ATLANTIC PROVINCES ECONOMIC COUNCIL | CONSEIL ÉCONOMIQUE DES PROVINCES DE L'ATLANTIQUE

Report Card

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Declining Greenhouse Gas Emissions in Atlantic Canada

- Atlantic Canada's greenhouse gas (GHG) emissions fell by 26% between 2004 and 2013, compared with a decline of only 4% nationally.
- The declines in Atlantic Canada reflect a reduction in fossil fuel use for electricity generation along with lower offshore oil and forest manufacturing output, and lower fertilizer use in Prince Edward Island.
- Environment Canada projects a further decline in Atlantic emissions to 2020 with all four provinces on track to reduce emissions by 10% below 1990 levels.

Atlantic Canada's greenhouse gas (GHG) emissions have dropped 26% since peak levels in 2004, compared to a national decrease of only 4%. In 2013, the region emitted 44 megatonnes of carbon dioxide equivalent (Mt CO_2 eq), which accounted for 6% of Canada's total emissions.

Atlantic emissions fell more than the rest of Canada partly due to the region's slower economic growth. Canada's real GDP grew by 18% between 2004 and 2013, compared with a gain of only 10% in the Atlantic provinces. Atlantic Canada's emissions intensity, which measures its emissions per dollar of GDP, also fell by 33% over this period, much faster than the 19% decline nationally.

Emissions by Sector

The electricity sector is a key driver of emissions in Atlantic Canada. Electricity is the largest-emitting sector in Nova Scotia and New Brunswick, representing 40% and 27% of provincial total emissions in 2013, respectively. Emission intensities in the two provinces are higher than the national average as both provinces remain heavily reliant on fossil fuels for electricity. In 2013, Nova Scotia generated 84% of its electricity from carbon-intensive energy sources while this proportion was 37% in New Brunswick. By contrast, Prince Edward Island uses wind power for its own generation, although it relies on imports from New Brunswick for about 75% of its electricity needs. Newfoundland and Labrador uses its abundant hydroelectricity resource to generate 97% of its electricity.

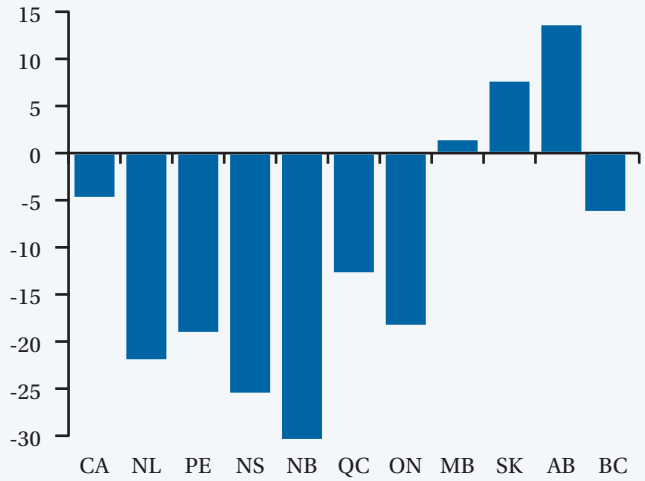
In New Brunswick, emissions from electricity generation fell by 54% between 2004 and 2013, accounting for almost three-quarters of the total drop in provincial GHG emissions. Closure of energy-intensive pulp and paper mills has reduced the total amount of electricity needed in the province, leading to a reduction in the use of fossil fuels for electricity generation. The Dalhousie generating station was closed in 2012, while new pollution control equipment installed at Coleson Cove in 2005, along with reduced use of the plant, has reduced its emissions by over 90% since 2004.

A 34% drop in electricity emissions represented 60% of Nova Scotia's total reduction in GHGs between 2004 and 2013. A drop in demand due to the 2009 recession, paper mill closures, and an increase in wind energy generation facilitated a 20% decline in generation from power stations using fossil fuels.

In Prince Edward Island, emissions from the agriculture sector account for almost 40% of their 19% decline in emissions between 2004 and 2013. Emissions from PEI's agricultural sector have decreased by 33% over this period, compared with only a 2% drop nationally. Most of the decline

Atlantic GHG Emissions Have Declined Sharply Since 2004

Change in greenhouse gas (GHG) emissions, 2004-2013 (%)



Source: Environment Canada, *National Inventory Report*

on the Island is due to lower direct soil emissions, which include N_2O emissions from synthetic fertilizers, manure and crop residue. According to the Census of Agriculture, the number of acres where fertilizer is being used has fallen since 2006.

Newfoundland and Labrador's 21% decline in provincial emissions between 2004 and 2013 reflects a mix of factors. These include: a switch to a lower-emissions fuel and reduced output from the oil-fired Holyrood generating station; a 27% decline in offshore oil production; lower emissions from the Come-by-Chance refinery, partly due to a debottlenecking project; and lower manufacturing emissions due to the closure of newsprint mills.

Looking Ahead

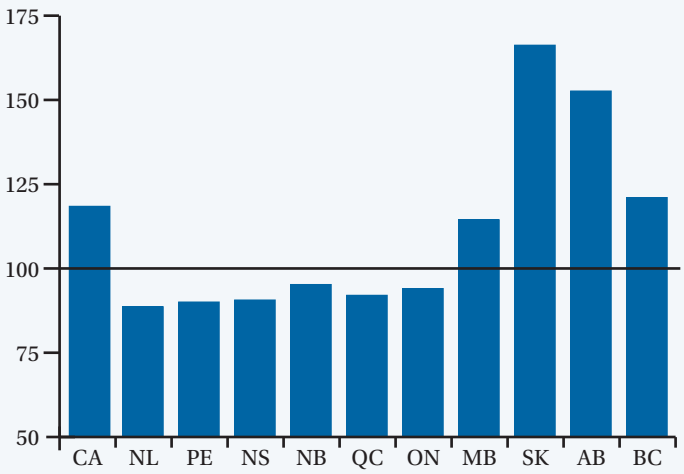
All four Atlantic provinces were part of the 2001 New England Governors and Eastern Canadian Premiers' Climate Change Action Plan, which outlined a goal to reduce regional GHG emissions by at least 10% below 1990 levels by 2020. Newfoundland and Labrador has already surpassed the goal and Prince Edward Island met the target in 2013. Nova Scotia is on track and New Brunswick's 2014 climate change action plan identifies a need for additional actions to achieve the 2020 target.

Environment Canada projects that the Atlantic provinces will reduce emissions to 41 Mt CO_2 eq by 2020, a decline of over 10% from 2012 levels, with Nova Scotia experiencing the biggest decrease in emissions. The projections factor in Nova Scotia's ambitious measures to reduce electricity GHG emissions by 25% by 2020, including demand-side management policies, renewable energy standards and hard caps on electricity emissions. At least one of the four units at the coal-fired Lingan generating station are expected to shut down by 2020; Lingan was the single largest emitter of GHGs in Nova Scotia in 2013. The closure of the Dartmouth oil refinery and declining offshore natural gas production will also contribute to a drop in Nova Scotia's emissions. These decreases could be offset if one or more of the proposed liquefied natural gas (LNG) export facilities goes ahead.

In Newfoundland and Labrador, the expected closure of the oil-fired Holyrood generating station by 2021 would largely offset higher emissions from the Hebron offshore oil project and the Vale underground nickel mine. Low iron ore prices are currently delaying any other new mine developments.

Atlantic GHG Emissions Are Below 1990 Levels

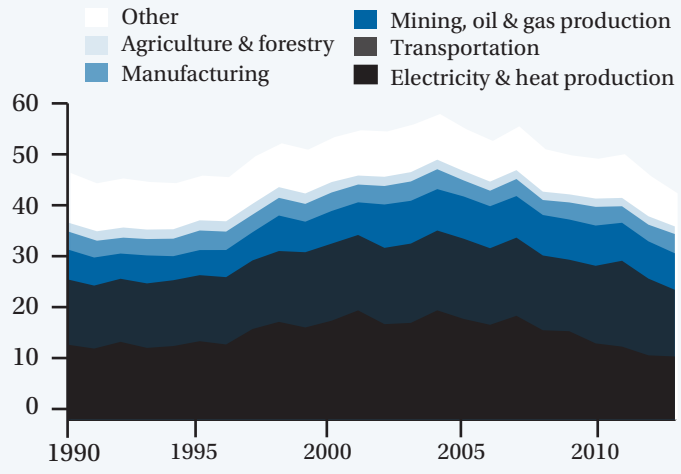
GHG emissions, 2013 (Index, 1990=100)



Source: Environment Canada, *National Inventory Report*

Lower Fossil Fuel Use Driving Down Atlantic Emissions Since 2004

GHG emissions (Mt CO_2 eq)



Source: Environment Canada, *National Inventory Report*