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Multilateral Assessment

A compilation of questions to - and answers by - Canada
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Question by New Zealand at Monday, 05 April 2021

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: 'Increasing stored carbon' committment

Under the Pan-Canadian Framework, the Government of Canada has committed to 'increasing stored carbon'. Can Canada please explain which practices and/or policies are expected to be used including, to increase carbon storage in existing forests?

Answer by Canada, Monday, 31 May 2021

The enhancement and expansion of stored carbon in Canada is an important part of Canada's climate action. The Pan-Canadian Framework on Clean Growth and Climate Change (the Framework), introduced in December 2016, was Canada's first national climate plan. Several measures under the Framework aimed to increase carbon storage. These measures include:

- Working with provincial and territorial governments to invest in improved management, and restoration to protect and enhance carbon sinks, including in forests, wetlands, and agricultural lands (e.g. through land-use and conservation measures).
- Collaborating with provincial and territorial governments to encourage the increased use of wood products in construction, including through updated building codes.
- Working with provincial and territorial governments to enhance innovation to advance GHG efficient management practices in forestry and agriculture.

For example, in 2017 British Columbia launched its Forest Carbon Initiative – a $290-million program over five years to develop and implement forest activities such as reforestation, tree improvement and fertilization that increase the carbon sequestration and storage in the province's forests. Further, Quebec is investing $75-million over 5 years to fund additional silviculture work that enhances the productivity of the province's forests, increasing carbon sequestration and storage. The silviculture work includes amending forest harvest practices, restoration of degraded forests, and the production of fast growing trees and plants. The Framework also provides resources to the federal Green Construction through Wood (GCWood) Program which aims to increase carbon storage in long-lived harvested wood products.

Building on the commitments made under the Framework, Canada's strengthened climate plan – *A Healthy Environment and a Healthy Economy* – included a strong commitment to advancing natural climate solutions and additional measures to increase stored carbon. These measures include, under the Natural Climate Solutions Fund:

- The 2 Billion Tree initiative, which is planting two billion trees across Canada by investing up to $3.16 billion over 10 years for the federal government to partner with provinces, territories, non-government organizations, Indigenous communities, municipalities, private landowners, and others. This initiative will

support planting trees on provincial and federal Crown lands, in cities and communities, on farms and on private rural and urban lands through a mix of reforestation, afforestation of areas that in the past naturally held forest, and urban tree planting.

- Restoring and enhancing wetlands, peatlands and grasslands to store and capture carbon through the Nature Smart Climate Solutions Fund (NSCSF), which is investing $631 million over 10 years. Activities under the NSCSF will focus on three main program objectives to sequester carbon: restoring degraded ecosystems; improving land management practices, especially in agriculture, forestry, and urban development sectors; and conserving carbon-rich ecosystems at high risk of conversion to other uses that would release their stored carbon. Canada's grasslands, croplands, wetlands, peatlands, and forests are highly valuable for their ability to capture and store carbon, while simultaneously supporting biodiversity. Projects carried out under the NSCSF will compliment the planting of 2 billion trees and will ensure that gains in terms of carbon sequestration are made early on, giving the planted trees time to reach their full mitigation potential.
- Supporting the agriculture sector's actions on climate change and other environmental priorities towards 2030 and 2050 by providing $98.4 million over 10 years to establish a new Agricultural Climate Solutions program. This fund will leverage $85 million in existing programming and will be guided by a new Canadian Agri-Environmental Strategy, to be developed in collaboration with partners. Budget 2021 announced an additional $200-million over two years (2021-22, 2022-2023) for this program to support on-farm climate action to reduce emissions through improved nitrogen management, increased adoption of cover cropping, and normalizing rotational grazing.
- As well, Canada is developing a comprehensive carbon capture, use and storage (CCUS) strategy and explore other opportunities to help keep Canada globally competitive in this growing industry.

Question by New Zealand at Monday, 05 April 2021

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Low Carbon Economy Fund

Could Canada please expand on what work has been done to quantify the removals expected from the forestry projects related to the Low Carbon Economy Fund?

Answer by Canada, Monday, 31 May 2021

Canada is supporting forestry projects in five provincial and territorial (PT) jurisdictions through the Low Carbon Economy Leadership Fund (British Columbia, Alberta, Quebec, Prince Edward Island, and Northwest Territories). Estimates of the carbon removals associated with these projects are provided by provincial and territorial governments and are reviewed and validated by Environment Climate Change Canada (ECCC) prior to approval of funding, using the Carbon Budget Model of the Canadian Forest Sector where appropriate. GHG

removal estimates are calculated using ISO 14604-2 GHG Quantification guidance at the Project level, where emissions from a project scenario are compared to a baseline scenario where no action is taken. The difference between the two scenarios provides the GHG reduction estimates associated with the funded project. Estimations are required for the mitigation in the year 2030 and in the year 2050, as well as the cumulative reductions by 2030 and by 2050. PT jurisdictions are required to provide annual reports to indicate the progress of activities during project implementation, noting any changes in timelines, assumptions, activities or costs that would impact GHG reduction outcomes. Projects will need to be completed by March 2024, at which point PTs will need to provide final estimates of expected GHG outcomes of each of the LCEF funded forestry projects.

Canada's BR4 LULUCF projections presented in Sections 5.1.6 and A2.6 do not include the expected impacts from the forestry projects related to the Low Carbon Economy Fund. These expected impacts may be included in future projection reports, as appropriate.

Question by New Zealand at Monday, 05 April 2021

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Options to reduce emissions in agriculture sector

We would be interested in learning more about any additional options that may have been considered to reduce emissions from agriculture but that were not included in the "with additional measures" scenario, but that might become relevant to deliver on Canada's longer-term ambitions towards 2050. For example, New Zealand would be interested to know what consideration has been given to a technology case for agricultural emissions (as discussed in BR4 section 5.2.3 for the energy sector), such as the application of nitrification and methane inhibitors and feed additives, given Canada's investment in research to support the development of additional technologies and practices.

Answer by Canada, Monday, 31 May 2021

Since the publication of Canada's Fourth Biennial Report on Climate Change, Canada has announced a number of policies and programs aimed at mitigating greenhouse gas emissions that were not in place or considered at the time of the Report's publication.

Canada released its Strengthened Climate Plan, *A Healthy Environment and A Healthy Economy*, in December 2020. This initiative includes an investment of $165.7 million over seven years (2021–2028) in an Agricultural Clean Technology program (ACT) to support the agriculture sector in developing transformative clean technologies and help farmers adopt commercially available clean technology. The ACT will prioritize investments that show promise to generate measurable greenhouse gas (GHG) emissions reductions in line with the Government of Canada targets. Priorities include technologies related to green energy and energy efficiency, precision agriculture, and the bioeconomy.

As well, the Government of Canada committed to set a national target to reduce emissions from the application of synthetic nitrogen fertilizer to 30% below 2020 levels by 2030.

A new Agricultural Climate Solutions program was launched in April 2021. This $185 million program will help to develop and implement farming practices to tackle climate change. Through agricultural practices, such as shelterbelts or cover crops, farmland can store carbon and reduce greenhouse gases. The program aims to establish a strong Canadawide network of regional collaborations made up of producers, scientists, and other sector stakeholders.

Budget 2021 announced an additional $200-million over two years (2021-22, 2022-2023) for this program to support on-farm climate action to reduce emissions through improved nitrogen management, increased adoption of cover cropping, and normalizing rotational grazing.

AAFC continues to advance the alignment of science, policy and program efforts to identify practices, quantify their potential GHG mitigation and C sequestration impact, and assess the effectiveness of various policy and program mechanisms to accelerate their adoption.

The “With Additional Measures” scenario included all the additional policies and measures that were under development but were not fully implemented by September 2019, in addition to the policies and measures implemented by September 2019 that were included in the “With Measures” scenario. The Technology Case (Sections 5.2.3 and A2.1.3) did not consider any technology improvement in the agricultural sector.

Question by Japan at Monday, 05 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Data on woody biomass in Canada

As one of the biggest wood exporting countries, Canada mentions an increase of the use of wood for generating bioenergy and advanced bioproducts on page 23 of BR4. Japan would appreciate you sharing some information on woody biomass. 1. What kinds of data does the Canada's government collect and archive to understand the current situation of woody biomass in the country? 2. In Canada, what types of forest are mainly utilized as sources of woody biomass?
Japan feels that these data is quite valuable to proceed the use of woody biomass as renewable energy.

Answer by Canada, Monday, 31 May 2021

Answer to first question:
To fulfill its reporting obligations under the United Nations Framework Convention on Climate Change (UNFCCC), Canada's annual National Inventory Report details the country's greenhouse gas emissions and removals. In preparing this report, Canada collects, analyzes and archives a range of data related to forests, harvested wood products and woody biomass used for generating bioenergy and advanced bioproducts as part of an integrated forest sector. The data collected are built from a variety of data sources including provincial forest inventories, surveys on residential and industrial energy use, and trade-related data. This report also covers collection methodology and uncertainties.

See Canada's 2021 National Inventory Report Part 1 (section 6.3 and 6.4) and Part 2 (section A3.5.2 and A3.5.3) for further details: https://unfccc.int/documents/271493

Answer to second question:

In Canada, 77% of the managed forest is certified (168 million hectares) to internationally recognized third-party standards of sustainable forest management. Furthermore, under all provincial and territorial forest management regulations, forests that are harvested on public lands must be reforested (through natural regeneration or seeding/planting).

Each year, Canadian sawmills generate approximately 30 million tonnes of wood residues that are largely utilized by secondary manufactures (pulp mills, panel mills, wood pellet mills). Sustainable forest management (thinning, fire smarting), harvest operations (tops, branches, stumps and damaged trees) and natural disturbances generate an additional 26 to 65 million tonnes of wood residues per year that are either pile burned to mitigate forest fire risk, or left to decay and release CO2 to the atmosphere.

The majority of forest bioenergy use in Canada currently occurs in the pulp and paper sector (>50%) where wood waste and process residues are used to generate steam, produce electricity and recover pulping chemicals.

Increasingly, there is interest in the use of underutilized forest biomass left on site following harvest operations or natural disturbance events to produce a range of bioproducts including clean fuels. These underutilized residues consist of branches, tops and low-value trees left after sustainable forest management practices (harvest, thinning, fire smarting) or natural disturbances (fires, insects).

Further information on Canada's forests and forest industry can be found in Canada's Annual State of the Forest Report: https://www.nrcan.gc.ca/our-natural-resources/forests-forestry/state-canadas-forests-report/16496

Question by Japan at Monday, 05 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Canada's greenhouse gas emissions projections

Page 47 of the BR4 of Canada states that Canada publishes supplementary analysis and projections of its GHG emissions in the context of its 2020 and 2030 emissions targets in years when the BRs are not submitted. This means that Canada updates and discloses projections and the related information every year. Could Canada provide us with the domestic framework, background and circumstances for enabling the preparation of the projection every year?

Answer by Canada, Monday, 31 May 2021

While there is no legislative requirement to publish annual emission projections, this has been Canada's practice since 2011, either in a stand-alone report or as a UNFCCC submission. In addition to these reports, Canada has also released emissions, drivers and related data on its open data website since 2017. The process for preparing projections is similar every year (as described in the BR4 A2.3 Baseline Data and Assumptions, A2.6 Projections and Contributions of LULUCF Modeling Methodologies and A2.7 Methodology for Development of Emission Scenarios). Projections are based on an extensive consultation process, involving ECCC, other federal government departments and provinces/territories. Partners are consulted on both input assumptions (economic drivers and policies) and preliminary output energy and emission projections. Consultations begin in late spring and continue through to early fall, when projections are finalized and prepared for publication, typically in late fall or early winter.

Question by Japan at Monday, 05 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Expert Engagement Initiative on Clean Growth and Climate Change

Page 48 of the BR4 of Canada presents that Canada is supporting the successful applicant in forming a new and independent not-for-profit 'institute' focused on clean growth and climate change. The relevant website indicates that the Canadian Institute for Climate Choices has been established as the 'institute'. How specifically is this institute involved in the development and implementation of climate change policies of the government of Canada?

Answer by Canada, Monday, 31 May 2021

In the development and implementation of climate change policies, the Government of Canada considers a range of advice, including advice put forward by the Canadian Institute for Climate Choices. The Canadian Institute for Climate Choices is an independent, non-profit organization that produces climate change analysis and advice to inform decision-making by all orders of government and other actors across Canada. Its advice is an important input to the Government of Canada's climate change policy development, given that the Canadian Institute for Climate Choices is a credible source for analysis by a broad cross-section of experts. Some of the key topics on which it has recently produced reports include pathways to net-zero, clean growth indicators, and the costs of climate change. The institute's work program is also informing the development of adaptation policies, including Canada's first-ever National Adaption Strategy. The Canadian Institute for Climate Choices does not have a direct role in the development and implementation of climate change policies, given that it is fully independent.

Question by Japan at Monday, 05 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Clean Growth Hub

Page 14 of the BR4 of Canada introduces the Clean Growth Hub to help stakeholders navigate federal programs and services most relevant to their needs. Could Canada tell us about the background and circumstances that led up to develop the Hub? What effects and achievements have this service had so far? In addition, could Canada give us the details if Canada plan to further develop this service in the future?

Answer by Canada, Monday, 31 May 2021

The federal budget that was announced in 2017 included a historic amount of spending to support clean technology innovation and adoption through a suite of programs with a wide range of objectives. In consultations leading up to the budget, Canadian clean technology companies and associations noted it was difficult to know what opportunities were available to clean tech companies and clean technology end-users. The Clean Growth Hub was proposed as a way to address this information gap. In the 3 years it has been in place, the Clean Growth Hub has helped more than 2000 clients (as of May 2021) navigate the federal landscape of programs by means of a website, a newsletter and one-on-one consultations between Clean Growth Hub officers and clean technology proponents. Clients report being more informed of opportunities and programs benefit from increased awareness. Canada's federal budget of April 2021 proposed to renew the Clean Growth Hub for 3 more years.

Question by United States of America at Monday, 05 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: 2 billion trees

Canada has made a commitment to plant 2 billion trees in the next 10 years. Could you please describe how Canada is coordinating with provincial governments, Indigenous Peoples, and other stakeholders to implement this and other AFOLU policies and measures?

Answer by Canada, Monday, 31 May 2021

The 2 Billion Trees program is a complex and historic initiative that will rely on strong partnerships across Canada to succeed. Canada is working through new and existing partnerships and governance mechanisms to engage a wide range of partners including federal departments and agencies, Provinces, Territories, Indigenous organizations and communities, municipalities, academia, environmental conservation organizations, individual landowners, and industry sectors including agriculture, forestry, urban development, and mining/oil and gas. Tapping into existing successful partnerships and compatible program infrastructure is intended to help us to mobilize the initiative quickly and reduce administrative burden on our partners. Working with provinces and territories will help to ensure that, to the extent possible, the work to implement natural climate solutions will be well-aligned with our ongoing collaborative efforts including those related to area-based conservation and priority places for species at risk.

The program is seeking to establish cost-shared partnerships with a number of organizations: provinces and territories, Indigenous organizations and communities, the private sector, and communities and municipalities across Canada. After the commitment to plant two billion trees was made, the Government of Canada invited representatives of these organizations to an initial information session on March 13, 2020. In addition to this initial session, National Indigenous Organizations and other interested Indigenous communities and organizations were invited to meet bilaterally to discuss the commitment and potential contributions of Indigenous communities and organizations, throughout 2020.

To help inform the program design, the Government of Canada held four engagement discussions in November 2020 with over 700 participants on the topics of:

- planting trees on Crown land
- planting trees on private land
- planting urban trees
- planting trees through Indigenous partnerships

After the official launch of the program in February 2021, program information was shared with provinces and territories through the Canadian Council of Forest Ministers and ongoing bilateral discussions have since continued. National Indigenous Organizations have been engaged since the program’s inception and discussions continue to occur regularly through departmental bilateral engagement structures. The 2 Billion Trees commitment is part of Canada’s Strengthened Climate Plan, which builds on the Pan-Canadian Framework on Clean Growth and Climate Change that was developed with provinces and territories, and in consultation with Indigenous peoples.

In March 2021, the Government of Canada launched an Early Start Projects Expression of Interest (EOI) to identify potential cost-shared projects for the 2021 planting season. A Future Participants Request for Information (RFI) was also launched to identify longer-term opportunities for tree planting projects from organizations across Canada.

Question by United States of America at Monday, 05 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Task Force on Just Transition Recommendations

Canada has new federal regulations to phase-out coal-fired electricity by 2030. Could you please outline key recommendations from the Task Force on Just Transition for Canadian Coal Power Workers and Communities about how to support coal workers and communities affected by the transition from coal-fired to cleaner electricity?

Answer by Canada, Monday, 31 May 2021

In light of the impacts of the coal phase-out policy on workers and communities, Canada's Minister of Environment and Climate Change appointed and launched an eleven-person Task Force on Just Transition for Canadian Coal Power Workers and Communities in April 2018. The Task Force was given a mandate to:

- engage workers and communities in the provinces affected by the coal phase-out
- provide options and recommendations to the Government of Canada, via the Minister, on:
    - what could be included in a just transition plan for coal power workers and communities
    - how to structure a subsequent phase of consultation and analysis concerning just transition

To deliver the mandate, members of the Task Force travelled to all of the affected provinces. They visited 15 affected communities, met with more than 80 stakeholders, hosted eight public engagement sessions to hear from the general public in affected areas of the country; and toured five generating stations, two coal mines, and one port. Using both the stories they heard during community visits, and their individual and collective expertise as members of the Task Force, the members developed ten recommendations. The Task Force produced a final report in March 2019, which outlined the ten key recommendations to the Government of Canada. A summary of these recommendations is listed below.

Embed just transition principles in planning, legislative, regulatory, and advisory processes to ensure ongoing and concrete actions throughout the coal phase-out transition

1. Develop, communicate, implement, monitor, evaluate, and publicly report on a just transition plan for the

coal phase-out, championed by a lead minister to oversee and report on progress
2. Include provisions for just transition in federal environmental and labour legislation and regulations, as well as relevant intergovernmental agreements
3. Establish a targeted, long-term research fund for studying the impact of the coal phase-out and the transition to a low-carbon economy

Ensure locally available supports

4. Fund the establishment and operation of locally-driven transition centres in affected coal communities

Provide workers a pathway to retirement

5. Create a pension bridging program for workers who will retire earlier than planned due to the coal phase out

Transition workers to sustainable employment

6. Create a detailed and publicly available inventory with labour market information pertaining to coal workers, such as skills profiles, demographics, locations, and current and potential employers
7. Create a comprehensive funding program for workers staying in the labour market to address their needs across the stages of securing a new job, including income support, education and skills building, re-employment, and mobility

Invest in community infrastructure

8. Identify, prioritize, and fund local infrastructure projects in affected communities

Fund community planning, collaboration, diversification, and stabilization

9. Establish a dedicated, comprehensive, inclusive, and flexible just transition funding program for affected communities
10. Meet directly with affected communities to learn about their local priorities, and to connect them with federal programs that could support their goals

For additional information about the work of the Task Force and these recommendations, please see the final report available here: http://publications.gc.ca/collections/collection_2019/eccc/En4-361-2019-eng.pdf

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Question by United States of America at Monday, 05 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Price on carbon

Canada now has a price on carbon pollution across the country. Can you please share more about how this carbon pricing scheme is expected to accelerate the decarbonization of

Canada's economy, and whether it will enable Canada to exceed its 2030 emissions targets?

Answer by Canada, Monday, 31 May 2021

In December 2020, the federal government released Canada's strengthened plan, *A Healthy Environment and a Healthy Economy*. The plan contains 64 strengthened and new federal policies, programs and investments to cut pollution and build a stronger, cleaner, more resilient and inclusive economy. The plan confirmed that the federal government will continue to put a price on carbon pollution, rising every year until 2030; a key initiative to achieving Canada's 2030 emissions targets and beyond.

Since 2019, every jurisdiction in Canada has had a price on carbon pollution. Canada's approach is flexible: any province or territory can design its own pricing system tailored to local needs, or can choose the federal pricing system. The federal government sets minimum national stringency standards that all systems must meet to ensure they are comparable and contribute their fair share to reducing greenhouse gas emissions. If a province decides not to price pollution, or proposes a system that does not meet these standards, the federal system is put in place. This ensures consistency and fairness for all Canadians.

The first phase of Canada's plan, laid out in 2016, set the carbon price at $20 per tonne of carbon dioxide equivalent in 2019, rising $10 every year to $50 in 2022. The carbon price was designed to start low and increase in a predictable manner slowly. A slow, but steady increase over a number of years motivates everyone to start making changes now by investing in more efficient and less polluting technology today.

With the end of the first five years approaching, Canada's strengthened climate plan proposed to increase the carbon price by $15 per year starting in 2023 rising to $170 per tonne in 2030, while returning all proceeds to the jurisdiction of origin to ensure that carbon pricing remains affordable and households are better off. Proceeds collected from the Output-Based Pricing System, Canada's regulatory trading system for industry, will support Canada's plan to decarbonize industrial sectors, and the federal carbon price will continue to be revenue neutral.

Continuing to increase the carbon price over the coming decade is essential for driving low-cost emission reductions in the near-term and for paving the way for Canada's longer-term low-carbon transformation. Canada's approach to carbon pricing has and will continue to unlock critical emissions reductions today, by 2025, by 2030 and on the road to net-zero emissions by 2050.

As part of the next phase of carbon pricing in Canada, in addition to increasing the carbon price, the government is reviewing the standards it uses to assess provincial carbon pricing systems, also known as the federal "benchmark criteria." Strengthening the federal benchmark criteria will help ensure all carbon pricing systems in Canada are sufficiently stringent to help meet Canada's climate goals, including by applying to a broad set of emission sources, with increasing stringency over time, that sends a consistent price signal across the system, and provides certainty so that businesses and individuals can plan for the future. The federal government has been engaging directly with provinces and territories and Indigenous organizations to gather

input on the proposed price trajectory and how best to strengthen the benchmark criteria.

The federal GHG Offset System is another tool to encourage cost-effective, voluntary emissions reductions and removals in Canada from activities not covered by carbon pricing, expanding the financial incentives to reduce carbon pollution across the economy. It will create opportunities for foresters, farmers, Indigenous communities and other project developers who implement innovative projects to reduce carbon pollution. Draft regulations on the Federal GHG Offset System were released for public comment on March 6, 2021 with the aim of finalizing the regulations by the end of 2021.

The Government of Canada will continue to engage provincial and territorial governments, as well as Indigenous Peoples, to inform the next phase of carbon pricing. The results of this broad suite of engagement activities will inform the path forward on carbon pricing over the next decade.

While carbon pricing is a critical part to the strengthened climate plan, it is part of a broad suite of measures to meet and exceed Canada's emissions goals. In tandem, the Government of Canada's policies and programs work together to ensure a smooth transition towards a cleaner economy in the years to come, while continuing to balance our environmental and economic goals.

Although carbon pricing is included in the "With Additional Measures" scenario, we did not model the impact of the carbon pricing alone to assess how it contributed to the decarbonization of the Canadian economy versus the contribution from other BR4 policies and measures. Carbon pricing and all other measures included in the "With Additional Measures", including the LULUCF contribution, resulted in projected emissions of 588 Mt in 2030, compared to a target of 511 Mt (Figure 5.2 and Table 5.9).

There was no specific analysis undertaken for the preparation of BR4, however Canada undertook extensive analysis to explore the impact of carbon pricing (i.e., fuel charge and the output-based performance system for industrial emitters) and its ability to accelerate the decarbonisation of Canada's economy. Canada's BR5 will represent Canada's pricing scheme at the time of the preparation of the submission.

Question by United States of America at Monday, 05 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Lessons from methane regulations

As BR4 notes, the oil and gas sector is Canada's largest source of GHG emissions, including methane, with new federal regulations to reduce methane emissions planned to come into force on January 1, 2020. Can you please describe early lessons from the implementation of these regulations have had so far?

Answer by Canada, Monday, 31 May 2021

The regulations took effect in January 2020. It is very early in the implementation process, and is difficult to characterize lessons learned at this time. Relevant data will be analyzed in the coming months as part of the policy review of the 2025 methane target.

Question by European Union at Thursday, 01 April 2021

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: ‘Technology case’ scenario

Besides a ‘with measures’ and a ‘with additional measures’ scenario, Canada provided projections using a ‘technology case’ scenario, giving an indication of the sensitivity of energy and emissions projections to faster evolution of technological progress. Of the trends which are addressed by this scenario (e.g. higher electric vehicle adoption, decline in solar capital costs), which ones can be expected to have the most important impact on greenhouse gas emissions in the short to medium term?

Answer by Canada, Monday, 31 May 2021

For the assumptions used in this technology scenario, the adoption of steam-assisted gravity drainage (SAGD) solvents followed by higher electric vehicle adoption exhibited the largest impacts on GHG emissions by 2030. Results are dependent on the particular scenario and thus could be expected to differ under a different set of technology assumptions.

Question by European Union at Thursday, 01 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Regulations to address methane in the oil and gas sector

According to the information provided in CTF table 3, federal regulations to address methane in the oil

and gas sector are among the policies and measures with the highest estimated mitigation impact in the target year 2020. According to section 4.5.4 of the Biennial Report, some of these regulations came into effect in January 2020, while all requirements will be in effect by January 2023. Could you provide some information on the experience with introducing these regulations? For instance, how were stakeholders involved in the development of these regulations, and how is adherence to these regulations monitored? Have expectations regarding their impact on methane emissions materialized?

Answer by Canada, Monday, 31 May 2021

Industry, provincial and ENGO stakeholders were involved throughout the development of these regulations, including review of the analysis performed to support the limits and thresholds prescribed in the regulations. In addition, a formal 60-day comment period allowed all stakeholders to provide written comments on the draft regulations prior to the finalization.

Since these regulations came into effect, three provinces have passed methane regulations on upstream oil and gas activity; these sub-national systems are expected to result in the same emission reductions as national regulations. These jurisdictions have historically been responsible for regulating most oil and gas activities in Canada and methane emission restrictions have been largely integrated into existing regulatory systems. Emissions data for 2020 will be reported by industry in the coming months. When this data is received later this year, a review of the impacts of this regulation will be conducted.

Question by European Union at Thursday, 01 April 2021

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Emissions in the target year

In Canada's Fourth Biennial Report, which was submitted in December 2019, greenhouse gas emissions (without LULUCF) were projected to be 705 Mt CO_2eq in the target year 2020, amounting to a 3.4 % reduction compared to 2005 levels. Now that the year 2020 has passed, could you provide an updated estimate of total greenhouse gas emissions in that year? Which main factors affected any changes in emissions in that year?

Answer by Canada, Monday, 31 May 2021

Since 2019 is the most recent year for which historic emissions are available in the *National Inventory Report 1990 – 2019: Greenhouse Gas Sources and Sinks in Canada* published in April 2021 (https://unfccc.int/documents/271493), emissions estimates for 2020 are still based on projections. Based on

Canada's Greenhouse Gas and Air Pollutant Emissions Projections 2020 published in February 2021 (http://www.publications.gc.ca/site/eng/9.866115/publication.html), Canada's emissions in 2020 are projected to be 637 Mt without LULUCF and 612 Mt with LULUCF. Compared with the BR4, the main contributor to the drop in the most recent projections for 2020 is related to the impact of COVID-19 on the Canadian economy, in particular the industrial and transportation sectors.

Question by United Kingdom of Great Britain and Northern Ireland at Thursday, 01 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Indigenous Peoples engagement

We note the work done to foster collaboration with a range of stakeholders in forming Canada's climate policies, in particular your engagement with Indigenous Peoples. Can you tell us more about your inclusive approach and are there any lessons you can share that would help Parties undertake inclusive consultation?

Answer by Canada, Monday, 31 May 2021

The Government of Canada is committed to working in partnership with Indigenous Peoples to address their unique circumstances and empower them with the tools they need to respond to the changing climate.

To support this commitment, in 2016 the Prime Minister and the national leaders of the Assembly of First Nation, Inuit Tapiriit Kanatami, and the Métis National Council respectively made joint commitments to establish ongoing distinctions-based senior bilateral tables focused on climate change and based on the recognition of rights, co-operation, and partnership. These structured, collaborative fora were launched in parallel with the release of the Pan-Canadian Framework on Clean Growth and Climate Change and they seek to promote First Nations, Inuit and Métis peoples' full and effective participation in federal climate actions while addressing joint climate change priorities.

Recently, Canada released a strengthened climate plan, A Healthy Environment and a Healthy Economy, which is inclusive of the Government of Canada's commitment to help support Indigenous peoples in advancing their climate priorities and adapt to the changing climate. To position Indigenous climate leadership as a cornerstone of Canada's strengthened climate plan, the Government of Canada will partner with First Nations, Inuit and Métis peoples to set an agenda for climate action and a framework for collaboration. Canada recognizes the importance of investing in the agency of Indigenous peoples and communities, supporting Indigenous-led and delivered solutions, equipping Indigenous peoples with equitable resources, and ensuring appropriate access to funding to implement self-determined climate action.

Canada looks forward to advancing co-development and other collaborative approaches to find solutions to

empower First Nations, Métis and Inuit communities and organizations, and supporting their self-determined climate priorities. The Government of Canada supports without qualification the United Nations Declaration on the Rights of Indigenous Peoples, including free, prior and informed consent. To formalize this commitment, the government has recently tabled legislation in support of the Declaration (Bill C-15 - United Nations Declaration on the Rights of Indigenous Peoples Act).

Lessons learned on inclusive engagement include collaborating with Indigenous partners on formal, joint fora for the co-development of policy and programs; ongoing communication between the federal government and Indigenous partners at senior levels; co-developing best practices and using them to guide federal decision making; ensuring programs are inclusive by design; and supporting Indigenous peoples to action self-determined climate priorities.

Question by Australia at Thursday, 01 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Nature-based solutions projects

In its Fourth Biennial Report Canada has stated it is taking a leadership role in the nature-based solutions and it was identified as one of Canada's 8 priority areas for adaptation. What nature-based projects is Canada currently participating in?

Answer by Canada, Monday, 31 May 2021

Canada is committed to protecting 25% of its lands and oceans by 2025, and to working toward 30% of each by 2030. This initiative will help put nature first by focusing on the large-scale conservation or protection of landscapes in order to support biodiversity conservation. Conserving ecosystems in the form of protected areas will also help us lock carbon in the ground, thereby acting as a safeguard against additional releases that could derail Canada's progress on climate change. Canada's recent federal budget committed an additional $4.1 billion to nature protection, including $2.3 billion over 5 years to Canada's Nature Legacy. This represents the largest investment in nature conservation in Canada's history, and will allow us to support Indigenous Guardians, to achieve our area-based conservation targets, and to take action to prevent priority species at imminent risk of disappearing.

Canada supports several nature-based solutions (NbS) projects through both large and smaller-scale funding programs, briefly described in the background section below. Moreover, the Government of Canada has been working with provinces and territories through the Canadian Council of Ministers of the Environment (CCME), a federal-provincial-territorial forum for collaboration on shared environmental priorities. Under the CCME, NbS for climate change adaptation and resilience is an area of shared interest and strong momentum. In 2018, the CCME commissioned a report on Best Practices and Resources on Climate Resilient Natural Infrastructure, which identifies opportunities, knowledge gaps and lessons learned.

More recently, the CCME contracted work to develop a terminology framework to foster a shared understanding of what is meant by NbS and related concepts such as natural infrastructure, and opportunities for its application across the country. This framework will help to provide a common language for discussing innovative approaches and bring greater awareness to their viability.

To inform this framework, ideas were shared from over 40 key partners and stakeholders including the business community, National Indigenous Organizations, academia, engineers, municipal governments and representatives from across provinces and territories.

The CCME has also hosted a series of webinars to profile community NbS projects, with a particular focus on how they contribute to enhancing resilience to climate impacts. The webinars were extremely popular and fully subscribed, involving up to 200 participants each, demonstrating a strong interest in advancing NbS.

Internationally, the government has also helped build awareness and capacity for NbS to enhance climate resilience. For example, Canada recently played a leadership role within the Global Commission on Adaptation as a convening country and one of five countries that funded its work, through a contribution of $7.5 million, and as a co-lead of the NbS Action Track.

Leading the Commission's NbS Action Track with Mexico, Canada demonstrated the value of NBS for adaptation and resilience, accelerated the uptake of NbS for adaptation at scale, and unlocked financial opportunities by:

- Establishing a vanguard group of five countries (Canada, Mexico, Peru, Ethiopia, and the Netherlands), eight cities, and five financing models to demonstrate the significant potential of NbS.
- Engaging with representatives of Indigenous peoples to ensure that Indigenous knowledge, rights, and leadership are foundational in efforts to scale up NbS. This included supporting Mexico in facilitating a multi-part dialogue, the Indigenous Peoples Dialogue on Climate Change, Biodiversity and Desertification. The results of this dialogue have been submitted to the Executive Secretariats of the three relevant Rio Conventions, highlighting suggestions that can be mainstreamed into the next rounds of negotiations under the Conferences of Parties.
- Identifying and creating financing opportunities for NbS. This included developing the first-ever assessment of the landscape of public international funding (climate finance and official development assistance) for NbS for adaptation aimed at helping donor and developing countries better understand the current state of funding flows for NbS for adaptation and to identify barriers in the funding landscape.
- Advancing youth leadership and capacity building in NbS by supporting an international intergenerational discussion on NbS, and supporting youth engagement in global adaptation dialogue, including the Climate Adaptation Summit.

Specific measures in this area include:

Disaster Mitigation and Adaptation Fund

Infrastructure Canada's Disaster Mitigation and Adaptation Fund supports major projects to enhance resilience

to climate impacts, including through the development of natural infrastructure assets such as trees, wetlands and other vegetation to address flooding and the urban heat island effect. With funding from this program, Montreal is creating one of largest urban green spaces in the world to strengthen wetlands ecosystem health and improve flood resilience in vulnerable parts of the city.

More Info: www.infrastructure.gc.ca/dmaf-faac/index-eng.html

Investing in Canada Infrastructure Plan

$9.2B over 10 years is available to provinces and territories through Integrated Bilateral Agreements where natural infrastructure is an eligible investment under the Adaptation, Resilience and Disaster Mitigation sub-stream of funding.

To support jobs and growth during the pandemic, Infrastructure Canada has recently launched a time-limited COVID-19 Resilience stream under the Investing in Canada Infrastructure Program, designed to deliver quick-start and short-term projects. Eligible projects include disaster mitigation and adaptation projects, including natural infrastructure, flood and wildfire mitigation, and tree planting.

More Info: www.infrastructure.gc.ca/plan/gi-iv-eng.html and www.infrastructure.gc.ca/prog/agreements-ententes/index-eng.html

Natural Climate Solutions Fund

While projects supported by this $4 billion Fund getting underway in 2021 will focus primarily on climate change mitigation, they are anticipated to have co-benefits for adaptation, biodiversity, and human well-being. Priorities for projects are likely to vary across regions. For instance, places adversely affected by forest pest infestations or wildland fire or with highly fragmented forest areas are likely candidates for projects that will support tree planting. It is expected that restoring and effectively managing grasslands, wetlands, and croplands will be emphasized in the Prairies. Wetland, cropland, and urban tree planting and ecosystem restoration projects may be prioritized in southern and inland regions of Canada. Coastal wetland, saltmarsh and coastal grassland restoration and conservation projects are likely to be emphasized in coastal regions. Finally, peatland restoration projects will be explored in the north to the extent possible. The Natural Climate Solutions Fund covers work in three areas:

1) $3.16B over 10 years to partner with provinces, territories, Indigenous communities, and municipalities in planting two billion trees across Canada, including supporting urban tree planting which could help mitigate the impacts of extreme heat events.

2) $631M over 10 years for projects to reduce greenhouse gas emissions related to ecosystem loss by protecting wildlife, improving land management, and restoring degraded ecosystems such as grasslands, wetlands, and peatlands.

3) $385M in new and existing resources over 10 years for the Agricultural Climate Solutions program to support the agricultural sector in the adoption of beneficial management practices that will increase carbon sequestration and realize other environmental benefits ($185M existing funding + $200M announced in Budget 2021).

Canadian Agricultural Partnership

The Partnership is a $3 billion 5-year investment by federal, provincial and territorial governments to strengthen the agriculture and agri-food sector. Under the Partnership, $2 billion is allocated to cost-shared programming of which an estimated allocation of up to $436 million has been made available to address environmental sustainability and climate change issues in the agricultural sector.

More info: www.agr.gc.ca/eng/about-our-department/key-departmental-initiatives/canadian-agricultural-partnership/?id=1461767369849

Climate Action and Awareness Fund

The Fund is investing $206M over 5 years to support Canada's climate change goals. The first two intakes of the program focused on youth climate awareness and community-based climate action. Future intakes of the program will support climate research and advance climate science and technology that would help build the knowledge base for a variety of climate actions, including NbS.

More Info: www.canada.ca/en/services/environment/weather/climatechange/funding-programs/climate-action-awareness-fund.html

Smaller-scale funding:

First Nation Adapt provides funding ($25M for core program + $27M for floodplain mapping/5 years) to First Nation communities located below the 60th parallel to assess and respond to climate change impacts on community infrastructure and emergency management. Funding available for flood plain mapping will support communities at significant risk of flooding. Applications are reviewed on an ongoing basis.

More Info: www.aadnc-andc.gc.ca/eng/1481305681144/1481305709311

Climate Change Preparedness in the North Program supports Indigenous and northern communities and governments in Yukon, Northwest Territories, Nunavut, Nunavik, and Nunatsiavut to assess risks from climate change impacts, develop adaptation options or plans, and implement adaptation measures. The program provides $21M over 5 years + $25.4M for adaptation measures over 5 years.

More Info: www.aadnc-andc.gc.ca/eng/1481305554936/1481305574833

Indigenous Community-Based Climate Monitoring Program supports Indigenous communities, on a distinctions-basis to monitor climate and the environmental effects of climate change on communities and traditional territories. The program provides $31.4M over five years. More info: https://rcaanc-cirnac.gc.ca/eng/1509728370447/1594738205979

Advancing Climate Change Science in Canada provided funding ($4.8 million over 1-3 years) to Canadian universities for research related to climate change that protect the health of Canadians by advancing innovation for energy efficient cooling technologies; accelerate knowledge of the role of forests in ecosystem services; and improve our understanding of carbon dynamics in Canadian ecosystems.

More Info: www.nserc-crsng.gc.ca/Professors-Professeurs/RPP-PP/ACCSC-SARCCC_eng.asp

The **EcoAction Community Funding Program** recently solicited proposals for projects that enhance freshwater management and climate resilience through natural infrastructure. Funding was available up to a maximum of $100,000 per project.

More Info: www.canada.ca/en/environment-climate-change/services/environmental-funding/ecoaction-community-program.html

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Question by Australia at Thursday, 01 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Priority clean energy technologies

Canada has reported on its increased engagements in international fora to accelerate the development and deployment of clean energy technologies. What clean energy technologies does Canada see as priority to meeting its 2030 Paris Agreement Target?

Answer by Canada, Monday, 31 May 2021

Canada's strengthened climate plan focuses on climate mitigation policy to the year 2030 and prioritizes a number of clean technology investments. The plan includes leveraging Canada's competitive advantage to develop domestic electric vehicles and the battery sector, investing in renewables and next generation clean technology solutions, investing in electricity transmission between provinces and, investing in biofuels, hydrogen and carbon capture, utilization and storage (CCUS). Canada is just starting along the innovation curves associated with some of the most promising decarbonization technologies, such as industrial electrification, CCUS, and hydrogen.

Canada is prioritizing production and use of low-carbon fuels through the Low-carbon and Zero-emissions Fuels Fund (including hydrogen, biocrude, renewable natural gas and diesel, cellulosic ethanol). Canada is also making significant investment commitments to advance CCUS projects through a new tax credit and funding support for clean tech projects. Canada's Hydrogen Strategy sets out a path for integrating low emitting hydrogen across the Canadian economy. Canada's heavy-duty fuel cell engine technology currently powers more than half of the world's hydrogen fuel cell electric buses. Hydrogen could provide between 18% and 24% of global energy demand by 2050.

Canada will continue to advance smart renewable energy and grid modernization projects to enable the clean grid of the future. This includes support to increase renewable power generation capacity such as wind and solar, and the deployment of grid modernization technologies such as power storage. Canada's plan also includes working with provinces and territories through key intertie projects to connect parts of Canada that have abundant clean hydroelectricity with parts of Canada that are currently more dependent on fossil fuels for electricity generation.

The Government will leverage Canada's competitive advantage in mining to build the Canadian battery and critical mineral supply chains needed to supply the electric vehicle market, aerospace sectors and support the wider clean energy transition. This work will build on the Canadian Metals and Minerals Plan and the Canada-U.S. Joint Action Plan on Critical Minerals, which both set the baseline for prioritizing domestic and North American production of metals and minerals required for the clean economy.

Question by Australia at Thursday, 01 April 2021

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: 2020 Target

In Canada's Fourth Biennial Report it stated that current projections show emissions are expected to be 19% below 2005 levels in 2030. Canada committed to an ambitious 2020 target to reduce emissions 17% below 2005 levels by 2020. Does Canada expect it will meet its 2020 target?

Answer by Canada, Monday, 31 May 2021

Canada will account for the achievement of its 2020 target in its Fifth Biennial Report in 2022. As reported in *Canada's Greenhouse Gas and Air Pollutant Emissions Projections 2020*, published in February 2021, Canada's projected 2020 emissions are set at 612 Mt (including LULUCF), which represents a 16% reduction from the 2005 value of 730 Mt that was used for the development of these projections. The updated projections for 2020 account for the impact of COVID-19, contrary to those identified in Canada's Fourth Biennial Report. These latest projections do not factor in net flows from the Western Climate Imitative (WCI). The WCI is working to finalize its approach to accounting for emission reduction flows between jurisdictions under its shared cap-and trade program. Note that the historical value for 2005 emissions was revised to 739 Mt in the *National Inventory Report 1990 – 2019: Greenhouse Gas Sources and Sinks in Canada,* published in April 2021.

In recent months, the Government of Canada announced a series of new and strengthened climate measures that puts Canada on a path of significant and sustained emissions reductions over the coming decade. We are confident that these new policies will put us within reach of our updated 2030 NDC target to reduce emissions between 40-45% below 2005 levels by 2030.

Question by New Zealand at Thursday, 01 April 2021

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide

emission reduction target

Type: Before 05 April

Title: Social implications of measures taken to address climate change

Page 25 of Canada's BR4 discusses the social implications of measures taken to address climate change. It also gives the example of the Pan-Canadian Approach to Pricing Carbon Pollution as a measure that gives flexibility to regions with unique circumstances. New Zealand is interested to know whether any other work been done on ensuring a just transition to net-zero, especially in regions whose economies are strongly linked to highemitting industries such as oil extraction?

Answer by Canada, Monday, 31 May 2021

The Government of Canada is working to ensure that all Canadians are empowered to benefit from the transition to a climate-resilient net-zero future and that no one is left behind. To achieve this goal Canada is:

- Continuing to support workers and communities impacted by the phase out of coal and to create jobs and lower emissions in the oil and gas sector
    - $185M commitment to support economic diversification and skills development initiatives in affected coal communities.
    - $1.72 billion to clean up orphan and inactive oil and gas wells which is expected to create upwards of 10,000 jobs.
    - Up to $750 million in repayable contributions through a new Emissions Reduction Fund to lower greenhouse gas emissions in Canada's oil and gas sector, with a focus on methane emissions.

- Implementing Canada's Strengthened Climate Plan as the backbone of the Government's plan for 1 million jobs. For example:
    - Thousands of jobs will be created retrofitting homes and buildings.
    - Planting two billion trees will create thousands of jobs for tree planters, technicians, nursery growers, field biologists, urban planners, and many others.
    - The growing electricity sector will provide a wide range of jobs, from wind turbine and rooftop solar installers to software engineers.
    - The Hydrogen Strategy for Canada is expected to generate more than 350,000 high-paying jobs nationally by 2050.
    - We are collaborating with the Atlantic provinces to connect surplus clean power to regions

moving away from coal, providing clean and affordable power and creating jobs.

- Making a historic investment in skills and training to ensure workers are able to succeed in the low carbon economy and have the skills necessary to build a net zero ready workforce.
- This will include supporting Canadians as they build new skills in growing sectors, helping workers receive the education and accreditation they need, and strengthening workers' futures by connecting them to employers and good jobs.
- Budget 2021 includes investments to deliver almost 500,000 new training and work opportunities including:
    - $55M for a Community Workforce Development Program
    - $960M for a new Sectoral Workforce Solutions Program
    - $250M to upskill/redeploy workers

Question by New Zealand at Thursday, 01 April 2021

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Newly announced priorities or measures

Page 35 of Canada's BR4 makes reference to a "net-zero emissions by 2050 target, and associated mitigation priorities" that "were not formally announced" when the emissions projections were done. Can Canada please provide an update on any newly announced priorities or measures?

Answer by Canada, Monday, 31 May 2021

Canada has announced a number of key measures and priorities since publication of Canada's 4th Biennial Report on Climate Change, including tabling draft legislation to codify Canada's commitment to reaching net-zero greenhouse gas emissions by 2050, a new 2030 greenhouse gas emissions reduction target, a strengthened climate plan, and a suite of new and enhanced programming.

In November 2020, the *Canadian Net-Zero Emissions Accountability Act* was introduced in Canada's Parliament, which if passed, will codify the Government of Canada's commitment for Canada to achieve net-zero greenhouse gas emissions by 2050. The *Act* will establish a legally binding process to set five-year national emissions-reduction targets for 2030, 2035, 2040, and 2045, develop credible, science-based

emissions-reduction plans to achieve each target and explain how each plan will contribute to reaching net-zero in 2050.

To support Canada's climate ambition, on April 22, 2021, Prime Minister Trudeau announced that Canada would be enhancing its 2030 emission reduction target to 40-45% below 2005 levels by 2030. Canada will submit this target to the UNFCCC as part of a new Nationally Determined Contribution this summer.

In December 2020, the Government of Canada announced *A Healthy Environment and a Healthy Economy* – Canada's strengthened climate plan. The plan includes ambitious federal policies and programs to accelerate the fight against climate change, create new, well-paying jobs, make life more affordable for households, and build a better future, including steps to:

- Make the places Canadians live and gather more affordable by cutting energy waste;
- Make clean, affordable transportation and power available in every Canadian community;
- Continue to ensure that pollution isn't free and that households get more money back;
- Build Canada's clean industrial advantage; and
- Embrace the power of nature to support healthier families and more resilient communities.

With the release of the strengthened climate plan, the Government of Canada committed $15 billion in investments to advance its ambitious climate goals and strengthen the clean economy. The Government has since expanded on these investments and committed an additional $15 billion for public transit and active transportation projects, and $17.6 billion in new, green recovery measures announced under Canada's federal 2021 budget which was released in April 2021. Key policies and measures announced Canada's 2020 Fall Economic Statement and the 2021 budget include:

- Providing up to $3.16 billion to plant two billion trees across Canada over the next ten years;
- Launching the $3 billion Strategic Innovation Fund Net-Zero Accelerator, to support Canada's industrial transformation across all sectors, and committing an additional $5 billion through Budget 2021 to support projects that will help decarbonize heavy industry and support clean technology;
- Providing $2.6 billion to help homeowners improve their home energy efficiency by providing grants for energy-efficient improvements and up to one million free EnerGuide energy assessments, with additional funding of $4.4 billion under Budget 2021 to help homeowners complete deep home retrofits through interest-free loans worth up to $40,000;
- Investing $1.5 billion over three years for green and inclusive community buildings through retrofits, repairs, upgrades and new builds;
- Investing $1.5 billion in a Low-carbon and Zero-emissions Fuels Fund to increase the production and use of low-carbon fuels (e.g., hydrogen, biocrude, renewable natural gas and diesel, cellulosic ethanol);
- Investing an additional $964 million over four years to advance smart renewable energy and grid modernization projects to enable the clean grid of the future;
- Providing Sustainable Development Technology Canada with an additional $750 million over five years, to support startups, and to scale-up companies to enable pre-commercial clean technologies to successfully demonstrate feasibility as well as to support early commercialization efforts;
- Investing up to $631 million over 10 years to restore and enhance wetlands, peatlands, grasslands and agricultural lands to boost carbon sequestration.
- Supporting for capital investments in carbon capture, utilization, and storage (CCUS) projects through an investment tax credit, with the goal of reducing emissions by at least 15 megatonnes of CO2 annually.

- Releasing Canada's Hydrogen Strategy, which sets out a path for integrating low emitting hydrogen across the Canadian economy; and,
- Announcing $14.9 billion for public transit projects over the next eight years, including $2.75 billion to support zero-emission public transit and school buses, $400 million to help build new and expanded networks of pathways, bike lanes, trails, and pedestrian bridges across Canada, as well as permanent funding of $3 billion per year for a permanent public transit fund, beginning in 2026-2027.

Finally, In February 2021, Canada and the United States released the *Roadmap for a Renewed U.S.-Canada Partnership*, and launched the U.S.-Canada High Level Ministerial Dialogue on Climate Ambition. We committed to working together to increase ambition under the Paris Agreement and to achieving net-zero emissions by 2050. Canada and the U.S. will also explore taking a continental approach to addressing methane emissions reductions in the oil and gas sectors, standards for light-duty and heavy-duty vehicles, and setting a 100% zero-emissions vehicles sales target.

Question by New Zealand at Thursday, 01 April 2021

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 05 April

Title: "Technology Case" emissions projections

Could Canada please elaborate more on the "Technology Case" emissions projections? In particular, how does this scenario differ to the "with measures" and "with additional measures" scenarios and which sectors see the strongest reductions in this scenario? Additionally, which sectors do not see significant emissions reductions?

Answer by Canada, Monday, 31 May 2021

The "Technology Case" included all the policies and measures that were included in the "With Additional Measures" scenario, but assumed a faster uptake of various technologies that would allow to further decrease GHG emissions. The "Technology Case" should be interpreted as an illustration of the additional decarbonization potential from the set of specific technologies chosen, but should not be viewed as a forecast of the actual uptake of these technologies nor as an estimate of the impact from all possible decarbonization technologies. Given that the "Technology Case" considered only a handful of technologies, impacts across sectors were primarily determined by the choice of these selected technologies, including their assumed level of uptake. The strongest GHG reductions in 2030 were in the oil and gas sector (due to the adoption of steam-assisted gravity drainage (SAGD) solvents) and the transportation sector (due to higher electric vehicle adoption).

Question by New Zealand at Thursday, 01 April 2021

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Solid waste production

Can Canada please provide more information about the overall composition and proportion of their solid waste production (I.e. organics, municipal, construction and demolition, farm fills and rural waste)?

Answer by Canada, Monday, 31 May 2021

Environment and Climate Change Canada completed a national waste characterization study in 2020. The data generated in this study was used in the 2021 National Inventory Report in the model that calculated landfill methane generation. The report can be accessed here: http://publications.gc.ca/site/eng/9.884760/publication.html

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Question by New Zealand at Thursday, 01 April 2021

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Alternative technologies for waste sector emissions

In its BR4, Canada mentions that the Pan-Canadian Framework considers the generation of bio-energy and bio-products as an emission reduction opportunity. What alternative technologies are expected to play a major role in limiting and reducing emissions from Canada’s waste sector other than landfill gas collection?

Answer by Canada, Monday, 31 May 2021

Construction of private and public sector anaerobic digestion facilities has increased in response to waste diversion and renewable fuel objectives. This includes anaerobic digestion facilities that process municipal solid waste, industrial/commercial organic waste, wastewater biosolids and agricultural wastes. Emerging technologies are also being applied in some locations, including thermo-chemical waste to energy processes.

Question by New Zealand at Thursday, 01 April 2021

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Waste sector policies

New Zealand is interested to know whether there are any plans to implement specific policies to increase removals (and/or reduce emissions) from the waste sector other than those focused on the solid waste category (i.e. municipal and industrial wastewater, sludge, compost)?

Answer by Canada, Monday, 31 May 2021

Emissions from the waste sector are dominated by landfill methane emissions and wastewater and organics processing (compost and anaerobic digestion) represents a relatively minor contributions. Work is ongoing to incorporate information on emissions from these sources into tools that will support waste management decision making (i.e. analysis of the GHG impact of diversion of biodegradable wastes).

Question by New Zealand at Thursday, 01 April 2021

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Carbon pollution pricing mechanisms

Page 167 of Canada's BR4 mentions the E3MC model has been used to investigate interactions between sectors and policies. New Zealand would be interested to learn which policies this model has shown to most positively interact with carbon pollution pricing mechanisms to reduce greenhouse gas emissions.

Answer by Canada, Monday, 31 May 2021

Projections for BR4 involved modeling of the entire policy package in order to account for all interactions between sectors and policies. Due to the number of policies contained in this package, it is not possible to isolate which policies interacted synergistically with carbon pricing.

Question by New Zealand at Thursday, 01 April 2021

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 05 April

Title: Auction of greenhouse gas allowances

Page 11 of Canada's BR4 mentions that Nova Scotia launched its first auction of greenhouse gas allowances in 2020. What are the key lessons learnt from the implementation of auctioning?

Answer by Canada, Monday, 31 May 2021

The need for regular communication and training support with cap and trade participants were key learnings from the auctions.

For communication, Nova Scotia ensures that participants have key contact information and Nova Scotia set up and monitor a dedicated cap-and-trade email address. They post all of the key dates on the Nova Scotia Climate Change website and send emails directly to participants with reminders about upcoming requirements. Nova Scotia publishes results for each auction on the website with key analysis for participants and interested stakeholders.

For training, Nova Scotia developed materials specifically on the auction including: a training presentation, frequently asked questions document, an auction user guide, an auction examples document, a detailed auction requirements and instructions document, and samples of what a letter or credit and letter of guarantee look like. The team in Nova Scotia offers training webinars before each auction event and held a mock auction event before the first auction in 2020. This allowed participants to use the system in a safe environment.

Nova Scotia also worked closely with Quebec, California, and the Western Climate Initiative to ask questions about what materials are useful to participants and how to support them before, during, and after an auction event. This allowed Nova Scotia to save a lot of time in planning communications and preparing training materials.

May-June 2021 UN Climate Change Conference

Session closes at 01-06-2021

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