August 11, 2017

Dear [REDACTED]

Re: Your request for access to information under Part II of the Access to Information and Protection of Privacy Act OCC/2/2017

On August 1, 2017, the former Office of Climate Change Branch received your request for access to the following records:

A copy of all briefing materials provided to the new Minister.

I am pleased to inform you that a decision has been made by the Deputy Minister for Municipal Affairs and Environment to provide access to the requested information.

In accordance with your request for a copy of the records, the appropriate copies have been enclosed.

The Access to Information and Protection of Privacy Act requires us to provide an advisory response within 10 days of receiving the request. As this request has been completed prior to day 10, this letter also serves as our Advisory Response.

Please be advised that you may ask the Information and Privacy Commissioner to review the processing of your access request, as set out in section 42 of the Access to Information and Protection of Privacy Act (the Act). A request to the Commissioner must be made in writing within 15 business days of the date of this letter or within a longer period that may be allowed by the Commissioner.

The address and contact information of the Information and Privacy Commissioner is as follows:

Office of the Information and Privacy Commissioner
2 Canada Drive
P. O. Box 13004, Stn. A
St. John’s, NL A1B 3V8

Telephone: (709) 729-6309
Toll-Free: 1-877-729-6309
Facsimile: (709) 729-6500

P.O. Box 8700, St. John’s, NL Canada A1B 4J6  709 729 3051  709 729 7491  www.gov.nl.ca
You may also appeal directly to the Supreme Court Trial Division within 15 business days after you receive the decision of the public body, pursuant to section 52 of the Act.

Please be advised that responsive records will be published following a 72 hour period after the response is sent electronically to you or five business days in the case where records are mailed to you. It is the goal to have the responsive records posted to the Completed Access to Information Requests website within one business day following the applicable period of time. Please note that requests for personal information will not be posted online.

If you have any further questions, please contact me by telephone at 709.729.3215 or by email at kimberlyolson@gov.nl.ca.

Sincerely,

Kim Olson
ATIPP Coordinator
Climate Change

Transition Binder
August 2017
Ministerial Briefing Binder
Climate Change

Part A: Briefing Material
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Strategic Issues Tab 2
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Outline

1. Climate Change Branch
2. Climate Change Overview
3. Energy Efficiency Overview
4. NL Approach
5. Current Strategic Issues
6. Conclusion
1. Climate Change Branch

- 6 staff / budget $1.26 M in 2017-18

Mandate:
- Advance sustained action on climate change and energy efficiency that effectively balances economic and environmental considerations, including raising public awareness
- Improve the evidence base to enable the province to maximize opportunities and minimize risks from the impacts of climate change and the move towards a low-carbon global economy
- Integrate and coordinate action across Government
- Represent province and engage external stakeholders to deepen and widen dialogue
1. Climate Change Branch

- Advances solutions to complex horizontal challenge

- Select Achievements:
  - National Clean 50 leadership award (2013)
  - National Clean 16 leadership award (2013)
  - Provincial Pinnacle Awards of Excellence and Merit (2014)
  - Provincial Pinnacle Award of Merit (2016)
2. Climate Change Overview

International Consensus

- Science is clear
  - Urgent and global challenge
- New international agreement (Paris – COP 21)
  - Adaptation – enhancing resilience to impacts
  - Mitigation – reducing GHG emissions
- Cost of inaction exceeds cost of action
  - There are solutions but no one answer
  - Economic opportunities and job creation
- All jurisdictions, large and small, must play a role
2. Climate Change Overview

Where do GHGs Come From?

Energy Sources
- Power Generation
- Flaring
- Houses and Buildings
- Road Transportation
- Marine Transportation
- Air Transportation

Non-Energy Sources
- Waste
- Deforestation
- Agriculture
2. Climate Change Overview
GHG Emissions by Sector - NL

- 36% - Transportation
- 36% - Large Industry
- 8% - Waste
- 11% - Power Generation
- 9% - Fuel Use in Buildings
- <1% - Manufacturing

2015
2. Climate Change Overview

Impacts

- Climate change will make NL:
  - Warmer
  - Wetter
  - Stormier
- Impacts pose opportunities and risks (e.g.)
  - Longer growing seasons for agriculture, forestry, aquaculture
  - Extended summer tourism season
  - Growth in green economy
  - Infrastructure damage and coastal erosion
  - New pests and invasive species
  - Permafrost melt in Labrador
2. Climate Change Overview

Two-Pronged Approach

**ADAPTATION**

- Adapting to the unavoidable impacts of climate change (e.g. more storms, increased coastal erosion)

**MITIGATION**

- Reducing GHG emissions to avoid further impacts in the future (e.g. through energy efficiency)

**Sustainable Communities**
3. Energy Efficiency Overview

Benefits

- Lowering household energy bills
- Improving competitiveness of business
- Tackling climate change
- Job creation and economic growth
- Increasing energy available for export
- Increasing comfort

Newfoundland Labrador
3. Energy Efficiency Overview

New Programs Developed by Climate Change Branch – Budget 2017

- Home Energy Savings Program (HESP)
  - Grant program to install insulation and other energy efficiency upgrades
  - Delivered by Newfoundland and Labrador Housing Corporation
  - Up to $5,000 grant per low income household
  - $5 million over 3 years
  - Accepting applications from July 4, 2017

- Energy Efficiency Loans Program (EELP)
  - Low-interest financing for heat pumps and insulation
  - Delivered by Newfoundland Power and NL Hydro
  - Loan principal up to $10,000 paid back on utility bill over 5 years
  - $4 million over 3 years
  - Program to be operational by Fall 2017
4. NL Approach

Targets and Goals

- GHG Emission Targets
  - 10% below 1990 levels by 2020
  - 75-85% below 2001 levels by 2050
- Enhance resilience to climate impacts
- Demonstrate Government leadership
- Grow the green economy
5. NL Approach
2011 Action Plans

- 75 Commitments in total
- 13 Departments and Agencies
- All sectors of the economy
- 5-year plans (2011-2016)
- Final report due in 2017
5. NL Approach
Examples of Progress to Date

- GDP growth significantly outpacing GHG growth
- First jurisdiction in Canada to integrate climate change into flood risk maps
- 113 coastal monitoring stations established
- Energy efficiency retrofits for almost 7,000 low-income houses
- 12 Government buildings and 3 municipal buildings have been certified under LEED designation
- Award-winning public awareness campaign
- *Management of Greenhouse Gas Act* to regulate large industry GHG emissions
5. NL Approach

Path Forward

- Adopted Pan-Canadian Framework on Clean Growth and Climate Change and committed to introduce “made-in-NL” approach carbon pricing
- Exploring opportunities to cost-share new programs with Federal Government (e.g. Low Carbon Economy Fund)
- Committed to release new Climate Change Action Plan in 2017-18 and close the gap to 2020 GHG target
- New energy efficiency programs announced in Budget 2017 to be rolled out
- Working to incorporate climate change into all infrastructure design and build
- Need to continue work to build climate-resilient communities (e.g. flood risk maps, precipitation projections, climate monitoring)
6. Current Strategic Issues (1)

- New Climate Change Action Plan
  - Public and stakeholder consultations completed
  - Indigenous engagement ongoing
  - Departmental engagement ongoing

- Carbon Pricing
  - Federal requirement to implement carbon pricing across whole economy
  - *Management of Greenhouse Gas Act (2016)* provides framework for NL’s onshore large industry – underpinning regulations to be developed
  - Ongoing dialogue with Federal Government on offshore industry
  - Direction needed on approach to transportation and building fuels
  - Consultations with industry and Indigenous organizations will be needed
6. Current Strategic Issues (2)

- Low Carbon Economy Leadership Fund
  - About $44.7 million in federal funding over 5 years
  - Targeted sectors: buildings, industry, agriculture and forestry
  - Cost-shared requirements (ratio differs by sector)
  - Cross departmental process to identify and develop possible initiatives

- Energy Efficiency Programs
  - Home Energy Savings Program operational from July 2017
  - Home Energy Efficiency Loan Program being developed, launch in Fall 2017

- Adaptation
  - Federal funding anticipated but process/criteria still unclear
  - Provincial funding available to update climate projections in 2017-18
7. Conclusion

- Science is clear – urgent action is needed by all
- Additional measures needed to close the gap to 2020 target
- Proactive approach will maximize economic opportunities and minimize risk
- Direction needed on current strategic issues in short term:
  - Carbon Pricing
  - Low Carbon Economy Fund
  - Climate Change Action Plan
Title: Climate Change – Strategic Issues

Issue: Overview of strategic issues to advance action on climate change in Newfoundland and Labrador.

Background and Current Status:
- Climate change is one of the most challenging long-term problems facing the world today and jurisdictions spanning the globe are pursuing solutions. Without action to reduce greenhouse gas (GHG) emissions and adapt to the unavoidable impacts of climate change, economies, communities and ecosystems will be affected.

- The effects of climate change and a shift to a lower carbon global economy present both risks and opportunities for the Province.
  - Risks include:
    - increasing extreme weather events (e.g., Tropical Storm Leslie, Hurricane Igor);
    - federal initiatives to regulate GHG emissions that may not take provincial circumstances into account;
    - growing exposure to new and invasive pests, vegetation and diseases; and,
    - rising energy prices that adversely impact households and businesses.

  - Opportunities include:
    - Developing regulations to reduce GHG emission in the industrial sector which will maintain competitiveness and assist with electricity rate mitigation (i.e., a made in NL approach to GHG emissions in the industrial sector);
    - supporting clean energy exports;
    - generating growth in the green economy; and
    - improving NL’s resilience to adverse climate impacts.

- Taking action on climate change requires sustained action by all sectors. In particular:
  - Effective action requires strong, sustained and visible top-down leadership. Evidence from around the world demonstrates that this is the best way to make real progress.
  - The issues are highly complex and cross cutting. They affect all sectors of the economy and impact every government-funded body and every individual in the province, and require a strong horizontal approach.
  - Climate change is one of few areas of policy where governments across the country and around the world have targets that span not just years, but decades. The Province has specific and measurable targets to reduce GHG emissions by 10 per cent below the 1990 level by 2020 and by 75-85 per cent below the 2001 level by 2050. This requires the development, review and implementation of strategies and policies needed to generate a fundamental change over a period of decades.
  - The path forward needs to balance environmental sustainability and economic growth.

- There are several key strategic issues and considerations moving forward:
  - GHG emissions need to decline further: The province came within 8.4 percent of meeting its target to stabilize GHG emissions at 1990 levels by 2010, at the same time GDP grew by about 70 percent. Actions are being taken to tackle GHGs, the most significant of which is decommissioning the Holyrood Generating Station when Muskrat Falls is developed. However, existing measures will not be sufficient for the Province to achieve its 2020 and 2050 targets and additional innovative policies and measures are needed. This will require a contribution
from all sectors of the economy, including large industry (onshore and offshore), transportation, building fuels, and waste. In his June 2017 audit, the Auditor-General recommended that the Province put in place further measures to reduce GHG emissions.

- **Renewed federal approach:** The tone and substance of the FPT conversation on climate change has significantly changed since the election of the Trudeau Government. Three First Ministers have taken place on climate change since October 2015 and, in December 2016, the Province adopted the Pan-Canadian Framework on Clean Growth and Climate Change.
  - The federal government has indicated that it plans to give provinces flexibility to design their own climate policies, including carbon pricing, while offering targeted funding from the to help provinces and territories achieve these goals.

- **Improving resilience:** More work is needed to deepen understanding of the risks to the provincial economy and communities, and more action is needed to improve resilience to climate impacts through adaptation. Impacts include:
  - more coastal erosion and flooding impacting infrastructure, insurance and public safety;
  - warmer temperatures affecting winter tourism;
  - rising temperatures increasing the incidence of human illness from infectious diseases;
  - reduced ice conditions impacting transportation in the north;
  - unstable and thawing permafrost impacting northern infrastructure; and,
  - warmer and less saline ocean waters affecting aquaculture.

- **Rising energy prices:** Energy prices are rising faster than inflation and the relative price between electricity and home heating fuels will change significantly after 2020. Energy conservation and efficiency has a key role to reducing fuel bills, regardless of energy source, making householders better off and improving business competitiveness. New programs were announced in Budget 2017 but there remains more scope to increase the uptake of energy efficiency.

- **Leadership and a long-term view:** The current action plans set out the Province’s strategic approach to tackling climate change and improving energy efficiency, alongside 75 commitments to action over a five year period (2011-2016). The Province’s strategic approach includes a commitment to GHG reduction targets for both 2020 and 2050. A new Plan is being developed for release in 2017-18 in which government will review progress and identify what additional policies and measures would be needed over the next five year period to advance its goals and achieve its targets.

**Action Being Taken:**

- Action has been undertaken on all of the 75 combined commitments in the *Climate Change and Energy Efficiency Action Plans*, and a final report is being developed for release in 2017.

- A new Climate Change Action Plan is under development, for release in 2017-18.

**Prepared By/Approved By:** G. Crane / J. Janes  
**August 4, 2017**
Information Note
Municipal Affairs and Environment

Title: Climate Change Branch

Issue: To provide an overview of the work of the Climate Change Branch (CCB).

Questions and Answers:
1. What is CCB's mandate?
2. What are CCB's lines of business?
3. How is CCB staff organized?
4. What is the CCB budget for 2017-18?

1) What is CCB's mandate?
   - The mandate of the CCB (formerly the Office of Climate Change) is:
     - To establish a path forward and advance sustained action on climate change and energy efficiency that effectively balances economic and environmental considerations, including deepening public awareness understanding and engagement.
     - To undertake focused research and analysis to improve the evidence base and enable the province to maximize opportunities and minimize risks from the impacts of climate change and the move towards a low-carbon global economy.
     - To work with departments to better integrate climate change and energy efficiency considerations into their current and future programs, services, legislation and regulations, and ensure effective coordination across government; and,
     - To advance the province's interests and priorities in regional, national and international forums on climate change and energy efficiency, and engage external stakeholders to deepen and widen government's dialogue on next steps.

2) What are CCB's lines of business?
   - CCB accomplishes its mandate through four lines of business:
     i. Policy and Strategy Development
        - CCB has lead responsibility within government for policy and strategy development on climate change and energy efficiency. It developed and is responsible for leading implementation of:
          - Climate Change Action Plan,
          - Energy Efficiency Action Plan,
          - Greening Government Action Plan, and
          - Market Transformation Framework.
        - CCB analyzes the implications of different policy and strategic approaches to achieve Government's greenhouse gas (GHG) reduction and energy efficiency targets; analyzes the impacts of climate change and economic opportunities for the province, and the implications of national and international developments.
     ii. Strengthening the Evidence Base
        - Given the complexity and cross-cutting nature of the issues which affect all sectors of the provincial economy, effective action on climate change and energy efficiency must be based on a sound evidence base of analysis and research.
        - CCB is responsible for strengthening the evidence base by undertaking research and analysis to support decision-making, developing greenhouse gas
projections, understanding best practices, and identifying and addressing information and data gaps through a systematic, long-term approach.

iii. Promoting Government-wide Action
- Climate change is a cross-cutting issue that impacts virtually every economic sector and does not fall squarely within the purview of any single entity, requiring coordinated commitment and action across all of government. This requires building common approaches across mandates, and identifying and acting on strategic issues that may otherwise get lost at the intersection of different department's mandates.
- CCB leads action on this front and ensures a coordinated approach to opportunities and challenges, and provides a strategic whole of government perspective on how to deploy scarce resources to best effect.

iv. Representing the Province in Intergovernmental Forums and Engaging External Stakeholders
- CCB represents the province’s interests and advances its policy objectives in regional, national and international forums and through its an extensive network of contacts across the country.
- CCB works with external stakeholders, including municipalities, large industry companies, industry associations, the electrical utilities, Memorial University, non-governmental organizations, and Indigenous Governments and organizations. This engagement informs policy analysis and supports implementation of commitments.

3) What is the budget for 2017-18?
- CCB’s 2017-2018 operational budget (which falls under the Office of Climate Change in Executive Council in Budget 2017) is as follows:

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
<td>(01) Salaries</td>
<td>$563,000</td>
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<tr>
<td>(02) Employee Benefits</td>
<td>$1,700</td>
</tr>
<tr>
<td>(03) Transportation and Communications</td>
<td>$34,100</td>
</tr>
<tr>
<td>(04) Supplies</td>
<td>$4,900</td>
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<tr>
<td>(05) Professional Services</td>
<td>$148,000</td>
</tr>
<tr>
<td>(06) Purchased Services</td>
<td>$7,400</td>
</tr>
<tr>
<td>(07) Property Furnishings &amp; Equipment</td>
<td>$500</td>
</tr>
<tr>
<td>(08) Grants and Subsidies</td>
<td>$500,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,259,500</strong></td>
</tr>
</tbody>
</table>

- Professional Services to be removed from fiscal year 2018-19 onwards.
- Grants and subsidies comprise 50 percent of government’s allocation for the Help Energy Efficiency Loans Program in 2017-18 (NLHC provides the remaining 50 percent).

4) How is CCB staff organized?
- CCB consists of six full-time staff members. Contacts details and an organizational chart are appended.

Prepared/Approved by: K. Robar / J. Janes
August 4, 2017
Appendix A: Climate Change Branch - Contact Information

Contact Information:

Address: 5th Floor, West Block
Confederation Building
St. John’s, NL A1B 4J6

Office Email: climatechange@gov.nl.ca

Office Telephone: (709) 729-1210

Individual Contact Details:

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Office Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackie Janes</td>
<td>Assistant Deputy Minister</td>
<td>729-7971</td>
</tr>
<tr>
<td>Gerald Crane</td>
<td>Director of Research, Analysis and Government Relations</td>
<td>729-0379</td>
</tr>
<tr>
<td>Kim Olson</td>
<td>Manager, Planning and Accountability</td>
<td>729-3215</td>
</tr>
<tr>
<td>Jennifer Forristall-Prim</td>
<td>Manager, Risk Mitigation and Impacts</td>
<td></td>
</tr>
<tr>
<td>Kyle Robar</td>
<td>Policy and Program Development Specialist</td>
<td>729-1394</td>
</tr>
<tr>
<td>Elaine Clarke</td>
<td>Administrative Support</td>
<td>729-1210</td>
</tr>
</tbody>
</table>

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Appendix B: Climate Change Branch - Organizational Chart

Deputy Minister
Jamie Chippett

Assistant Deputy Minister
Jackie Janes

Director, Government Relations, Research and Analysis
Gerald Crane

Manager, Planning and Accountability
Kimberly Olson

Manager, Risk Mitigation and Impacts
Jennifer Forristall-Prim

Policy and Program Development Specialist
Kyle Robar

Administrative Assistant
Elaine Clarke
FREQUENTLY ASKED QUESTIONS

Section 1: Climate Change
1. What is climate change and why is it important?
2. What are the impacts of climate change on the Province?
3. The Province emits so little compared to others. Why should we do anything to reduce GHG emissions?
4. Why does it make economic sense to take action on climate change?
5. What is the difference between climate change adaptation and climate change mitigation?
6. Why must adaptation and mitigation proceed hand-in-hand?

Section 2: Energy Efficiency
7. What is energy efficiency? How does it differ from energy conservation?
8. How are energy efficiency and conservation connected to climate change?
9. Do energy efficiency and conservation have benefits beyond climate change?
SECTION 1: CLIMATE CHANGE

1) What is climate change and why is it important?
- The science is clear: climate change is one of the most serious long-term challenges facing the planet and our province today.
- Life on Earth is sustained by naturally occurring gases in the Earth’s atmosphere which allow the Sun’s rays to pass through the atmosphere to warm the Earth and then trap the warmth to prevent it escaping out into space. These gases retain enough heat from the Sun to sustain life on Earth.
- But human activity has disrupted that balance. Since the industrial revolution, we have put greenhouse gases (such as carbon dioxide, methane and nitrous oxide) into the atmosphere in massive amounts by burning fossil fuels (oil, gas and coal), cutting down a lot of forests, and using farming methods that add to GHGs in the atmosphere.
- Now there is too much of these GHGs in the atmosphere. All the gases act like a blanket surrounding the Earth retaining too much of the Sun’s heat. That means we are fundamentally changing the Earth’s climate. Global average temperature has risen by 0.85°C since 1880 and some regions have warmed by much more than this. The Northern Hemisphere is warmer now than at any point in the last 1000 years.
- In 2014, Intergovernmental Panel on Climate Change (IPCC) released its latest report on the science of climate change. The IPCC was established in 1988 by the World Meteorological Office and the United Nations Environment Programme. It is the most comprehensive and authoritative source of information on climate change, releasing comprehensive assessments on the state of climate change every five to seven years. The report concluded that:
  - The probability that human activities are the main cause of climate change has increased from ‘very likely’ (90 per cent chance) to ‘extremely likely’ (95 per cent certain).
  - Global temperatures have already increased by 0.85°C since 1880 and temperatures are likely to rise between 0.3°C to 4.8°C by the late 21st Century.
  - Sea levels are likely to rise by between 26cm and 82cm by the late 21st Century, after a 19cm rise in the 19th Century.
  - Year-round reductions in Arctic sea ice are projected by the end of the 21st century. A nearly ice-free Arctic Ocean in September is possible by mid-century.
  - The scientific consensus agrees that climate change is happening and there is over 95% probability it is due to the release of GHGs from human activity.

2) What are the impacts of climate change on the Province?
- Climate change will make Newfoundland and Labrador warmer, wetter, and stormier. For example:
  - Temperatures could rise by as much 4 degrees Celsius in northern Labrador in winter by mid-century.
  - Precipitation will become more intense, occur more frequently and last longer. In St. John’s precipitation is projected to increase by 28% by 2050.
  - Climate change is expected to cause more frequent and more severe extreme weather events. Hurricane Igor alone caused $185 million of damage. Hurricane Sandy caused billions of damage in the US and the loss of 150 lives.
- These changes will pose both opportunities and risks to Newfoundland and Labrador such as:
  - Longer growing seasons for agriculture, forestry and aquaculture.
  - An extended summer tourism season.
 Opportunities for growth in the green economy such as new demand ocean observation technologies.

- Climate change is causing glaciers to melt, sea-levels to rise, and more coastal erosion. As over 90% of our population lives by the coast, this is a serious threat.
- Extreme weather events damage households, businesses and infrastructure, and put lives at risk. Extreme weather often causes floods, one of the most common and costly natural hazards for our province.
- Climate change is impacting winter-ice conditions in Labrador, adversely affecting winter transportation routes and affecting the permafrost on which buildings are constructed, threatening structural integrity. It is also impacting traditional habitats for caribou herds which are already under distress.
- Climate change is affecting ecosystems which can affect livelihoods and health. It is changing the ocean environment, which is impacting species and bringing new pests and diseases northwards like cabbage worm and Lyme disease.

3) The Province emits little compared to bigger provinces. Why should we do anything to reduce GHG emissions?

- As a global problem, climate change calls for a global response. All jurisdictions, no matter how big or small, have a role to play. As Canada pursues GHG emission reductions nationally, all provinces will be expected to contribute.

- As the world moves towards a carbon-constrained economy, it is important to prepare for the future by determining how to minimize the risks and seize the opportunities, such as the growing demand for clean power generated from non-GHG emitting sources like wind and hydroelectricity.

4) Why does it make economic sense to take action on climate change?

- Climate change is not just an environmental issue as it has significant economic and social consequences. There are strong economic imperatives to devise a clear path forward. The global cost of reducing GHG emissions is lower than the global costs associated with responding to the effects of climate change.

- Those jurisdictions that engage proactively in action on climate change will be best placed to position their economies to minimize risks and maximize opportunities, as they will shape the rules and help prepare their economies for the fundamental changes to come in a carbon-constrained world.

- Jurisdictions that fail to grapple with the agenda may incur higher costs in the long run, miss opportunities to seize new markets for low emitting goods and services, and could be vulnerable to changing market realities. Delays in taking action to reduce emissions can increase the final costs of meeting emission reduction targets by creating uncertainty for business and “locking in” less efficient capital stock.

- A 2010-11 study commissioned by OCC and TCII concluded that, with the right support, it is possible to increase jobs in the green economy by 30% by 2020. Some sectors of the green economy also present the possibility of increases in high-paying, specialized employment and economic diversification. The green economy includes sectors such as sustainable tourism, green buildings, green energy supply, waste management, energy efficiency, green transportation and sustainable resources management (e.g. aquaculture, forestry and agriculture).
• Adaptation measures designed to improve resilience to the unavoidable impacts of climate change can help minimize the costs associated with these impacts.

5) **What is the difference between climate change adaptation and climate change mitigation?**

• Responding to climate change is a complex challenge that has two equally important parts: adaptation and mitigation. Action is needed on both fronts simultaneously (they are complementary actions and one cannot be substituted for the other). A two-pronged approach is therefore needed with:
  o **Adaptation** - adjusting to the unavoidable impacts of climate change to improve resilience; and
  o **Mitigation** - reducing GHG emissions to limit or avoid potential impacts of climate change in the future.

• Climate change **adaptation** refers to actions by governments, communities, businesses and individuals to understand, plan for, and respond to unavoidable changes in the climate. This could include, for example, new planning practices to avoid areas at risk of sea-level rise, building infrastructure to higher standards and exploiting economic opportunities such as the growing demand for environmental and water monitoring.

• Adaptation is often considered more of a local issue compared to GHG reduction (mitigation) efforts as the specific climate change impacts, challenges and opportunities can be unique to a specific location. As a result, a fundamental component of adaptation is first improving understanding of the potential risks and opportunities.

• Climate change **mitigation** refers to the actions by governments, communities, businesses, and individuals to reduce the quantity of GHGs released into the atmosphere, in an effort to minimize continued future warming of the Earth. At the individual or organizational level, this is often known as reducing one’s carbon footprint. The establishment of GHG reduction targets forms a key part of climate change mitigation policy for many governments.

• Actual reductions in GHG emissions can be achieved in many ways, including:
  o switching from energy sources powered by burning fossil fuels to energy sources powered by renewable (hydro, wind, solar, etc.) or nuclear sources;
  o increasing the energy efficiency of equipment that burns fossil fuels; and,
  o changing practices or behavior to reduce the consumption of fossil fuels — such as walking or using public transit instead of driving a gas-powered car.

6) **Why must adaptation and mitigation proceed hand-in-hand?**

• Promoting action on adaptation is a long-term challenge and one that is fundamental to the sustainability of Newfoundland and Labrador.

• Because GHGs stay in the atmosphere for significant periods of time, the climate will continue to change even if global GHG emissions were reduced to zero today. The planet is already committed to a certain amount of warming and the continuation of some impacts that have already been seen.

• However, the **extent and severity of impacts** over the coming decades will be determined by the level of GHG emissions countries continue to emit going forward. Therefore, efforts to reduce GHG emissions must proceed hand-in-hand with efforts to adapt to a changing climate.
SECTION 2: ENERGY EFFICIENCY

7) What is energy efficiency? How does it differ from energy conservation?

- Energy efficiency refers to achieving a similar or better level of service or output while using less energy. Energy efficiency can involve the use of new or existing technologies, such as insulation or a heat pump. For example, an energy efficient light bulb provides the same amount of light output with less energy input than a non-energy efficient bulb, and energy efficient windows and insulation can allow a home to be heated to the same level of comfort as a house without any insulation using less energy.

- In contrast to energy efficiency, energy conservation focuses on reducing energy consumption through changes in behaviour, such as turning off lights when leaving a room or unplugging chargers when not in use.

8) How are energy efficiency and conservation connected to climate change?

- Energy efficiency can be an important component to combating climate change where the energy being consumed comes from fossil fuels as less energy consumption means less GHG emissions. Reduced energy consumption of “clean” energy has no impact on GHG emissions.

- Energy conservation and efficiency actions that help tackle climate change include those that reduce reliance on energy generated through the combustion of fossil fuels such as coal, oil, and natural gas to generate heat and electricity and to fuel vehicles.

9) Do energy efficiency and conservation have other benefits beyond climate change?

- Absolutely. Energy conservation and efficiency present an opportunity for economic development and environmental progress.

- Regardless of the impact on GHG emissions, energy conservation and efficiency has significant economic and other benefits, including:
  - Lower household energy bills – For example, energy efficiency retrofits under the Residential Energy Efficiency Program lowered household bills by, on average, $690 per annum;
  - Improve business competitiveness - By lowering energy costs, businesses can lower production costs.
  - Improve the comfort of people’s homes which can have significant health benefits, as the likelihood of ill health is increased by cold homes, with illnesses such as influenza, heart disease and strokes all exacerbated by the cold.
  - Lower operating costs for schools and hospitals – For example, the new K-6 School in Paradise was built to high energy efficiency standards and, relative to a building constructed to traditional standards, it is expected to reduce annual energy use by about 60 percent (savings of over $100,000 per annum).
  - Reduce local air pollutants – Energy efficiency can reduce the amount of local air pollutants emitted. These pollutants, which include fine particulate matter and other chemicals, can be harmful to human health and are distinct from GHG emissions which are the principle cause of climate change.
  - Contribute to job creation and economic growth - Modeling by the Department of Finance shows that, for every $1 million spent on energy efficiency programming, GDP increases by about $0.8 million in year one and about $1.1 million over the long term, and
consumer spending increases by $0.6 million in year one and $0.7 million over the long term.

- As a result, even if all the province's energy was generated from clean energy sources, there would still be a strong economic rationale for promoting greater energy efficiency.
Climate change is one of the most challenging long-term issues facing the world and our province today. Newfoundland and Labrador’s communities and economy are already being impacted by climate change such as an increase in extreme weather events, flooding, coastal erosion, and melting permafrost in northern areas. Action is needed to prevent worse impacts and build resilience. Climate change is not just an environmental concern, it also an economic and social issue that presents new opportunities as well as risks, including job growth and advancements in areas such as sustainable resource development and the green economy.

Within Canada, the December 2016 Pan-Canadian Framework on Clean Growth and Climate Change (PCF) is a landmark commitment from Federal, Provincial and Territorial governments to facilitate a transition to a lower carbon, climate-resilient economy. The province has committed to develop a made-in-Newfoundland and Labrador approach to implementing the PCF, and work on this is underway. Newfoundland and Labrador has already put in place legislation to tackle climate change termed the Management of Greenhouse Gas Act and, in The Way Forward, government has committed to develop a new climate change action plan.

In accordance with the Transparency and Accountability Act, the Office of Climate Change is categorized as a category 2 entity, meaning it reports at an output level. As Minister Responsible for the Office of Climate Change, I am pleased to present the Office of Climate Change's 2017-20 Business Plan. As the Minister responsible, I am accountable for the preparation of this plan and for achieving its goals and objectives.

[Signature]
Honourable Perry Trimper
Minister
Departmental Overview

The Office of Climate Change (OCC) is located within Executive Council and has lead responsibility for policy and strategy development on issues relating to climate change adaptation and mitigation and energy efficiency within the Government of Newfoundland and Labrador.

Given the complex, cross-cutting nature of climate change, OCC works collaboratively across government to integrate climate change considerations into the work of all departments and agencies.

For a complete listing of our mandate, lines of business, values, vision and primary clients please visit: http://www.exec.gov.nl.ca/exec/occ/office/index.html

To fulfill its mandate, OCC is currently composed of six staff (four females, two males) and is located on the 5th Floor, West Block, Confederation Building, St. John's.

For the fiscal year 2017-18, OCC has an operating budget of $1,259,500.00.
Issue One – Transitioning to a Low-Carbon, Climate-Resilient Economy

The Earth's climate is changing. Globally, each of the last three decades has been the warmest on record. The science is clear that climate change is one of the greatest challenges facing the planet, and it is being caused by human activities. Impacts include the warming of air and ocean temperatures, permafrost and sea ice melt, sea level-rise, more extreme weather events, coastal erosion, and invasive species. However, there will also be new opportunities associated with a warming climate and the transition to a low-carbon economy, such as longer farming and summer tourism seasons, reduced heating demand in the winter months, and greater energy efficiency in building construction and transportation.

As greenhouse gases are not bound by jurisdictional boundaries, there is increasing recognition that all jurisdictions must do their part to reduce emissions. Governments in Canada and beyond are considering and moving forward with a range of approaches to mitigate climate change, including carbon pricing, new building codes and standards and fuel regulations. The Government of Newfoundland and Labrador has committed to reduce greenhouse gas emissions in the province by 10 per cent below 1990 levels by 2020, and 75 to 85 per cent below 2001 levels by 2050. This is a challenging goal that requires concerted action, and while the province is not currently projected to meet its 2020 reduction target, it is committed to doing more to close the gap to the set target.

In 2016, the Government of Newfoundland and Labrador passed the Management of Greenhouse Gas Act, the province's first climate change legislation. Overseeing the development of regulations necessary to meet the Act will be a key focus for OCC over this planning cycle.

As a result of the greenhouse gas emissions that have already accumulated in the atmosphere, the Earth is committed to a certain amount of warming - some impacts
are now unavoidable and some are already being felt. These impacts can affect communities, infrastructure, health and public services. The Provincial Government is working to enhance the resilience of the province and embrace the opportunities that exist, such as improving our planning and construction practices and improving decision-making tools for the public and private sectors.

Energy efficiency can drive significant reductions in greenhouse gas emissions where it reduces reliance on the burning of fossil fuels for energy, thus lessening the environmental impact of energy use in homes, buildings and transportation. Improvements in energy efficiency also offer additional benefits such as reducing energy costs to consumers, improving household comfort, improving business competitiveness and reducing local air pollutants.

Taking action on climate change presents significant opportunities for the development of the province's green economy. Businesses that invest in research and development activities and that provide innovative products and services will benefit from the global shift toward a low carbon economy. This in turn holds significant potential for technological advancement, innovation, export opportunities and employment.

**GOAL:**

By March 31, 2020, the Office of Climate Change will have advanced initiatives to mitigate greenhouse gas emissions, strengthened resilience to the impacts of climate change and increased energy efficiency to support growth in the green economy in the province.

**Indicators:**

- Released a new strategic framework on climate change.
- Developed regulations pursuant to the *Management of Greenhouse Gas Act*.
- Worked with internal stakeholders to continue to integrate climate change and energy efficiency considerations into policy development, planning and decision-making.
• Engaged and collaborated with external stakeholders and the public to raise awareness and understanding on climate change and energy efficiency.

Objective 1:

By March 31, 2018, the Office of Climate Change will have developed a new five-year plan for taking action on climate change.

Indicators:

• Continued to engage internal and external stakeholders and entities in the development of a new plan for taking action on climate change in Newfoundland and Labrador.

• Released a new plan for taking action on climate change in Newfoundland and Labrador.

Objective 2:

By March 31, 2019, the Office of Climate Change will have further built capacity and understanding of climate change and energy efficiency.

Objective 3:

By March 31, 2020, the Office of Climate Change will have advanced implementation of the new five-year plan for taking action on climate change in Newfoundland and Labrador.
Issue Two – Advancing the Pan-Canadian Framework on Climate Change and Clean Growth

Addressing climate is a global challenge, and governments around the world are increasingly collaborating on joint initiatives. The Government of Newfoundland and Labrador is working with the Federal Government and other jurisdictions to advance action on climate change.

In December 2016, federal, provincial and territorial governments launched the Pan-Canadian Framework on Clean Growth and Climate Change (PCF), which builds on actions of the provincial and territorial governments to reduce emissions and adapt to the impacts of climate change, and identifies actions that will promote clean economic growth. The PCF is based on four key priority areas of action: implementing carbon pricing; advancing other policy, regulatory and technology-based measures to reduce greenhouse gas emissions; building resilience to climate change; and advancing clean technologies, innovation and employment.

Going forward, governments across Canada, including Newfoundland and Labrador, will implement the PCF. OCC will seek to ensure fair and flexible approaches to taking action on climate change are advanced that take account of provincial circumstances and priorities.

In addition, Provinces and Territories, including Newfoundland and Labrador, are playing a significant role in driving action on climate change by collaborating among themselves and with other jurisdictions. This includes collaborative initiatives through the Council of the Federation, Conference of New England Governors and Eastern Canadian Premiers, the Compact of States and Regions and the Climate Summit of the Americas. OCC will continue to work with and participate in these forums to advance action on climate change.
Strategically engaging and working with other governments and intergovernmental organizations will be a priority for OCC over this planning cycle. Through these efforts, OCC will work to advance the province's interests, leverage the experience and expertise of other jurisdictions, support climate change mitigation and adaptation in the province, and identify areas for new action where collaboration would be beneficial.

**GOAL:**

By March 31, 2020, the Office of Climate Change will have worked with other jurisdictions to advance implementation of the Pan-Canadian Framework on Clean Growth and Climate Change (PCF).

**Indicators:**

- Participated in intergovernmental processes to advance PCF actions and commitments.
- Worked with stakeholders to build understanding and capacity to implement PCF actions and commitments.

**Objective 1:**

By March 31, 2018, the Office of Climate Change will have worked with other departments and jurisdictions to establish a governance framework and work streams to implement the PCF.

**Indicators:**

- Participated in PCF intergovernmental processes such as meetings and working groups.
- Incorporated priority actions and commitments under the PCF into the new Climate Change Action Plan.
Objective 2:
By March 31, 2019, the Office of Climate Change will have built capacity and engagement among partner departments and entities to initiate priority actions under the PCF.

Objective 3:
By March 31, 2020, the Office of Climate Change will have implemented priority actions and commitments and monitored progress under the PCF.
Annex A: Strategic Directions

Strategic directions are the articulation of desired physical, social or economic outcomes that normally require action by, or involvement of, more than one government entity. These directions are generally communicated by government through platform documents, Throne and Budget Speeches, policy documents such as The Way Forward and other communiqués. The Transparency and Accountability Act requires departments and public bodies to take into account these strategic directions in the preparation of their performance-based plans. This action will facilitate the integration of planning practices across government and will ensure that all entities are moving forward on key commitments. The strategic direction identified below comprises a number of focus areas, each of which will be addressed in OCC’s Business Plan.

Title: Climate Change

Outcome: A province that has advanced its capacity to reduce greenhouse gas emissions, increased its resilience to climate change, improved energy efficiency and supported growth in its green economy through collaboration across jurisdictions and sectors.

Components of the Strategic Direction:
- Reduction of provincial greenhouse gas emissions
- Adaptation to climate change impacts
- Improve energy efficiency
- Support growth in the green economy
- Collaboration on the Pan-Canadian Framework on Clean Growth and Climate Change; and
- Raise public awareness and understanding
Canada’s Targets*

<table>
<thead>
<tr>
<th>Year</th>
<th>GHG Target</th>
<th>Actual/Projected GHG Emissions (Million tonnes)</th>
<th>Target GHG Emissions (Million tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>Base year for 2020 and 2030 targets</td>
<td>747</td>
<td>-</td>
</tr>
<tr>
<td>2015</td>
<td>Most recent year (no target)</td>
<td>722</td>
<td>-</td>
</tr>
<tr>
<td>2020</td>
<td>Target – 17% below 2005 levels</td>
<td>731</td>
<td>622</td>
</tr>
<tr>
<td>2030</td>
<td>Target – 30% below 2005 levels</td>
<td>742</td>
<td>524</td>
</tr>
</tbody>
</table>

*All data, not including land use, land-use change and forestry (LULUCF).

GHG Emissions in Canada, 2015 (latest year for which data is available)

<table>
<thead>
<tr>
<th>Province</th>
<th>GHG Emissions (million tonnes)</th>
<th>Percent of Canada</th>
<th>Per Capita Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>721.8</td>
<td>100%</td>
<td>20.1</td>
</tr>
<tr>
<td>NL</td>
<td>10.3</td>
<td>1.4%</td>
<td>19.5</td>
</tr>
<tr>
<td>PE</td>
<td>1.8</td>
<td>0.2%</td>
<td>12.0</td>
</tr>
<tr>
<td>NS</td>
<td>16.2</td>
<td>2.2%</td>
<td>17.2</td>
</tr>
<tr>
<td>NB</td>
<td>14.1</td>
<td>2.0%</td>
<td>18.7</td>
</tr>
<tr>
<td>QC</td>
<td>80.1</td>
<td>11.1%</td>
<td>9.7</td>
</tr>
<tr>
<td>ON</td>
<td>166.2</td>
<td>23.0%</td>
<td>12.0</td>
</tr>
<tr>
<td>MB</td>
<td>20.8</td>
<td>2.9%</td>
<td>16.0</td>
</tr>
<tr>
<td>SK</td>
<td>75</td>
<td>10.4%</td>
<td>66.2</td>
</tr>
<tr>
<td>AB</td>
<td>274.1</td>
<td>38.0%</td>
<td>65.6</td>
</tr>
<tr>
<td>BC</td>
<td>60.9</td>
<td>8.4%</td>
<td>13.0</td>
</tr>
<tr>
<td>NU</td>
<td>1.4</td>
<td>0.1%</td>
<td>17.1</td>
</tr>
<tr>
<td>NT</td>
<td>0.6</td>
<td>0.2%</td>
<td>32.6</td>
</tr>
<tr>
<td>YT</td>
<td>0.3</td>
<td>&lt;0.1%</td>
<td>6.8</td>
</tr>
</tbody>
</table>
NL GHG Reduction Targets*

<table>
<thead>
<tr>
<th>Year</th>
<th>GHG Target</th>
<th>Actual/Projected GHG Emissions (million tonnes)</th>
<th>Target GHG Emissions (million tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>Base year (for targets)</td>
<td>9.6</td>
<td>-</td>
</tr>
<tr>
<td>2015</td>
<td>Most recent year (no target)</td>
<td>10.3</td>
<td>-</td>
</tr>
<tr>
<td>2010</td>
<td>Target — Stabilize GHGs at 1990 levels</td>
<td>10.3</td>
<td>9.6</td>
</tr>
<tr>
<td>2020</td>
<td>Target — reduce by 10% below 1990 levels</td>
<td>9.6**</td>
<td>8.6</td>
</tr>
<tr>
<td>2050</td>
<td>Target — reduce by 75-85% below 2001 levels</td>
<td>n.a.</td>
<td>1.5-2.4</td>
</tr>
</tbody>
</table>

*NL adopted a regional 2030 GHG marker as part of the Conference of New England Governors and Eastern Canadian Premiers (NEG-ECP) in August 2015. The marker is to reduce regional GHGs by 35-45% below 1990 levels by 2030. NL has not adopted a province-specific target for 2030.

**Not including impacts of carbon pricing and the Management of Greenhouse Gas Act or any additional policies and measures. The amount of GHGs to be reduced will depend on future federal regulations and provincial regulatory decisions.

NL GHG Emissions, 1990-2015 actual, 2016-2020 projected
**Large Industrial GHG Facilities, 2015**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Facility</th>
<th>Emissions (Million tonnes)</th>
<th>Percent of NL Total Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offshore Petroleum</td>
<td>Hibernia</td>
<td>0.51</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Terra Nova</td>
<td>0.55</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>White Rose</td>
<td>0.54</td>
<td>5%</td>
</tr>
<tr>
<td>Oil refining</td>
<td>NARL (Come by Chance)</td>
<td>1.01</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>IOC</td>
<td>0.99</td>
<td>9%</td>
</tr>
<tr>
<td>Mining</td>
<td>Voisey’s Bay</td>
<td>0.09</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Long Harbour HMP*</td>
<td>&lt;0.01</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Newsprint</td>
<td>CBPP</td>
<td>0.02 est.</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

*New start-up, limited production.*
NL Energy Efficiency Target

<table>
<thead>
<tr>
<th>Year</th>
<th>GHG Target</th>
<th>Actual/Projected Energy (Petajoules)</th>
<th>Target Energy (Petajoules)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>Base year (for business-as-usual projection)</td>
<td>149.4</td>
<td>-</td>
</tr>
<tr>
<td>2015</td>
<td>Most recent year for which data is available (no target)</td>
<td>128.1</td>
<td>-</td>
</tr>
<tr>
<td>2020</td>
<td>Reduce energy use by 20% below business-as-usual</td>
<td>130.2</td>
<td>120</td>
</tr>
</tbody>
</table>

Energy Efficiency and Energy Use

August 2017
### CLIMATE CHANGE:
### LIST OF ACRONYMS AND GLOSSARY OF KEY TERMS

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptation</td>
<td>Actions to plan for and respond to the impacts of climate change, including measures taken by governments, communities and businesses to, among other things, monitor natural resources, protect species and ecosystems, build community capacity and upgrade infrastructure.</td>
</tr>
<tr>
<td>Anthropogenic Climate Change</td>
<td>Climate change caused by human activities that produce greenhouse gas emissions.</td>
</tr>
<tr>
<td>Biofuels</td>
<td>Gas or liquid fuel made from plant material (biomass). Includes wood and wood derivatives, peat, railroad ties, straw, tires, fish oils, tall oil, landfill gases, various forms of waste and ethanol blended into motor gasoline.</td>
</tr>
<tr>
<td>Build Better Buildings (BBB) Policy</td>
<td>Provincial policy adopted in 2010 that establishes several sustainability requirements for all new buildings and major renovations receiving any level of capital funding from the Provincial Government.</td>
</tr>
<tr>
<td>Canadian Green Building Council (CaGBC)</td>
<td>A not-for-profit, national organization that has been working since 2002 to advance green building and sustainable community development practices in Canada. Administers the Leadership in Energy and Environmental Design (LEED) certification program in Canada (see definition below).</td>
</tr>
<tr>
<td>Cap and Trade</td>
<td>See Emissions Trading</td>
</tr>
<tr>
<td>Carbon Capture and Storage (CCS)</td>
<td>Technology aimed at capturing the carbon dioxide emissions produced from the use of fossil fuels in electricity generation and industrial processes, preventing the carbon dioxide from entering the atmosphere.</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>A naturally occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the primary human-caused greenhouse gas that affects the Earth's climate.</td>
</tr>
<tr>
<td>Carbon Dioxide Equivalent</td>
<td>A measure used to express how much various greenhouse gases contribute to climate change by comparing them to carbon dioxide (See Global Warming Potential).</td>
</tr>
<tr>
<td>Carbon Footprint</td>
<td>The amount of greenhouse gas emissions generated by an organization, product, event or person. Includes direct emissions (e.g. burning fossil fuels), indirect emissions (e.g. electricity consumption), and embedded emissions (e.g. emissions generated by producing a good or service).</td>
</tr>
<tr>
<td>Carbon Market</td>
<td>See Emissions Trading</td>
</tr>
<tr>
<td>Carbon Pricing</td>
<td>Regulatory and/or taxation mechanisms that effectively establish a &quot;price&quot; or &quot;cost&quot; for the amount of carbon dioxide that is emitted into the atmosphere (see also Carbon Taxes, Emissions Trading and Flexible Regulation).</td>
</tr>
<tr>
<td>Carbon Sinks</td>
<td>An area of land or water that can absorb and store carbon dioxide from the atmosphere. Forests are the most common form of carbon sink, as well as soils, peat, permafrost, ocean water and carbonate deposits in the deep ocean. With changes in conditions (e.g. temperature, precipitation, and natural or man-made disturbances), a carbon sink can become a carbon source, in other words it can release carbon dioxide into the atmosphere.</td>
</tr>
<tr>
<td><strong>Carbon Taxes</strong></td>
<td>Taxes which are placed on fuels that emit greenhouse gases when consumed. Carbon taxes provide an incentive to consumers to improve their energy efficiency or switch to alternative fuel types. They can be levied in a way that makes them revenue neutral (i.e. other taxes are reduced to compensate for the carbon tax).</td>
</tr>
<tr>
<td><strong>Climate Change</strong></td>
<td>Refers to any significant change in the measures of climate lasting for an extended period of time. Includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer.</td>
</tr>
<tr>
<td><strong>Conference of New England Governors and Eastern Canadian Premiers</strong></td>
<td>A forum of Premiers from Newfoundland and Labrador, Quebec, Nova Scotia, New Brunswick and Prince Edward Island, and Governors from Massachusetts, Maine, New Hampshire, Rhode Island, Vermont and Connecticut. Premiers and Governors meet annually address various cross-border issues including energy and transmission, climate change and air quality, trade and export development and border security.</td>
</tr>
<tr>
<td><strong>Conference of the Parties (COP)</strong></td>
<td>The COP is the supreme decision-making body of the United Nations Framework Convention on Climate Change (UNFCCC). All parties to the UNFCCC are represented at the COP, which has met annually since 1995.</td>
</tr>
<tr>
<td><strong>Copenhagen Accord</strong></td>
<td>The outcome of the 2009 United Nations climate change negotiations in Copenhagen, Denmark, which provided a broad set of commitments to guide post-2012 actions and negotiations on climate change. The agreement was not legally-binding, but did endorse the continuation of the legally-binding Kyoto Protocol (see definition below). Through this agreement, Canada set a national emissions reduction target of 17 percent below 2005 levels by 2020, and 30 percent below 2005 levels by 2030.</td>
</tr>
<tr>
<td><strong>Council of Atlantic Premiers</strong></td>
<td>A forum of Premiers from Newfoundland and Labrador, Nova Scotia, New Brunswick and Prince Edward Island. Premiers meet regularly and discuss issues of mutual concern, Including energy development, transportation and infrastructure, health and wellness and the environment. Premiers have also undertaken several trade and export development missions within North America.</td>
</tr>
<tr>
<td><strong>Council of the Federation</strong></td>
<td>A forum of all Canadian Premiers and Territorial Leaders. It meets annually to address key issues in Canada including the economy, energy, transportation, international and intra-provincial trade, health and emergency preparedness and climate change.</td>
</tr>
<tr>
<td><strong>Emissions Trading</strong></td>
<td>Commonly referred to as “cap-and-trade”, this is a regulatory regime that sets limits on certain industries’ or facilities’ annual greenhouse gas emissions, and requires firms to obtain tradable credits to cover their emission levels.</td>
</tr>
<tr>
<td><strong>Energy Conservation</strong></td>
<td>Refers to measures that seek to alter the behaviour of individuals by encouraging them to reduce energy consumption, including switching off lights when leaving a room, turning off televisions or computers when not in use, or lowering thermostat settings at night.</td>
</tr>
<tr>
<td><strong>Energy Efficiency</strong></td>
<td>Refers to using less energy to provide the same level of energy service.</td>
</tr>
<tr>
<td><strong>ENERGY STAR</strong></td>
<td>A voluntary certification program administered in Canada by Natural Resources Canada that helps that consumers, governments and businesses advance energy efficiency in Canada.</td>
</tr>
<tr>
<td>Energy-Intensive Sector</td>
<td>Industrial firms and power generators that require large amounts of energy to produce and transport their products and services.</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Flaring</td>
<td>The process of burning off hydrocarbons such as natural gas at offshore oil and gas installations, or methane after it is captured from landfill sites. Often used to dispose of natural gas that cannot be processed or sold, but can also help reduce methane emissions from landfills.</td>
</tr>
<tr>
<td>Flexible Regulation</td>
<td>A regulatory approach to reducing greenhouse gas emissions that establishes a given emission target in legislation, but also provides a range of options to achieve compliance (e.g., reducing emissions, contributing to a green technology fund, purchasing offset credits).</td>
</tr>
<tr>
<td>Fuel-Switching</td>
<td>The substitution of one type of fuel for another (e.g., substituting carbon-intensive fuels, such as diesel, with lower GHG-emitting fuels, such as hydroelectricity).</td>
</tr>
<tr>
<td>Global Warming</td>
<td>The recent and ongoing global average increase in temperature near the Earth’s surface.</td>
</tr>
<tr>
<td>Global Warming Potential</td>
<td>A relative measure of how much heat a greenhouse gas traps in the atmosphere, which accounts for its potency as well as its lifespan.</td>
</tr>
<tr>
<td>Green Economy</td>
<td>Nine key economic sectors that supply the bulk of environmentally-responsible (i.e., green) products and services in the province: Sustainable Resource Management, Sustainable Tourism, Waste Management, Green Knowledge &amp; Support, Energy Efficiency &amp; Conservation, Green Transport, Green Energy Supply, Green Building, and Environmental Protection.</td>
</tr>
<tr>
<td>Green Globes</td>
<td>A green building rating and certification tool used primarily in Canada and the U.S., operated by Building Owners and Managers Association (BOMA) for existing buildings and ECD Energy and Environment Canada Ltd. for other uses. Projects are rated on a scale of 1 to 4 Green Globes, which is determined by how high a project scores across a number of assessment areas (e.g., Energy, Water, Emissions, Effluents and Other Impacts).</td>
</tr>
<tr>
<td>Green Leasing</td>
<td>A lease between a landlord and tenant that incorporates environmental sustainability principles and practices in the management and occupation of a building or facility.</td>
</tr>
<tr>
<td>Greenhouse Effect</td>
<td>The process whereby some of the heat reflected by the Earth’s surface is trapped by naturally occurring greenhouse gases in the atmosphere keeping the Earth’s temperature hospitable.</td>
</tr>
<tr>
<td>Greenhouse Gases</td>
<td>Gases that are responsible for climate change and which may be released by natural processes or human activity. The six gases covered by the 1997 Kyoto Protocol were carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). The majority of GHGs come from the combustion of fossil fuels, but ‘non-energy’ sources of GHGs such as those emitted from waste (methane from decaying material), agriculture (nitrous oxide from fertilizers or methane from cattle) and deforestation (carbon dioxide from trees) can account for large amounts of GHGs in some locations.</td>
</tr>
<tr>
<td><strong>Intergovernmental Panel on Climate Change (IPCC)</strong></td>
<td>Established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, the IPCC surveys peer reviewed scientific and technical literature and periodically publishes assessment reports on the latest scientific evidence. These reports are approved by 196 governments party to the United Nations Framework Convention on Climate Change and are widely recognized as the most authoritative source of information on climate change.</td>
</tr>
<tr>
<td><strong>Kyoto Protocol</strong></td>
<td>An international treaty that set legally binding targets for the reduction of GHG emissions by industrialized countries in the period 2008-2012. Canada ratified the Protocol on December 17, 2002, committing to reduce its GHG emissions by six per cent below 1990 levels by 2012. Canada withdrew from the Kyoto Protocol in December 2012. Negotiations on post-2012 emission reductions are ongoing.</td>
</tr>
<tr>
<td><strong>Leadership in Energy and Environmental Design (LEED)</strong></td>
<td>An internationally recognized third-party rating and certification program for the design, construction and operation of high-performance green buildings. With four possible levels of certification (i.e. certified, silver, gold and platinum), LEED is intended to accommodate a wide range of green building strategies across a number of credit categories (e.g. Energy and Atmosphere, Transportation, Indoor Environmental Quality).</td>
</tr>
<tr>
<td><strong>Mitigation</strong></td>
<td>Actions taken by individuals and businesses to reduce their GHG emissions in order to minimize their effects on global climate change.</td>
</tr>
<tr>
<td><strong>National Building Code of Canada (NBC)</strong></td>
<td>Provides minimum requirements that all new homes and buildings must meet in every municipality in Newfoundland and Labrador. In 2012, the code was updated to include energy efficiency requirements for homes and small buildings (under 600 square metres).</td>
</tr>
<tr>
<td><strong>National Energy Code for Buildings (NECB)</strong></td>
<td>Provides minimum energy efficiency requirements for the design and construction of large buildings that are over 3 storeys or 600 square metres. It's one of five national construction codes published by the Federal Government and was most recently updated in 2011.</td>
</tr>
<tr>
<td><strong>Non-Renewable Energy</strong></td>
<td>Sources of energy that are not self-renewing, such as oil, natural gas and coal.</td>
</tr>
<tr>
<td><strong>Offset Credits</strong></td>
<td>See Emissions Trading.</td>
</tr>
<tr>
<td><strong>Paris Climate Change Conference</strong></td>
<td>The 21st annual session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, held in Paris, France in December 2015. The conference aims to achieve a binding and universal agreement on climate change.</td>
</tr>
<tr>
<td><strong>Renewable Energy</strong></td>
<td>Sources of energy which are inherently self-renewing, such as hydro, solar, wind, tidal and geothermal energy.</td>
</tr>
<tr>
<td><strong>Sustainable Development</strong></td>
<td>Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.</td>
</tr>
<tr>
<td><strong>Unburnable Carbon</strong></td>
<td>Refers to fossil fuel energy sources which cannot be burnt if the world is to adhere to a given carbon budget (See Carbon Budget).</td>
</tr>
<tr>
<td><strong>United Nations Framework Convention on Climate Change</strong></td>
<td>An international treaty signed in 1992 that established the “ultimate objective” for action to tackle climate change, namely, to stabilize “…greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic [human-induced] interference with the climate system.” Canada ratified the Convention on December 4, 1992 and the Convention came into force in March 1994. There are currently 196 parties that have ratified the Convention, including the U.S..</td>
</tr>
</tbody>
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