

# New Brunswick and Climate Change - *On Track to 2012*

2010 - 2011 Progress Report  
October 2011



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## Executive summary



In 2007, the first *New Brunswick Climate Change Action Plan* (NBCCAP) was launched. The “made-in-New Brunswick” plan includes a series of actions to reduce greenhouse gas (GHG) emissions, to adapt to climate change impacts and to encourage partnerships and engage communities and citizens to embrace progressive change. The plan provides a framework for many government departments, agencies and non-governmental organizations to collaborate in delivering the broad scope of actions needed.

During the fourth year of implementation, the Province continued to foster significant progress to address climate change. The Province is on track to deliver on the commitments made in plan. Most recent data of 2009, show that New Brunswick was about 2.4 megatonnes (Mt) away from its commitment to reduce GHG emissions to the 1990 level in 2012. In addition to the emissions reductions, a wide range of studies is being carried out to assess and understand the effects of our changing climate in an effort to make informed decisions and apply solutions. Together, these efforts combined with a variety of partnerships and citizen engagement activities are contributing to **New Brunswick being on track to reach its target in 2012 and preparing for the effects of a changing climate.**

Highlights of the fourth year of the *New Brunswick Climate Change Action Plan* include:

Progress on declining greenhouse gas emissions:

- All emissions-related categories of the action plan reported declining trends.
- Efficiency NB programs reduced GHG emissions by 177,000 tonnes.
- 45 megawatts (MW) of wind power were installed at Lamèque, New Brunswick’s third wind facility, bringing total wind-powered capacity to 294 MW.
- A new 3.5 MW hydro facility was commissioned in Edmundston.
- Eight allocations for Crown forest biomass totaling 1,276,000 cubic metres were awarded in mid 2010, enough to displace about 200 million litres of oil.
- An investment of \$4.5 million was made in energy auditing and implementation of energy efficiency measures in government operations, and the construction of smart metering systems for schools and hospitals.
- A computer model was initiated to track and report energy consumption and corresponding emissions by government departments, an essential step in managing government’s energy consumption and carbon footprint.

Progress on adaptation to climate change:

- Major progress was made engaging and working with numerous New Brunswick communities as part of the \$8.5 million Atlantic Regional Adaptation Collaborative. Case studies examining coastal and inland flooding and erosion, drinking water supplies and impacts on land use and infrastructure at risk were initiated and made substantial progress. The [www.atlanticadaptation.ca](http://www.atlanticadaptation.ca) website was launched to showcase these projects.

- Construction of dykes upstream of the Petitcodiac causeway was completed to meet future sea level rise predictions for the protection of property and farmland as part of the Petitcodiac Restoration.
- A project was started to provide detailed information on current and future climate projections for New Brunswick.

Progress on outreach and education:

- Public engagement initiatives were continued such as the Opinion Leaders Forum, the Green Business Pilot Project for the Edmundston Region Chamber of Commerce, Earth Hour events and the Neighborhood Eco-Challenge. These initiatives generated GHG emissions reductions and promoted climate change awareness.
- Efficiency NB launched a toolbox of resources to help municipalities and community groups educate residents about the importance and benefits of energy efficiency.
- Presentations and workshops were delivered at conferences. For example, a partnership was made with government departments, the New Brunswick Environmental Industry Association and the New Brunswick Purchasing Management Institute in April to host the first ever New Brunswick green products and services forum in Fredericton.

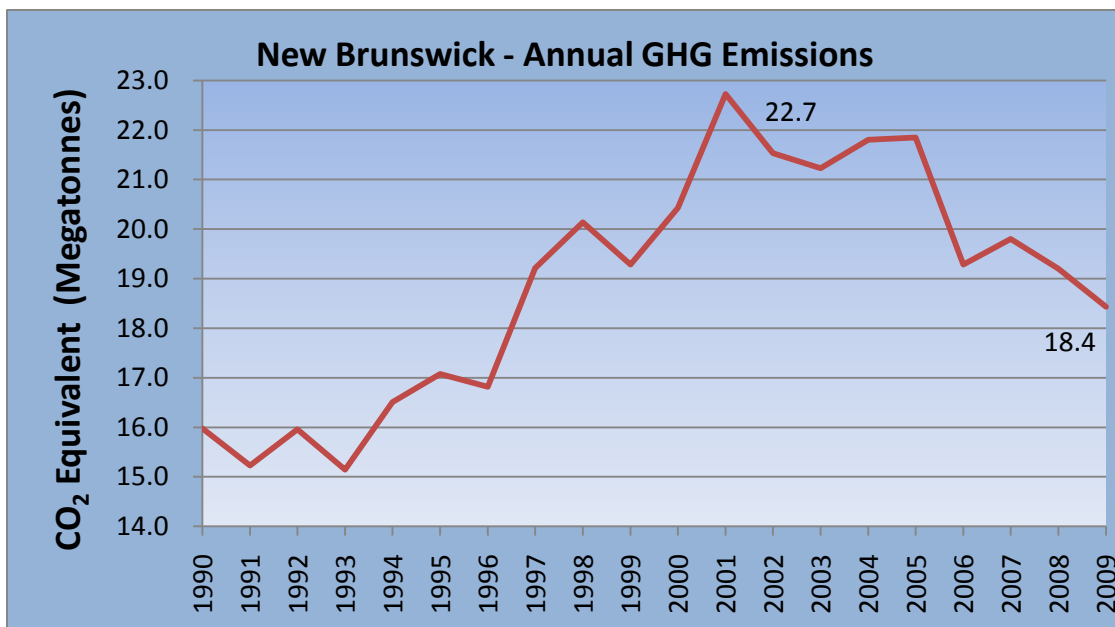
## The New Brunswick Situation

### New Brunswick Greenhouse Gas (GHG) Emissions

New Brunswick understands the far reaching implications of climate change and therefore is committed to reducing overall anthropogenic emissions of greenhouse gases, the main contributor to unprecedented rapid climate change.

GHG emission reductions priorities have been determined and, concrete actions are being undertaken showing positive results. GHG emissions have been declining thanks to the actions by government, industry, businesses, communities, non-profit groups, families and individual New Brunswickers.

In 2009, GHG emissions from all sources in New Brunswick amounted to 18.4 Mt of carbon dioxide equivalent (CO<sub>2</sub> eq.), 2.7 per cent of the Canadian total. Between 2004\* and 2009, New Brunswick emissions declined by 3.4 Mt (16 per cent), with emissions from large industries and electricity generation, falling by 22 per cent.



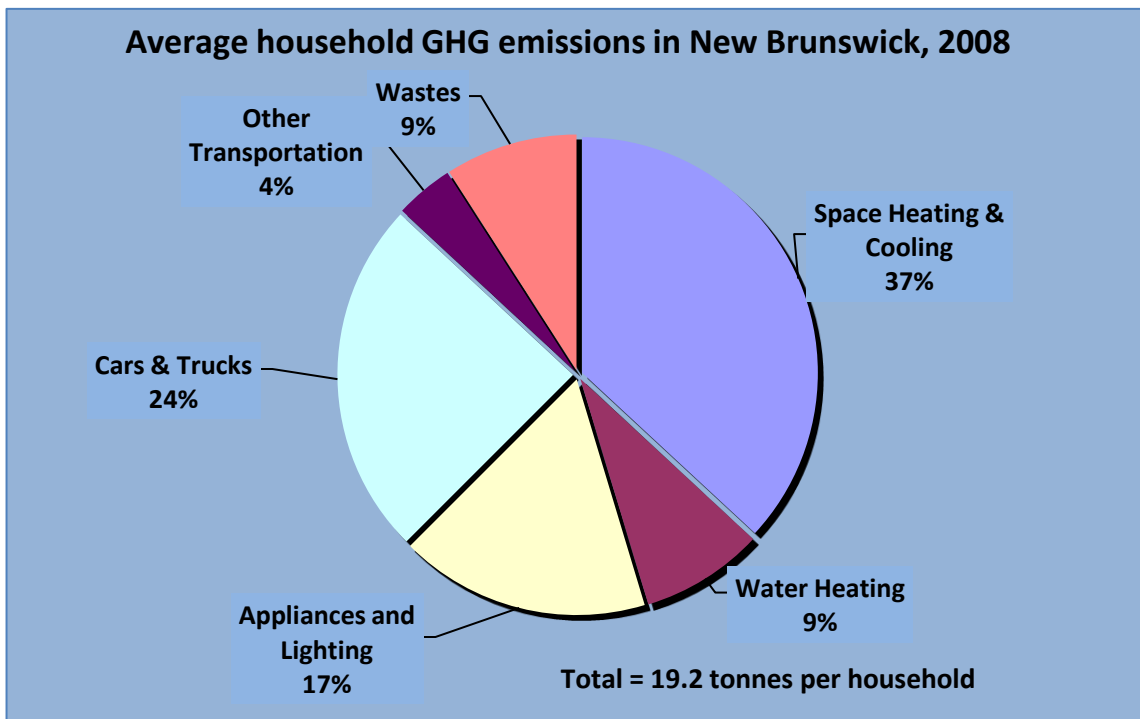
Source: National Inventory Reports, Environment Canada

Electricity generation remains the largest single contributor of GHG emissions in New Brunswick, but its share of emissions has been declining. Electricity generation accounted for 38 per cent of total emissions in 2009, down from 41 per cent in 2004. Lower energy demand, growth in wind energy and electricity purchases from neighbouring utilities contributed to a reduction in GHG emissions from electricity generation.

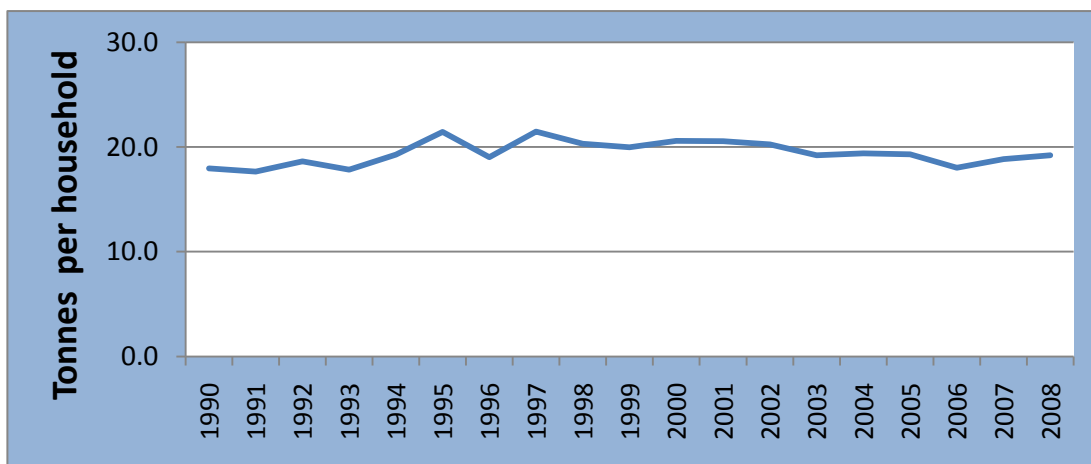
\*2004 data was used as the most recent baseline year available when developing the 2007-2012 Climate Change Action Plan. 2009 is the most recent data from Environment Canada.

## Individuals Make a Difference

Twenty-five per cent of New Brunswick's total GHG emissions were attributable to household activities and to the choices individual New Brunswickers made every day. Space heating and cooling and transportation choices were the leading contributors to GHG emissions. Space heating and cooling accounted for the largest percentage at 37 per cent. Cars, trucks, air travel and other transportation accounted for 28 per cent of GHG emissions.



Household emissions in 2008 were 15 per cent below the 2004 level, but are still 1.7 tonnes above 1990 levels.

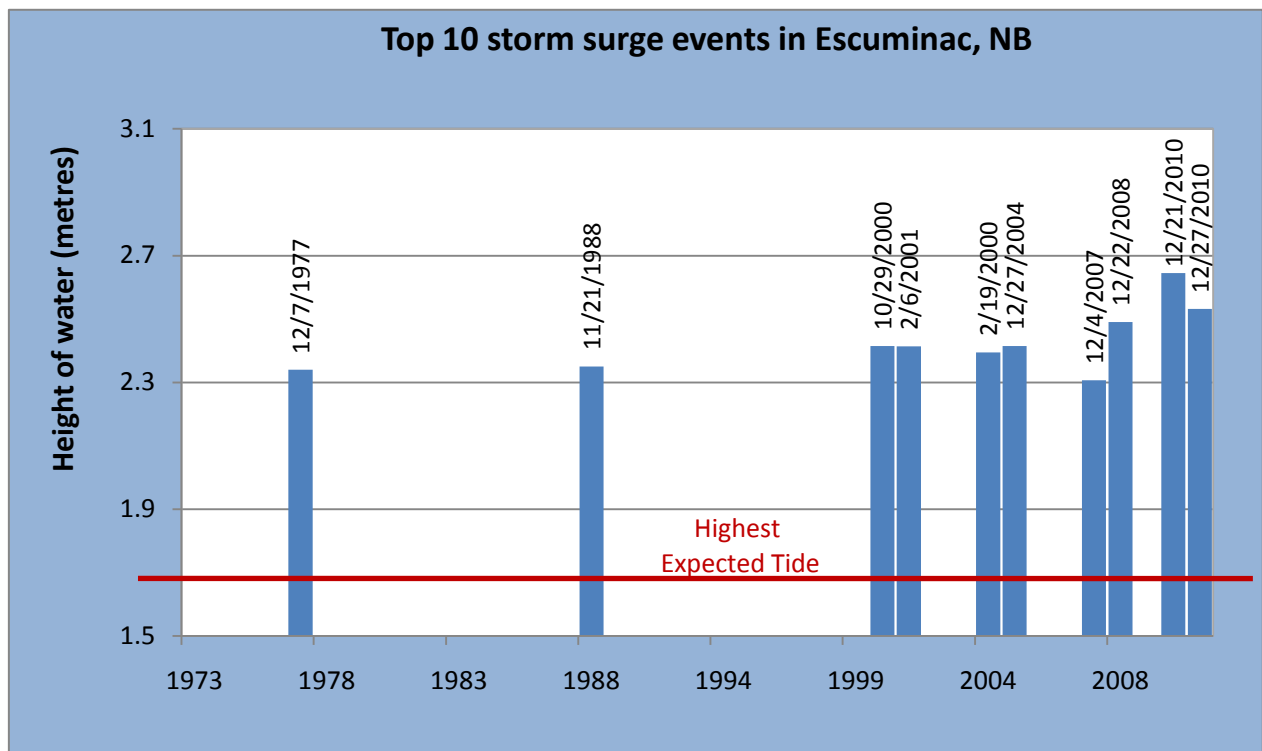


Source: New Brunswick Department of Environment

## Adaptation

Significant weather events that have recently affected New Brunswick, such as extreme rainfalls, winter thaws, and elevated temperatures, are all consistent with climate change predictions provided by computer modeling and expert analysis. 2010 was the warmest year in New Brunswick weather history. These trends are expected to continue, along with higher sea levels and a range of associated effects such as flooding, land erosion, damage to property and increasing risks to health and safety.

Individuals, businesses, communities, and government are working together to assess and manage the risks and opportunities posed by New Brunswick's changing climate. The Government is currently involved in over 50 climate change adaptation projects, such as vulnerability assessments and community adaptation plans. Many of these projects are taking place in coastal areas and along inland waters because these areas may be particularly vulnerable to climate change. By taking action now, New Brunswick can begin to adapt to the unavoidable and continually increasing impacts on communities and ecosystems through appropriate policy and program responses.



Source: Fisheries and Oceans Canada

This figure shows the top 10 storm surge events at Escuminac (near Miramichi) since measurements were first recorded in 1973. These extreme high water level events, caused by intense weather systems with strong winds and unusually low air pressure, are increasing in magnitude and frequency along New Brunswick's coasts. These events represent substantial risks for the people, property, economy and ecosystems of New Brunswick.

There is also agreement in Atlantic Canada that working together on issues of joint concern allows the four Atlantic Provinces to go beyond what can be achieved individually. In adopting an adaptation strategy for Atlantic Canada, the participating provinces recognize the significance of climate change and the need to encourage and support adaptive measures particularly with respect to impacts to coastal areas and inland waters in the Atlantic region.

## Partnerships and Communications

To foster the changes needed to transition the province to a lower carbon economy and higher resiliency to the changing climate, the engagement of all citizens and businesses is essential. The Department of Environment developed an engagement strategy for three core groups: opinion leaders, communities of interest and the general public. The opinion leaders' forum assisted in generating key ideas for public engagement such as the Neighborhood Eco-Challenge and the Climate Change Youth Engagement Network.

Eight New Brunswick families took action to address climate change by participating in the Neighborhood Eco-Challenge from January 10 to March 4, 2011. The challenge highlighted the importance of taking individual action on climate change to set an example within the community. Actions included conserving energy and water, using public and alternative means of transportation, reducing waste, and setting an example for their neighbors. On average, the families reduced their transportation emissions by 27 per cent; their kitchen emissions, including emissions from stoves, refrigerators and dishwashers, by 31 per cent; and their entertainment emissions, including emissions from televisions and laptops, by 60 per cent.

One of the actions recommended from a dialogue with the Climate Change Youth Engagement Network, was to initiate Earth Hour events in New Brunswick in an effort to raise awareness of reducing energy consumption. Events were held in Fredericton and Moncton and generated over 1,000 participants. New Brunswickers reduced electricity demand by 24 megawatts, making this year's Earth Hour the most successful to date in the province. The reduction in power from 8:30 p.m. to 9:30 p.m. was equivalent to turning off about 480,000 standard light bulbs.

In addition, Edmundston and Fredericton businesses, among other areas, made commitments to become more energy efficient, generating less waste, reducing the need for transportation or offering more eco-friendly products to consumers.

Funding through the New Brunswick Environmental Trust Fund was allocated to a number of non-governmental organizations and municipalities to promote energy efficiency, transportation efficiencies, waste reduction, and water conservation. Local knowledge and results stemming from these activities were shared with departments and agencies to foster citizen engagement throughout New Brunswick.

Partners such as Efficiency NB, the New Brunswick Climate Change Hub, the Conservation Council of New Brunswick, the New Brunswick Environmental Network, and provincial and municipal associations all helped the Province meet its climate change outreach and engagement objectives. It's everyone's responsibility to take action on climate change.

To learn more about GHG emissions, adaptation and education/engagement, please visit the New Brunswick climate change website at [www.qnb.ca/climatechange](http://www.qnb.ca/climatechange).



## Actions to Reduce or Avoid GHG Emissions

*“Using energy more efficiently is a key factor in achieving greenhouse gas emission reductions and it makes our energy system less expensive to operate.” NBCCAP 2007-2012*

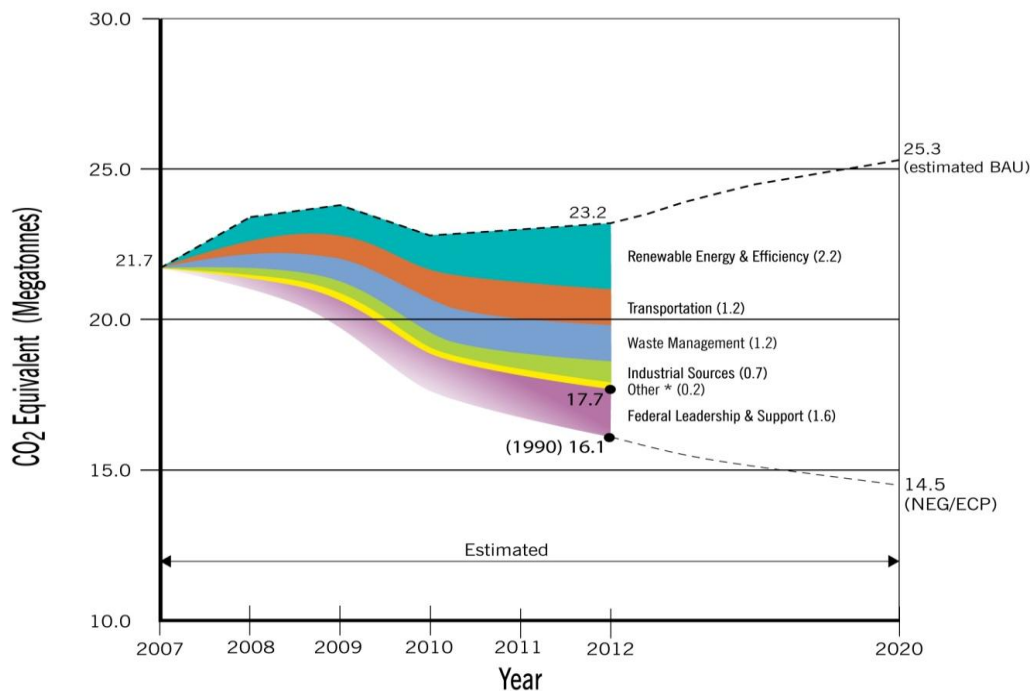


In the Climate Change Action Plan, the Province set GHG reduction targets in the areas of energy efficiency and renewable energy, transportation, waste management and industrial sources.

The New Brunswick commitments coupled with those of the federal government are projected to enable the Province to realize a reduction of total GHG emissions to 1990 levels in 2012. During 2010, the Department of Environment began preliminary work in anticipation of a 2012-2020 action plan to achieve further reductions and work toward the Conference of New England Governors and Eastern Canadian Premiers (NEG/ECP) emission reduction targets of 10 per cent below 1990 by 2020.

The following graph illustrates the projected GHG emission reductions for each of the commitment categories outlined in the Climate Change Action Plan compared to a Business As Usual (BAU) projection prepared at the time of launching the plan. The sections that follow report on progress in each of the categories.

Projected Greenhouse Gas Emissions Scenarios in New Brunswick



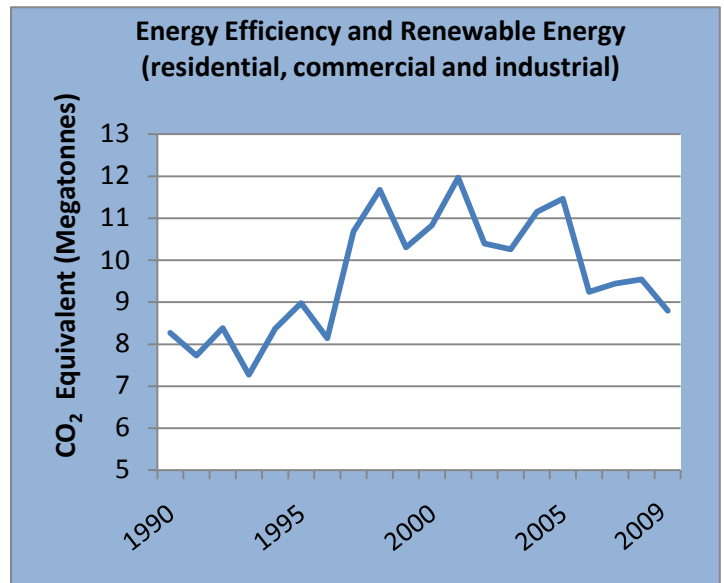
Other\* - Government Leading by Example / Partnership & Communications

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

## Energy Efficiency and Renewable Energy

*“Cleaner energy options are being made more widely available, and programs are being implemented to help ensure that all types of energy will be used more efficiently.” NBCCAP 2007-2012*

Energy efficiency and renewable energy have affected emissions in the residential, commercial and industrial sectors. Emissions from these sectors declined by nine per cent since 2007 when the action plan was introduced. Emissions from the residential sector have declined to 699 kilotonnes (kt) while emissions from the commercial sector have declined to 727 kt.



Source: New Brunswick Department of Environment

### Progress

#### Efficiency NB

##### Commercial Sector:

- completed the Maritime New Commercial Building Energy Baseline Study at the end of March 2011. The results provide benchmarks against which efficiency gains can be measured and a basis for new standards of performance for the Commercial New Construction program;
- completed energy efficiency upgrades in 120 buildings under the Energy Smart program saving 11,800 tonnes of greenhouse gas (GHG) emissions annually;
- saw 19 completed projects in the Start Smart Modelling Path program for new buildings saving 1,200 tonnes of GHG annually;
- launched the new Core Performance Prescriptive Path program for new building retrofits. NB Liquor Corporation is incorporating the use of the Core Performance Guide into their leased spaces and other buildings; and
- promoted the use of solar water heating equipment, ground and water source heat pumps, and renewable electricity sources.

##### Municipal Sector:

- increased the uptake of the Energy Smart program with an additional 22 municipal buildings.

##### Residential Sector:

- implemented significant changes to the residential program:
- increased the target by 20 per cent in energy efficiency;
- enhanced incentives for technologies such as geothermal and solar domestic heating systems;
- provided maximum incentives for apartments or homes that achieve a NetZero target;

- removed incentives for homes heated by electric resistance heating (primary source of heating) for new residential construction; and
- processed 5,909 new applications to the existing homes program bringing GHG reductions to 63,000 tonnes per year since the program started.

Department of Energy:

- participated in an Interprovincial Committee dedicated to the advancement of biofuels from agricultural and wood biomass. The department also coordinated a wood pellet workshop, which included representation from government, industry and the environment sectors. The intent is to develop a collaborative approach to pellet use in New Brunswick; and
- worked with the K.C. Irving Chair in Sustainable Development at the Université de Moncton to complete resource maps for solar and hydro opportunities in New Brunswick.

NB Power:

- reduced its GHG emissions from a high of 9.94 million tonnes in 2001 to 3.76 million tonnes in 2010;
- contracted 45 MW of wind capacity with Acciona at the Lamèque Wind facility increasing the total wind generation capacity to 295 MW in New Brunswick;
- explored new lighting technologies and saving energy by testing new LED lights in 300 locations across the province;
- continued to evaluate all options to reduce its carbon footprint while maintaining its competitive rates;
  - explored other renewable energy options such as small hydro, tidal power, biomass co-firing and electricity generated from landfill gas;
  - focused on power plant efficiency including high efficiency turbines, and other improvements; and
  - partnered with Efficiency NB to expand energy efficiency in electricity use by customers.

Department of Natural Resources:

- under the wind energy policy, allocated land for the research and development of wind energy projects on Crown lands, which include 18 active licensees conducting wind exploration on over 70,000 hectares;
- adopted a comprehensive policy on the Allocation of Crown Lands In support of Tidal In-stream Energy Conversion projects;
- under the biomass policy, issued two Requests for Proposals (RFP) for the Miramichi Region in 2010; and
- awarded eight allocations for Crown forest biomass in mid 2010 for 1,276,000 cubic metres, enough to displace about 200 million liters of oil.

Department of Agriculture, Aquaculture and Fisheries:

- delivered a farm energy efficiency program in partnership with Efficiency NB supporting ten on-farm energy audits and funded five energy efficiency upgrades; and

- jointly sponsored, with the departments of Agriculture of Prince Edward Island and Nova Scotia, a webinar on energy efficiency for dairy farmers.

Department of Environment:

- supported the installation of a 3.5 megawatt (MW) hydro power unit at Edmundston Energy;
- continued to administer projects funded by the New Brunswick Environmental Trust Fund, which provided more than \$95,500 for four GHG reduction projects:
  - the Bathurst College Foundation created an energy consumption analysis centre;
  - EcoAction at Mount Allison University assisted other universities in organizing a 'Campus Climate Challenge', an annual energy saving campaign;
  - EOS Eco-Energy created Integrated Community Sustainability Plans to address sea-level rise (adaptation) and GHG emissions at the local and regional level; and
  - the New Brunswick Lung Association designed a project to provide consumers with real time information about their electricity usage and methods to reduce it.

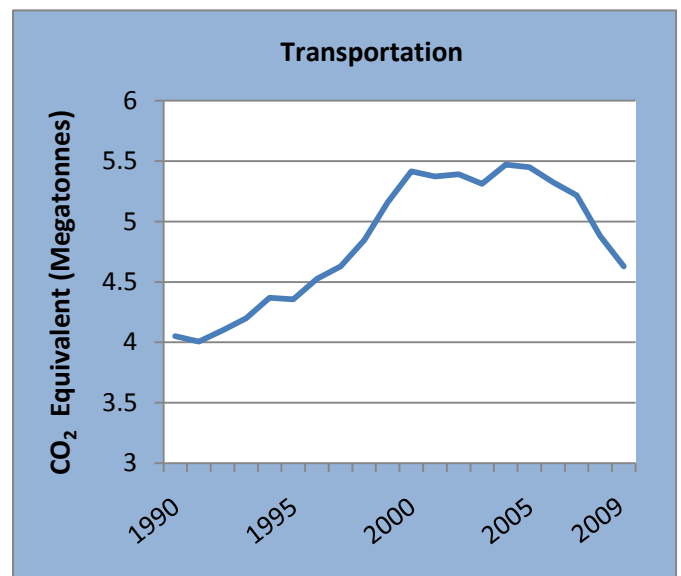
## Transportation

*“The Province will work to improve transportation options and help consumers make informed decisions about vehicles, fuels and transportation in general.”*  
NBCCAP 2007-2012

In 2009, emissions from the transportation sector continued to decline from the peak of 5.5 Mt in 2004 to 4.6 Mt, remaining 0.6 Mt above 1990 levels. Emissions from road transportation, which accounts for 80 per cent of total transportation emissions, have been declining since 2007 and are currently at 3.7 Mt. Emissions from air travel, rail and marine continued to decline from 2007 levels.

Despite these declines, the Province continues to find the transportation sector its greatest challenge in reducing GHG emissions. While progress is being experienced, significant opportunities remain in individual transportation decisions and the movement of freight. The Province is making improvements in public transit efficiency and GHG emissions through bus replacement, rehabilitation and fleet expansion. Further opportunities include networks of commuter parking areas, walking/cycling trails and carpooling.

In 2010, the Province supported the initiative of the federal government in regulating strict national fuel efficient vehicle and GHG reduction standards for vehicles. The regulation, under the *Canadian Environmental Protection Act*, applies to manufacturers and importers of new passenger automobiles or light trucks for sale in Canada. The regulation sets targets for GHG emission reductions levels for vehicles of the 2011 to 2016 model years and is expected to reduce by 25 per cent the GHG emissions from Canadian passenger automobiles and light duty trucks in 2016 relative to 2008.



Source: New Brunswick Department of Environment

The Province is partnering with members of the New England Governors and the Eastern Canada Premiers region to improve transportation options and reduce GHG emissions.

## Progress

### Department of Transportation:

- continued to work with the municipalities of Fredericton, Moncton, Miramichi and Saint John with regards to the enhancement of public transit services. The \$40 million federal funding allocation for public transit resulted in additional transit capacity, greater fleet efficiency and reduced GHG emissions;
- opened a new weigh-in-motion (WIM) facility on Route 2 at Salisbury on the Eastbound lane in September 2010 bringing the total number of WIM sites to five. WIM sites significantly reduce GHG emission from idling, starting and stopping of heavy commercial vehicles at conventional scales. Business competitiveness is enhanced by more efficient transportation systems;
- continued to invest in strategic infrastructure to improve efficiency in the movement of goods and people;
- continued to monitor transportation initiatives that improve efficiency and help reduce emissions from the transportation sector, such as the installation of auxiliary power units on owner-operated trucks and installation of aerodynamic skirting on van trailers; and
- continued to see growth in the number of applications from the trucking industry to operate long combination vehicles (LCVs) under special permit on four-lane highways in New Brunswick. This type of vehicle configuration allows greater volumes of cargo to be hauled with the same power unit and results in fuel savings of about 40 per cent.

### Department of Public Safety:

- through the Registrar of Motor Vehicles, encouraged a collaboration to implement a strategy of limiting truck speeds to 105 km/h within Atlantic Canada; and
- will be consulting with stakeholders in the fall of 2011 in regards to vehicle emissions program. Vehicle emission standards will be included in the discussions.

### Department of Environment:

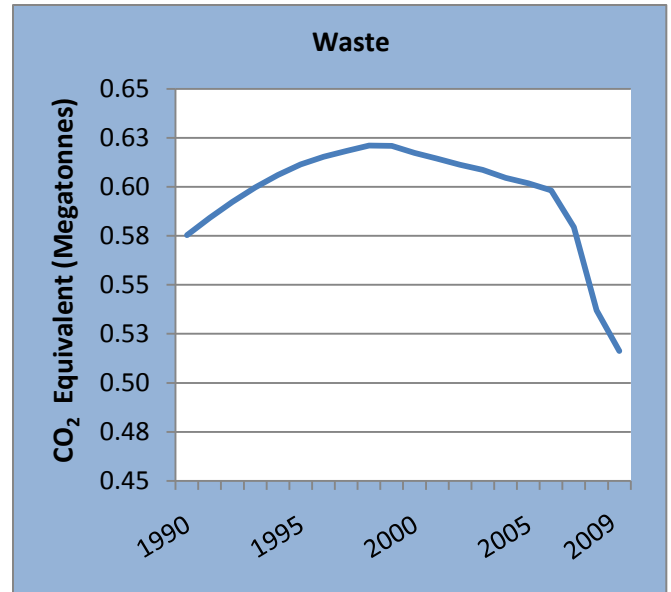
- supported local groups with anti-idling awareness campaigns;
- continued to support the New Brunswick Environmental Trust Fund, which provided \$30,000 for two transportation projects:
  - the Town of Quispamsis developed an Active Transportation Plan for the community in order to reduce GHG emissions and conserve energy; and
  - the Village of New Maryland developed a Master Trail Plan to encourage alternative methods of commuting while preserving the natural environment.

## Waste Management

*“New Brunswick has an action plan to reduce and divert waste in order to address broad waste-management issues. The Province will build upon this action plan.” NBCCAP 2007-2012.*

Emissions from landfills have been declining over time and were 516 kt in 2009, or 50 kt below 1990 levels. This reduction is due to technological improvements in provincial landfills such as the installation of systems to capture and flare landfill gas along with improved management practices.

The Province is currently working with the solid waste commissions to develop waste diversion plans, enhance composting operations and collect methane gas.



Source: New Brunswick Department of Environment

### Progress

Department of Environment:

- continued to support the installation of methane management systems at the regional solid waste facilities. The Fredericton, Fundy Region, Nepisiguit-Chaleur, and South West solid waste commissions are collecting and flaring landfill gas (potent GHG emissions) and the Fundy Region has installed electricity generation; and
- continued to support regional solid waste commissions in implementing waste diversion programs.

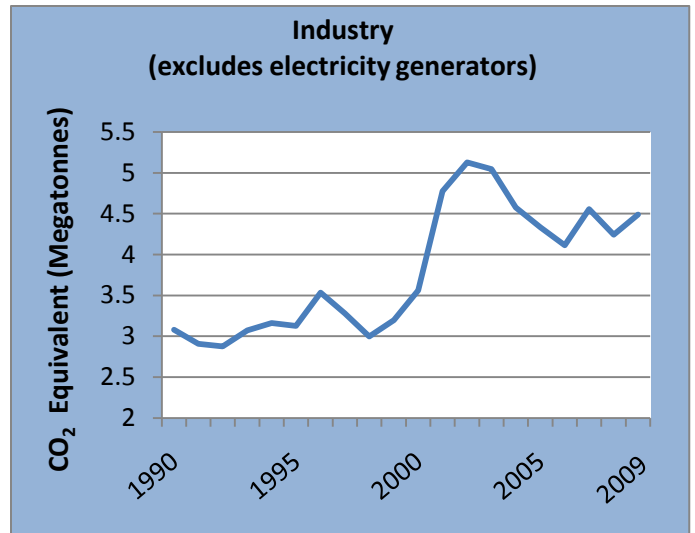
Department of Agriculture, Aquaculture and Fisheries:

- supported the evaluation of a precision manure spreader to minimize the amount of surplus nutrients in the soil, resulting in GHG emissions.

## Industrial Sources

*“The Province will work with New Brunswick Industries and the federal government to help ensure there is fairness and consistency in implementing emission standards for industrial sources among industry sectors, provinces and territories.” NBCCAP 2007-2012*

Industrial sector emissions have been trending downward in recent years. GHG emissions from large industrial facilities went from a high of 5.1 Mt in 2003 to 4.5 Mt in 2009. An overall increase in the industrial sector of 250 kt reported by Environment Canada in 2009 was the result of reporting method adjustments.



Source: New Brunswick Department of Environment

## Progress

Business New Brunswick:

- provided more than \$2 million in loans and loan guarantees in 2010-2011 from the Financial Assistance to Industry Program for energy, productivity and efficiency initiatives;
- provided more than \$185,000 to 35 projects and related initiatives that focused on efficiency, and recycling technologies through the Business New Brunswick's Technology Adoption and Commercialization Program;
- worked with the Department of Environment and other provincial and federal government departments to identify and develop opportunities for clean technology;
- assisted businesses in marketing green products and services from New Brunswick at events in the United States and Europe; and
- worked with the University of New Brunswick's Faculty of Forestry and Environmental Management on the NSERC Strategic Network on Innovative Wood Products & Building Systems (NEWBuildS Network). This is a five year, \$5 million research program.

New Brunswick Innovation Foundation:

- in the fiscal year of 2010-2011, provided \$1.5 million to 34 projects involving environmentally focused research and development.

Efficiency NB:

- grew the Small and Medium Industry program to include 24 participants with 17 projects or feasibility studies underway;
- received the prestigious iStar award for the Large Industry program from the Alliance to Save Energy. This program has 67 active capital projects or Energy Management Information System (EMIS) implementations. To date projects in operation are providing annual energy savings of \$15 million and have reduced annual GHG emissions by 74,126 tonnes; and

- continued to partner with the Canadian Manufacturing and Exporters on energy efficiency workshops.

Department of Environment:

- continued to ensure that GHG emissions in the Province of New Brunswick are minimized as much as possible through the Environmental Impact Assessment process and other approvals processes; and
- undertook a study to identify potential carbon offsets that could be developed over the next five years. The study identified a range of 100,000 tonnes to one million tonnes of GHG offsets available with a potential financial value of more than \$1.5 million.

Department of Natural Resources:

- continued to work with Federal Government to ensure that forest management carbon credit opportunities in New Brunswick are recognized. The department will proceed further on this action once the data set and analysis for carbon credit opportunities is done. In addition, the department will be able to better identify future opportunities once the 2012-2017 Forest Management Plan is finalized.

## Future Energy Opportunities

*“Acting upon and exploring future energy opportunities will contribute to providing New Brunswick with the flexibility to make future choices in growing our communities and economy. Many opportunities exist to continue developing an economically sound, diverse and sustainable electricity sector.” NBCCAP 2007-2012*

The Premier appointed an Energy Commission in October 2010 to recommend a 10-year energy plan for the province. After public consultations, it submitted its report in May 2011. Energy use represents 92 per cent of GHG emissions in the province, which illustrates the importance of energy policy to climate change action.

The Commission noted that a new Climate Change Action Plan is needed in 2012 and that electricity generation and transportation are dominant contributors to GHG emissions to be addressed in the new plan. The Commission also noted that carbon emissions will have a cost associated with them at some point in the future and that efficiency, conservation, renewable energy and alternative fuels will become the major factors in planning our energy future.

### Progress

Department of Energy:

- commissioned a feasibility on providing natural gas to the northern part of the Province. It concluded that there were no feasible options for widespread gas distribution in the north, but non-pipeline delivery options, such as compressed natural gas by tanker truck, may serve high base load facilities in limited circumstances.



NB Power:

- installed new high efficiency turbine rotors in the refurbishment of the Point Lepreau nuclear station, which will add 4 per cent to its production capacity; and
- initiated the PowerShift Atlantic “Maritime Load Control for Wind Integration project”. The project is using customer load control to help integrate wind power into the Maritime electricity systems.

## 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.”  
*NBCCAP 2007-2012*

Government is leading by example and guiding sustainable practices by implementing GHG reduction programs for their own buildings and operations. Several departments and agencies are adopting best environmental practices in the areas of procurement, transportation, buildings and energy management by improving the efficiency of new construction and existing buildings.

### Progress

Department of Supply and Services:

- achieved both Leadership in Energy and Environmental Design (LEED) Gold Certification in April 2011 and four Green Globes in September 2010 for the Department of Natural Resources Richibucto District Office. École Sainte Thérèse and the Rexton Community Health Centre will be applying for LEED Certification;
- in conjunction with the Department of Social Development, six new nursing homes for the Province will be designed to meet the requirements of the Provincial Green Building Policy but will not be certified as LEED. The department prepared the Department of Social Development Guidelines for Nursing Homes using best practice principles in pursuit of efficiencies with energy, water use, quality day lighting, utilization of regional materials, building durability, maintenance and operations balanced with cost efficiencies over the initial construction and life cycle of all nursing home projects (new buildings and major additions);
- required the following projects to be designed to meet the Green Building Policy using either LEED Silver or Green Globes rating systems:
  - Fredericton North Elementary;
  - Kennebecasis Park;
  - Moncton Nord;
  - Riverview Elementary;
  - Rogersville School;
  - Moncton High;
  - Southern Carleton;
  - Woodstock Centennial;
  - École Ste. Bernadette; and
  - Campbellton Forensic Hospital;

- revised the department's Guidelines for Educational Facilities to update best practice principles and incorporate revisions to the revised LEED Rating System; Canada Green Building Council (CaGBC) has updated Version 1.0 New Construction to LEED 2009 as of June 2010. All new building projects registered with CaGBC from that date on will be required to be designed and constructed to LEED 2009;
- promoted use of wood pellets by:
  - developing an RFP for Renewable Energy Supply Agreements for Grand Falls General Hospital and École Marie Gaetane which are in close proximity to a reliable pellet supply produced from industrial wood waste;
  - working with the project development group for the Nursing Home Project for Edmundston to incorporate pellet boiler into the heating plant;
  - incorporating a pellet plant into the tender package for Fredericton North Elementary School;
- made an investment of \$3.8 million in energy auditing and implementation of energy retrofit measures in the fiscal year of 2010-2011. Projected annual savings for the measures completed is \$638,000 with a reduction of 4,754 tonnes CO<sub>2</sub> equivalent. Nearly \$2.5 million was invested in health care facilities, \$1.1 million in education buildings, \$100,000 in community colleges and \$40,000 in the Department of Transportation (DOT) garages. Work in hospitals consisted primarily of lighting retrofits, boiler control upgrades, motor upgrades and ventilation energy recovery system renewals while K-12 schools and community colleges received lighting retrofits and DOT garages received programmable electronic thermostats;
- made an investment of \$703,000 in the fiscal year of 2010-2011 to begin the construction of smart metering systems for schools and hospitals. The projected annual energy savings to be derived from analysis of the energy data is \$162,000 while atmospheric emissions are projected at 1,320 tonnes CO<sub>2</sub> equivalent. The department worked with the New Brunswick Internal Service Agency and Facilicorp to establish computer servers for energy data storage;
- approximately 100 government buildings used natural gas instead of more polluting energy sources, such as coal and oil;
- purchased an industrial composter for a joint project with NBCC Bathurst and a local school;
- began using Diesel Exhaust Fluid (DEF), a fluid that is used to significantly reduce oxides of nitrogen (NOx) emissions and substantially improve fuel economy;
- partnered with the departments of Environment and Business New Brunswick, the New Brunswick Environmental Industry Association and the New Brunswick Purchasing Management Institute in April to host the first ever New Brunswick green products and services forum in Fredericton. The forum featured a trade show with more than 40 exhibits representing primarily New Brunswick green products and service providers as well as workshops designed to inform sellers and buyers about present and emerging trends;
- continued to implement the print optimization project to reduce energy consumption and conserve paper.

Department of Social Development:

- invested approximately \$9 million on efficiency-related upgrades for Public Low Income Housing; and
- invested \$3.4 million (homeowner/rental) within the fiscal year in grant funding for 845 low income households to make energy improvements to their homes through the ecoEnergy Retrofit Program. As of March 31, 2011, energy audits and upgrades in low-income housing led to 23,215 GJ of savings (average savings of 25 GJ per household), a total reduction of 2,474 tonnes (approx. 2.7 tonnes per household) in GHG emissions.

Department of Transportation:

- completed the two-year biodiesel trials on 12 vehicles including a school bus, grader, plow truck and light truck. The trial was successful with no barriers being identified to using five and ten per cent biodiesel blended in petroleum diesel in the government fleet of vehicles when it becomes commercially available. The project resulted in a reduction of 22 tonnes in GHG emissions and 8,600 of litres of diesel fuel;
- continued to monitor the pilot hybrid school bus project. There continues to be additional focus in both the regular and executive fleet on the purchase of hybrid and more fuel efficient vehicles along with factoring in the cost of fuel when purchasing light vehicles;
- invested in buses and plow trucks equipped with new diesel engines that are clean burning;
- continued to monitor the results of upgrading conventional ferry engines to fuel-efficient engines;
- completed its replacement of incandescent lamps with LEDs (light emitting diodes) in permanent flashing warning lights. Illumination of the Centennial Bridge (Route 11 Miramichi) was converted from High Pressure Sodium (HPS) to LED luminaires in 2010. The current rehabilitation of the Saint John Harbour Bridge, which began in 2010, includes replacement of all existing HPS luminaires with LED units;
- continued to encourage anti-idling as part of the Green Vehicle Policy. The Green Vehicle Policy was introduced in 2006 to help make the government fleet more fuel-efficient and reduce GHG emissions. Anti-idling became effective June 1, 2007; and
- initiated a process to implement 1,000 GPS units within the government fleet to reduce fuel consumption and increase operational efficiencies.

Department of Environment:

- promoted the concept of sustainable communities and use of best management practices using community involvement, urban agriculture and storm water management to various stakeholders including municipalities, planning authorities, and sectoral groups. This project will also provide examples of better storm water management in response to climate change.

## Adapting to the Impacts of Climate Change

*“Climate change has already made impacts on New Brunswick communities, and they are unavoidable in the immediate future.” NBCCAP 2007-2012*



The climate has also been changing, and accelerated change is now evident. Individuals, businesses, communities, and government must work together to assess and manage the risks and opportunities of New Brunswick's changing climate. By taking action, New Brunswick can adapt to the unavoidable impacts on our communities and ecosystems.

### Development of policies

*“Development in New Brunswick’s rural and urban areas must be carried out with consideration of the way it will contribute and respond to the effects of climate change.” NBCCAP 2007-2012*

The Province has made significant progress on planning policies to adapt to the expected effects of climate change by considering 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

Department of Environment:

- continued support of the Coastal Areas Protection Policy. The coastal area is recognized as an area of provincial interest and as such this initiative is linked to the work on the Provincial Planning Policy; and
- initiated a land and water management framework development process that will consider flood risk areas, wetlands, coastal and watershed management to enable protection and compliance with all users.

### Managing Natural Resources

*“Climate change will challenge present practices in the agriculture, aquaculture, forestry, and traditional fishery sectors.” NBCCAP 2007-2012*

Climate change is challenging practices in the areas of natural resources on which the Province is highly dependent. Changes to our climate can alter these resources. The Province is collaborating with associations to assess and understand trends in climatic changes and assist in choosing the appropriate climate change adaptation strategies.

## Progress

### Department of Natural Resources:

- in conjunction with the New Brunswick Growth and Yield Unit, developed carbon yield curves for Crown land. The department is also in the process of developing a supply model for private land. This will enable the department to calculate the carbon foot print for Crown and non-industrial private forest;
- completed the selection of an additional Protected Natural Area, as part of the government strategy;
- allocated up to \$600,000 of the \$6 million Private Land Silviculture Funding program for the reforestation of abandoned farmland. The cost sharing ratio will remain at 90 per cent government and 10 per cent private land owner contribution;
- regarding forest fires, through Forest Protection Limited (FPL), the department acquired a new water-based bomber aircraft (AT 802 FireBoss) to supplement its fleet of five land-based AT 802 water bombers; and
- regarding forest insects and diseases, the Forest Pest Management Section (FPMS) of the department annually monitors and forecasts pest conditions throughout the Province and liaises with other agencies and jurisdictions regarding alien invasive species so that prompt action can be taken when appropriate. Control programs are planned and conducted using an Integrated Pest Management approach. FPMS, in collaboration with FPL, participates directly and/or indirectly in research projects to develop and improve pest control strategies and tactics such as biological insecticides and computer decision support systems, some of which now consider carbon sequestration. The department continued its participation in the development of a National Forest Pest Strategy under the aegis of the Canadian Council of Forest Ministers.

### Department of Agriculture, Aquaculture and Fisheries:

- provided on-going technical advice to agricultural producers; and
- through the Canada-New Brunswick Growing Forward Agreement funding program, assisted agricultural producers to aid them to adapt to climate change conditions and reduce GHG emissions.

### Department of Environment:

- is collaborating with the Atlantic Dairy and Forage Institute (ADFI). ADFI has received funds from the Canadian Agriculture Adaptation Program to conduct a Pilot Project on 50 New Brunswick and 50 Alberta Dairy Farms. This project will allow ADFI to evaluate the Quantification Methodology in the certified “Quantification Protocol for Emission Reductions from Dairy Cattle” while developing the required framework, guidance documents and form the necessary relationships between farmers, milk recording agencies, verifiers and carbon buyers, so that a national program can be financially self sufficient in the future. This project will consist of the development of monitoring and calculation templates, the quantification and verification of 100 dairy farms (50 in both New Brunswick and Alberta) and finally the marketing of verified credits to large final emitters with proceeds being returned to participating farmers.

## Risks and Damages

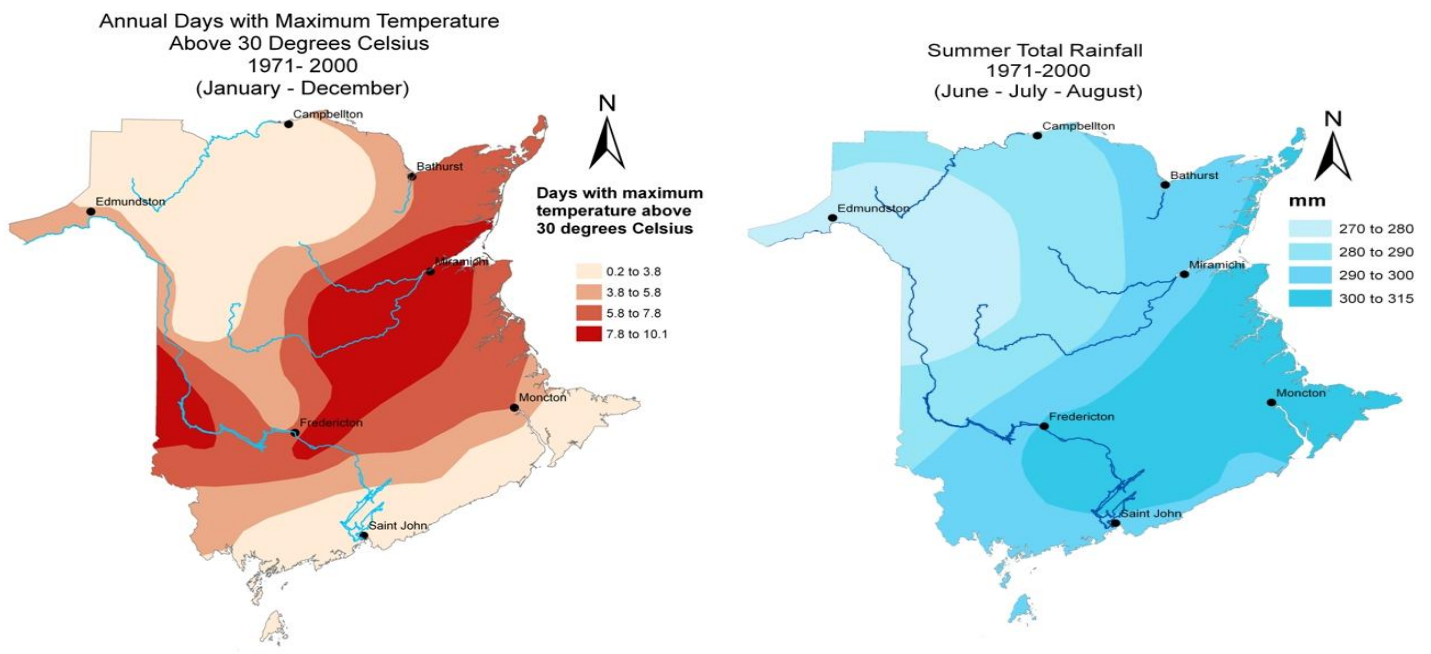
*“It is important to transfer our scientific knowledge of how our environment is being affected by climate change to the development of applied solutions for government, businesses, and communities.” NBCCAP 2007-2012*

The Province is addressing the challenges of risks and damages by fostering a dialogue with stakeholders. Transferring knowledge on a provincial, regional and community scale is ongoing and is essential. This transfer of knowledge will enhance applied solutions and will incorporate best practices for informed decision making in an effort to decrease risks and damages.

### Progress

Department of Environment:

- began work on a project to provide detailed information on current and future climate projections in New Brunswick for external users, including planners, municipal managers and the general public. Information will be presented via a web interface, primarily in map form. Maps were prepared for 14 climatic variables for the 1971-2000 climate period. The example maps show annual days with maximum temperature above 30° C and summer total rainfall;



- initiated and maintained oversight and management of applied studies in 14 communities across New Brunswick as part of the \$ 8.5 million Atlantic Regional Adaptation Collaborative (RAC). This initiative, developed in collaboration with the other Atlantic Provinces, municipalities and Natural Resources Canada, promotes and enables climate change adaptation actions via applied case studies that address priority concerns, including coastal and inland flooding and erosion, infrastructure, community planning, and groundwater management. During 2010-2011, projects engaged the communities of Le Goulet, Shippagan, Bas Caraquet, Richibucto, Moncton, Riverview, Dieppe, Sackville, Grand Falls, Saint John, Grand Bay-Westfield, Hampton, Quispamsis and Rothesay;
- launched the Atlantic Climate Adaptation Solutions website [www.atlanticadaptation.ca](http://www.atlanticadaptation.ca) to showcase the RAC projects across the region;
- planned and managed a risks and vulnerabilities workshop for all those involved in New Brunswick RAC projects, held in Moncton in November;
- initiated adaptation studies in Memramcook and Port Elgin, and provided advice and support for additional work in northwestern New Brunswick, coordinated through CARNO (comité de l'aménagement rural du Nord-Ouest);
- planned and oversaw the delivery of a conference entitled "Planning for Change: Managing Risk in a Changing Climate", held in Moncton in March. The conference was attended by over 150 government, municipal and planning staff and produced recommendations for future actions;
- in collaboration with the Department of Public Safety, began work on developing options for improved policies for flood-prone areas;
- commissioned and managed the production of technical issue papers on insurance and climate change, inland flooding and policy and planning. Upon completion, these papers will be used as up-to-date references on these topics in the Atlantic region and across Canada;
- completed a review of provincial climate-related monitoring networks, which resulted in several recommendations for improvement. Efforts were continued to improve the ability to assess lake vulnerabilities to algal blooms, to monitor the contribution of snow pack water equivalent to provincial water resources for hydrologic forecasting purposes, and extend seasonal precipitation monitoring to provide year-round data for assessments of water availability;
- installed a new forecasting system within the Hydrology Center with linkage to the data acquisition system, and updated river forecast models. Configuration of the system elements continues with training and testing toward improvements in the timing and delivery of forecast reports to clients and integration with the United States in sharing the monitoring of key hydrologic variables like temperature and precipitation;
- supported the completion of both low flow and flood (high) flow frequency assessments using periods of recorded data from provincially supported hydrometric gauging stations. The findings of these reports can help advance engineering design criteria for the sizing of infrastructure including bridges and storm drain, as well as outfall dilution capabilities, mixing zone determinations and overall watershed planning activities;
- continued to administer projects funded by the New Brunswick Environmental Trust Fund, which provided more than \$315,810 for 12 climate change adaptation projects:

- the Comité de l'aménagement rural du Nord-Ouest developed a plan for adaptation to the effects of climate change in northwestern New Brunswick;
- the UNB Environment and Sustainable Development Research Centre reviewed how our climate is currently being monitored and made recommendations that will ensure statistically significant monitoring and detection of climate change in the long-term;
- the Fredericton Area Watersheds Association, in partnership with the UNB Environment & Sustainable Development Research Centre, developed climate change adaptation strategies for New Brunswick municipalities;
- the Groupe Littoral et vie continued to work with organizations and the Town of Bouctouche in adapting to sea level rise as a result of climate change;
- the Nature Conservancy of Canada assessed threats and initiated actions to ensure the long term health and viability of coastal nature preserves;
- the North Shore Micmac District Council - Aboriginal Aquatic Resource & Oceans Management undertook studies that will be used in designing and implementing climate change adaptation strategies for future community planning exercises;
- the Town of Tracadie-Sheila studied coastal infrastructure and erosion in light of climate change adaptation and long-term planning;
- the Université de Moncton:
  - examined the effects of climate change to help evaluate the impact of extreme floods and drought on New Brunswick infrastructure;
  - monitored coastal changes associated with two types of erosion protection structures;
  - assisted residents within the Kent District Planning Commission in making informed decisions concerning adaptation to sea-level rise; and
  - hosted a workshop to advance the understanding of an integrated approach to coastal zone management and adaptation to sea level rise; and
- Vision H<sub>2</sub>O updated its geomatic data in order to better predict the impact of sea-level rise on coastal communities.

Department of Agriculture, Aquaculture and Fisheries:

- continued to support the Atlantic Agricultural Riparian Health and Management Strategy, by providing classroom and field training on riparian management for various departments and other stakeholders;
- hosted the Atlantic Riparian Health Workshop which was attended by over 140 riparian health professionals;
- continued to assist the Department of Supply and Services with the completion and construction of dykes upstream of the Petitcodiac causeway to meet future sea level rise predictions for the protection of farmland as part of the Petitcodiac Restoration; and
- through the Canada-New Brunswick Growing Forward Agreement, continued to support environmental farm plans and beneficial management practices implementation including those aimed at adapting to and mitigating the effects of climate change.

Department of Public Safety - New Brunswick Emergency Measures Organization (NB EMO):

- partnered with Pelmorex Communications Inc. to provide a direct to broadcast public alerting system. NB is one of six provinces that have entered into a formal agreement to use Pelmorex



infrastructure and applications as the core technology for public alerting. NB EMO will add a number of commercial radio stations to the system this year;


- is leading work to develop a more robust emergency program for Charlotte County. This pilot project will integrate local, provincial, private sector and non government entities under a comprehensive emergency program, providing local authorities with much greater capacity to manage emergencies and disasters; and
- completed a three year project to develop a high accuracy digital elevation model (DEM) for the Saint John River. The New Brunswick River Forecast Centre is using the DEM to improve inundation modelling and forecasting. NB EMO and the NB 911 Bureau have developed a number of applications that use the DEM to visualize at-risk areas, current and forecasted water levels and the associated flood impacts. The DEM also supports a range of other climate change adaptation planning activities.

#### Department of Health:

- in partnership with Health Canada, continued to develop a heat alert pilot project intended to reduce the rate of heat-related illness in the province. Due to climate change, forecasters predict that in Fredericton will have a significantly greater number of days exceeding a humidex of 40°C. Because of this, it has been chosen as the Atlantic Provinces site for this pilot project. The other pilots will be conducted in Manitoba and Windsor, Ontario. The project is funded through Health Canada until 2012. The end result will be the development of a best practices guide for the preparation of heat alert and response programs; and
- is developing a new category of licensed on-site sewage system installer for non-conventional sewage disposal systems. This will be beneficial to property owners who may experience a reduction in lot size as a result of climate change (e.g. flooding, sea level rise) and will assist in reducing risks to public health and the environment.

## Partnerships and Communication

*“Our ability to manage our environment in a sustainable manner, reduce emissions and adapt to climate change impacts relies on our recognition that acting to protect the environment is a shared responsibility.” NBCCAP 2007-2012*



The Climate Change Action Plan outlines a number of actions to strengthen partnerships, reduce emissions and prepare for climate change impacts. It is a responsibility that must be addressed by local, aboriginal and federal partnerships by sharing ideas, experiences and practices.

## Partnerships with Communities and Working with Stakeholders

*“The Province acknowledges that communities will play a critical role in greenhouse gas emissions reductions and adaptation strategies to address climate change impacts.” NBCCAP 2007-2012*

The Province continued to assist communities in constructing their infrastructure in a manner that minimizes GHG emissions and is designed to function reliably in a changing climate. Since the release of the action plan, municipalities can generate energy from a range of green energy systems. By partnering with communities and stakeholders, the Province can achieve targets and pursue innovative climate proofing approaches.

### Progress

Department of Environment:

- began a review of the greening of government initiative to assess the progress made and to make recommendations for further provincial actions;
- promoted the concept of integrated planning in relation to climate change for projects, reviews, and working committee groups;
- completed a climate change presentation that integrates subdivision building and smart growth principles to foster knowledge on how development, buildings, streets and land can be carried out. The department also prepared maps which refer to local implementation of subdivisions building in response to climate change;
- worked with selected communities to identify local climate change issues and opportunities, and determine appropriate actions;
- held two English Sustainable Community Design (SCD) seminars and one French seminar in New Brunswick, delivered SCD info sessions to Departments and provided training for six SCD info and two seminar sessions in partnership with the Canada Mortgage and Housing Corporation, Efficiency NB, the Federation of Canadian Municipalities (Affordability and Choice Today) and the Association of Municipal Administrators of New Brunswick;
- monitored a UNB study on regulatory changes associated with One Tree Orchard in Fredericton, a community project that maximizes the use of locally derived energy and heating sources, and reduces the need for vehicle traffic; and

- continued to administer projects funded by the New Brunswick Environmental Trust Fund, which provided more than \$81,000 to support the implementation of green plans for Kedgwick, Memramcook, Saint-Isidore, and Shippagan.

Department of Agriculture, Aquaculture and Fisheries:

- worked with the New Brunswick Agri-Food Market Development Industry Advisory Committee to identify and capture opportunities in the local food market. The Agri-food Market Development Program provided assistance to producers, farm markets, associations and agri-food businesses to help increase the promotion and awareness of local agri-food products which resulted in an increase in sales and consumption.

Department of Local Government:

- administered the Gas Tax Fund in 2010, for which 88 of 188 projects will have an effect on reducing GHG emissions.

## Public Education and Outreach

*“The province recognizes that public awareness and education initiatives are essential in engaging people in making choices that both reduce greenhouse gas emissions and respect the challenges of a changing environment.” NBCCAP 2007-2012*

The Province encouraged all sectors to consider their current actions and take steps towards both reducing their GHG emissions and adapting to current and future climate change impacts. Activities across the province were held to promote energy efficiency, transportation efficiencies, waste reduction, and water conservation. The Province worked with a number of partners to raise awareness and understanding of climate change issues.

### Progress

Department of Environment:

- delivered presentations and workshops at conferences, information sessions, home shows and events to raise awareness of climate change. Promotional/demonstration materials and tools were presented to highlight improved GHG emissions management and more comprehensive adaptation actions to foster climate change environmental stewardship in New Brunswick;
- developed partnerships with various groups and organizations to assist in delivering climate change outreach initiatives;
- continued to implement the climate change engagement strategy involving three core groups: opinion leaders, communities of interest and the public. The department:
  - brought together provincial opinion leaders in June 2010 for a fourth forum on climate change. The forum included a dialogue session with Stephen Lewis and a presentation on climate change engagement initiatives proposed by previous forums and delivered by the department;
  - completed a pilot project to promote green practices to businesses in partnership with the Conservation Council of New Brunswick, Efficiency NB, Edmundston Madawaska Tourism, City of Edmundston and the Edmundston Region Chamber of Commerce. The pilot project

- promoted energy efficiency, transportation, waste and water management and eco-friendly practices. To learn more about these practices, visit the Edmundston Region Chamber of Commerce website – <http://www.ccedmundston.com/en/ecologisation.php>;
- continued, in conjunction with the Project Planning Committee for the Climate Change Youth Engagement Network, to provide training and organize public awareness events for youth, such as the Earth Hour events in Fredericton and Moncton;
  - in partnership with Efficiency NB, the New Brunswick Environmental Network and the New Brunswick Lung Association (New Brunswick Climate Change Hub), undertook the Neighbourhood Eco-Challenge. Families from Moncton, Petitcodiac, Saint Andrews and Shediac made a commitment to reduce their personal carbon footprint as part of recognizing the importance of climate change and the need to take action at the community level;
  - worked with government departments, the New Brunswick Environmental Industry Association, and the New Brunswick Purchasing Management Institute in April to host the first ever New Brunswick green products and services forum in Fredericton;
  - administered projects funded by the New Brunswick Environmental Trust Fund, which provided more than \$583,410 for 25 climate change education projects:
    - ACAP Saint John provided learning opportunities for urban stakeholders to discover the diversity of plants and wildlife within Greater Saint John, and their individual responsibilities in maintaining and improving their environment in the face of climate change;
    - the Association de Bassins Versants de la Grande et Petite Rivière Tracadie educated the public and school children on ways to mitigate the effects of climate change;
    - the Bathurst Sustainable Development:
      - continued to operate a Climate Change Action Centre which provided information about climate Change, energy efficiency, reducing GHG emissions, and the programs available to help address climate change; and
      - in light of the International Year of Biodiversity, took action locally to mobilize individuals on actions to conserve, preserve, protect and restore biological diversity;
    - the Canadian Parks and Wilderness Society raised awareness regarding implementation of the New Brunswick Climate Change Action Plan as it relates to natural areas conservation, forest management, community planning and smart growth;
    - the Cape Jourimain Nature Centre:
      - continued to deliver programs on renewable energy, biodiversity and water stewardship; and
      - developed the concept of a provincial information hub on small-scale renewable energy. This Hub will provide information on renewable energy technologies and links to demonstration sites where these approaches are showcased;
    - the City of Fredericton engaged and motivated the public to reduce GHG gas emissions in a tangible and sustained way;

- the Club Loisir de la Rivière Caraquet empowered students at l'école Léandre LeGresley to reduce their energy consumption and carbon footprint;
- the Comité de Gestion Environnementale de la Rivière Pokemouche conducted an educational campaign for students focusing on wetlands, climate change, ecological gardens and energy efficiency;
- the Comité sauvons nos Rivières Neguac educated the public about ways to address climate change;
- the Conservation Council of New Brunswick:
  - encouraged the consumption of locally produced food in order to reduce the GHG emissions associated with long-distance transportation; and
  - continued a Renewable Energy Assistance Hub for Southwestern New Brunswick. The council served as a clearinghouse of information on renewable energy, linked people with technology demonstration projects and provided advice on adopting renewable energy;
- Downtown Caraquet undertook an educational campaign to promote green practices by its residents;
- the Falls Brook Centre continued to operate a Renewable Energy Information and Assistance Centre for North-Western New Brunswick. The Centre provided information on renewable energy technologies, linked people with demonstration sites and provided advice on adopting renewable energy in the home, small business and on the farm;
- the Gaia Project developed and delivered a high school educational program aimed at raising the awareness of climate change, and solutions that are available to help take action;
- the Groupe Littoral et vie:
  - educated the residents of Kent County about adapting to the effects of climate change in coastal areas; and
  - conducted workshops for students on environmental issues including coastal habitats, energy efficiency, water quality, reforestation and the impacts of climate change;
- the New Brunswick Climate Change Hub continued to improve public education and build capacity among communities with regard to reducing GHG emissions;
- the New Brunswick Environmental Network created and fostered opportunities for youth and communities to take action on climate change and other environmental issues;
- the New Brunswick Lung Association expanded upon the SIMPLE Driver Stewardship Program which is designed to influence Canadians to reduce fuel consumption and GHG emissions through the way they drive, maintain and purchase their vehicles;
- les Pros de l'Environnement at École La Rivière de Pokemouche used a weather station to study the weather and its relationship with our climate;
- the Shediac Bay Watershed Association conducted educational sessions in schools and local businesses in order to promote energy and water conservation concepts;

- the University of New Brunswick Fredericton, in cooperation with Université de Moncton and Mount Allison University, produced a series of video clips featuring climate change messages; and
- Vision H<sub>2</sub>O educated school children, local businesses and the general public about energy conservation, climate change and GHG gas emissions.

Efficiency NB:

- collaborated with Mount Allison University's Eco Action student environmental group to launch the Campus Climate Change Challenge province wide. The purpose of the challenge was to raise awareness of how much energy is being used and how big savings can be made by doing little things; and
- launched, in the summer of 2010, a toolbox of resources to help municipalities and community groups educate residents about the importance and benefits of energy efficiency.

## Moving Forward



### Implementation

*“Although the actions contained in this document will be phased in and implemented within the timeline of this plan, additional actions, including those addressing adaptation issues, are long-term and will require a sustained commitment beyond the 2007-2012 period.” NBCCAP 2007-2012*

The Province is now embarking on the final year of the Climate Change Action Plan 2007-2012. Its many actions continue to be phased in and implemented; these actions will continue to produce beneficial results into the future from which the next plan to 2020 can be built. This first New Brunswick Climate Change Action Plan establishes a base to inform and influence decisions. The next plan will expand upon existing initiatives with new actions.

### Progress

Department of Environment:

- monitored and measured 35 New Brunswick Climate Change Action Fund projects in support of public-sector, private-sector and not-for-profit initiatives in keeping with the Climate Change Action Plan goals. These projects are expected to result in reductions or avoidances of greenhouse gas emissions and air pollution throughout the province. The projects are documented on the New Brunswick Climate Change Website and have been registered with the Canadian Standard Association (CSA) GHG Clean Projects Registry. In 2010, the first year of reporting, these projects have resulted in estimated reductions of over 40,000 tonnes CO<sub>2</sub> equivalent;
- will continue to administer the New Brunswick Environmental Trust Fund which, in 2011-2012, invested over \$1 million in climate change mitigation, adaptation, and education projects; and

- will continue to develop a range of initiatives in support of more effective adaptation to climate change.

## Accountability

*“A Climate Change Secretariat has been created to help co-ordinate activities of government departments and to develop and implement initiatives for achieving the objective of the Climate Change Action Plan and raise awareness of climate change issues.” NBCCAP 2007-2012*

The Climate Change Secretariat monitors GHG emissions trends and progress regarding the implementation of all climate change initiatives in the action plan. Several government departments and agencies lead climate change activities. The departments of Agriculture, Aquaculture and Fisheries, Business New Brunswick, Energy, Environment, Finance, Fisheries, Health, Local Government, Public Safety, Social Development, Supply and Services, Natural Resources, Tourism and Parks, and Transportation, as well as Efficiency NB, the New Brunswick Innovation Foundation and, NB Power all have contributed towards the progress of the plan. In addition, many communities, industries, businesses, non-profit organizations and individuals have contributed significantly to the plan. Work between provincial departments and partners is ongoing to facilitate the transfer of knowledge and to gain a better understanding of climate change issues.

## Progress

Department of Environment:

- in conjunction with partners such as Efficiency NB, the New Brunswick Climate Change Hub, the Conservation Council of New Brunswick and the New Brunswick Environmental Network, provincial departments and municipal associations met numerous Climate Change Action Plan objectives. These efforts will also contribute to the New England Governors/Eastern Canadian Premiers climate change objectives and support bilateral discussions on climate change;
- in conjunction with the CSA, continued to facilitate the sharing of information about GHG emissions tracking and reduction activities in the province;
- developed a partnership with Stantec to explore GHG emissions reductions opportunities in provincial government operations; and
- developed a model to track and report energy consumption and corresponding emissions by department. The results of this model will allow the key departments to better manage their energy consumption as well as providing a baseline estimate of the province’s emissions for future mitigation policies. The model is expected to be operational in 2011.

New Brunswick Climate Change Secretariat  
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The summary and progress report are also available electronically.