

2017 UPDATE OF THE REGIONAL CLIMATE CHANGE — ACTION PLAN —

BUILDING ON SOLID FOUNDATIONS

Conference of the New England Governors
and Eastern Canadian Premiers

August 28, 2017

Charlottetown, Prince Edward Island



NEW BRUNSWICK



NEWFOUNDLAND
AND LABRADOR



NOVA SCOTIA



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ISLAND



QUEBEC



CONNECTICUT



MAINE



MASSACHUSETTS



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RHODE ISLAND



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Executive Summary

The Conference of New England Governors and Eastern Canadian Premiers (NEG-ECP) adopted a regional *Climate Change Action Plan (CCAP)* in 2001. The two main objectives of the regional *CCAP* were to reduce greenhouse gas (GHG) emissions and to reduce the impacts of climate change through adaptation. This plan presented a long-term vision for GHG emissions reductions with regional targets set for 2010 of bringing regional GHG emissions back to 1990 levels and to reduce by 2020 regional GHG emissions by 10% below 1990 level. As well the plan provided for additional longer term goal setting.

The *CCAP* was the first, international, multi-government effort to tackle climate change to be officially adopted in the world. Beyond representing a collaborative effort among jurisdictions of two countries, the action plan represented the first adopted by both governors and premiers to tackle climate change and present a long-term vision on the issue.

The region achieved its 2010 GHG emissions reduction goal by reducing its dependence on fossil fuels and increasing its regional gross domestic product (GDP), nevertheless, accomplishing the long-term vision of the *CCAP* still requires fundamental changes in the way the region produces and uses energy.

In 2015 the governors and premiers adopted Resolution 39-1 which presented a reduction marker for 2030 of reducing regional GHG emissions by at least 35 to 45% below 1990 levels. The resolution also provided direction aimed at updating the *CCAP* to help the region meet the mid- and long- term GHG reduction goals.

The primary focus of this updated plan is to present the achievements since its adoption in 2001 as well as outline a framework of possible joint actions to advance our common goal to reduce regional GHG emissions. A secondary focus is to highlight the need for regional collaboration on adaptation to climate change. The actions presented in this framework represent a menu of options and, while committing to working collaboratively, each jurisdiction will follow its own path to reducing its emissions in a manner consistent with its opportunities, challenges and priorities.

The Climate Change Steering Committee (CCSC), under the guidance of the Committee on the Environment (COE), worked in collaboration with various sector standing committees and working groups to update the regional *CCAP*.

Areas of focus for future possible actions were identified as follows:

- Energy Supply and Transmission
- End-Use and Distributed Energy
- Transportation
- Natural Resources
- Cross-Cutting
- Government Leadership

These updates, found in the 2017 regional *Climate Change Action Plan - Building on Solid Foundations*, include a summary of regional achievements as well as a list of possible regional action. This reaffirms that climate change remains a concern for the region, and that planning for climate change offers opportunities for economic growth. Regional collaboration on climate change also supports and compliments other regional, state, provincial, national and international initiatives currently being implemented.

2017 Update of the Regional Climate Change Action Plan – Building on Solid Foundations

Foreword

Since 1973, the New England Governors and Eastern Canadian Premiers have met regularly to advance the interests of the states and provinces. The aim of their conference is to develop networks, take collective action, engage in regional initiatives, undertake research, and increase public awareness of shared interests. The Conference highlights a unique and highly-effective international relationship of the 11 jurisdictions which builds on historical and family ties.

The landmark 2001 regional *Climate Change Action Plan* (CCAP) set clear regional GHG emissions reduction targets for 2010, 2020, namely:

- To bring regional GHG emissions back to 1990 levels by 2010;
- To reduce regional GHG emissions by 10% below 1990 levels by 2020; and
- To reduce regional GHG emissions sufficiently to eliminate any dangerous threat to the climate.

In 2007, the governors and premiers adopted Resolution 31-1 which set the long-term regional GHG reduction goal to reduce regional GHG emissions by 75 to 85 per cent below 2001 levels by 2050.

Since its implementation, the *CCAP* has evolved continuously with the adoption of progressive environment, climate change, energy and transportation related resolutions and reports. These documents have expanded the scope of activities outlined in the action plan which has led to a positive impact on the region's GHG emissions profile.

In addition, the governors and premiers adopted Resolution 39-1 at their 39th annual conference to include a regional reduction marker to reduce regional GHG emissions by at least 35 to 45% below 1990 levels by 2030. The resolution included direction for the NEG/ECP committees to work collaboratively to identify a common set of regional environmental, transportation and energy strategies, policies and measures where GHG reductions are possible. This update is submitted to fulfill that directive.

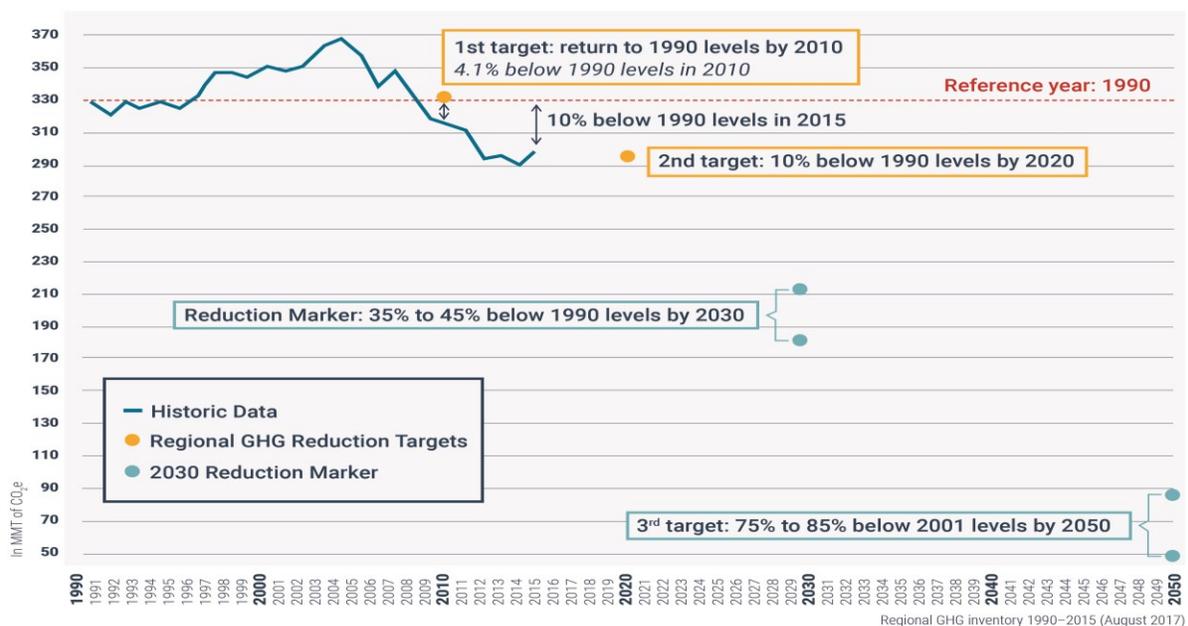
Achievements

Data collected for the 1990–2015 regional GHG inventory¹ shows that the region exceeded its 2010 target recording a 4.1% reduction in GHG emissions.

In 2015, regional GHG emissions were at 10.4% below 1990 levels, exceeding the regional target set for 2020 (see Figure 1).

The region's successful actions have attracted attention around the globe, as confirmed by its first **Low Carbon Leader awards** presented in 2005 by Bloomberg and The Climate Group, as well as its second award for **Leadership in Fighting Climate Change** presented by The Climate Group in 2013.

FIGURE 1 – REGIONAL GHG EMISSIONS FOR 1990-2015,
2020 TARGET AND 2030 MARKER

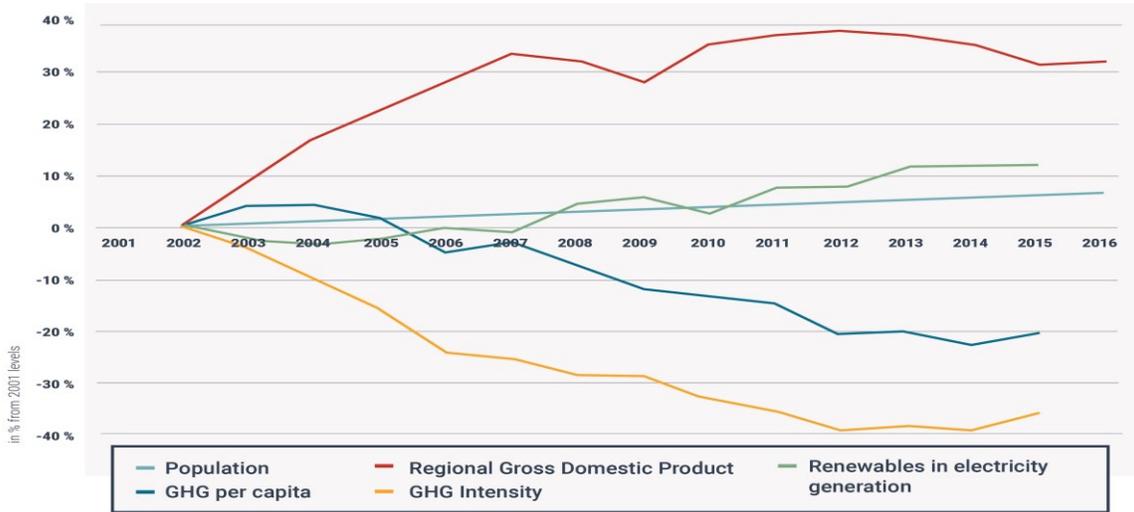


These achievements cannot be attributed to any single jurisdiction or specific action: policies, regulations and collaborative efforts played key roles. Since the adoption of the action plan, the following trends can be highlighted (Figure 2):

- The population of the region grew by more than six per cent while GHG emissions per capita decreased by 21%;
- The economy grew by 32% through 2015, while numerous climate change policies and measures were being implemented in the region;
- The GHG intensity of the economy (measured by dividing GHG emissions by GDP) decreased by 36%; and,
- The region increased its generation of renewable energy by 12% between 2001 and 2015, with a non-hydro renewable generation increasing by 78%.

¹ For the provinces of New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island and Québec, the National Inventory Report from Environment and Climate Change Canada is used to produce the regional GHG inventory. For the New England States, inventories are produced by the states using Environmental Protection Agency SIT software.

FIGURE 2 - REGIONAL GHG EMISSIONS, REGIONAL GDP, ENERGY CONSUMPTION, AND FOSSIL FUEL CONSUMPTION AS COMPARED TO 2001 LEVELS



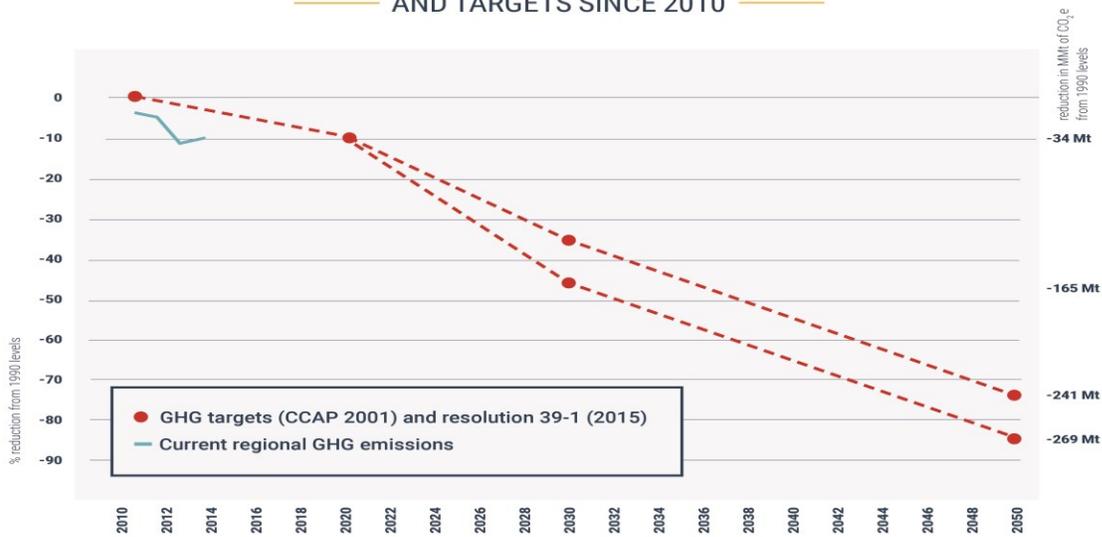
Source: Regional GHG inventory 1990-2015 (August 2017); www.bea.gov; Statistics Canada Tables 384-0038/128-0016; U.S. Energy Information Administration Table CT2

Regional Targets

A preliminary data projection suggests that the pace of the region's current GHG emissions reductions must accelerate (Figure 3) in order to achieve the reduction goals.

This will require determining the most appropriate strategies, policies, and measures – which may be undertaken individually and collectively – that can launch transformational changes in the production and use of energy and other GHG emitting sources.

FIGURE 3 - REGIONAL GHG EMISSIONS AND TARGETS SINCE 2010



Source: Regional GHG inventory 1990-2015 (August 2017)

In order to meet the 2030 reduction marker, as a region, the following are possible areas of action:

- Accelerate the development and deployment of energy-efficient and low-carbon technologies;
- Encourage long-term planning regarding investments in low-carbon energy projects;
- Grow the public's understanding of sustainable practices;
- Encourage early action to optimize energy-smart investment strategies; and
- Ensure that the businesses operating in the region can capitalize on opportunities arising from the transition to a low-carbon economy.

In this document, the term low-carbon applies to primary energy sources (e.g., renewable electricity generation) as well as energy-efficient technologies (e.g., highly efficient heat pumps).

Building on Solid Foundations – An Evolving Plan

A full understanding of the region's past and present GHG emission profile provides an important step toward assessing the success of mitigation measures and identifying possible cost-effective reduction opportunities in all sectors of the economy. The list of possible regional actions presented above offers pathways for the region to accelerate the reduction of GHG emissions.

While this update focuses on addressing the causes of climate change, each jurisdiction recognizes the importance of adaptation and has begun to prepare for climate change impacts. It is essential that states and provinces assess their individual vulnerabilities and needs, but it will also be necessary to collaborate regionally by sharing climate data and risks, incorporating climate information and adaptation strategies into planning and decision making, and working across the region to build resilience.

By adopting the 2017 update, the jurisdictions maintain a commitment to:

- Support a comprehensive regional framework to advance our common goal to reduce GHG emissions;
- Achieve the regional mid- and long-term emission reduction marker and goals;
- Uphold and increase the level of engagement set into motion in 2001 and to implement, in conjunction with their own plans for reducing GHG emissions, a process that includes disclosure of progress and information-sharing.

It is important to note that although the targets, strategies, policies, and measures outlined are for the New England states and Eastern Canadian provinces as a region, they may not be achieved in equal measure by each jurisdiction. Each jurisdiction commits to working collaboratively in order to reach the regional targets; however, the regional CCAP does not create legally binding obligations on the participating governments.

Areas of Focus and Possible Regional Actions

1. *Energy Supply and Transmission*

Addresses opportunities to reduce the carbon intensity of the regions' energy supply portfolio. This includes options that deal with electricity generation, the transmission of electricity and natural gas, and delivered heating fuels.

Possible regional actions could include:

- 1.1 Low-Carbon Electricity Supply Targets:** Establish an appropriate target for cost-effective low-carbon electricity supply for 2030 to meet future electricity demand across sectors.
- 1.2 Low-Carbon Non-Electric Energy Supply Targets:** Establish an appropriate target for cost-effective low-carbon non-electric energy supply for 2030.
- 1.3 Track Regional Low-Carbon Energy Supply:** Evaluate progress towards achieving the regional low-carbon energy supply targets.
- 1.4 Support Low-Carbon Non-Electric Energy Supply:** Enable the expansion of low-carbon fuel supply and consumption in order to reduce GHG emissions associated with the built environment in the region.
- 1.5 Enhance Energy Transmission and Distribution:** Reduce GHG emissions associated with transmission of all energy types including electricity and natural gas.

2. *End-Use and Distributed Energy*

Focuses on regional opportunities to reduce GHG emissions associated with energy consumption of all types through energy efficiency and conservation, and through distributed generation.

Possible regional actions could include:

- 2.1 Energy Efficiency and Conservation Targets:** Track the region's energy efficiency and conservation targets and efforts to reduce end-use energy consumption in buildings and industry.
- 2.2 Advanced Standards and Codes:** Investigate opportunities to advance regional energy efficiency standards for equipment and appliances. Consider energy codes for new construction and major refurbishment of buildings.
- 2.3 Energy Efficiency and Conservation Programs for Existing Buildings and New Construction:** Support regional efforts to cost-effectively reduce GHG emissions from end-use energy consumption through efficiency, demand side management, and other load-reduction efforts, such as low-carbon energy resources.

- 2.4 Expand Regional Distributed Generation:** Support regional efforts to cost-effectively reduce GHG emissions from end-use energy consumption by expanding the regional supply of distributed power sources and low-carbon heating fuels.
- 2.5 Utilize Electricity Rates and Rate Design:** Collaborate on opportunities to promote the use of electric rate designs that foster peak demand reductions and the adoption of GHG mitigation technologies such as renewable energy and energy efficiency.

3. Transportation

Includes regional opportunities that increase transportation choices and accessibility, and that promote the transition to low-carbon vehicle technologies and fuels.

Possible regional actions could include:

- 3.1 Mode Efficiency and Intermodality:** Enable efficient movement of passengers and freight by ensuring interconnections between sustainable forms of transportation are available and cost effective (e.g. bike to bus to commuter rail; ship to train to truck).
- 3.2 Low-Carbon Transportation:** Promote the transition to low-carbon fuels, and advanced technology, zero emission vehicles.
- 3.3 Fuel Economy and Emissions Reductions:** Support continual improvements in federal requirements related to the fuel economy and emissions profile of passenger vehicles, heavy duty trucks and buses, as well as in the marine, rail, and aviation sectors.

4. Natural Resources

Considers options that could enhance the amount of carbon being captured and stored in agricultural and forested lands, as well as freshwater, coastal and marine systems. This section also considers options to encourage sustainable materials management.

Possible regional actions could include:

- 4.1 Sustainable Forest Management:** Enhance sustainable forest management practices, programs that maintain or increase net-carbon storage, and reduce conversion of forested land.
- 4.2 Biomass Utilization:** Support the sustainable utilization of woody biomass as a renewable energy alternative to the use of fossil fuels.
- 4.3 Sustainable Agricultural Practices:** Encourage opportunities for increasing, conserving, and restoring agricultural carbon sinks and reservoirs, and the reduction of agriculture-based GHG emissions.
- 4.4 Blue Carbon Management:** Manage blue carbon resources to preserve and enhance their existing carbon reservoirs.

- 4.5 Methane Management:** Encourage best practices that reduce GHG emissions associated with waste and wastewater management.
- 4.6 Sustainable Materials Management / Resource Recovery:** Encourage individuals, businesses, governments, and educational institutions to take action to lower GHG emissions by adopting sustainable materials management practices.

5. Cross-Cutting

Reflects that the areas of focus noted above not only have many unique attributes, but they are also interconnected in a number of ways. This section takes into account options that affect multiple sectors to ensure that mitigation actions made within one sector do not negatively affect the capacity to reduce GHG emissions in another sector.

Possible regional actions could include:

- 5.1 Inventorying and Modeling:** Assess progress towards achieving the regional GHG emissions reduction marker and targets.
- 5.2 Innovation and Research:** Enhance development and deployment of low-carbon innovation technologies and processes in order to take advantage of economic opportunities offered by an emerging low-carbon economy.
- 5.3 Market-Based Mechanisms:** Maintain a leadership role in North America in development of market-based programs designed to create clean growth economic opportunities for the region and enhance its overall competitiveness nationally and internationally.
- 5.4 Promote Electrification of Non-Electric Power Sectors:** Lower the carbon intensity of the economy at a faster rate than business as usual by accelerating the displacement of fossil fuel combustion technology with more cost-effective low-carbon electric alternatives.
- 5.5 Economic Development and Innovation** Support a consistent set of policies that provide businesses, industry, and the regional market place with clear market signals needed to encourage long-term planning and investments in the emerging low-carbon economy.
- 5.6 Education and Outreach:** Promote dialogue on climate change, fossil fuel consumption and energy use.

6. Government Leadership

Addresses the opportunities to use less energy and transition to low-carbon fuels and technologies across government buildings, fleets, and operations. This section takes into account the importance of government leadership and the benefits of working collaboratively to reduce GHG emissions.

Possible regional actions could include:

- 6.1 Develop and Track Targets:** Continue work on regional GHG emissions reduction targets for the public sector and report on progress towards achieving them.
- 6.2 Building Performance:** Reduce end-use energy consumption and demand of in-state and provincial-owned and occupied buildings, both existing and new construction.
- 6.3 Fleet Performance:** Reduce GHG emissions related to state and provincial vehicle operations.
- 6.4 Education and Outreach:** Work cooperatively among the member jurisdictions, and in partnership with governmental organizations in the region, to continue to inform the public about climate risks and impacts, the importance of reducing GHG emissions, and the opportunities arising from the low-carbon economy.

Going Forward

The COE and CCSC, in collaboration with the other NEG-ECP standing committees, will utilize the framework in this update and continue to work on options, measures, and policies to help the region achieve the GHG emissions reduction targets.

This may include pursuing new and additional strategies, policies, and measures by adopting resolutions that further advance the region's GHG emission reductions in a variety of sectors.