

Environment

The Alcoa Canada Primary Metals Environment team in Québec is made up of several professionals and technicians. Each smelter has its own Environment team, while a regional team works on common issues. A variety of committees enable the sharing of best practices, which has resulted in the 2008 achievements described below. In addition, we signed three important agreements with government in 2008: an agreement with Environment Canada to reduce polycyclic aromatic hydrocarbons (PAH) at the Baie-Comeau Smelter, and two agreements with the Québec government, one to voluntarily reduce greenhouse gas (GHG) emissions and the other regarding environmental performance. These agreements will orient our activities over the coming years.

Material use and recycling

We pursued our efforts to reduce landfilled waste in 2008. With a 49% reduction compared to the base year of 2000, we came close to achieving our target of 50% thanks primarily to the considerable progress made at the Baie-Comeau Smelter.

Our 2008 efforts to reduce, recover, recycle and reuse enabled us to keep close to 4,500 metric tons of waste from going to landfill compared to the year 2000.

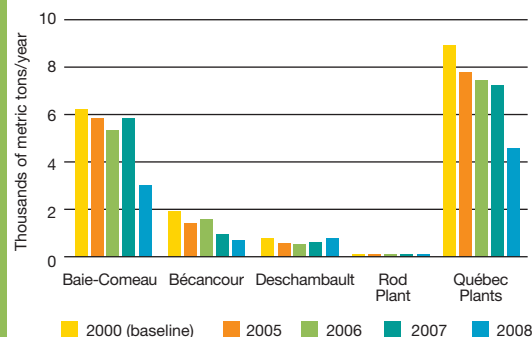
Recycling of dross remains an issue for our facilities because some of our suppliers had to cease operations in 2008.

As part of the "Défi, on recycle" (Recycling Challenge), the Bécancour Smelter (ABI) has been working with other economic stakeholders in the region since 2007 so that a new **waste management coaching program** could be offered to small and medium-sized enterprises (SME) from the Bécancour and Nicolet-Yamaska county regional municipalities.

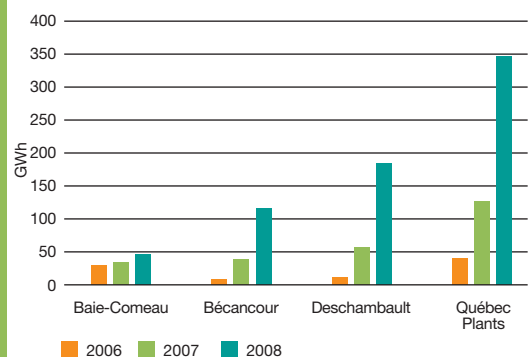
Energy

Our Québec smelters made significant progress in energy efficiency over the last few years, especially in 2008, when we surpassed our targeted savings by five times, with a total of 349 GWh saved. In fact, our Deschambault and Bécancour smelters were both admitted to the Hydro-Québec *Écoélectrique* network in 2008, a network that gathers energy efficiency leaders among Québec corporations.

Landfilled waste excluding spent potliners and casthouse dross



Energy efficiency savings



Water

All wastewater quality parameters measured remained stable, except for suspended solids at the Bécancour Smelter, which increased. Nevertheless, the levels recorded remain well below the limits established by the province of Québec.

Water consumption at our Québec plants remained relatively stable. Due to the current economic situation, Alcoa has had to review its water consumption reduction action plan.

Biodiversity

The Alcoa-wide 10 Million Trees program is very active in Québec, where more than 54,500 trees and shrubs have been distributed since 2001. We have also maintained our partnerships with the Centre de la biodiversité de Bécancour and the new Manicouagan-Uapishka World Biosphere Reserve, within which the Baie-Comeau plant is located. As part of the Alcoa-Earthwatch Institute sponsorship agreement, another of our Québec employees had the opportunity to participate in an Earthwatch expedition in 2008.

Air emissions

Absolute GHG emissions for Alcoa Canada Primary Metals remained stable in 2008, while the intensity of emissions per metric ton of aluminum increased due to operating difficulties at the Söderberg pot rooms at the Baie-Comeau Smelter. This increase was, however, offset by the shutdown of one of the Söderberg pot rooms last November. The Baie-Comeau Smelter's prebake plant became a worldwide benchmark in 2008 within Alcoa for its low perfluorocarbon (PFC) emissions related to anodic effects (0.03 t CO₂eq/t Al).

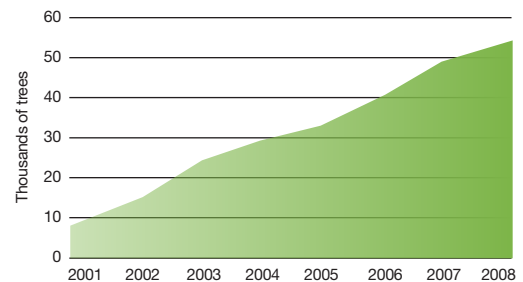
An external auditor confirmed that PAHs emissions at the Baie-Comeau Smelter met the requirements of the agreement with Environment Canada.

Water quality at Québec plants

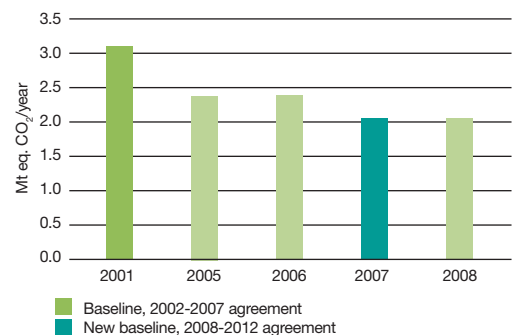
	Fluorides	Aluminum	Suspended Solids	Oils and Grease
Baie-Comeau				
Bécancour				
Deschambault				
Rod Plant	–			

- All results below established limits, average value comparable to previous years
- All results below establish limits, average value superior to previous years
- At least one result exceeds established limits

10 Million Trees program



Greenhouse gas emissions



2008 Objectives	Results	Comments
Zero non-compliances with environmental laws and regulations.	9	
35% reduction in the intensity of perfluorocarbon emissions (PFCs) compared to 2006.	33%	
Signature of a voluntary agreement with the Government of Québec to reduce greenhouse gas emissions (GHG) for the 2008-2012 period.		
Signature of an environmental performance agreement with the Ministère du Développement durable, de l'Environnement et des Parcs for the 2008-2015 period.		
Signature of a voluntary agreement with Environment Canada to reduce polycyclic aromatic hydrocarbons (PAHs) emissions at Baie-Comeau.		
50% reduction of waste landfilled in 2008 compared to 2000.	49%	
Development of a water consumption reduction plan.		The plan has been developed but, in light of the economic crisis, the implementation schedule is being revised.
Completion of energy efficiency projects to achieve total savings of approximately 65 GWh.	349 GWh	
Evaluation of the potential of improving the energy efficiency of casthouse furnaces.		
Evaluation of the potential of using biogas.		Evaluation completed, results inconclusive.

2009 Objectives

- Zero non-compliances with environmental laws and regulations.
- Completion of an environmental impact study for the modernization of the Baie-Comeau Smelter.
- Meet the requirements of the **Environmental Performance Agreement** with the Ministère du Développement durable, de l'Environnement et des Parcs.
- Meet the requirements of the **voluntary agreement with Environment Canada** to reduce polycyclic aromatic hydrocarbons (PAH) emissions at Baie-Comeau.
- Achieve perfluorocarbon (PFC) emissions of 0.43 t CO₂ eq/t Al.
- Complete energy efficiency projects totaling 115 GWh over the 2009-2010 period.
- Reduce waste landfilled by 60% compared to 2000.