New Nouveau Brunswick
Be...in this place • Être...ici on le peut

Climate Change Action Plan 2007-2008 Progress Report

THE FOUNDATION YEAR

Be smart! *Take Action* on Climate Change

September 2008

Table of Contents

Introduction

In June 2007, the Province of New Brunswick released its *New Brunswick Climate Change Action Plan* (NBCCAP), an important step to address climate change and its effects in this province. The focus of the first year of implementation was on laying the foundations for meeting the goals of the NBCCAP. More results will be realized over the duration of the implementation of the plan. Several departments share the responsibility of implementing the initiatives in the plan, and the Department of Environment will continue to monitor and report on the progress of the NBCCAP.

The NBCCAP outlines the approach New Brunswick is taking to **reduce greenhouse gas (GHG) emissions** in New Brunswick and to **manage our adaptation response to climate change impacts** through a series of objectives and policy actions, as well as through **engagement of stakeholders and the general public**. Reaching the objectives of the NBCCAP will be vital not only to the continued economic and social well-being of every New Brunswicker, but also to environmental sustainability in our province. Furthermore, these achievements will contribute to the sustainability of our communities, which must remain strong in order to continue driving New Brunswick's progress towards self-sufficiency by 2026.

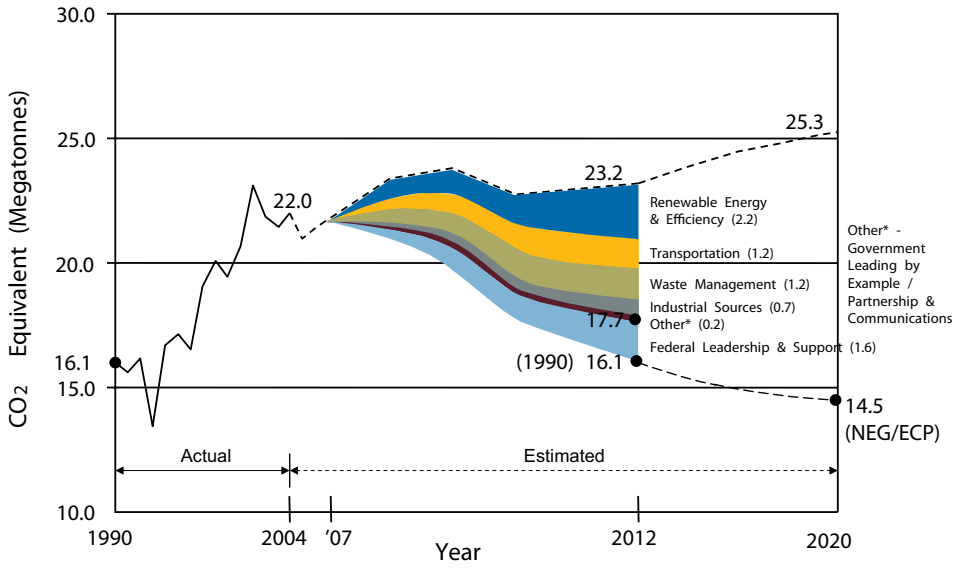
As a result of the New Brunswick-led initiatives in the plan, GHG emissions will be reduced in the province by 5.5 megatonnes (Mt) annually in 2012. With the addition of federal initiatives, GHG emissions will be reduced to 1990 levels by 2012.

Annual Greenhouse Gas Emission Reductions in 2012

Potential for GHG Reductions and Avoidance	Estimated Reductions CO_2 eq.
Energy Efficiency and Renewable Energy	2.2 Mt
Transportation	1.2 Mt
Waste Management	1.2 Mt
Industrial Sources (including Federal Government partnerships)	0.7 Mt
Other - Government Leading by Example - Partnerships and Communications	0.2 Mt
Total Reductions - Provincial	5.5 Mt
Federal Initiatives	1.6 Mt
Total Reductions – Provincial and Federal	7.1 Mt

The projected GHG reductions demonstrate progressive and cumulative benefits from the New Brunswick-led actions as well as federal leadership and support.

Projected Greenhouse Gas Emissions Scenarios in New Brunswick



References – National Inventory Report: 1990-2004/NB Departments of Energy & Environment

Actions to Reduce or Avoid Greenhouse Gases

Human activities, such as consumption of fossil fuels, have climatic effects that are being observed worldwide. Unless current emission trends can be reversed, there will be harmful effects on all aspects of the environment, economy and society. Provincial actions to reduce or avoid greenhouse gas (GHG) emissions include an increased proportion of greenhouse gas-free energy, improvements in the management of energy use, fuel switching, improved waste management, and expansion of the ozone-depleting substances regulation to include gases that contribute to climate change.

Energy Efficiency and Renewable Energy

The Province is fostering the availability of cleaner energy options, and is helping to implement strategies, initiatives and programs to promote energy efficiency.

Progress

- Efficiency NB expanded its suite of energy efficiency programs and initiatives to include offerings in the residential, commercial and industrial sectors. During this period, Efficiency NB met its industrial program participation target six months ahead of schedule with 10 of the province's largest industrial facilities joining the program.
- In partnership with Efficiency NB and the Department of Social Development, the Department of Environment, through the New Brunswick Climate Action Fund, made investments in the Low Income Retrofit Program to provide access to energy efficiency retrofits for low-income homeowners.

- Efficiency NB commenced development of a building energy labelling pilot project in New Brunswick. Building labelling promotes an awareness of energy efficiency in buildings and is also a useful tool to support energy codes.
- NB Power has committed to contract 400 megawatts of wind-generated electricity by 2010. This past year, it announced the development of four wind farms in New Brunswick totalling about 250 megawatts (enough power to meet the needs of 40,000 homes).
- The Department of Energy initiated a study to develop a Community Wind Energy Program for New Brunswick.
- An analysis of the potential for tidal power generation has been completed and a Strategic Environmental Assessment was undertaken to further assess opportunities.
- The Department of Natural Resources released a new policy on allocation of Crown lands for research in support of in-stream tidal power generation. Following a call for proposals, Crown land leases were offered to Irving Oil, in partnership with the Huntsman Marine Centre, to explore tidal power generation in the Bay of Fundy.
- The Department of Natural Resources advanced work on a forest biomass policy for Crown land.
- The Department of Energy continued to lead an interdepartmental committee to assess the opportunities for bio-energy from the forest, agricultural sources and waste material.
- The Department of Supply and Services implemented energy-saving technologies in government facilities.
- The K.C. Irving Chair in Sustainable Development at the Université de Moncton provided assistance to community groups, municipalities, and non-profit organizations in promoting the development of wind and other renewable energy sources in New Brunswick.

Transportation

The transportation sector accounts for 25 per cent of New Brunswick's GHG. The Province is working at improving transportation options and helping consumers make informed decisions about vehicles, fuels and transportation in general.

Progress

- The Province continues to work with various municipalities with respect to the enhancement of public transit services. From the $40-million federal funding allocation, investments have been made to enhance public transit operations in Fredericton, Moncton and Saint John. In addition, a funding program was established for new transit services in other cities as well as a rural-to-urban commuter service.
- The Department of Transportation continued to develop and implement an Intelligent Transportation Strategy that promotes the improvement of traffic flow of goods and people by improving border crossings and security, commercial vehicle flow (weigh-in-motion scales), inter-modal freight transportation, operations and facilities management, as well as by providing better information to travellers.
- The Department of Transportation introduced a new policy that allows the use of new generation, fuel-efficient, single wide tires, and truck-trailer trains or long combination vehicles to operate under special permit on designated New Brunswick highways.
- Public and private transportation initiatives that improve efficiency and help reduce emissions from the transportation sector, such as the installation of auxiliary power units on owner operator trucks and of aerodynamic skirting on van trailers, are being implemented.

- Two facilities in the province have developed biofuel related projects and a provincial inter-departmental committee on biofuels, led by the Department of Energy, continued to assess further opportunities related to the production and use of biofuels in New Brunswick. A biodiesel trial project was commenced during this period.
- The Department of Local Government worked towards the establishment, with the three provincial municipal associations, of a steering committee to develop a public transportation strategy to ensure New Brunswickers have convenient alternatives to their private vehicles and that their needs for mobility are met.

Waste Management

The Province has been promoting improved waste management options, better recycling and composting systems, the reduction of waste at the source, advocating increased recycled content in products and packaging, Extended Producer Responsibility, and reducing GHG emissions from landfill operations.

Progress

- Investments were made in New Brunswick solid waste commissions to increase waste diversion and reduction activities and to promote awareness.
- Methane management systems have been installed at two of the six engineered provincial landfills. Another landfill is in the final stages of installing a system and others are exploring such opportunities.
- The *Ozone Depleting Substances Regulation* was amended to manage ozone-depleting replacement substances. Ozone-depleting replacement substances are potent greenhouse gases, with a typical global-warming potential 1,300 times that of CO_2.

Industrial Sources

The Province has been working with the federal government to help ensure there is fairness and consistency in implementing emission standards and to address emissions from industrial facilities by focusing on energy efficiency and fuel-switching actions.

Progress

- NB Power commenced refurbishing the Point Lepreau nuclear energy electricity-generating facility to restore the facility back to its originally designed capacity of 635 megawatts to displace more fossil fuel generation. The province also undertook a feasibility study for the construction of a second nuclear reactor at Point Lepreau.
- An interdepartmental committee on carbon sequestration was successful in having forest carbon management opportunities recognized in the design of the federal government's GHG regulatory framework and is working with other provinces to further develop this opportunity.
- Investments were made with Atlantic Hydrogen Inc. to undertake a project that will demonstrate how companies can use Carbon Saver™ technology.

Government Leading by Example

The Province will use the leadership position of the public sector to demonstrate best environmental practices and encourage environmentally sustainable practices within government and beyond.

Progress

- Provincial green vehicle procurement and fleet vehicle anti-idling policies have been implemented.

- The Department of Transportation commenced a hybrid school bus project, a project to replace the conventional diesel engines in two cable ferries with fuel efficient engines, and a project to replace incandescent flashing warning lights with Light Emitting Diodes (LED).
- The Department of Supply and Services has undertaken work to reduce energy use in public buildings and introduce more environmentally friendly practices in the care and maintenance of government properties. Several new provincial building projects have been and are being undertaken that use LEED (Leadership in Energy and Environmental Design) strategies to benchmark their projects against standards for energy use and GHG emission norms. Examples include the District Ranger Offices in Bathurst and Florenceville, the new Upper River Valley Hospital, and the Havelock Elementary School. These building projects are completed and operating.
- A number of projects currently being developed are also targeting LEED silver designations. The Saint John Justice Complex, the Department of Natural Resources ranger office in Richibucto, the new Eleanor Graham School in Rexton, and the new Moncton North School in Moncton are all examples of projects being developed using the LEED agenda. Some of these projects are being developed using private partners to finance, build, maintain and operate the facilities.
- In an effort to reduce GHG emissions, the Department of Environment has played a leadership role in ensuring that their conferences are carbon-neutral with the intention that this practice will be adopted by others.

Adapting to the Impacts of Climate Change

New Brunswick must not only reduce greenhouse gas (GHG) emissions, but also be prepared for the effects of climate change. Climate change has already had impacts on New Brunswick communities and further changes are unavoidable. The province must prepare for the effects of climate change by understanding the extent of the changes, the risks they pose and the opportunities they can present. While increasing awareness and understanding of appropriate adaptation strategies and actions that can be undertaken, the adaptation response must also be a combination of education, technological innovation, regulatory actions and achievable targets.

Development Policies

The Province must con-sider development that builds on principles of social, economic and environmental sustainability; integrates careful land, water, and air planning; and promotes the development of sustainable communities.

Progress

- Amendments under the *Community Planning Act* were made to allow and to authorize the development of an integrated provincial planning policy.

- A Sustainable Communities Case Study for the Greater Saint John Region was initiated with opinion leaders to improve the sustainability of communities. The learnings from the case study will be shared with other communities to foster sustainable communities and will be a useful tool for the development of an integrated provincial planning policy.
- The Department of Environment continued to develop a regulatory framework to help protect the coastal environment.
- The Department of Environment made progress towards a comprehensive water management strategy. The water strategy will allow for the protection of water resources to ensure the abundance of good water quality for New Brunswickers, and for a series of other proactive management strategies.

Managing Natural Resources

The development of appropriate resource-management strategies enables New Brunswick to safeguard the environment and helps the province meet its GHG reduction commitments.

Progress

- The Department of Natural Resources progressed towards the final stages of producing the provincial Biodiversity Strategy. As well, refinements to the Protected Natural Areas Program are being implemented to better protect biological diversity.
- A new fish-health laboratory was announced in St. George to position the province at the forefront of aquatic animal health science and to support efforts in research and monitoring to assess fisheries viability and resources risks.

Risks and Damages

In order to reduce environmental damages and economic loss caused by climate change impacts, it is important to build scientific knowledge of how our environment is being affected and to develop applied solutions for government, businesses and communities.

In addition, emergency management capacity must be in place at the regional level to continue to assess and adapt to new threats and to continue to be vigilant for possible impacts on key infrastructure.

Progress

- Partnerships were developed with the federal government to undertake a provincial risk assessment initiative for the Atlantic provinces.
- An Atlantic Climate Change Adaptation Workshop, hosted by the Department of Environment and Natural Resources Canada, was held in Saint John in May 2008. The workshop provided an opportunity for Atlantic and other provinces as well as the United Kingdom to explore adaptation approaches to a changing climate with particular attention to coastal areas, inland waters, and related infrastructure.
- The Department of Public Safety developed a new, integrated incident management system and is partnering with the Department of Local Government to build emergency management capacity at the regional and local level.
- The Department of Public Safety, through the New Brunswick Emergency Measures Organization, undertook a number of research initiatives and developmental projects to better assess and communicate risks to the public and for critical infrastructure managing agencies. These were validated during the St. John River spring flood in 2008.
- The Environment and Sustainable Development Research Centre (ESDRC) at the University of New Brunswick gathered information on the global response to climate change. In addition, ESDRC partnered with the City of Fredericton to undertake the second phase in the development of a “Climate Change Adaptation Strategy” for the City.
- The Department of Geodesy and Geomatics Engineering at the University of New Brunswick carried out a Light/Laser Detection and Ranging survey of the Lower St. John River Valley to establish a high-precision elevation model for use in predicting flooding events.

- The K.C. Irving Chair in Sustainable Development at the Université de Moncton developed strategies for the adaptation and mitigation of climate change in New Brunswick. It also examined the rate of coastal erosion for Carron Pointe and involved residents in the establishment and adoption of an action plan aimed at minimizing environmental impacts of climate change.
- The Department of Biology at the Université de Moncton examined the effects of increasing air temperatures and precipitation events and their impact on future water temperatures and the viability of freshwater fish species.

Partnerships and Communication

The ability to manage our environment in a sustainable manner, reduce greenhouse gas (GHG) emissions, and adapt to climate change impacts relies on recognition that acting to protect the environment is a shared responsibility. Public awareness and education initiatives are essential activities necessary for engaging people in making choices that both reduce GHG emissions and acknowledge the challenges of a changing environment. These responsibilities are best addressed through local, aboriginal, provincial and federal partnerships.

Partnership with communities and working with stakeholders

Due to the scope of climate change, a collective response is required. Communities also provide key opportunities for the reduction of greenhouse gases through land use, energy and transportation planning; infrastructure design; green procurement; building retrofits; water conservation; solid waste diversion; and the use of distributed energy systems.

Progress

- The Provincial Municipal Council agreed to be the formal roundtable with municipal associations to promote and encourage regular dialogue and an exchange of ideas on climate change issues between communities and provincial officials.
- The Department of Agriculture and Aquaculture worked with farmers to develop and promote practices that reduce vulnerabilities to climate change impacts and reduce GHG emissions.
- Amendments were made to the *Municipalities Act* to remove barriers to municipal green energy generation.
- Training sessions were provided in numerous communities to encourage the implementation of Sustainable Community Design at the local level. Six projects in the province were planned or have been carried out.
- The Province made investments to numerous communities to continue or to launch green plans to foster sustainable communities.

Public Education and Outreach

Public awareness and education initiatives are essential in order to engage people successfully. Therefore, efforts must be undertaken to inform the public of the possible impacts of climate change, the steps necessary to reduce GHG emissions, and measures necessary to adapt to changes already taking place.

Progress

- Efficiency NB increased awareness of the importance of energy efficiency by launching a campaign at the community level.

- The Department of Environment developed an engagement strategy for three core groups: opinion leaders, communities of interest and the general public. In May 2008, a group of provincial opinion leaders was brought together to share their thoughts on how New Brunswick citizens can become meaningfully engaged in the implementation of the action plan. This process will continue in 2008.
- New Brunswick Climate Change Action Plan presentations were delivered at information sessions, workshops, and trade shows to promote environmental leadership and awareness of actions that reduce GHG emissions and help climate-proof decision-making.
- A partnership between the New Brunswick Advisory Council on Youth and the Department of Environment was struck to engage youth in New Brunswick to take action on climate change.
- Numerous local groups undertook actions that will raise awareness of climate change and reduce greenhouse gas emissions in their communities.

Moving Forward

Implementation

Partnerships and resources are important factors required in implementing the New Brunswick Climate Change Action Plan (NBCCAP). Through support of initiatives form Efficiency NB, the New Brunswick Environmental Trust Fund (NBETF), the New Brunswick Climate Action Fund (NBCAF), and the New Brunswick Municipal Rural Infrastructure Program, substantial gains will be made towards addressing provincial greenhouse gas emissions (GHG) and ensuring development decisions can address the effects of our changing climate. It is also essential for the Province to continue working with the federal, regional and municipal governments to achieve the NBCCAP objectives.

Progress

- The NBETF awarded $1 million for community projects that can assist the Province in meeting the objectives of the NBCCAP. Funding was allocated for 15 mitigation, six adaptation and seven education projects.
- In an effort to reduce GHG emissions, the Province has established, with federal financial assistance (Canada ecoTrust), the NBCAF: a three-year, $34-million fund to support public sector, private sector and not-for-profit initiatives that are in keeping with GHG emission reduction goals of the NBCCAP. The NBCAF awarded $20 million for 14 emission reduction projects in the past year.

Accountability

The Climate Change Secretariat within the Department of Environment tracks and reports on GHG emissions trends and progress regarding the implementation of all climate change initiatives in the NBCCAP. Efforts are also being made that will contribute to the New England Governors and Eastern Canada Premiers (NEG/ECP) climate change activities and support any bilateral (federal, provincial, territorial, or international) discussions on climate change matters.

Progress

- An interdepartmental committee has been formed to help co-ordinate activities of government departments to ensure the NBCCAP commitments are achieved.
- The Canadian Standard Association has been retained to provide an approach and develop tools to facilitate the calculating, tracking and reporting of governments efforts to reduce GHG emissions.
- Partners such as Efficiency NB, the NB Climate Change Hub, the Conservation Council of New Brunswick and provincial municipal associations also assist the province in implementing the NBCCAP.

New Brunswick Climate Change Secretariat
Department of Environment

P.O. Box 6000
Fredericton, New Brunswick
E3B 5H1

Telephone: (506) 453-3925
Fax: (506) 453-2265

For additional copies, please contact:

Public Affairs
Department of Environment

Telephone: (506) 453-3700
Fax: (506) 453-3843

www.gnb.ca/environment
This report is also available electronically.