

Climate Change Action Plan 2009-2010 Progress Report

Making Real Progress

June 2010



Be smart! *Take Action* on Climate Change

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Introduction



During the third year of implementation of the *New Brunswick Climate Change Action Plan* (NBCCAP), the Province has made real progress towards implementing the plan's commitments and building on the successes of the previous year. Several government departments have actively led climate change activities and many communities, industries, businesses, non-profit organizations, and individuals have participated in and contributed to this progress.

The NBCCAP is an ambitious plan that 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 the series of objectives and policy actions, as well as through the engagement of stakeholders and the general public.

Some key highlights of this third year that all New Brunswickers can proud to have helped develop and implement are:

- three years after releasing the NBCCAP, the Province of New Brunswick started or has completed 95 per cent of the commitments in the plan;
- between 2004 and 2008 overall emissions had declined by 3.3 megatonnes (Mt), a decrease of 15 per cent;
- adopted a green building policy that requires provincial government new construction and major renovation projects to achieve a minimum level of energy and environmental performance and measures outcomes against nationally recognized third-party rating systems such as LEED® (Leadership in Energy and Environmental Design), Green Globes Design™ and Efficiency NB Core Performance Guide;
- announced and started work on the Atlantic Climate Adaptation Solutions Project. This initiative, led by New Brunswick, was developed in collaboration with the other Atlantic provinces, municipalities and Natural Resources Canada and will involve applied case studies in six New Brunswick Communities;
- amended the *Clean Environment Act* to authorize regional solid waste commissions to be generators of electricity;
- proclaimed amendments to the *Municipalities Act* enabling municipal electricity generation;
- purchased wind energy from the Caribou Mountain 33 turbine wind farm with a capacity of 99 megawatts (MW) and contracted an additional 54 MW

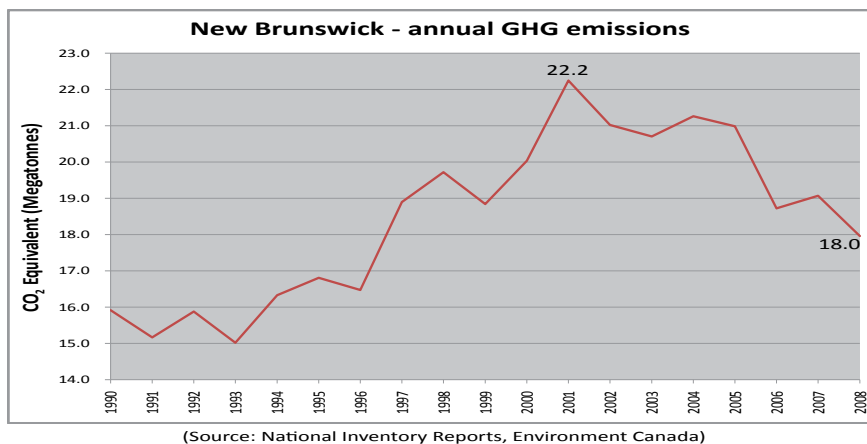
of wind energy capacity with Trans Alta Corporation at their current Kent Hill facility increasing their capacity to 150 MW for a total wind energy generation capacity in the province of 249 MW by the end of 2010;

- expanded the climate change website to include emissions reduction, adaptation and youth sections. The adaptation section includes an interactive map that provides information about areas at risk of flooding or prone to flooding; and
- continued to lead successful public engagement initiative such as the Opinion Leaders Forum, the Green Business Pilot Project for the Edmundston Region Chamber of Commerce, the Climate Change Youth Engagement Strategy and the 2nd Phase of the Mayors Eco-Challenge.

The New Brunswick situation

New Brunswick greenhouse gas (GHG) emissions

In 2008, GHG emissions from all sources in New Brunswick amounted to 18.0 megatonnes (Mt), or 2.5 per cent of the Canadian total of 734 Mt of carbon dioxide (CO₂). Between 2004 and 2008, overall emissions declined by 3.3 Mt (15 per cent), with emissions from large industries and electricity generating, falling by 21 per cent.

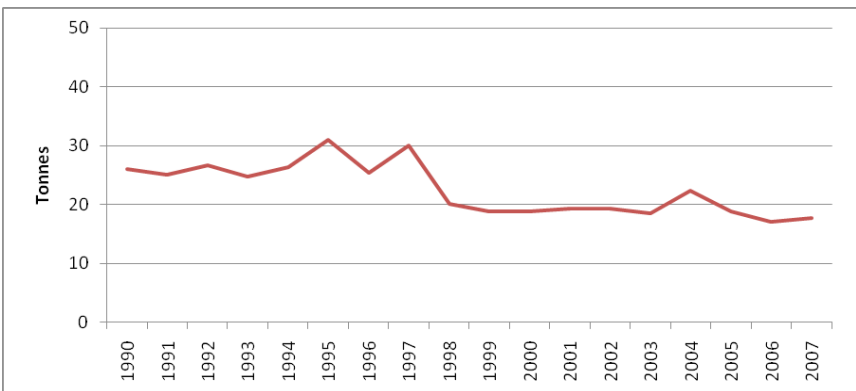
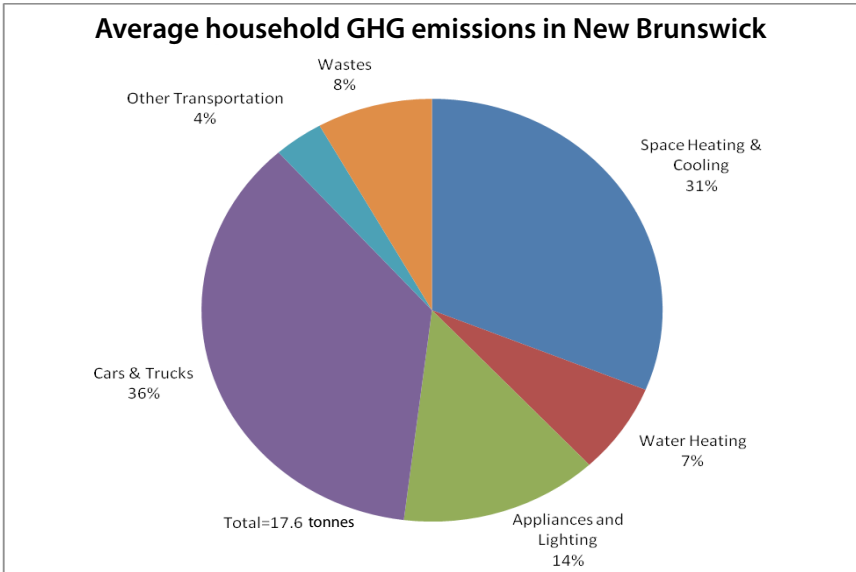


New Brunswick's GHG emissions increased steadily from 1990 until 2001; since 2001, however, emissions have been gradually declining.

Electricity generation remained the leading contributor of GHG emissions in New Brunswick, but its share of emissions has been declining. In terms of overall emissions: electricity generation accounted for 37 per cent of emissions in 2008, down from 42 per cent in 2004. The introduction of wind energy, extended periods of higher rainfall levels available for hydro electricity generation and energy purchases from neighbouring utilities contributed to a reduction in GHG emissions at NB Power, at the same time, these three developments helped displace the utility's fossil-based electricity generation, reducing the province's overall GHG emissions.

New Brunswick household GHG emissions

Twenty-eight per cent of New Brunswick's total GHG emissions were attributable to household activities and to the choices New Brunswickers made every day. Household, transportation and space heating/cooling choices were the leading contributors to GHG emissions. Cars, trucks, air travel and other transportation account for 40 per cent of GHG emissions. Space heating and cooling accounted for the second largest percentage, 31 per cent.



(Source: New Brunswick Department of Environment)

Adapting to climate change

Understanding the risks and opportunities from the physical impacts of climate change for all sectors of New Brunswick's economy, society, and ecosystems is important to the Province. Work continues to better understand the implication and the range of vulnerabilities and formulate appropriate policy and planning and other responses, such as communicating strategic information to government and the public.


The importance of partnerships

Climate change is a shared responsibility. Government, industry, communities, and individuals all share the responsibility for managing the environment in a sustainable manner, reducing GHG emissions, and adapting to climate change. Every New Brunswicker has a role to play. The NBCCAP includes collective actions to achieve these objectives. 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 help the Province meet the NBCCAP objectives. This engagement process has been in place to ensure the delivery of the plan. Funding is also available through the New Brunswick Environmental Trust Fund to foster partnerships; over \$1 million is funded annually for climate change mitigation, adaptation, and education projects.

The Province also promotes public awareness and educational programs to engage New Brunswickers. For example, an Earth Hour "Unplug Your World" event was held on March 27, 2009 in partnership with the Climate Change Youth Engagement Network, the Department of Environment, the Conservation Council of New Brunswick and the City of Fredericton at the Boyce Farmers' Market in Fredericton. Over 450 individuals attended this event. Earth Hour is an annual event where cities and towns around the world turn off their lights for one hour to raise awareness about climate change and the impact that each individual can have in making a change. New Brunswickers rose to the challenge and reduced their electricity consumption by 18 megawatts for the hour. This is equal to turning out about 360,000 lights. This resulted in a reduction of 9 tonnes of CO₂.

Actions to reduce or avoid GHG

"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

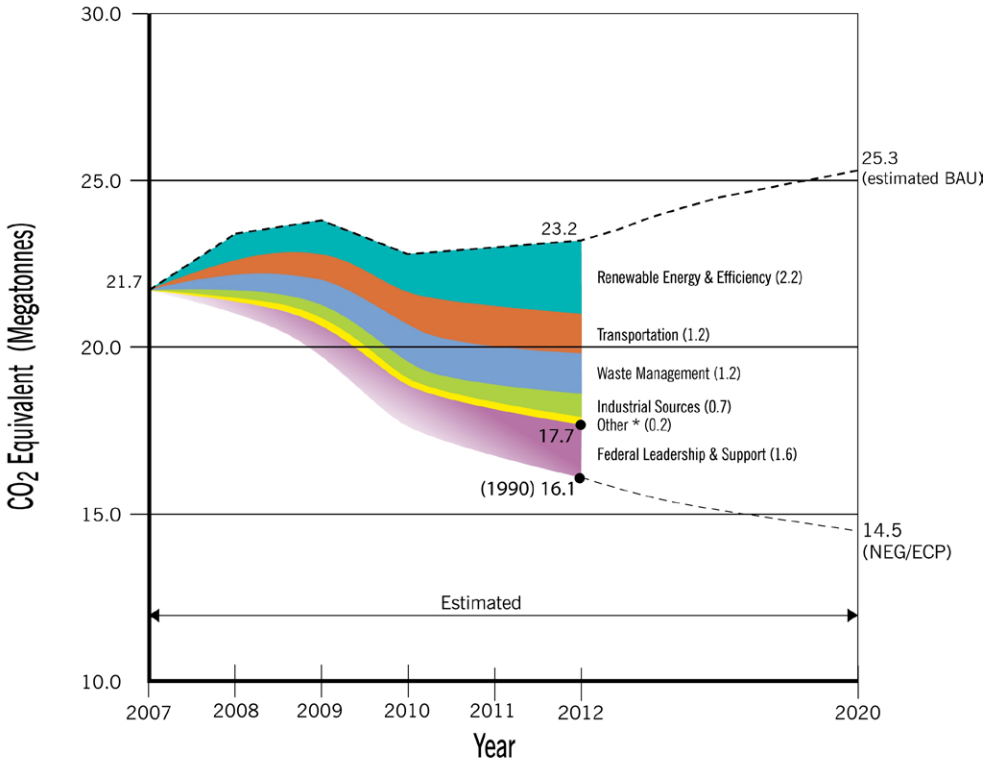


The Province acknowledges that action is needed to reduce or avoid GHG emissions, human activities, especially the release of GHG emissions through the burning of fossil fuels, have been contributing to a changing climate and severe environmental consequences. The Province is fostering using more GHG-free energy, improving energy management, switching to cleaner fuels, improving waste management, and using project assessment reviews and other environmental approval processes to minimize project emissions.

The projected GHG reductions demonstrate progressive and cumulative benefits from the New Brunswick-led actions. The New Brunswick commitments will enable the Province to realize a reduction of total GHG emissions of 5.5 Mt annually in 2012. New Brunswick remains committed to contributing to regional and national initiatives to address climate change issues in the short and long term and remains committed, with federal leadership and support, to reducing its GHG emissions to 1990 levels by 2012. The benefits of the NBCCAP will further advance the drop in emission levels in reaching 1990 levels, and by 2020, meet the Conference of New England Governors and Eastern Canadian Premiers (NEG/ECP) emission reduction targets of 10 per cent below 1990.

The following graph illustrates the projected GHG emission reductions for each of the commitment categories outlined in the NBCCAP compared to a Business As Usual (BAU) projection.

Projected greenhouse gas (GHG) emissions scenarios in New Brunswick



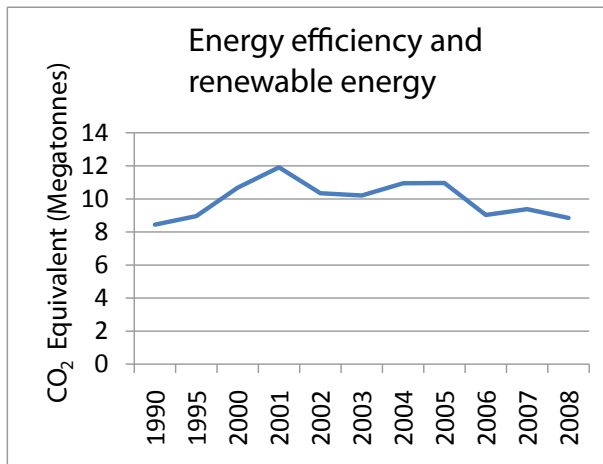
Other * - Government Leading by Example / Partnership & Communications

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

The Province is fostering the availability of cleaner energy options, and is helping to implement strategies, initiatives and programs to promote energy efficiency. Between 2004 and 2008, overall GHG emissions from electricity generation decreased by 15 per cent.



(Source: New Brunswick Department of Environment)

Progress:

- Efficiency NB - Residential:
 - increased participation in the residential existing homes program from:
 - 2,515 (homes with retrofits completed) and 7,330 (homes with initial audits) in 2008-2009;
 - to 5,690 (homes with retrofits completed) and 9,841 (homes with initial audits) in 2009-2010, estimated GHG emissions reductions from upgrades done as part of this program, since the program inception are 32,266 tonnes per year.
- Efficiency NB - Commercial:
 - was part of the Industry Provincial Offset Group (IPOG) that completed

development of a GHG quantification protocol for “Energy Efficiency in buildings and Demand Side Management Projects” which was submitted to the Federal Department of the Environment for consideration as part of any GHG regulations announced federally;

- worked with the Department of Supply and Services (DSS) to examine the energy utilization indices for provincial buildings;
- worked with the DSS, Department of Social Development, and the Department of the Environment on the development of the Provincial Green Building Policy announced on April 6, 2010. This policy guides the design and construction of energy efficient and environmentally sustainable buildings owned or funded by the province of New Brunswick;
- signed up 183 buildings into the Energy Smart Commercial Buildings Energy Efficiency Upgrades program in 2009-2010 compared to 161 in 2008-2009. Estimated GHG emissions reductions due to this program, since program inception are 7,030 tonnes per year;
- completed an updated GHG Emission Reduction Quantification report on the Bright Ideas Commercial Lighting program which came to an end in December 2009. This report indicates that the program reduced the annual energy consumption of end users by 5,376,750 kWh and the associated annual GHG emissions by 5,022 tonnes;
- completed the commercial building energy labelling pilot project that was started in 2007-2008. In partnership with DSS, Perth-Andover, Saint John, Miramichi, and Fredericton 62 municipal / government buildings have received energy consumption labels. These labels provide a means of indicating how well a building is performing compared to buildings of a similar type; and
- launched the Core Performance Prescriptive Path program, in March of 2010. The Core performance is a new program designed to achieve significant, predictable energy savings in new commercial buildings. This program provides an alternative to the modelling based approach to new building design called for in the Start Smart program (which nine buildings have completed) allowing more buildings to be designed to high energy efficiency levels.
- Efficiency NB - Industrial:
 - continues to add facilities and projects to the large industrial program with a current roster of 26 industry participants and 34 active capital projects and 17 facilities undergoing Energy Management Information System Audits. The total potential for annual GHG emissions reductions with existing active projects (including the stimulus projects shown below) is approximately 300,000 tonnes; and
 - created a new Energy Efficiency Project Implementation Stimulus

Fund which administered a further 3.4 million dollars of the New Brunswick Climate Action Funds to eleven different industrial facilities for a total of 16 projects. These projects are expected to reduce annual GHG emissions by 155,716 tonnes.

- Department of Energy:
 - developed proposed regulations under the *Energy Efficiency Act*, to increase regulated efficiency levels and to increase the number of appliances and industrial products included in the regulations. The amendments are expected to take effect in 2010 after stakeholder consultation is concluded;
 - completed a small-scale hydro electric study for sites in New Brunswick which will be made available to the public;
 - completed an assessment of small-scale biomass opportunities for co-generation, district heating and facility heating with the New Brunswick Federation of Woodlot Owners. The assessment is currently being finalized and will be made available to the public;
 - through the Council of Energy Ministers, Energy Technology Working Group, participated in a national carbon capture and storage network in order to share information and learn more about emerging technologies;
 - developed a Community Energy Policy that will provide an opportunity for the development of up to 75 megawatts (MW) of distributed renewable energy projects throughout the province; and
 - provided the New Brunswick Community College in Grand Falls support for the development of applied research and innovation projects. With provincial support, new technology and product options for the natural resource sectors of agriculture and forestry will be provided.
- NB Power:
 - reduced its GHG emissions from a high of 9.94 million tonnes in 2001 to 5.76 million tonnes in 2009;
 - committed to exploring new lighting technologies and saving energy by testing new LED lights in 24 locations across the province;
 - continued to evaluate all options to reduce its carbon footprint while maintaining its competitive rates in the future by investigating non-emitting sources of supply including:
 - exploring other renewable energy options such as small hydro, tidal power, biomass co-firing and electricity generated from landfill gas;
 - investigating the total potential for wind generation and maximizing wind integration;

- focusing on existing plant efficiency (high efficiency turbines, and other improvements);
- purchased wind energy from the Caribou Mountain 33 turbine wind farm with a capacity of 99 MW;
- contracted an additional 54 MW of wind energy capacity with Trans Alta Corporation at their current Kent Hill facility increasing their capacity to 150 MW for a total wind energy generation capacity in the province of 249 MW by the end of 2010; and
- hosted a roadway lighting conference with delegates from the United States and Canada.
- Department of Natural Resources:
 - awarded Crown forest biomass allocations to four forest companies to support eight separate biomass projects.
- Department of Agriculture and Aquaculture:
 - through the Canada-New Brunswick Growing Forward Agreement, implemented a funding program for on-farm energy audits to be complimentary to Efficiency NB's Energy Smart Program. The department funded a training session for on-farm energy efficiency for potential audit service providers. The department also implemented a funding program for implementation of energy efficient technologies. To date, eight on-farm audits have been funded.
- Department of Environment:
 - continued to administer the New Brunswick Environmental Trust Fund, which provided more than \$213,000 to eight GHG reduction projects:
 - EOS Eco-Energy expanded their work in engaging Tantramar residents and municipalities to address climate change through local energy conservation initiatives;
 - the City of Edmundston examined its energy consumption practices in order to identify actions that will help conserve energy and reduce GHG emissions;
 - the Chaleur Regional Hospital Foundation assessed the potential of an energy cogeneration project;
 - the Chaleur Standing Committee on Economy and Sustainable Development educated business owners and community leaders about sustainable development with a focus on local implications, implemented green and environmentally sustainable practices within businesses and communities in the region and helped establish regional support to further its objectives;
 - the Fondation du Collège de Bathurst Inc. adopted the concept of a Green Campus for the New Brunswick Community College Bathurst Campus;
 - the Town of Bouctouche established an action plan to reduce

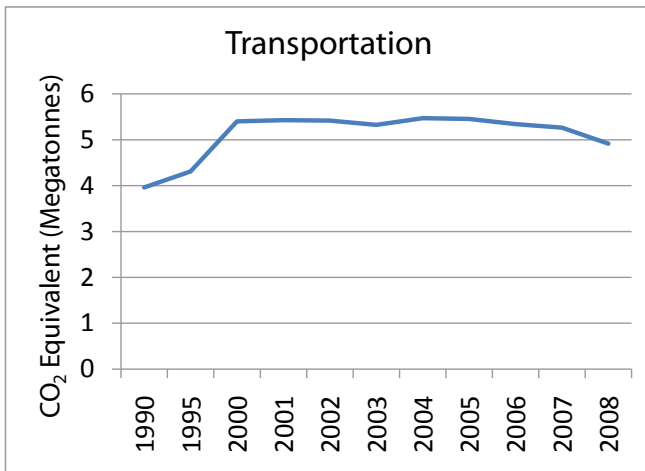
GHG emissions;

- the Town of Tracadie-Sheila assessed GHG within its boundaries; and
- the Town of Riverview implemented components of the Federation of Canadian Municipalities Partners for Climate Change Protection Program. The Town examined ways to save energy, sequester carbon, divert waste, conserve water, etc.

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 2008, the transportation sector accounted for 27 per cent of GHG emissions in New Brunswick. Transportation is the second largest contributor of emissions in the province. Continued effort was undertaken during the year to improve transportation efficiency and reduce GHG emissions from this sector.



(Source: New Brunswick Department of Environment)

Progress:

- Department of Transportation:
 - continued 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. Fredericton and Moncton are building new maintenance facilities for greater efficiency in fleet operations and to enable an increase in fleet size. With funding from the New Brunswick Climate Action Fund, Saint John has launched new park and ride services within the city and redesigned transit routes to better serve customers. The rural to urban commuter service expanded with the launch of two new articulated buses linking the Towns of Hampton and Quispamsis with the City of Saint John. Articulated buses are longer buses that are hinged in the middle, so they can carry more passengers, while still being able to navigate city streets. The new Saint John Transit operations center opened in September 2009 and is undergoing LEED (Leadership in Energy and Environmental Design) certification. A new transit service in Miramichi began in August 2009 and has successfully increased ridership since its inception;

- continues to pursue the Intelligent Transportation System Strategy released in 2008. The 511 Travel Information Service was launched in December 2009 which contributes to GHG reductions by improving efficiencies through better trip planning. There are currently four weigh-in-motion facilities, and an additional facility will be completed by the fall of 2010;
 - 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;
 - continues to accept 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; and
 - opened a new efficient border crossing at St. Stephen/Calais in November 2009.
- Department of Local Government:
 - established a steering committee to develop a public transportation strategy to ensure New Brunswickers have convenient alternatives to their private vehicles and that their mobility needs would be met. A Terms of Reference and Guiding Principles are currently being developed and once approved a Public Transportation Advisory Committee will be established. The Advisory Committee will provide advice on matters of process and substance in identifying issues,

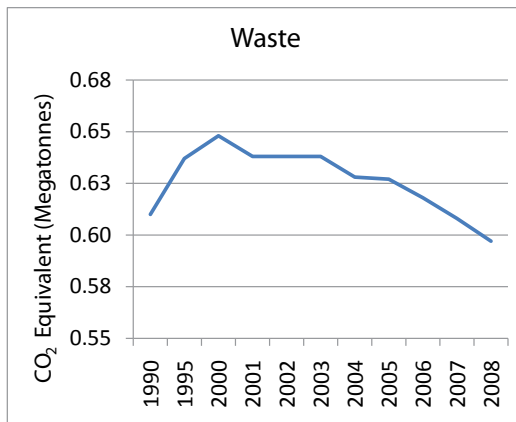
concerns and information to be addressed in the Public Transportation Strategy. The Advisory Committee is intended to be a discussion forum and will specifically explore initiatives, as articulated in the NBCCAP; and

- completed an environmental scan of anti-idling policy and by-laws available in other jurisdiction.
- Department of Public Safety:
 - researched vehicle emissions programs both in Canada and the United States and is preparing, in consultation with stakeholders, program recommendations to government based on best practices in other North American jurisdictions.
- Department of Environment:
 - supported local groups, such as the New Brunswick Lung Association (New Brunswick Climate Change Hub), with anti-idling awareness campaigns.

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*

GHG emissions from the waste sector are smaller relative to the other sectors but great benefits can be gained from managing landfill gases because of its methane content which has twenty one times greater global warming potential than carbon dioxide. Also, by reducing, reusing, and recycling waste we achieve other important environmental and economic benefits.



(Source: New Brunswick Department of Environment)

Progress:

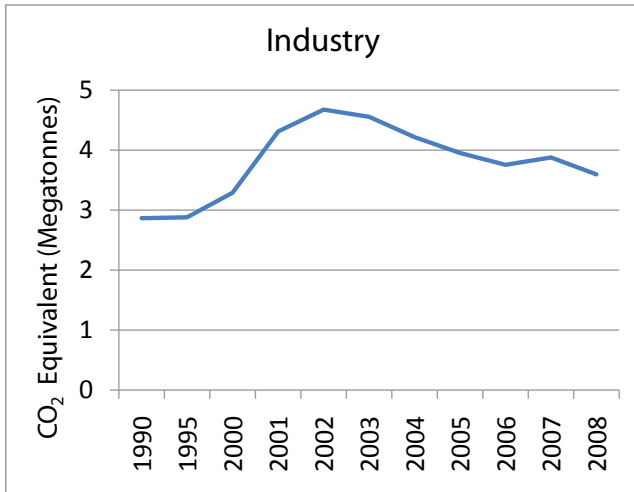
- Department of Environment:
 - amended the *Clean Environment Act* to authorize regional solid waste commissions to be generators of electricity. This enables the capture and use of methane gas at landfills;
 - continued to support the regional solid waste commissions in implementation of waste diversion programs such as: Used Milk Containers - the department continues to work collaboratively with the Milk Industry to improve upon the delivery of a voluntary used milk container collection program. Wireless Communication Devices - the department has worked collaboratively with the wireless industry to allow for collection of these devices in the Province through a voluntary Program Called Recycle My Cell; Used Oil and Coolant Stewardship Program - the department is in the process of launching a new designated material stewardship program which will be overseen by Recycle NB, this regulated program will include the handling of waste fluids; and
 - required wholesalers and end users to obtain a permit from the department for the sale and purchase of ozone depleting substances and replacement substances (hydrofluorocarbons). Information has been collected since 2008 on the sales and purchases of replacement substances by authorised handlers (wholesalers and end users). All applicants of permits to buy replacement substances are required to be "certified" as per regulatory requirements. Wholesalers are required to provide semi-annual reports to the department on all sales of regulated refrigerants to holders of permits to buy. The amendments to the *Ozone Depleting Substances and Other Halocarbons Regulation - Clean Air Act*, came into force on June 30, 2007. A total of 428 permits were issued for ozone depleting substances, and replacement substances.
- Department of Agriculture and Aquaculture:
 - supported the trial use of an innovative cattle manure press designed to convert manure into cattle bedding through Enabling Agricultural Research and Innovation as part of the Canada-New Brunswick Growing Forward Agreement, thus reducing the amount of manure releasing GHG emissions into the atmosphere;
 - in conjunction with the Department of Environment, is supporting the development of GHG protocol. During 2009-2010, Atlantic Dairy and Forage Institute developed and received certification by Alberta Environment of its GHG protocol "Quantification Protocol for Emission Reductions from Dairy Cattle". This protocol addresses the three major GHGs produced in the agriculture sector: methane, nitrous oxide

- and carbon dioxide. This protocol will help enable Canadian dairy producers to better manage GHG emissions; and
- supported the Laforge Biogas project, through the Canada-New Brunswick Growing Forward Agreement and the New Brunswick Climate Action Fund, which utilizes agricultural waste products and converts them to gas. This project will reduce GHG production by converting these gases for greener electrical production.
 - Department of Energy:
 - continued to support Laforge Bioenvironmental in constructing a biogas plant (anaerobic digester) that will produce up to 360 kWh of electricity. The production of energy is based on the feedstock for the biogas system, which will be a combination of manure and off-farm organic waste. In addition to the electricity generated from the system, a bi-product of the process will be a nutrient rich fertilizer that can be used by local producers. This will result in a reduction of 16,000 tonnes of CO₂ annually.

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 and among provinces and territories." NBCCAP 2007-2012

New Brunswick industries are becoming more competitive and resilient by reducing their emissions. Through efficiency and conservation, industries are producing environmentally-responsible products, services and technologies that generate less waste and pollution. New Brunswick industries are capturing emerging green opportunities and at the same time, addressing local and global challenges such as climate change. Twin Rivers Pulp Mill in Edmundston New Brunswick, working with NB Power, embarked on an "off oil program" and power generation improvement. These programs have resulted in a 90 per cent annual reduction in heavy fuel oil consumption of approximately 36 million litres and a corresponding reduction in GHG emissions of 96,000 tonnes.



(Source: New Brunswick Department of Environment)

Progress:

- Business New Brunswick:
 - provided more than \$65 million in loans and loan guarantees in 2009-2010 from the Financial Assistance to Industry Program for energy, productivity and efficiency initiatives;
 - provided more than \$175,000 to 25 projects and related initiatives that focused on capacity building, demonstration, efficiency, and recycling technologies through the Business New Brunswick's Technology Adoption and Commercialization Program;
 - included two Green Building workshops in New Brunswick and activities to help businesses to obtain green certifications for building product markets through Business New Brunswick's Export Development activities. Businesses were also assisted in marketing green products and services from New Brunswick at events in the United States and Europe; and
 - continued to work with a variety of companies, departments, associations and agencies on initiatives such as energy efficiency improvements, clean technology and market development.
- New Brunswick Innovation Foundation (NBIF):
 - actively supports environmentally-focused research and development. In the fiscal year of 2009-2010, NBIF provided approximately \$1.5 Million to 39 projects involving environmentally focused research and development.

- Department of Natural Resources:
 - continued to participate in the National Forest Sinks Committee (NFSC) to keep current as the science and accounting principles regarding carbon sequestration continue to develop on the global, national and jurisdictional fronts. The NFSC played an integral part in the COP15 negotiations in particular with the promotion for inclusion of harvested wood products in the accounting of carbon sequestration and supporting the forward-looking baseline principle for accounting for forest management carbon emissions and reductions;
 - continued to develop a carbon dataset that can be used to conduct carbon scenario analysis on the provincial Crown forest. The department is working in conjunction with the New Brunswick Growth and Yield Unit and has acquired the software for building carbon yield curves that will quantify how much carbon specific forest stands in the province contain. This in turn will provide the avenue for the department to calculate their forest carbon footprint;
 - released the Framework for Forest Management Offset Protocols for private/public use following the Canadian Council of Forest Ministers (CCFM) conference call in October 2009. This document will serve as a technical resource to help inform protocol writers when developing protocols for forest management projects;
 - engaged with a federal / provincial mitigation subcommittee (that reports to the NFSC) that is looking at potential mitigation activities that will be beneficial to implement for potential carbon offset opportunities. This committee is looking into the cost benefits of various forest management projects that jurisdictions could consider when developing a mitigation strategy;
 - advanced work with the CCFM regarding the completion and release of a document to guide policy makers and forest practitioners in assessing tree species vulnerability - the report titled "Vulnerability of Canada's Tree Species to Climate Change and Management Options for Adaptation: An overview for Policy Makers and Practitioners" in the fall of 2009; and
 - continued to work with the CCFM to complete a Collaborative Adaptation Initiative at the forest ecosystem/landscape and forest sector levels related to sustainable forest management under a changing climate.
- Department of Environment:
 - continued to ensure that emissions in the Province of New Brunswick are minimized as much as practically possible through the Environmental Impact Assessment process and other approvals processes. Most industrial operations are required to obtain an

Approval to Operate under the *Air Quality Regulation* of the *Clean Air Act*. Approvals to Operate are only issued once an industrial operation has installed or upgraded equipment or implemented technology that can meet air quality standards. Approvals to Operate are reviewed and issued every five years for each facility. Examples of these industrial approvals include: Old Dutch Foods Ltd. Hartland Production Facility Upgrade (2010), Sabian Ltd. (Cymbal manufacturing plant) (2007) and University of New Brunswick Heating Plant (2005).

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

In conjunction with energy efficiency and renewable electricity initiatives, the Province must begin the planning necessary to further reduce the carbon footprint. Beginning to reduce our carbon footprint now is important in order to position New Brunswick for self-sufficiency by 2026.

- Department of Natural Resources:
 - actively encouraged exploration for natural gas through geological mapping, providing technical expertise, promotion at conferences, revised and streamlined legislation and calls for exploration proposals; and
 - continued to pursue the previously identified initiatives (e.g., implementation of Resource Allocation and Mineral Management System; drafting regulations on royalties, drilling and production; participation in Partnership Agreement on Regulation and Economy; attendance at Winter North American Prospect Expo 2009; approximately \$48 million in exploration work commitments in the province through the granting of Oil and Natural Gas rights in 2009-2010). Corridor has also entered into an agreement with Apache Canada for them to spend a minimum of \$25 million in Oil and Natural Gas exploration over the next year with an option to spend an additional \$100 million.
- Department of Energy:
 - participated, through the Council of Energy Ministers, Energy Technology Working Group, in a national carbon capture and storage network in order to share information and learn more about emerging technologies.

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

Through the greening-of-government operations, provincial departments and agencies will develop initiatives to make government more energy-efficient and environmentally sustainable. That is why the provincial government has remained committed to acting upon the NBCCAP's objectives in the areas of procurement, transportation, buildings, partnerships, and energy management.

Progress:

- Department of Supply and Services:
 - added additional Environmentally Preferable Products items in the Central Stores, with a particular emphasis on New Brunswick promotional items made from wood, versus previous non-renewable resources;
 - continues to purchase appliances that are Energy Star compliant. The department (Internal Services Alignment) is implementing a print optimization project across government which will result in all print devices being Energy Star compliant and also resulting in fewer devices, all preset to duplex printing and all toner cartridges/consumables being recycled / disposed in an environmentally responsible manner. Central Stores and Central Purchasing tender for standing offers for fluorescent lamp purchases. The list of fluorescent lamps has been updated to promote the use of the premium efficiency lamps that has also been incentive by Efficiency NB;
 - adopted a green building policy, effective April 1, 2010 that requires provincial government new construction and major renovation projects to achieve a minimum level of energy and environmental performance and measures outcomes against nationally recognized third-party rating systems such as LEED® (Leadership in Energy and Environmental Design), Green Globes Design™ and Efficiency NB Core Performance Guide. The policy will become effective January 1, 2011 for all entities that receive provincial government funding for new construction or major renovation projects;
 - in conjunction with the Department of Natural Resources (DNR) opened the DNR Richibucto District office on November 16, 2009. The Province has applied to the Canada Green Building Council for LEED certification. The DNR Florenceville District office achieved LEED Gold


- certification in 2009;
- concluded in February 2010, the lighting retrofit program for the K-12 schools, resulting in 43,000 of the 143,000 lighting fixtures being upgraded. The total investment of \$1.6 million has resulted in an estimated energy cost savings of \$398,000 per year, and estimated 5000 tonnes reduction in carbon dioxide equivalent GHG emissions will result from this project. This represents a significant contribution towards the 50,000 tonnes reduction that the department is targeting to meet the goals of the NBCCAP;
 - required the following projects to be designed to meet a LEED Silver Rating, all these projects have been registered with Canada Green Building Council:
 - École Sainte-Thérèse, Dieppe;
 - École Régionale Restigouche-Est, Balmoral;
 - P3 School. Eleanor Graham School, Rexton;
 - P3 School. Moncton North;
 - Dumont - Major Addition;
 - Rexton Community Health Centre;
 - Saint-John Courthouse;
 - Dalhousie Correction Centre;
 - Southeast Correction Centre, Shediac;
 - New Brunswick Community College, Edmundston;
 - New Brunswick Community College Energy Building, Grandview;
 - New Brunswick Community College Allied Health, University of New Brunswick Saint John;
 - New Brunswick Community College E Block, Moncton;
 - upgraded the Department Guidelines for Educational Facilities V3 to include best practice sustainable principles in schools;
 - is revising the Department Guidelines for Education Facilities V4; which will be a further refinement of best practice principles related to sustainable design for the design and construction of high performance schools for the Department of Education;
 - prepared and completed the Department of Social Development Nursing Homes Design Standards in February 2010 which incorporated best practice sustainable ('green') principles for the design and construction of high performance nursing homes funded by the Province; and
 - is in the process of consolidating 14 separate server rooms into one common data center. Beside many other benefits, the department will realize a large energy reduction by centralizing its data services (potential savings are currently being quantified).

- Department of Transportation:
 - continued to monitor the pilot hybrid school bus project and biodiesel trial. There continued to be an 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;
 - continued to monitor the results of upgrading conventional ferry engines to fuel-efficient engines as well as the replacement of incandescent flashing warning lights with light-emitting diodes;
 - continued to encourage anti-idling as part of the Green Vehicle Policy;
 - monitored the 5 per cent biodiesel project on 12 vehicles including a school bus, grader, plow truck and light truck; and
 - invested in buses and plow trucks equipped with new diesel engines that are clean burning and have a particulate trap that filters harmful particulate emissions before they are released into the atmosphere.
- Department of Social Development:
 - retrofitted public low income housing 117 exterior units which included 1 1/2 in. of foam on exterior walls, new Energy Star windows and doors. 44 units received new Energy Star windows and new doors. 50 units received ventilation upgrade and had 220 CFM direct exhaust each. These were converted to 50 CFM exhaust per units using an ERV to recover energy .44 units went from 160 CFM direct exhaust to 85 CFM HRVs. Seven buildings received lighting upgrade and were relamped with the new energy efficient T8 lamps (approx. 2,000 lamps). Five of the seven buildings were wired with occupancy sensors (77 per cent of lamps) to lower energy cost. An estimated 800 tonnes/year of GHG were reduced/avoided;
 - pre-designed six nursing homes. They are to be built to LEED Silver within the next two years. Five of these nursing homes will replace six outdated structures. One is a new facility;
 - received \$5.76 million (homeowner/rental) in grant funding for 1,260 low income households to make energy improvements to their homes. All units received an energy assessment prior to approval;
 - were completed and occupied 15 projects (298 units) during the fiscal year 2009-2010 under the Affordable Rental Housing Program. All projects were designed to achieve an EnerGuide for new houses rating of 80 or higher; and
 - received energy assessments for 100 units owned and managed by the department (Public Housing).

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



New Brunswick must not only reduce GHG emissions, but also be prepared for the effects of climate change. Adapting to the impacts of climate change is one of the most important activities we must do as governments, industries, businesses and individuals. Efforts must be undertaken to "climate proof" our activities. 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

"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 work on a provincial planning policy. Representatives from 13 provincial departments were engaged in the process to develop a Provincial Planning Policy Regulation under the *Community Planning Act*. This regulation will provide direction that will enable sustainable development throughout the province. This working group has identified 20 potential areas of provincial interest that are being considered in the development process. This process includes consideration of how development must adapt to a changing climate,

in particular what can be considered high-risk areas for development. The concept of preservation and management of green spaces is embedded in the work to identify areas of provincial interest or importance;

- continued development toward a regulated approach for wetland and coastal area protection. Such a regulated approach would provide a means to more clearly define and enforce the requirements of the existing Coastal Areas Protection Policy and the Wetlands Conservation Policy. This would improve local planning and development in areas that are frequently impacted by weather events. This would reduce climate change related risks to people and property while also improving the protection of our coastal and wetland eco-systems; and
- undertook work for a water management strategy including holding a focus group session with non-government stakeholders representatives such as environmental groups, industry, watershed groups, etc.
- Department of Agriculture and Aquaculture:
 - began working on an Agricultural Land Use Policy as a component of the Provincial Planning Policy.

Managing natural resources

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

Natural resources in New Brunswick have always been a cornerstone of our economy and identity. The development of appropriate resource-management strategies enables New Brunswick to safeguard the environment and helps the province meet its GHG reduction commitments.

Progress:

- Department of Agriculture and Aquaculture:
 - moved forward with activities to support the Atlantic Agricultural Riparian Health and Management Strategy, such as providing classroom and field training on riparian management for various government departments and other stakeholders, and initiating an Atlantic Riparian Health Workshop to be held in 2010;
 - assisted 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;
 - through the Canada-New Brunswick Growing Forward Agreement, the department continues to support environmental farm plans and beneficial management practices implementation including those aimed at mitigating and adapting to climate change;
 - participated with the departments of Natural Resources and Environment, in a climate change workshop for agriculture, hosted by Agriculture and Agri-Food Canada; and
 - held, in conjunction with the Department of Fisheries, the official opening for the new Provincial Fish Health Laboratory. The lab is providing a location for the department and the Atlantic Veterinary College to undertake research and monitoring associated with the management of our aquatic resources. A major focus of the department relates to aquatic health management in which the lab has the necessary capabilities for conducting diagnostics for the department's disease monitoring programs and research. The department also continued to partner with Fisheries and Oceans Canada in monitoring for invasive aquatic species. The department worked closely with United States neighbours on the Gulf of Maine Committee, actively collecting samples and monitoring any changes to sensitive bivalve species.
- Department of Environment:
 - partnered with Irving Oil to provide funding to the University of New Brunswick for a research project on the suitability of New Brunswick geology to store carbon. The final report was completed in May of 2010. Based on a review of existing data, regions of New Brunswick were identified where the basic geological conditions for carbon storage exist. Potential storage areas include strata under southeast New Brunswick and the Bay of Fundy, however there is insufficient data to endorse or rule out these sites.
- Department of Natural Resources:
 - participated in the Canadian Council of Resource Ministers (CCRM) Biodiversity and Climate Change Adaptation Project. The project will develop an action plan to address critical gaps in information and tools required for decision making related to biodiversity and climate change adaptation. (Terms of Reference – CCRM, June 2009). Deliverables:
 - Report 1 – Identification of decision and information needs (August 2009);
 - Report 2 – Gap Analysis of Information (November 2009);
 - Report 3 – Action Plan (January 2010);
 - through Forest Protection Limited (FPL) acquired a new water

skimming water bomber aircraft in 2010, to supplement its fleet of land-based water bombers;

- continues to be a member of the Canadian Interagency Forest Fire Centre (CIFFC) which provides operational wildland fire control services, as well as management of information to its Member Agencies. In addition to coordinating services for all the provinces, territories and federal fire management agencies, CIFFC can coordinate the sharing of resources with the United States and other countries;
- continues to be a member of the Northeast Compact between the New England States, New York, the New England National Forest, Nova Scotia, Québec and Newfoundland-Labrador which also provides operational wildland fire control services to its members. This organization actively provides avenues for information and resource sharing across the international boundary;
- is upgrading the department's weather stations from analogue to digital technology;
- regarding protection against forest insect and diseases, the Forest Pest Management Section (FPMS) 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;
- through FPMS, in collaboration with FPL, participates directly and/or in-directly 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 different timber and non-timber values, carbon sequestration, and alternative tactics such as salvage harvesting along with applied controls, and integrated forest management planning; and
- through FPMS, participated in the development of a National Forest Pest Strategy (NFPS) under the aegis of the Canadian Council of Forest Ministers by direct and indirect collaboration in working groups, technical committees and various projects related to the six main NFPS components: Risk Analysis, Monitoring & Diagnostics, Science & Technology, Information & Information Management, Reporting, Communications & Outreach and Governance.
- Department of Tourism and Parks:
 - developed a new provincial Tourism Strategy 2010 – 2013, jointly with the tourism industry representatives, which makes the economic and environmental sustainability of the industry its top priority; and
 - revised the New Brunswick Tourism Development Guidelines, which outline priorities for investment in the tourism sector. The guidelines prioritize development of low impact eco-tourism activities. Aimed at

upgrading the condition and quality of the province's accommodations stock, the investment guidelines for fixed roof accommodations and campgrounds cite the development of non-carbon-based energy sources as a priority. Private tourism operators throughout the province have taken the initiative to reduce their carbon footprint and serve as models of best practice for the industry as a whole.

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 works with partners to better understand the climatic changes that are taking place. When the province experiences flooding, storm surges, or intense precipitation, it often becomes evident how vulnerable we are from severe weather. Climate change is expected to result in an increase frequency and severity of adverse weather events and therefore it is important to plan accordingly to prepare for these challenges.

Progress:

- Department of Environment:
 - enhanced the climate change web site, presenting a range of new content on climate change adaptation actions and reference material, the website also includes a new web-based map viewer application, in collaboration with Service New Brunswick and the New Brunswick Emergency Measures Organisation (NBEMO), this application presents detailed mapping information of areas at risk from inland flooding. This will assist planners, developers and the general public to better identify and manage developments in flood-prone areas;
 - announced on April 23, 2010 the Atlantic Climate Adaptation Solutions Project. This initiative developed in collaboration with the other Atlantic provinces, municipalities and Natural Resources Canada, includes funding of approximately \$8.4 million between 2010 and 2012. Regional studies will be conducted in each Atlantic province. This will contribute to climate change adaptation, in the areas of coastal risk and vulnerability, inland flood risk, infrastructure, community planning, groundwater management, and the engagement of professional practitioners such as engineers and planners. Projects in New Brunswick began with:
 - the appointment of a provincial coordinator;

- the acquisition of high-precision mapping data for key flood-prone areas;
- planning for the initial phases of projects in Richibucto (groundwater management) greater Moncton (inland flooding), Grand Falls (inland flooding/erosion), and
- technical and general planning collaboration between the member jurisdictions;
- began a systematic risks, vulnerabilities and opportunities assessment, focussing initially on provincial government operations. The assessment is identifying areas where current practices, policies and structures make programs vulnerable to the anticipated effects of climate change. Opportunities resulting from changing climatic conditions are also being identified;
- initiated a review of all major environmental monitoring networks and programs, to ensure that the right measurements are being made in the right locations to detect climate changes and support effective environmental management. As a result of the initial assessment, two new automatic weather stations were purchased and deployed for use in the upper Saint John River valley. These stations fill important gaps in the network and will improve river flow forecasting. Review of additional networks will proceed during 2010;
- made an investment of two hydro-meteorological stations in the Saint John River Basin network in partnership with the State of Maine to improve New Brunswick's understanding of climate change vulnerabilities and aid in international flow and flood forecasting. A contract has been signed to install a new forecasting platform within the Hydrology Center which will interface with the data acquisition system, updated forecast models and allow improvements in the timing and delivery of forecast reports to clients;
- commissioned a scientific review of the Canadian Regional Climate Model through the New Brunswick Environmental Trust Fund with the final report received in March 2010. The results of this work aid significantly in the assessment of future climate changes in New Brunswick and associated planning and management activities;
- received a report entitled "The Impact of Climate Change on Floods and Droughts under a Climate Scenario in New Brunswick", commissioned through the New Brunswick Environmental Trust Fund. This study provides detail on the return periods of specific high and low flow conditions in major New Brunswick Rivers under three future climate scenarios. This information can be used for engineering design and planning work taking expected climate changes into account;
- continued to administer the New Brunswick Environmental Trust

Fund, which provided more than \$311,800 to support ten climate change adaptation projects:


- the Université de Moncton:
 - assisted residents in the Kent District Planning Commission territory in making informed decisions concerning adaptation to sea-level rise;
 - examined the effects of climate change in order to help evaluate the impact of extreme floods and drought on New Brunswick infrastructure; and
 - monitored coastal changes associated with two types of erosion protection structures;
- the Environment & Sustainable Development Research Centre (University of New Brunswick):
 - assessed the performance of the latest dynamical downscale model in simulating past climatic conditions on an annual, seasonal and regional basis;
 - modeled the effects of floods and droughts and examine the effect of competing water demand in the St. John River system; and
 - undertook work to help predict the effects of climate change on the hydrologic behavior;
- the Canadian Rivers Institute predicted how land use activities can affect river temperatures and then apply models of global climate change to predict “areas of concern” for New Brunswick watersheds;
- the Rural and Small Town Programme at Mount Allison University increased the understanding and capacity to ensure sustainable development and adapt to climate change in rural and small town communities;
- the Nature Trust of New Brunswick enhanced stewardship activities and engaged the public in the management its nature preserves. This included educational signage, botanical inventories, management plans and examining the effects of climate change and sea level rise; and
- the Miramichi River Environmental Assessment Committee partnered with the department to undertake snow pack monitoring in the Miramichi watershed.
- Department of Natural Resources:
 - continued the coastal erosion mapping work at the department’s Geological Surveys Office in Bathurst. Coastal monitoring continued at sixteen permanent monitoring sites. Coastal mapping in the Maisonette area was also conducted in conjunction with the New Brunswick Community College.

- Department of Public Safety:
 - worked with a broad group of professional organizations to establish the New Brunswick Emergency Responder Interoperability Committee (NBERIC). This committee comprises senior representatives of emergency services associations, the Association of Municipal Administrators and all government departments and agencies with a defined role in emergency management and response. NBERIC has developed a provincial Interoperability Strategy which provides a governance framework and prioritizes work along several lines of business, including procedures, technology, training and usage. The department, through NB EMO, has acquired and deployed an electronic incident management system for all eight District Emergency Operations Centres. The Sentinel Emergency Preparedness, Emergency Command Centre is a state of the art program that will enable the Districts to establish common, integrated emergency management capability with NB EMO as well as several municipalities using the same system. Training on this system as well as the Everbridge Notification system was completed in March of 2010; and
 - continued to acquire LIDAR data for areas that are prone to flooding. These acquisitions will allow for more detailed plotting of flood inundation by improving the digital elevation model accuracy. This will provide, through the acquisition of LIDAR, a better planning tool for land use development in the future.

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 NBCCAP 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 emission reductions and adaptation strategies to address climate change impacts.” NBCCAP 2007-2012

Strong partnerships and collective actions are required to meet the goals of the NBCCAP. The Province has engaged communities and stakeholders to become partners in efforts to better understand the climatic changes taking place, to reduce GHG emissions and adapt to climate change by sharing ideas, experiences and practices. By partnering with communities and stakeholders, the Province can set realistic targets and provide flexibility for innovations.

Progress:

- Department of Local Government:
 - proclaimed the *Municipalities Act* amendments on January 18, 2010 enabling municipal electricity generation; and
 - administered the Gas Tax Fund (GTF) in 2009, for which 89 projects of 186 will have an effect on reducing GHG emissions (48 per cent of all GTF projects).
- Department of Agriculture and Aquaculture:
 - 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 to help increase the promotion and awareness of local agri-food products which resulted in an increase in sales and consumption.
- Department of Environment:
 - continued to work with communities and developers to encourage the implementation of sustainable community design (SCD) at the local level;
 - supported the implementation of SCD on the One Tree Orchard Project in Fredericton and Le village en haut du Ruisseau project in Dieppe to help protect local wetlands and other sensitive and important natural habitats;
 - provided information and training sessions to numerous partners and stakeholders on SCD concepts and opportunities;
 - is continuing to review of the greening-of-government initiative to assess progress made to date and to make recommendations for further provincial actions as well as best practices that may be shared with or complement community efforts; and

- continued to administer the New Brunswick Environmental Trust Fund, which provided more than \$65,000 to support the implementation of green plans for the City of Moncton, Communauté de rurale Beaubassin Est, the Town of Grand Falls and the Village of Memramcook.

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, communities and stakeholders promote public awareness and educational programs, as well as transfer knowledge to New Brunswickers in taking action towards both reducing their GHG emissions and adapting to future climate change impacts.

Progress:

- Department of Environment:
 - delivered presentations and workshops at information sessions, events and conferences to promote environmental leadership and awareness of commitments that reduce GHG emissions. Promotional/ demonstration materials and tools such as New Brunswick carbon footprint calculators were presented to highlight GHG emissions and to encourage New Brunswickers to take action on climate change;
 - developed partnerships with various groups and organizations to assist in delivering climate change outreach initiatives;
 - expanded the climate change website to include a youth section;
 - continued to direct a climate change engagement strategy at three groups: opinion leaders, communities of interest and the public. The strategy focused on the following projects in which the department:
 - brought together provincial opinion leaders in November 2009 for a third forum to discuss potential action items to engage New Brunswickers meaningfully in the implementation of the NBCCAP;
 - developed a pilot project to promote green practices to businesses for the Edmundston Region Chamber of Commerce in partnership with the Conservation Council of New Brunswick, Efficiency NB, Edmundston Madawaska Tourism, and City of Edmundston. The pilot project promotes energy efficiency, transportation, waste management and water management practices as well as eco-friendly products;

- provided training and organized public awareness events, such as Earth Hour “Unplug Your World” in Fredericton, to assist in the implementation of climate change youth-led actions identified from the Big Splash Conference in partnership with the New Brunswick Environmental Network, and the project planning committee for the Climate Change Youth Engagement Network; and
- called upon municipal leaders to participate in the 2nd phase of the Mayors’ Eco-Challenge 2009 in partnership with the Union of the Municipalities of New Brunswick, the Cities Association of New Brunswick, Efficiency NB, and the New Brunswick Lung Association (New Brunswick Climate Change Hub). Mayors, Deputy Mayors, Councillors, Ministers from the departments of Environment and Local Government 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 municipal level. GHG emissions in New Brunswick were reduced by more than 12.5 tonnes as a result;
- continued to administer the New Brunswick Environmental Trust Fund, which provided more than \$566,000 for 23 education projects:
 - the Bathurst Sustainable Development Group:
 - educated the public about the impacts of climate change on our fresh water resources and the importance of actively engaging as stewards of our water; and
 - opened a Climate Change Action Centre as a one-stop location to provide information about climate change, energy efficiency, reducing GHG emissions, and the programs available to assist the public in making positive changes on addressing climate change;
 - the Cape Jourimain Center:
 - developed educational tools and programs dealing with renewable energy, in particular the use of alternative technologies;
 - developed the concept of a provincial information hub on small-scale renewable energy; and
 - finalized the Learning Centre in South Branch by providing access to an individual homeowner’s approach to using alternative technologies and measures to reduce energy use in a home setting;
- the Falls Brook Centre established a Renewable Energy Information and Assistance Centre for northwestern New Brunswick;
- the Conservation Council of New Brunswick:

- expanded its outreach and education program to include a “Food that won’t cost the Climate” campaign that to encourage citizens to purchase locally grown and produced food and create awareness of the connection between imported food, GHG emissions and food security; and
- established a Renewable Energy Assistance Hub for southwestern New Brunswick;
- 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; and
 - educated drivers on the air quality, climate change, safety, and financial benefits of proper tire maintenance, and utilize Community Based Social Marketing Techniques to influence drivers to adopt proper tire maintenance behaviors;
- the Canadian Parks and Wilderness Society raised awareness regarding implementation of the NBCCAP as it relates to natural areas conservation, forest management, community planning and smart growth;
- the Partenariat de la gestion intégrée du bassin versant de Caraquet educated the general public about climate change;
- the Shediac Bay Watershed Association conducted educational and awareness sessions in schools and local businesses in order to promote energy consumption and conservation concepts;
- the City of Fredericton engaged citizens, businesses, institutions, schools, organizations, etc. in their efforts to reduce GHG emissions in a tangible and sustained way;
- the Association Bassins Versant Grande et Petite Rivière Tracadie encouraged individuals to take action on climate change on a personal level;
- the New Brunswick Climate Change Hub continued to improve public education and build capacity among communities with regard to reducing GHG emissions;
- the Club Loisir de la Rivière Caraquet taught students at l’école Terre des Jeunes how to reduce their energy consumption;
- the Groupe Littoral et vie worked with the Town of Bouctouche to educate the public about climate change adaptation;
- the Comité sauvons nos Rivières Neguac educated the public about ways to address climate change;
- the New Brunswick Environmental Network created and fostered opportunities for youth and communities across New Brunswick to take action on climate change;

- the Comité de Gestion Environnementale de la Rivière Pokemouche educated school children about water quality, climate change and energy efficiency;
 - the Fredericton Organic Community Garden, in cooperation with the City of Fredericton, undertook an educational campaign regarding the environmental and health benefits of organic agriculture, food systems and sustainable community life; and
 - EOS Eco-Energy educated the public about standby power consumption. Homeowners made commitment to unplug non-essential electronics and appliances when not in use or to plug them into a power bar that can be turned off.
- Department of Supply and Services:
 - held a green summit in September 2009 to create an environmental awareness among government employees.
- Efficiency NB:
 - conducted community based energy efficiency initiatives for Sackville, Eel Ground, Quispamsis, and Shediac;
 - concluded a two year community pilot project for Perth-Andover. This pilot project decreased the residential energy consumption by 3.3 per cent;
 - concluded an Home Energy Survey Pilot project targeting youth (10-14 years old); and
 - developed capacity building workshops (e.g. Energy Efficient Renovations, the 5 Dollars to \$ense Energy Management and the Energy Efficiency Capital Planning Toolkit) and presentations for municipalities.
- Department of Social Development:
 - certified 19 energy advisors with another six who have completed the course training and are working on their seven training files.

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 the main player in implementing the NBCCAP but since the scope of climate change activities is simply too broad for one single entity, many others have become engaged in helping to deliver positive results. The Province continues to work with business, industry, communities, stakeholders and individuals to implement the NBCCAP.

Progress:

- Department of Environment:
 - awarded \$34 million, under the New Brunswick Climate Action Fund, to fund 35 projects in support of public-sector, private-sector and not-for-profit initiatives in keeping with the NBCCAP goals. These projects, being undertaken by the public-sector, private-sector and not-for-profit, are expected to result in reductions or avoidances of GHG emissions and air pollution throughout the province. The projects are documented on the New Brunswick climate change website with a description of the projects and the estimated emission reductions; and
 - will continue to administer the New Brunswick Environmental Trust Fund which, in 2010-2011, invested over \$1 million in climate change mitigation, adaptation, and education projects.

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 has the responsibility of coordinating the implementation of the NBCCAP and to foster a better understanding of climate change issues. Work is ongoing to facilitate the transfer of knowledge and to gain a better understanding of climate change issues. National, regional, provincial, and local dialogue and exchange is being carried out to ensure the coordination of commitments.

Progress:

- 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 helped the provincial government meet the NBCCAP objectives. These efforts will contribute to the New England Governors / Eastern Canadian Premiers climate change activities and support bilateral (federal, provincial, territorial, or international) discussions on climate change;
- Efficiency NB worked with the Canadian Standards Association (CSA) on GHG quantification reports for three incentive programs; and
- the Secretariat developed a website in conjunction with the CSA to facilitate the sharing of information on GHG emission tracking and reduction activities in the province. The website includes information on measuring carbon footprints, tracking provincial emissions, tracking New Brunswick Climate Action Fund projects and reporting on NBCCAP progress. The carbon footprint measurements tools include three New Brunswick-specific calculators, a meeting calculator, a household's calculator and an activities calculator. These calculators serve as a useful tool for New Brunswickers who wish to learn more about their own carbon footprint and find ways to lessen the affect of their daily lives on the environment. The public is invited to consult the New Brunswick Climate Change...*Measuring Our Emissions* website at: www.gnb.ca/climatechange, to obtain further information on recent trends and activities in the province.

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This report is also available electronically.