

Daily sitting 40

Wednesday, November 2, 2016

11 o'clock a.m.

Prayers.

Mr. Speaker introduced the new Chaplain for the session, Father Shawn Daley, pastor of Paroisse Sainte-Anne-des-Pays-Bas.

With leave of the House and pursuant to the terms of the resolution appointing the Select Committee on Climate Change (Motion 19), Mr. Harvey presented the Final Report of the Committee, which was filed with the Clerk of the Legislative Assembly and released on October 24, 2016, and it is as follows:

October 24, 2016

To the Honourable  
The Legislative Assembly of  
The Province of New Brunswick

Mr. Speaker:

I have the pleasure to present herewith the Final Report of the Select Committee on Climate Change entitled *New Brunswickers' Response to Climate Change*. Your Committee was given the task of engaging with New Brunswickers on the issue of climate change and reporting back to the Legislature with recommendations.

The report represents the results of your Committee's engagements and deliberations on what a stronger New Brunswick response to climate change should look like and what we may reasonably expect the government to achieve through our recommendations.

On behalf of the Committee, I would like to thank the presenters, government departments and members of the public, including First Nations, who appeared before the Committee and submitted written briefs. Everyone generously gave of their time to inform the Committee on this important issue and propose innovative and unique solutions for New Brunswick.

I would also like to express my sincere appreciation to the members of the Committee for their valuable contribution in carrying out our mandate and to the various government officials and legislative staff who participated in the process and provided support to our work.

Respectfully submitted,

(Sgd.:) Andrew Harvey, M.L.A.  
Chair

The full report of the Committee as presented follows:

### **Executive Summary**

The Select Committee on Climate Change, an all-party Committee of the Legislative Assembly, was appointed by the House on April 8, 2016. The Committee was, by motion of the House, charged with conducting public consultations, informed by a climate change discussion guide, *Building a Stronger New Brunswick Response to Climate Change*, and reporting to the House with recommendations. The Committee was fortunate to hear from a wide diversity of New Brunswickers who shared their opinions about how New Brunswick should respond to the opportunities and challenges presented by climate change.

New Brunswick is already experiencing the impacts of climate change, including sea level rise, extreme rainfall events, coastal and inland flooding, accelerated coastal erosion, heat waves, diseases, and some migration of invasive species. The scope and magnitude of the change and its impacts are expected to increase in the future.

Every single person and economic sector in New Brunswick will be affected by climate change. The collaborative and coordinated participation of the public and private sectors, non-governmental organizations (NGOs), academia, households, and First Nations, is essential if New Brunswick is going to address this challenge. No single entity can tackle the climate change challenge by itself.

Based on the Committee's public engagement efforts and subsequent deliberations, the Committee wishes to highlight the following recommendations under six themes:

1. **Responding to Climate Change: General Principles.** The province's collective response to reducing greenhouse gas (GHG) emissions and adapting to the impacts of climate change must be guided by sound principles:

- *be bold*
- *incorporate climate change considerations into all decision-making*
- *recognize New Brunswick's unique circumstances and opportunities*
- *focus on the most efficient and effective actions*
- *ensure sustained action*
- *work together and share the responsibility*

2. **Government Leadership.** Government must take a strong leadership role in addressing the challenges and opportunities of climate change. Example actions include:
  - *establishing a committee of Cabinet dedicated to climate change*
  - *introducing a Climate Change Act*
  - *requiring climate change consideration in all Memorandums to the Executive Council*
  - *including climate change consideration in the mandate letters to all Ministers and Crown corporations*
  - *developing energy management plans for all government departments*
  - *enhancing the role of the Climate Change Secretariat*
  - *establishing a multi-stakeholder climate advisory council*
  - *developing a communications strategy to educate New Brunswickers about the causes of climate change*
  - *including capacity building (human, knowledge and financial) as a component of all actions*
  - *investing in the training of workers in the fields of energy efficiency and renewable energy*
  - *measuring and reporting on New Brunswick's climate actions*
  
3. **Economic Opportunities.** The government's response to climate change offers economic opportunities. Example actions include:
  - *creating the conditions for growth and job creation in the areas of clean technology, products and services*
  - *enabling greater private investments in community economic development corporations*
  - *reducing energy costs and re-investing the savings into the economy*
  
4. **Adaptation: Responding to the Impacts and Risks of Climate Change.** Climate change adaptation is about making informed, forward-looking decisions considering future climate conditions. Government must take immediate action to adapt to climate change. Example actions include:
  - *acquiring up-to-date climate information*
  - *strengthening research capabilities into the impacts of climate change*
  - *ensuring that the impacts of climate change and extreme weather are considered in all infrastructure decisions*
  - *requiring completed climate change adaptation plans to access infrastructure funding*
  - *promoting and utilizing natural infrastructure*
  - *implementing statements of provincial interest related to climate change under the Community Planning Act*

- *incorporating climate change knowledge into all forest management plans*
  - *encouraging agricultural practices that promote soil health and reduce soil erosion*
  - *partnering with the insurance industry to make flood insurance available to high risk homeowners*
  - *updating and implementing New Brunswick's Flood Risk Reduction Strategy (2014)*
5. **Mitigation: Transitioning to a Low-Carbon Economy.** An aggressive, integrated approach to GHG emissions reduction is required if New Brunswick is to do its part to meet climate change obligations and maintain economic competitiveness. Government must take action to reduce GHG emissions. Example actions include:
- *establishing clear GHG emissions reduction targets of 40 per cent below 1990 levels by 2030 and 80 per cent below 2001 levels by 2050*
  - *phasing out fossil fuels used in electricity generation by 2030*
  - *developing energy efficiency targets for all government owned and funded facilities*
  - *establishing a permanent, independent provincial agency with a mandate for energy efficiency and promotion of renewable energy*
  - *increasing the target for in-province electricity sales from renewable sources to 60 per cent by 2030*
  - *setting a target of 5,000 electric vehicles in New Brunswick by 2020 and 20,000 by 2030*
  - *electrifying the government vehicle fleet*
  - *focusing on industrial energy efficiency*
  - *exploring opportunities for carbon offset markets*
  - *establishing a made in New Brunswick carbon pricing mechanism after specific conditions are met*
6. **Funding for Climate Change Initiatives.** Government must ensure that climate change mitigation and adaptation initiatives are adequately supported. Example actions include:
- *establishing a dedicated climate change fund*
  - *ensuring all revenue, including any revenue derived from carbon pricing, is placed in the fund and invested back to consumers and economic sectors*
  - *reporting annually and being transparent on expenditures and performance of the fund*
  - *allowing for multi-year funding for climate-related initiatives*

The imagination, determination and range of knowledge of those who presented, along with the work that communities, individuals and governments have already undertaken are reasons for optimism in the face of the broad scope of required actions. New Brunswickers are eager to build on the progress to date. Based on the diversity of ideas that were presented, there is a role and a place for everyone as New Brunswick moves forward to address climate change and put the province on a pathway to a low-carbon economy that creates jobs and sustains families and communities.

## **Introduction**

### **The Context for New Brunswick's Response**

The Intergovernmental Panel on Climate Change, the world's foremost authority, has stated that an increase in global temperatures of more than 2.0 degrees Celsius will result in significant, irreversible impacts. The current level of GHG emissions is expected to push global temperatures over this 2.0 degrees Celsius threshold before the end of this century. The panel has also determined that it is "extremely likely" that human activity is responsible for the warming that has already taken place since the mid-20th century. New Brunswick is already experiencing climate change; the scope and magnitude of the change are expected to increase in the future.

The global transition set in motion by the 2015 *Paris Agreement* under the *United Nations Framework Convention on Climate Change*, its subsequent ratification by Canada, and the *Vancouver Declaration on Clean Growth and Climate Change*, includes many opportunities for New Brunswick to be more efficient and competitive; to open new business opportunities; and to build more resilience and diversity into our economy. Responses to climate change in the areas of GHG emissions reduction and climate change adaptation have resulted in real economic benefits in other jurisdictions. These responses can also offer the potential for long term job creation in the province and can provide a stimulus for investment in innovation and business development.

Industry, transportation, and electricity generation are the three dominant contributors to provincial GHG emissions.

Although New Brunswick's GHG emissions have declined in recent years, they are not predicted to decline in the future under the status quo. This, along with the GHG reduction targets adopted by the Conference of New England Governors and Eastern Canadian Premiers and the provincial government, means that substantial additional GHG reduction measures will be required to meet New Brunswick's targets of:

- 10 per cent below 1990 levels by 2020;
- 35 to 45 per cent below 1990 levels by 2030; and
- 75 to 85 per cent below 2001 levels by 2050.

Investments aimed at energy efficiency and cleaner energy alternatives are especially important in light of New Brunswick's energy-intensive industries and the growing importance of less carbon-intensive products in our export markets. Timely investments in adaptation will also help to maintain and enhance New Brunswick's economic competitiveness, the well-being of residents, and the resilience of communities. Many of our provincial and territorial counterparts have already taken significant steps in GHG reduction and climate change adaptation.

An ambitious, integrated approach to GHG emissions reduction is required if New Brunswick is to do its part to meet its climate change obligations and maintain economic competitiveness. As part of this approach, collaboration with partners will continue to be a cornerstone and is particularly important for a small province such as New Brunswick.

Additional information outlining the global, national, and provincial context for New Brunswick's responses to climate change can be found in the discussion guide entitled *Building a Stronger New Brunswick Response to Climate Change*.

#### **Climate Change Impacts in New Brunswick**

World-wide, the rate of warming has accelerated over the past 45 years. In Canada, the mean temperature has increased by 1.6 degrees Celsius (twice the global rate) and by 2.2 degrees Celsius in the Arctic (3 times the global rate).

Climate change is already evident in New Brunswick in the form of increased temperatures, more intense precipitation, and higher sea levels. In general, New Brunswickers can expect the future to be warmer, wetter, and stormier. Fluctuations in the timing of precipitation may also result in periods of drought. Sea levels are expected to rise by more than one metre by 2100. There is an elevated risk of a variety of adverse effects including health concerns, pests and invasive species, impacts on water quality and quantity, coastal and inland flooding and erosion, extreme winds, and icing of trees and power lines.

Community infrastructure, such as storm sewers, sewage treatment facilities, and water supplies, is particularly vulnerable. Climate change impacts can also contribute to road, bridge, port, rail, and airport disruptions, and increased costs for infrastructure repair and maintenance.

These disruptions in productivity, critical trade infrastructure, electricity generation, and supply chains would have far-reaching consequences for many economic sectors, services to consumers, and businesses. Tourism and recreation activities that are weather-dependent are particularly sensitive to climate change.

Climate change represents a threat to physical and mental health and a challenge to the health system. Natural disasters have a negative impact on public health and can reduce individual and community resilience. Often there is a disproportionate impact on the most vulnerable members of society.

New Brunswick's resource-based economy is also vulnerable. Climate change is creating risks as well as operational and sustainability challenges for forestry, agriculture, fisheries and aquaculture production, while providing some additional opportunities, such as an expanded growing season and new crop species.

New Brunswick's ecosystems are being impacted. The speed of climate change is of particular concern as it will likely unfold more rapidly than many species can adapt.

Climate change will impact the natural environment upon which First Nations communities depend. There will be changes to wildlife and plant species, traditional medicines, and waterways. This will result in significant impacts on the culture and way of life for many First Nations communities.

### **Mandate of the Committee**

On April 8, 2016, the Legislature appointed a Select Committee on Climate Change. The all-party Committee is responsible for engaging with New Brunswickers on the issue of climate change and reporting to the Legislature with recommendations. The text of the motion to establish the Select Committee on Climate Change is contained in Appendix A.

### **Public Engagement**

#### **Engagement Process**

All New Brunswickers were encouraged to assist the Committee in its work by sharing their ideas and opinions on the topic of climate change. On May 25, 2016, the Minister of Environment and Local Government tabled a discussion guide entitled *Building a Stronger New Brunswick Response to Climate Change* in support of public engagement.

To help ensure that as many people as possible were able to make their views known, the Committee issued a public invitation to participate in public hearings and submit a written brief to the Committee. Between August 26 and September 13, 2016, public hearings took place in all regions of the province: Perth-Andover, Edmundston, Atholville, Shippagan, Moncton, Sackville, Saint John and Fredericton, and with First Nations communities in Elsipogtog and Tobique First Nations and the Mi'gmawe'l Tplu'taqnn Inc. (MTI). During the months of July and August, the Committee also received briefings from notable experts and government departments.

All told, over 150 presenters took the time to appear before the Committee and many more attended the public hearings. In addition, the Committee received over 40 written submissions from interested New Brunswickers (Appendix B).

#### **New Brunswickers' Ideas about Responding to Climate Change**

Committee members are grateful for the sincere and knowledgeable presentations and submissions received. New Brunswickers are passionate about their province and committed to its continued success. Many respondents provided the Committee with references that contained a wealth of information. All information received was carefully reviewed and considered in the preparation of this report.

The vast majority of presenters acknowledged the predominant scientific opinion that climate change is real and human-caused, although a few presenters questioned the validity of climate change and the assertion that it is caused by humans. The Committee heard that there is general consensus about the urgency of responding to climate change and that there are many ideas about how best to proceed.

The necessary responses to climate change touch all sectors of New Brunswick's society and economy, including agriculture, forestry, fisheries, aquaculture, electricity generation, energy use, transportation, land-use planning, education, and health care. No single region, sector, government department, organization, or community can tackle the climate change challenge by themselves; collaborative and coordinated action is essential. The ideas, skills, and energies required to adequately respond to climate change are scattered throughout the province and arranged in a variety of formal and informal networks. This is an organizational challenge but it also represents an advantage: no one need shoulder the burden alone.

A detailed summary of the themes, key messages, and suggestions received by the Committee during public engagement is contained in Appendix C.

### Recommendations of the Committee

The recommendations of the Committee are outlined in the following section of the report and are grouped under six themes which emerged from the Committee's public engagement efforts and subsequent deliberations.

1. Responding to Climate Change: General Principles
2. Government Leadership
3. Economic Opportunities
4. Adaptation: Responding to the Impacts and Risks of Climate Change
5. Mitigation: Transitioning to a Low-Carbon Economy
6. Funding for Climate Change Initiatives

#### Responding to Climate Change: General Principles

Considering the messages received during public engagement, the Committee recommends that government:

1. Use the following principles to guide New Brunswick's climate actions and the province's collective response to reducing GHG emissions and adapting to the impacts of climate change:
  - a. **Be bold.** Responding to climate change will require a number of simultaneous actions, some of which will be unprecedented in scale and scope.
  - b. **Incorporate climate change considerations into all decision-making.** Climate change considerations should be integrated into decision-making across all levels of government, communities, households, and businesses using the best available scientific and socio-economic data, validated and augmented by local and traditional knowledge.
  - c. **Recognize New Brunswick's unique circumstances and opportunities.** The unique economic, social, and geographical conditions in New Brunswick must be taken into consideration when designing and implementing actions to maximize health, social, ecological, and economic benefits.
  - d. **Focus on the most efficient and effective actions.** Seek maximum value for the efforts expended and undertake initiatives that will be the most efficient, effective and have the greatest impact on GHG emissions and climate change adaptation. There is a need to direct resources to both adaptation (preparing for effects of climate change) and mitigation (reducing GHG emissions).

- e. **Ensure sustained action.** A climate change action plan is not the final goal. Responding to climate change requires sustained action and the ongoing availability of human and financial resources. Responding to climate change is a long-term commitment.
- f. **Work together and share the responsibility.** Continued collaboration, engagement, cost-sharing, and information-sharing are needed both in developing and implementing actions; it is a shared responsibility. Governments, the private sector, households, NGOs, academia, and First Nations all have a key role to play.

### **Government Leadership**

The response to climate change is a shared responsibility involving all New Brunswickers. Government must take a strong leadership role in addressing the challenges and opportunities presented by a changing climate.

The Committee heard that the objectives of reducing GHG emissions and adapting to the impacts of climate change will be more achievable when all New Brunswickers are aware of the serious nature of the issues and know how they can participate in response. Capacity building refers to growing the strengths, skills, knowledge, competencies, and abilities of New Brunswickers to respond to climate change. Capacity, including human, knowledge and financial, was identified as a key component to being able to respond to the opportunities and challenges posed by climate change.

Measuring, reporting, and verification are important elements of an effective response to climate change and are vital to assessing progress. Transparent reporting will also enable government and all New Brunswickers to track the effectiveness of GHG reduction initiatives, measure progress in adapting to climate change, and make any adjustments necessary to achieve provincial targets and goals.

The Committee offers recommendations under each of the following categories to support the theme of government leadership.

### **Role of Government in Leading Change**

To ensure proper accountability for the implementation of New Brunswick's climate actions, the Committee recommends that government:

2. Establish a committee of Cabinet dedicated solely to the issue of climate change, chaired by the Premier, to oversee the implementation of New Brunswick's climate actions.
3. Introduce an overarching Climate Change Act that:
  - a. Establishes specific GHG emission targets;

- b. Requires climate implications (adaptation and mitigation) to be considered in all government-funded and government-approved projects and decision-making; and
  - c. Ensures mechanisms are in place to implement New Brunswick's climate actions.
4. Require climate change, both GHG emissions and climate change adaptation, to be considered during the development of all Memorandums to the Executive Council.
5. Include in the mandate letters to all Ministers and Crown corporations the requirement to:
  - a. Consider climate change in all decision-making;
  - b. Establish specific GHG reduction targets for the department or corporation; and
  - c. Assume responsibility for GHG reduction and climate change adaptation for specific economic sectors related to the department or corporation.
6. Lead by example on climate change through actions and decisions by developing the most effective and efficient tools (policy, legislation, incentives, disincentives, financing) to address climate change.
7. Establish low-carbon footprint requirements for all government and Crown corporation procurement to assist in meeting emissions targets (i.e. purchase products produced with the lowest possible GHG emissions).
8. Develop energy management plans for all government departments.
9. Ensure the Climate Change Secretariat has the power, authority, and resources to:
  - a. Coordinate, measure and report on GHG reductions, adaptation achievements and implementation progress, in cooperation with other government departments and Crown corporations, directly to the Cabinet Committee;
  - b. Establish a multi-stakeholder climate advisory council as part of a new robust engagement model, including input on priorities for a climate fund;
  - c. Manage the continued engagement with provincial partners including municipalities, First Nations, academia, private sector, and NGOs, and federal, provincial, territorial, and international jurisdictions on climate change matters;
  - d. Coordinate the gathering and dissemination of information relating to climate change;
  - e. Facilitate innovation and research, and demonstrate what is possible through best practices related to climate change; and
  - f. Lead the development of public awareness and education programs on climate change.

**Building Awareness**

To support and build awareness around climate change, the Committee recommends that government:

10. Develop a bold and comprehensive communications strategy to educate New Brunswickers about the causes of climate change, including the linkage between human activity and climate change, and identify opportunities for all New Brunswickers to participate in solutions. Include partners to enable similar efforts and messages to be delivered outside of government.
11. Develop a central repository for different types of climate information. The information should be easy to access, understand, and interpret. An outreach strategy is needed to ensure that partners are aware of the information and its value.
12. Incorporate climate change into the education curriculum for all grades, including experiential learning and connecting students with climate change initiatives in their local communities.

**Building Capacity**

To continue to build the capacity needed to respond to climate change in New Brunswick, the Committee recommends that government:

13. Include capacity building (human, knowledge, and financial) as a fundamental component of all actions.
14. Support and strategically invest in research at New Brunswick universities and colleges.
15. Invest in training of workers, particularly in the trades, to create a new workforce oriented to energy efficiency, energy management, and renewable energy.
16. Strengthen linkages between researchers, NGOs, local communities, and First Nations, to create partnerships and increase local capacity.

**Measuring and Reporting**

To support a robust framework for measuring and reporting on New Brunswick's climate actions, the Committee recommends that government:

17. Establish and publicize the baseline conditions against which initiatives will be measured. Actions must be measurable and include clear timelines and responsibilities. Focus on quantifiable indicators.
18. Develop performance indicators to demonstrate improvements in adaptation over time.
19. Report annually to the Legislative Assembly on progress towards responding to climate change.

**Economic Opportunities**

The Committee heard that responses to climate change offer the potential for job creation in the province and can provide a stimulus for investment in innovation and business development.

To support and promote the economic and job creation opportunities associated with climate change, the Committee recommends that government:

20. Create the conditions for growth and job creation in the areas of clean technology, products and services related to climate change in all sectors such as housing, agriculture, forestry, manufacturing, energy efficiency, renewable energy, information technology, and transportation.
21. Enable greater private investments in community economic development corporations that are supporting climate change initiatives.
22. Recognize the large financial opportunities that exist through reducing energy costs and the potential for reinvesting the savings into New Brunswick's economy.

**Adaptation: Responding to the Impacts and Risks of Climate Change**

The Committee heard that climate change is already evident in New Brunswick in the form of increased temperatures, more intense precipitation, and higher sea levels. Even with significant reductions in GHGs, the impacts of climate change will continue to be felt by New Brunswickers for decades into the future.

Climate resilience is the ability to survive and flourish in the face of a changing climate. Climate change adaptation is a key means to achieving climate resilience, and is about making informed forward-looking decisions considering future climate conditions.

Acquiring up-to-date climate information to inform decision-making and implementing effective adaptation measures will save lives, minimize damages, and lower costs over the long term for individuals, businesses, organizations, and governments. Taking immediate action to adapt to climate change will help ensure communities; infrastructures; the health care system; natural resource, agriculture, fisheries and aquaculture sectors; and natural systems function into the future.

The Committee offers recommendations under each of the following categories to support the theme of adaptation.

**Acquiring Climate Information and Supporting Research**

To ensure New Brunswick has access to the best available climate information and research the Committee recommends that government:

23. Acquire the most up-to-date predictive climate change information for all parts of the province and ensure the modeling capacity exists to support decision-making, including planning.
24. Strengthen research capabilities into the impacts of climate change by identifying research priorities and encouraging greater collaboration and sharing of information across partners (e.g., academic institutions, other jurisdictions, federal government, NGOs).

**Building Climate-Resilient Infrastructure**

To ensure that infrastructure in New Brunswick is adapted to future climate conditions, the Committee recommends that government:

25. Promote and utilize natural infrastructure (e.g., forests, wetlands, salt marshes, floodplains) as an important tool to buffer against climate change impacts.
26. Ensure that the impacts of climate change and extreme weather are considered in all infrastructure decisions and the lifecycle assessment of all infrastructure projects (design, construction, operation, and maintenance).

**Supporting Community Adaptation Planning**

To promote climate resilient communities in New Brunswick, the Committee recommends that government:

27. Ensure NGOs and local community partners are supported so they can continue to guide communities through the adaptation planning process.
28. Make the preparation and implementation of climate change adaptation plans mandatory for local and municipal governments that apply for provincial infrastructure funding. Develop guidelines for identifying vulnerabilities and creating adaptation plans.
29. Conduct climate change adaptation planning at a regional scale and empower regional service commissions to coordinate this exercise.
30. Amend the *Community Planning Act* and *Municipalities Act* to respond to the needs of local governments and their priorities for adaptation.
31. Implement statements of provincial interest under the *Community Planning Act* to establish province-wide standards and requirements for responding to climate change at the community level. Allow communities to exceed these standards if they choose.

**Adapting Forest Management**

To ensure forest management practices are adapted to future climate conditions, the Committee recommends that government:

32. Incorporate climate change knowledge into Crown land operating plans and all forest management plans to promote diversity in age, species composition, and genetic diversity to increase resilience.
33. Modify silvicultural investments to promote techniques that lead to greater forest resilience.
34. Plan forest activities on a watershed basis to manage peak flow events associated with extreme precipitation.

**Adapting Agriculture**

To help build a resilient agricultural sector and ensure practices are adapted to future climate conditions, the Committee recommends that government:

35. Support research into the impacts of climate change on agriculture and examine new crop and market opportunities as a result of changing growing conditions.
36. Encourage future federal-provincial-territorial funding agreements (e.g. Growing Forward) to include a stronger focus on climate change.
37. Encourage agricultural practices that promote soil health and reduce vulnerability to soil erosion.
38. Establish a program to assist with riparian buffer restoration in agricultural areas, recognizing that riparian buffers between agricultural activities and watercourses are important to address erosion and runoff from extreme weather events.

**Adapting Fisheries**

To promote a fishery that is adapted to climate change and ready to respond to new opportunities, the Committee recommends that government:

39. Urge the federal Department of Fisheries and Oceans to:
  - a. Ensure that sufficient refuge harbours and wharves exist for protection from storm events;
  - b. Adjust the timing of fishing seasons in response to changing marine conditions; and
  - c. Move more quickly to take advantage of new fisheries that may appear in New Brunswick waters.

**Adapting Ecosystems**

To increase the stability and resilience of natural and human systems, the Committee recommends that government:

40. Recognize the importance of ecosystems (e.g., wetlands, forests, soil, dunes, coastal salt marshes) in buffering the impacts of climate change, and integrate ecosystem services (e.g., temperature control, maintaining air quality, erosion control, water quality improvement, flood reduction) into land-use planning.
41. Identify and focus on the most climate-vulnerable species, habitats, and landscapes as targets for adaptation action and manage for landscape connectivity to allow for species migration.

**Reducing Climate-Related Hazards and Risks**

To ensure the continued safety of New Brunswickers and shift from reactive to proactive emergency management planning, the Committee recommends that government:

42. Ensure provincial disaster financial assistance programs and insurance products are responsive to climate change.
43. Work in partnership with the insurance industry to make flood insurance available to high-risk homeowners and promote awareness of available products.
44. Consider future climate conditions when making decisions about replacing or repairing infrastructure following disasters (“build back better” or relocate).
45. Update and implement *New Brunswick’s Flood Risk Reduction Strategy* (2014) to more prominently consider climate change, including:
  - a. Ensuring that new infrastructure is not located in hazard areas; and
  - b. Empowering and educating homeowners about ways to reduce the risk to existing infrastructure located in hazard areas and enhance awareness of the numerous publications and tools already available.

**Adapting to the Health Impacts of Climate Change**

To ensure the continued health and well-being of New Brunswickers in a changing climate, the Committee recommends that government:

46. Support ongoing research into climate-related health risks, including drinking water quality and quantity, increased risk of heat-related incidents, psychological and physiological impacts of extreme weather events, and the potential spread of vector-borne diseases.

**Mitigation: Transitioning to a Low-Carbon Economy**

Canada is responsible for approximately 1.6 per cent of global GHG emissions and is the ninth largest emitter among all nations. New Brunswick is responsible for approximately 3 per cent of Canada's emissions and 0.03 per cent of global emissions. It is the nation's third largest emitter on a per capita basis after Alberta and Saskatchewan.

The Committee heard that while the amount of New Brunswick's emissions is small on the global scale, most presenters were in general agreement that the province should do its part to meet Canada's national emissions reduction targets and its regional commitments. The majority supported the transition to a low-carbon economy with the goal of reducing fossil fuel consumption.

An ambitious, integrated approach to GHG emissions reduction is required if New Brunswick is to do its part to meet its climate change obligations and maintain economic competitiveness. Energy efficiency, renewable energy, emissions reduction in transportation and industrial processes, carbon sequestration, land-use planning, and carbon pricing were all identified as tools to assist in reducing New Brunswick's GHG emissions.

There are two basic approaches to carbon pricing:

- A carbon levy (carbon tax) establishes a dollar amount that is charged per unit of GHG emissions. It is usually calculated according to the carbon content of the fossil fuel that is consumed to obtain energy. The carbon price is known in advance so industries and consumers can budget for the cost of their emissions and plan their energy use accordingly. It is not possible, however, to know in advance the size of the resultant reduction in GHG emissions.
- Under an emissions trading scheme (cap-and-trade system or carbon market), the government sets a cap (limit) on the amount of GHGs that can be emitted by a particular sector (e.g., oil and gas, pulp and paper, electricity generation). Emission allowances (also known as quotas, permits, or credits) are sold or given to individual companies by the government. Emission allowances can be traded (bought and sold). There is certainty as to the level of GHG reductions that will be achieved but the cost companies will have to pay to emit GHGs is not known in advance.

The Committee heard that a carbon levy/tax is generally less complex and easier to administer than a cap-and-trade system and that carbon pricing can be designed to achieve different objectives. By tailoring specific features within a carbon pricing scheme or combining features of both, various objectives can be optimized but there are always trade-offs.

The Committee offers recommendations under each of the following categories to support the theme of mitigation.

**GHG Reduction Targets**

The Committee acknowledges the GHG reduction target for 2020 of 10 per cent below 1990 levels. To achieve additional GHG emissions reduction, the Committee recommends that government:

47. Establish specific GHG emission targets for 2030 and 2050 that fall within the target range of previously adopted regional targets:
  - a. 40 per cent below 1990 levels by 2030; and
  - b. 80 per cent below 2001 levels by 2050.
48. Phase out fossil fuels used in electricity generation by 2030 and replace with renewable energy and energy efficiency; social and economic impacts must be considered.

**Energy Efficiency**

To implement robust actions on energy efficiency in support of GHG emissions reduction targets, the Committee recommends that government:

49. Set ambitious, measurable, short, medium, and long-term targets for energy efficiency for all sectors.
50. Develop energy efficiency targets for all government-owned and funded facilities.
51. Adopt the National Energy Code of Canada for Buildings and National Building Code within a year of their release nationally and invest in training of inspectors to ensure adequate enforcement. Implement the necessary legislation to allow this to occur.
52. Require energy labeling for all new building construction, both residential and commercial.
53. Urge the federal government to:
  - a. Improve energy efficiency through revisions to the building standards for First Nations housing; and
  - b. Ensure that energy efficiency is included as a component of social housing agreements.
54. Explore the potential for the Property-Assessed Clean Energy (PACE) Program in New Brunswick as a means of financing for private property owners to implement energy efficiency and renewable energy improvements.

55. Establish a permanent, independent provincial agency with a mandate for energy efficiency and promotion of renewable energy across all sectors (industrial, commercial, residential, and transportation) and all fuel types. The mandate of the agency should include:
  - a. Clear performance-based targets for program delivery, subject to performance audits;
  - b. Sustained funding, including financial incentives and financing mechanisms, to support enhanced and progressive long-term programs;
  - c. Expanded capacity and programs to support low-income New Brunswickers;
  - d. Active promotion and recruitment of participants to enhance program uptake; and
  - e. Training for building contractors through partnerships with the New Brunswick Home Builders' Association and other stakeholders.

#### **Renewable Energy**

To increase renewable energy production in New Brunswick in support of GHG emissions reduction targets, the Committee recommends that government:

56. Increase the target for in-province electricity sales from renewable sources to 60 per cent by 2030.
57. Show leadership by using renewable energy to heat and power government buildings.
58. Investigate and remove existing barriers to the greater implementation of renewable power generation, distributed energy generation, and net metering.
59. Support the uptake of increased renewables for both electricity generation and residential/business heating in New Brunswick, through financial incentives, policy, and legislation.
60. Expand the small-scale community renewable energy program.
61. Work with the federal government to address the barriers to using registered retirement savings plan investments to support community economic development corporations with their renewable energy projects.
62. Mandate NB Power to:
  - a. Reduce fossil fuel use in electricity generation by increasing electricity generation from renewable sources;
  - b. Accelerate the implementation of the Smart Grid initiative to increase the penetration of renewables into the market; and
  - c. Expand net metering and make the development of distributed energy generation a high priority.

**Transportation Emissions**

To achieve GHG emissions reduction in the transportation sector, the Committee recommends that government:

63. Set a target of 5,000 electric vehicles on the road in New Brunswick by 2020 and 20,000 by 2030. To achieve this target:
  - a. Implement the required incentives, regulations, and policies; and
  - b. Develop the required charging infrastructure to support electric vehicle targets, including rapid charging stations.
64. Lead by example by electrifying the government vehicle fleet.
65. Develop a specific program for the electrification of taxis and local delivery vehicles.
66. Work with the freight and trucking industry to increase fuel efficiency in commercial trucking and pilot the use of alternative fuels such as propane, natural gas, and bio-diesel.
67. Institute public transportation planning at the regional level to allow for route integration and improvements in access.
68. Work with communities to improve public transport ridership and alternative forms of transportation, such as carpooling, cycling, and walking.

**Industrial Emissions**

To achieve industrial GHG emissions reduction, the Committee recommends that government:

69. Create and enforce stringent GHG emissions reduction regulations under the *Clean Air Act*.
70. Mandate the development of energy management plans as a condition of the Approval to Operate, pursuant to the Air Quality Regulation of the New Brunswick *Clean Air Act*.
71. Provide incentives and programs to support initial implementation of industrial energy efficiency. Programs should include a performance-based approach, a focus on energy management information systems, and training and capacity building.

**Agricultural Emissions**

To achieve agricultural GHG emissions reduction, the Committee recommends that government:

72. Link financial incentives for agriculture to the development of farm-management plans that include methane and fertilizer management.

**Carbon Sequestration**

To support an increase in carbon sequestration in New Brunswick as a means to mitigate GHG emissions, the Committee recommends that government:

73. Explore the opportunity for participation in carbon offset markets (voluntary and regulated), for large and small industry, as a means to capture GHG emissions and generate revenue and economic opportunities for New Brunswickers.
74. Direct revenue generated from carbon sequestration on Crown land to a climate change fund.
75. Encourage and support forest and agriculture practices that are known to increase carbon sequestration and conduct research into the most effective silviculture and agricultural practices for increasing carbon sequestration.
76. Incorporate the use of materials that have sequestered carbon or were produced with low carbon emissions into building specifications and requirements.

**Planning for Climate Change**

To help promote smart growth principles and planning that incorporate GHG emissions reduction, the Committee recommends that government:

77. Adopt community and regional land-use planning requirements that address ways to shape land-use to incorporate energy efficiency, energy conservation, carbon sequestration, and reduce emissions.
78. Provide incentives to promote smart growth (natural infrastructure, green buildings, and low impact developments) and sustainable community design.
79. Incorporate GHG emissions reduction considerations into lifecycle assessments of all infrastructure projects.
80. Amend the *Community Planning Act* and *Municipalities Act* to respond to the needs of local governments and their priorities for mitigation.

**Carbon Pricing**

There was general, but not unanimous, support for some form of carbon pricing to drive emissions reduction and generate revenue to fund other responses to climate change. More engagement and analysis is required before a carbon pricing mechanism is established.

The Committee recommends that government:

81. Develop a made-in-New Brunswick carbon pricing mechanism, as opposed to having one imposed on New Brunswickers by the federal government, that is conditional on:

- a. Directing all revenue from carbon pricing to a dedicated climate change fund, not general revenue;
- b. Undertaking a detailed analysis of the social, financial, economic, and environmental impacts of the various carbon pricing mechanisms and revenue investment options. The analysis should be made public and consider the:
  - i. Potential impacts on consumers and businesses (including capacity to pay) and industry (including trade-exposed, energy-intensive New Brunswick industries);
  - ii. Cost of administering any carbon pricing mechanism; and
  - iii. Impact on GHG emissions reduction.
- c. Protecting low-income New Brunswickers;
- d. Including all economic sectors;
- e. Considering the approach taken by neighboring jurisdictions;
- f. Developing the mechanism with the engagement of all concerned interests; and
- g. Ensuring the carbon-pricing mechanism is outlined in legislation and receives public consultation through a committee of the Legislative Assembly.

#### **Funding for Climate Change Initiatives**

The Committee heard that dedicated funding for climate change initiatives is essential to ensure sustained, ambitious, and collaborative action.

To ensure that climate change mitigation and adaptation initiatives are adequately supported, the Committee recommends that government:

82. Establish and administer a climate change fund that will:
  - a. Ensure revenue derived from carbon pricing is invested back to consumers and economic sectors with the majority of the revenue dedicated to GHG emissions reduction (energy conservation and efficiency, and renewables) and the remaining balance to climate change adaptation;
  - b. Be completely transparent regarding who is paying and how the revenue is spent;
  - c. Ensure expenditures are done in accordance with government's climate action priorities;
  - d. Involve a multi-stakeholder climate advisory council to provide input on funding priorities; and
  - e. Consider all existing provincial and federal funds and opportunities to align or incorporate within the climate change fund and better utilize and leverage the revenue from these funds to meet government's climate action priorities.

83. Report annually on expenditures and performance of the climate change fund to the Legislative Assembly's Standing Committee on Public Accounts.
84. Make provisions for multi-year funding for climate-related initiatives.
85. Reinvest government energy management savings back into departmental actions to address climate change.

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Her Honour, the Lieutenant-Governor, was announced, and having been bidden to enter, took her seat in the chair upon the Throne.

Her Honour was pleased to close the session with the following speech:

*Premier Gallant, Honourable Members of the Legislative Assembly, the time has come to prorogue the second session of this fifty-eighth Legislative Assembly. Over the course of this past session, you have accomplished a great deal - work of importance to this province, to our communities, and to individual New Brunswickers. Thanks to you, our province is better able to rise to challenges and make the most of fresh opportunities in order to ensure a better future.*

*I want to offer my personal thanks to each one of you for your dedication to public life and public service, for your commitment to this House, and for what you represent to the people who put you here. I encourage you to continue your diligent efforts on behalf of the people of New Brunswick during the coming session, which will commence this afternoon. I want to encourage you to follow parliamentary conventions and traditions, and I challenge you to embody the respect and dignity this historic Chamber deserves. You are here, because people have faith in you. I also believe in you - and our legislative process. New Brunswick needs you - all of you - your leadership, your consensus, your cooperation, your vision.*

*These difficult times require your strength of character, your conviction, your passion, and your inspiration. Your role is not an easy one. But you are here for the good of this province. Never forget that we are one New Brunswick. We are officially bilingual. We are proudly multicultural. We are one New Brunswick.*

*Now, with the completion of the business of the Second Session of this Fifty-eighth Legislative Assembly, it is my privilege, my responsibility to issue the command of Her Majesty, Queen Elizabeth the Second, Queen of Canada and Queen of New Brunswick, that this Legislature stand prorogued. May Divine Providence continue to guide and bless the people of New Brunswick. Thank you.*

The Clerk of the Legislative Assembly, Donald J. Forestell, then said:

*Mr. Speaker and Members of the Legislative Assembly:*

*It is Her Honour the Lieutenant-Governor's will and pleasure that the Legislative Assembly be prorogued until 1 o'clock p.m. today, and this Legislative Assembly is hereby prorogued accordingly.*

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The House prorogued at 11.17 a.m.

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The following documents, having been deposited with the Clerk of the House since the last sitting of the House, were deemed laid upon the table of the House pursuant to Standing Rule 39:

**Annual Reports**

2015 Recycle NB	July 8, 2016
2015-2016 New Brunswick Health Council	August 12, 2016
2016 <i>Statute Repeal Act</i> , Office of the Attorney General	August 30, 2016
2015-2016 New Brunswick Investment Management Corporation	August 31, 2016
2015-2016 Vitalité Health Network	September 6, 2016
2015-2016 Vehicle Management Agency	September 15, 2016
2015-2016 Horizon Health Network	September 26, 2016
2015-2016 New Brunswick Power Corporation	September 27, 2016
2015-2016 New Brunswick Energy and Utilities Board	September 28, 2016
2015-2016 Financial and Consumer Services Commission	September 29, 2016
2015-2016 Research and Productivity Council	October 21, 2016
2015-2016 Ambulance New Brunswick	October 24, 2016
2015-2016 Office of the Public Intervener, a Unit of the Office of the Attorney General	October 25, 2016
2014 Air Quality Monitoring Results, Department of Environment and Local Government	October 26, 2016
2015-2016 Economic and Social Inclusion Corporation	October 26, 2016
2016 Report of the Auditor General of New Brunswick, Volume 2, Joint Audit of the Atlantic Lottery Corporation	October 26, 2016
2015-2016 New Brunswick Community College	October 28, 2016

**Other**

Members' Public Disclosure Statements 2015, filed with the Clerk of the Legislative Assembly, pursuant to subsection 20(7) of the <i>Members' Conflict of Interest Act</i>	July 19, 2016
Strategic Program Review, Review of the Officers of the Legislative Assembly; and Executive Summary	July 28, 2016
Under the provision of the <i>Fees Act</i> , proposed increases to handling fees required to be paid by beverage product distributors to beverage container redemption centres	September 15, 2016
Public Accounts for the fiscal year ended March 31, 2016, Volume 1, Consolidated Financial Statements	September 30, 2016
New Brunswicker's Response to Climate Change, Final Report of the Select Committee on Climate Change	October 24, 2016

**Petitions**

Response to Petition 68	July 15, 2016
Response to Petitions 69, 70, 71	July 21, 2016
Response to Petition 72	August 3, 2016
Response to Petition 56	August 8, 2016