste of the modernization and robotization strategy slated for deployment over the coming years.



STIMULATING CHALLENGES ON A DAILY BASIS



HIGHLIGHTS

- 581,596 tonnes of aluminium
- Ongoing project involving the new AP40 smelting pot technology
- 108 of 594 pots operated with AP40 technology
- Four production technicians sent to help another aluminium smelter following a power outage
- Promising project for optimizing internal aluminium recycling capacity
- Temporary power reductions to support the Hydro-Québec system
- Several thousand tonnes of anodes sold to another Quebec aluminium smelter

SHAREHOLDERS, COMMUNITY AND PARTNERS

During this watershed year, featuring major changes in Alouette's structure and operations, the company decided to refresh certain aspects of its corporate image while keeping its traditional bird logo. A more contemporary and dynamic visual environment was gradually deployed in 2018. The new corporate website, with its vibrant colours and numerous employee photos, was designed to highlight the company's personality, characterized by a solid team and supported by a welcoming community. The findings of a survey of external perceptions of Alouette released during the year painted a positive picture of how citizens of the Sept-Rivières regional county municipality view Sept-Îles' largest private employer: 97% of respondents had a positive opinion of the company. Feedback gathered during the survey nevertheless prompted Alouette to adjust certain practices. Proud of its history of openness and accessibility, the company continues year after year to welcome hundreds of visitors, tourists and students eager to find out more about the smelter's operations. In the same vein, in 2018, Alouette provided \$540,000 in support for a variety of organizations and causes.



BROAD INVOLVEMENT BY AN EXCEPTIONAL PARTNER

HIGHLIGHTS

- Leading partner of the 40th Orange Alouette Volleyball Tournament
- Support for the 34th edition of the Innu Nikamu Festival
- 66th Alouette Côte-Nord Invitational Curling Bonspiel
- Ongoing partnership with *Maison Alouette* (Sept-Îles community organizations)
- \$210,000 donated with employees to *Opération Enfant Soleil*
- \$109,655 donated with employees to *Centraide Duplessis*
- Partnership worth over \$50,000 with the Gallix ski resort
- Active support by Alouette employees for the Sept-Îles Regional Hospital Foundation
- Support for six *L'Envert de ta cour* greening program projects launched by *Corporation de protection de l'environnement de Sept-Îles*
- Presentation of four *Partenaires d'excellence* awards during a gala evening
- Official presenter of the 25th edition of Sept-Îles' *Vieux-Quai en Fête* summer festival
- Summer tours of the facilities for over 600 visitors
- Welcoming of 160 students interested in exploring metallurgy trades
- Ongoing cultural development agreement and awarding of related scholarships
- Honorary co-chair of *Les Arts et la Ville* symposium



FINANCIAL EXCELLENCE

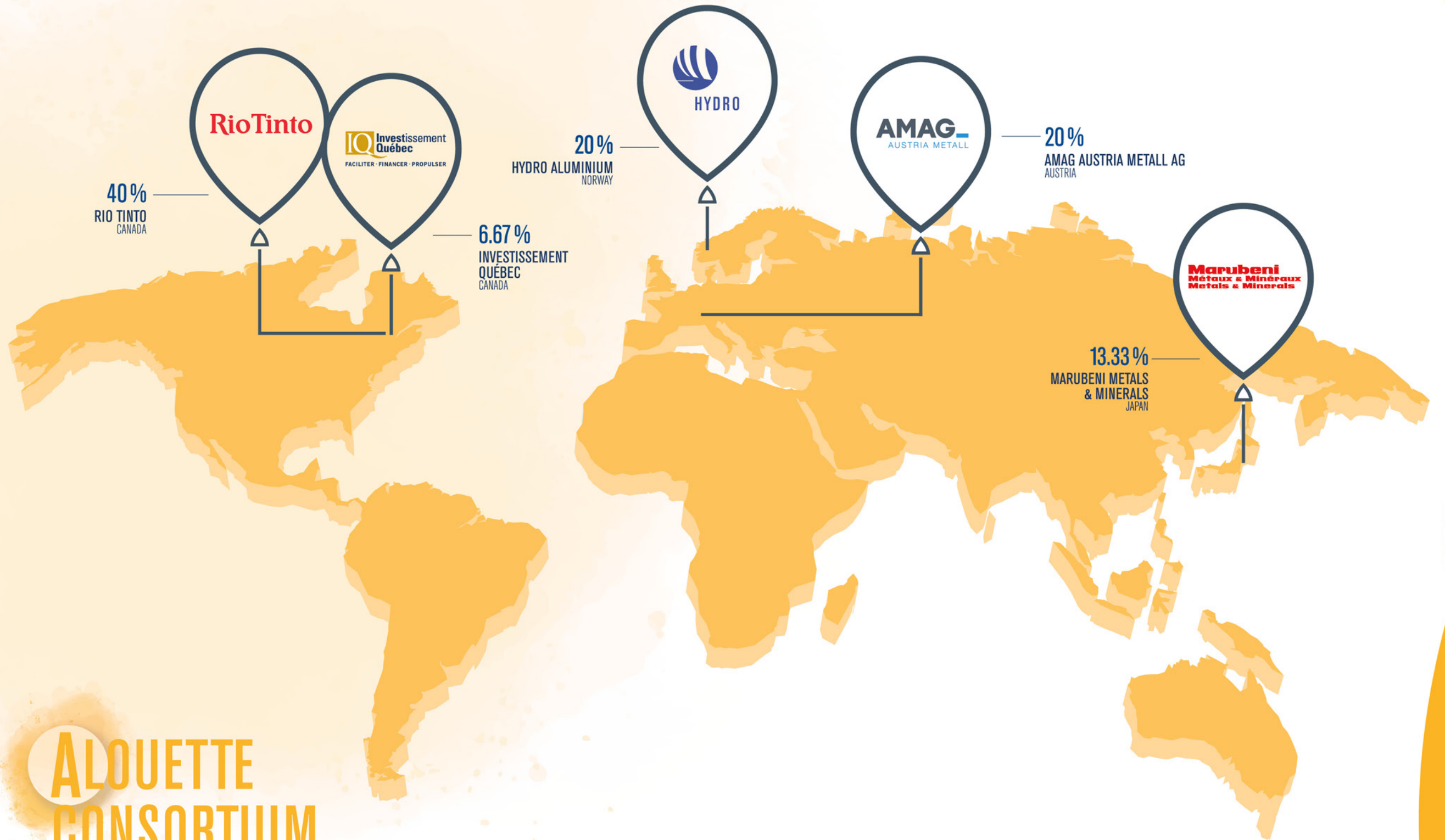
From the financial standpoint, 2018 was undeniably filled with challenges. The price of aluminium rose briefly during the first half of the year and then ended up at less than US\$2,000 per tonne. International geopolitical tensions also had a tangible impact on the North American economy and caused raw material procurement problems. The year was a turbulent time for the alumina market, with a production cutback imposed by the Brazilian authorities on Alouette's key supplier. Instability and shortages meant higher prices for this essential raw material for aluminium production. In this context, the company's internal team and shareholders worked hard to find other sources of alumina and safeguard Alouette's operations. As in previous years, major amounts were invested to keep assets in good condition and modernize certain equipment. The company reiterated its interest in obtaining a natural gas supply, with a view to boosting its competitiveness and reducing greenhouse gas emissions.

HIGHLIGHTS

- Close to \$102 million in goods and services purchased locally
- Variety of optimization projects led by Black Belt employees
- \$1.23 million invested to replace radio communication equipment
- \$330,000 invested to install walkways and equipment in the Paste Plant
- \$200,000 invested to install guardrails
- \$295,000 invested to replace the truck scale
- \$2.8 million invested to upgrade power facilities
- Close to \$1 million invested at the hexapod inspection station
- Major refurbishment of roofs to keep sheet metal from falling to the ground
- Major work in the administrative building machine room
- Deployment of the \$3.2 million vehicle upgrade plan

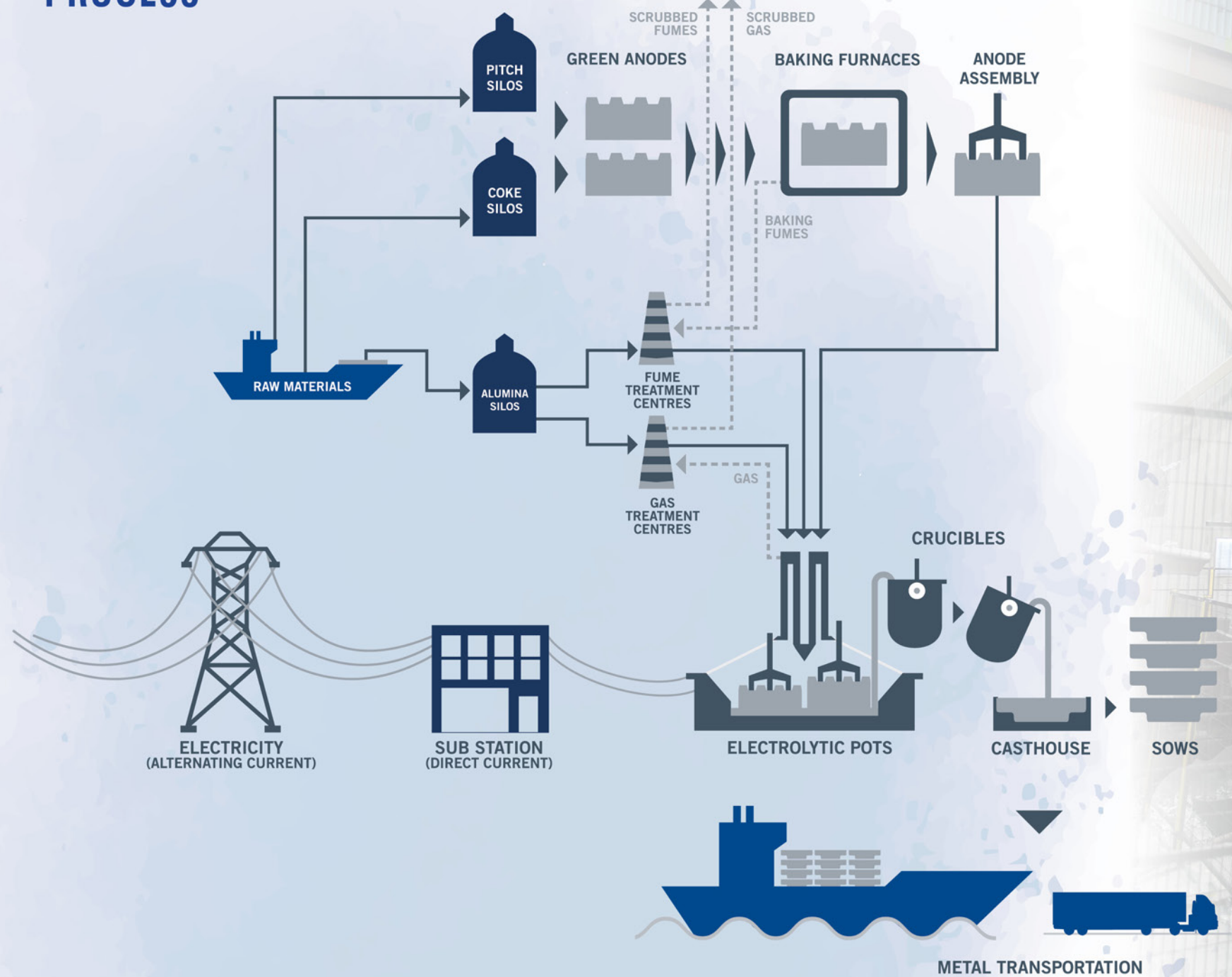
INVESTMENTS WITH A LOCAL IMPACT





**ALOQUETTE
CONSORTIUM**

PRODUCTION PROCESS





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