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Multilateral assessment

Questions and answers Canada

Question by European Union at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Impact of mitigation actions

During the technical review of Canada's BR2, the ERT noted that Canada's GHG emissions excluding LULUCF have decreased by a relatively small amount compared with its target. The ERT further noted that Canada's GHG emissions excluding LULUCF have risen considerably since 1990 and have also followed an upward trend in recent years (GHG emissions excluding LULUCF increased by 1.6 per cent in the period 2013–2014). The ERT noted also that in the limited time remaining until 2020, Canada faces the challenge of putting in place mitigation actions that deliver the emission reductions necessary to make progress towards its target.

- Could Canada provide additional information on how its mitigation actions to-data have had an impact on emissions reductions?

- Please could Canada provide additional information on how believes its future implementation of actions will ensure it achieves its target?

Answer by Canada, Friday, 28 April 2017

First question:

Canada's emissions projections, as presented in its 2nd Biennial Report (BR2), reflect the federal, provincial and territorial mitigation actions in place as of September 2015 (as listed in BR2 Table A31). Canada is taking action to reduce emissions in the near term and implementing policies that will send longer-term signals to facilitate Canada's transition to a low-carbon economy.

Information regarding the impact on Canada's emissions of individual mitigation actions taken to date is included in the annex to Canada's Second Biennial Report: Key Policies and Measures Affecting Canada's Greenhouse Gas Emissions. This annex includes estimates of the individual mitigation impacts in 2020 for various mitigation measures. As an example, it is estimated that Environment and Climate Change Canada's Coal-Fired Generation Electricity Regulations will reduce GHG emissions by 3.1 Mt (CO_2 eq) in 2020.

More recent analysis is included in Canada's 2016 reference case (released December 2016, http://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=1F24D9EE-1). Projections in Canada's 2016 reference case reflect policies and measures in place as of November 1, 2016, and are presented by sector and sub-sector; the impacts of individual measures are not discussed. Canada anticipates that the measures included under the Pan-Canadian Framework on Clean Growth and Climate Change will further reduce Canada's GHG emissions in both 2020 and 2030.

Second question:

Since its submission of the BR2, a number of major policies have been announced and/or implemented. In December 2016, Canada adopted a new national climate change plan, the Pan-Canadian Framework on Clean Growth and Climate Change. The Pan-Canadian Framework includes measures to reduce emissions across all sectors and puts Canada on a pathway to its 2030 target. Key measures to reduce emissions under the Pan-Canadian Framework include a minimum $10 per tonne price on carbon pollution across Canada by 2018, which will increase annually by $10 per tonne up to $50 per tonne by 2022, at which point the overall approach will be reviewed to confirm the path forward, including continued increases in stringency; accelerating the phase-out of coal-fired electricity to 2030 and investments to modernize and decarbonize Canada's electricity system; regulations to reduce methane emissions from the oil and gas sector by 40-45% by 2025; developing a clean fuel standard to reduce lifecycle emissions from fuels used in buildings, industry and transportation; and enhancing carbon storage in forests and agricultural lands.

Additional policies, plans, and measures to reduce emissions have also been announced at the provincial level, such as Ontario's cap-and-trade system; and Alberta's Climate Leadership Plan, which includes actions to phase-out coal-fired electricity, introduces a carbon levy, and sets a 100Mt annual cap on oil sands emissions. These measures will decrease Canada's future GHG emissions further.

Some of these measures are reflected in Canada's 2016 greenhouse gas emissions Reference Case report (released December 2016), which is an update of the GHG projections shown in Canada's BR2. This report shows that, with policies and measures in place as of November 1, 2016, Canada's total GHG emissions would be 731 Mt CO2eq in 2020 and 742 Mt CO2eq in 2030. Canada anticipates that the measures included under the Pan-Canadian Framework on Clean Growth and Climate Change will reduce Canada's GHG emissions to 567 Mt in 2030. Please see the following link for more information on these reports: https://www.canada.ca/en/services/environment/weather/climatechange/climate-action/modelling-ghg-projections.html

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Question by European Union at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: LULUCF Projections

In its BR2, Canada did not provide projections for the LULUCF sector and explained that new estimation methodology that would significantly affect projected LULUCF emissions, as it removes the impacts of natural disturbances from the estimates of managed forest emissions and removals. Are updated projections available for the LULUCF sector for 2020?

Answer by Canada, Friday, 28 April 2017

Since the Second Biennial Report, Canada has developed an approach to remove natural disturbance impacts from emission estimates for the category forest land remaining forest land, which dominates the LULUCF sector for Canada. These new historical estimates, which focus on anthropogenic emissions and removals, are available in Canada's 2017 National Inventory Report (released April 13 2017).

Work is underway to develop new emission projections for LULUCF based on these new historical estimates.

Question by European Union at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: LULUCF

In its BR2 Canada explained that, while it would account for the contribution from LULUCF towards the achievement of its target, it has not been able to provide the estimates in the BR2 owing to the ongoing work on the development of an estimation methodology that captures anthropogenic emissions and removals . Could you provide more details about this methodology?

Answer by Canada, Sunday, 30 April 2017

Canada has developed an approach to remove the impacts of uncontrollable natural disturbances from GHG emissions and removals in the category forest land remaining forest land (FL-FL) reported in the National Inventory Report (NIR).

This approach is based on the ability to separate, in the Carbon Budget Model of the Canadian Forest Service (CBM-CFS3), forest stands dominated by the impacts of anthropogenic activities from stands dominated by the impacts of uncontrollable natural disturbances. Emissions and removals by a forest stand are deemed anthropogenic when (i) a stand's growth trajectory has been significantly modified by human intervention—this definition includes commercial clearcut and partial harvest, commercial and pre-commercial thinning, salvage logging, site preparation, and rehabilitation and planting on stands that have undergone both stand replacing and partial natural disturbances; and (ii) a stand –

regardless of the original disturbance type - has attained commercial maturity and therefore is actively considered within forest management planning scenarios (eligible to be scheduled for harvest). In contrast, emissions and removals resulting from natural disturbances are those from (i) stands that have been affected by a stand replacing natural disturbance up to the period that stands reach commercial maturity or (ii) stands that have been affected by partial disturbance resulting in reduced standing biomass until that stand has attained pre-disturbance equivalent biomass.

As a result of these methodological improvements, the large interannual variations in the net flux due to wildfires reported in previous submissions have been removed, leaving estimates that better represent human-controlled emissions and removals in managed forests (see figure below). The approach remains consistent with previous methods in terms of area coverage and calculation and with the same model (Carbon Budget Model of the Canadian Forest Sector).

The improved approach for FL-FL emissions estimation has been incorporated in the 2017 Inventory submission to the UNFCCC and will be used for the projections for that category. The FL-FL methodology will be subject to continuous improvements over time.

Attachment: FLRFL.pdf

Question by European Union at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Use of mechanisms

Canada reported in its BR2 that it may consider using international market-based mechanisms to meet its emission reduction targets under the Convention, but it had not taken a decision on their use at the time of preparing the BR2. Could Canada provide estimates of the expected contributions from market mechanisms needed to meet its 2020 target?

Answer by Canada, Friday, 28 April 2017

Canada is still considering the use of international market-based mechanisms to meet emission reduction targets under the Convention. Canada will explore the potential use of international mechanisms in the overall effort to achieve its 2030 target, subject to the establishment of robust systems that provide the certainty and confidence needed to deliver emissions reductions that meet Canadian standards. Canada will continue to work with Parties under the United Nations Framework Convention on Climate Change to ensure

effective systems that ensure environmental integrity and apply robust accounting are established.

Question by Republic of Korea at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Monitoring and evaluation for the mitigation actions

Does the implementing entities(ministries, agencies, or companies) monitor and evaluate mitigation policies or measures by themselves? Or, does a competent organization, such as Environment and Climate Change Canada, conduct overall monitoring and evaluation?

Answer by Canada, Friday, 28 April 2017

The Pan-Canadian Framework on Clean Growth and Climate Change commits to ongoing monitoring and reporting on results, in order to ensure that policies are effective, take stock of progress achieved, and to inform Canada's future national commitments in accordance with the Paris Agreement.

Canada has committed to preparing updated emissions projections on an annual basis. In applicable years, Canada's Biennial Report will serve this purpose, while supplementary emissions projections will be prepared in alternate years. For example, Canada's 2016 greenhouse gas emissions Reference Case report (released December 2016), is an update of the GHG projections shown in Canada's BR2.

Starting in 2017, the federal, provincial and territorial governments will work together to develop annual reports to Canada's Prime Minister and provincial and territorial Premiers as measures under the Framework are designed and implemented. The Pan-Canadian Framework also commits to engage with external experts to provide informed advice to decision makers; assess the effectiveness of measures, including through the use of modeling; and identify best practices. This will help ensure that actions identified in the Pan-Canadian Framework are open to external, independent review, and are transparent and informed by science and evidence.

On carbon pricing, federal, provincial, and territorial governments will work together to establish an approach to the review of carbon pricing, including expert assessment of stringency and effectiveness that compares carbon pricing systems across Canada. This will

be completed by early 2022 to provide certainty on the path forward. An interim report will be completed in 2020 which will be reviewed and assessed by Canada's Prime Minister and provincial and territorial Premiers. As an early deliverable, the review will assess approaches and best practices to address the competitiveness of emissions-intensive trade-exposed sectors.

In addition, the Government of Canada will continue to regularly evaluate regulatory approaches, track and report on progress. These and other mechanisms for transparency and accountability will enable Canada to track progress towards its target and adjust policies and approaches over time as needed.

On a separate track, the Commissioner of the Environment and Sustainable Development, appointed by the Auditor General of Canada, is responsible for providing Canadian parliamentarians with objective, independent analysis and recommendations on the federal government's efforts to protect the environment and foster sustainable development.

The Commissioner conducts performance audits and is responsible for monitoring sustainable development strategies of federal departments; overseeing the environmental petitions process; and auditing the federal government's management of environmental and sustainable development issues. The Commissioner periodically audits the environmental objectives and actions of the government in order to analyze progress. In addition to any possible future audits by the Commissioner of the Environment and Sustainable Development or the Office of the Auditor General, each federal department will consider conducting internal audits and evaluations of the programs for which they are responsible, as part of their own risk assessments.

Question by Republic of Korea at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Monitoring and evaluation for the mitigation actions

Does the government monitor and evaluate the mitigation actions listed in the CTF table 3?

Answer by Canada, Friday, 28 April 2017

For federal policies and measures in CTF table 3, please refer to the answer for the following question: "Do the implementing entities (ministries, agencies, or companies) monitor and

evaluate mitigation policies or measures by themselves? Or, does a competent organization, such as Environment and Climate Change Canada, conduct overall monitoring and evaluation?".

The CTF table 3 also includes mitigation actions from provinces and territories. Provinces and territories are responsible for monitoring and evaluating the effectiveness of their environmental policies and programs. For example, the Government of Ontario has an Environmental Commissioner who is responsible for reporting on Ontario's progress reducing greenhouse gas emissions and improving energy conservation and efficiency in the province. Environment and Climate Change Canada includes provincial and territorial mitigation actions in its modelling of emissions projections as published in Biennial Reports and supplementary emissions projections.

Question by Republic of Korea at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Domestic arrangements for self-assessment

With regard to the self-assessment in Annex 4 on page 47 of the second biennial report,

a. Are the analysis and recommendation of the Commissioner of the Environment and Sustainable Development on behalf of the Auditor General of Canada utilized to improve or enhance the mitigation actions by ministries?

b. It seems that the auditing target covers not only GHG emissions reduction, but also general environment and sustainable development in Canada and the government does not conduct the review on GHG reduction measures periodically. Does the government have a basis to decide the timing of the review on GHG reduction measures?

Answer by Canada, Friday, 28 April 2017

In response to areas for improvement identified by the Commissioner of the Environment and Sustainable Development, ministries and other responsible entities are required to develop a Management Action Plan which identifies concrete actions a ministry will take in response to audit findings, including improving or enhancing mitigation actions. Each activity in the Management Action Plan includes a timeline for achievement, responsible parties and the opportunity to update progress throughout the year. As a result, ministries are able to benefit from the analysis and recommendations of the Commissioner of the Environment and Sustainable Development by committing to actionable items. Successive audits by the Commissioner of the Environment and Sustainable Development are able to measure

progress on recommendations.

Departments do not have the ability to choose the timing of a review on greenhouse gas reduction measures. The Commissioner of the Environment and Sustainable Development, appointed by the Auditor General of Canada, chooses the schedule of its audits on environmental actions and measures, including greenhouse gas reduction measures. There are several audits related to climate change currently underway, including an audit on Environment and Climate Change Canada's climate change mitigation activities that is expected to be completed in Fall 2017.

Canada's Federal Sustainable Development Act requires that a report on the progress of implementing the Federal Sustainable Development Strategy is developed every three years. The Minister of Environment and Climate Change is then responsible for tabling this report in Canada's Parliament in order to demonstrate progress on environmental objectives. Additionally, the Commissioner of the Environment and Sustainable Development provides recommendations on the Federal Sustainable Development Strategy every three years and this feedback is used for developing updated goals and targets.

Question by Japan at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Phase-out of coal-fired power plants

Ontario's phase-out of coal-fired power plants is reported as a big mitigation action in the BR. How was this decision coodinated?

Answer by Canada, Friday, 28 April 2017

In order to phase out its use of coal-fired power, the Government of Ontario developed a long-term, co-ordinated plan which included the conversion of existing infrastructure and overall supply-mix changes.

The Ontario Ministry of Energy worked closely with Ontario Power Generation (OPG) and the Independent Electricity System Operator (IESO). The OPG is the largest generator of electricity in the province (primarily through hydroelectric and nuclear sites) and the IESO is responsible for procuring electricity supply and planning the electricity system over the long-term.

The OPG established a schedule for coal phase-out based on fuel type, fuel flexibility, emissions, unit condition, labour and location. It established a multi-disciplinary senior team consisting of Station Operations, Fuel Supply, Energy Planning and Forecasting, and Market Operations. The IESO was responsible for ensuring system reliability and sustainability during and following the coal phase-out. It procured electricity supply, and planning the electricity system over the long-term

As a result of these actions, coal went from 25% of Ontario's supply mix in 2003 to zero in 2014, while grid reliability and domestic supply improved. Eliminating the use of coal was a significant action which supported Ontario achieving its 2014 emissions reduction target of 6% below 1990 levels.

Question by Japan at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Clean energy technology

What is important to effectively promote the innovation, introduction and dissemination of clean energy technology?

Answer by Canada, Friday, 28 April 2017

Canada is committed to supporting technologies that will advance its environmental objectives, create jobs and stimulate growth in the clean technology sector. A focus on clean technology, innovation and growth is a core element of the Pan-Canadian Framework on Clean Growth and Climate Change to support the transition to a low-carbon economy.

International collaboration and partnerships are important to help promote innovation and clean technology. The Government of Canada joined Mission Innovation in November 2015 with 19 other nations as part of a global effort to accelerate clean energy innovation with the goal of making clean energy widely affordable. Following up on this commitment made during COP 21, in 2016 Canada committed to doubling government investment over the next five years in clean energy research and development. Support for clean technology will reduce greenhouse gas emissions, diversify the economy and open access to new markets and support job growth.

The Pan-Canadian Framework outlines a range of actions to support clean technology and innovation at all stages of development, including: supporting R&D to reduce emissions; helping companies commercialize their products and grow; purchasing clean technologies for government operations; supporting Indigenous Peoples and northern and remote communities to adopt and adapt clean technology to their needs; and aligning investments across levels of government.

Domestically, Canadian arm's length government agencies, such as Sustainable Development Technology Canada and the Canadian Northern Economic Development Agency, provide funding and support for economic and business development projects that support the development of clean technologies. Canadian Northern Economic Development Agency focuses on supporting clean technology innovation in Canada's North, such as developing renewable energy resources, reducing greenhouse gas emissions, or improving water or soil quality.

Sustainable Development Technology Canada funds clean tech projects and coaches entrepreneurs to support the development of the project. Starting in 2017–18, Canada will invest $400 million over five years to recapitalize the Sustainable Development Tech Fund to support projects which develop and demonstrate new clean technologies that promote sustainable development, including those that address environmental issues such as climate change, air quality, clean water and clean soil.

This investment is part of over $2.2 billion in funding for clean technology initiatives announced through Canada's 2017 federal Budget. These investments support Canada's commitment in Mission Innovation to double investment in clean energy research, development and demonstration over the next five years.

Question by Japan at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Performance standards for passenger car

What is the current performance standards for car? What level of performance standards does Canada expect in the future?

Answer by Canada, Friday, 28 April 2017

Canada's federal government currently administers regulations to reduce GHG emissions from light-duty vehicles (cars and light trucks) that are manufactured or imported into Canada for the purpose of sale. The regulations establish fleet-average GHG emission standards in alignment with the U.S. national standards. The standards vary based on the physical size of the vehicles in a company's fleet and increase in stringency on average between 3-5% per year from model years 2011 to 2025. As a result of the regulations it is expected that light-duty vehicles of the 2025 model year will emit on average about 50% less GHG emissions than 2008 models.

Question by Japan at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Introduction of "Reduction of CO2 Emissions from the Coal-Fired Generation of Electricity

Canada has set very strict criteria in "Reduction of CO2 Emissions from the Coal-Fired Generation of Electricity Regulations". Would you provide some background information of this regulation, and also information of the coordination process with the stakeholders upon the introducing of this regulation?

Answer by Canada, Friday, 28 April 2017

In 2012, the Government of Canada published the Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations. Under the authority of the Canadian Environmental Protection Act (CEPA), 1999, the regulations apply a performance standard of 420 tonnes CO2 per gigawatt hour (t/GWh), based on the level of high efficiency natural gas. The performance standard under the regulations came into effect on July 1st, 2015 and apply to new coal-fired electricity generating units, as well as to existing units that have reached a defined period of operating life (between 45 and 50 years). Effectively, these regulations serve to ban the construction of new traditional coal-fired generation plants, and require the phase-out of existing units without carbon capture and storage (CCS). In December 2016, the Government of Canada issued a Notice of Intent to amend the existing coal-fired electricity regulations to further accelerate the phase-out of traditional coal-fire electricity by requiring all coal units to meet the performance standard 2030.

Prior to publication of the draft regulations in 2012, Environment and Climate Change Canada carried out extensive consultations with stakeholders and affected provinces. This included consultations with the coal-fired electricity sector and with representatives from the governments of Alberta, Saskatchewan, Manitoba, Ontario, Nova Scotia, and New Brunswick — the provinces most reliant on coal-fired generation — as well as non-governmental organizations. Other federal departments also participated in the consultations with affected

stakeholders. On August 27, 2011, the Government of Canada published the draft regulations in Canada Gazette I, initiating a 60-day consultation period, allowing stakeholders and interested parties an opportunity to submit formal comments for consideration. Over 5 000 submissions were received during the 60-day consultation period from provincial governments, electricity industry corporations or system operators, industry associations, and NGOs. The remainder of comments came from the general public, primarily through the use of form letters available on various websites. Based on these comments, and subsequent discussions with industry and provinces, refinements were made to the Regulations.

The Government of Nova Scotia complies with the Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations through an equivalency agreement. This means that in Nova Scotia the federal regulations stand down in favour of provincial regulations of an equivalent environmental outcome.

Question by China at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Effective additional measures

According to the projections, it is difficult for Canada to achieve the 2020 target. What are the most effective additional measures would Canada consider to take?

Answer by Canada, Friday, 28 April 2017

Canada is taking action to reduce emissions in the near term, and implementing policies that will send longer-term signals to facilitate Canada’s transition to a low-carbon economy. The Pan-Canadian Framework on Clean Growth and Climate Change, which was released in December 2016, announces significant new action to reduce Canada’s emissions. The Pan-Canadian Framework focuses on Canada’s 2030 target of 30% below 2005 levels of emissions, but includes mitigation actions that will reduce emissions in the near term. For example, there will be a price on carbon pollution across Canada by 2018, starting at $10 per tonne and increasing to $30 per tonne by 2020 and $50 per tonne by 2022. Regulations for HFCs are under development, and will be finalized this year (2017). Regulations to reduce methane emissions by 40-45% from the oil and gas sector by 2025 will be phased-in starting in 2020. Consultations on a clean fuel standard are underway and regulations are expected to be developed by 2019.

Additional policies, plans, and measures to reduce emissions have also been announced at

the provincial level, such as Ontario's cap-and-trade system; and Alberta's Climate Leadership Plan, which includes actions to phase-out coal-fired electricity, introduces a carbon levy, and sets a 100Mt annual cap on oil sands emissions. These measures will decrease Canada's future GHG emissions further.

Some of these new measures are reflected in Canada's 2016 greenhouse gas emissions Reference Case report (released December 2016), which is an update of the GHG projections shown in Canada's BR2. This new report shows that Canada's GHG emissions in 2020 would reach 731 Mt (without LULUCF), a reduction of 37 Mt compared to the GHG projections presented in the BR2.

However, many of the policies and regulations outlined in the Pan-Canadian Framework will require time to develop, in consultation with provinces and territories and stakeholders, and implement. Some of these measures will achieve fewer emission reductions in the near term, but will enable Canada to transition to a low-carbon economy over the medium to longer term. The Pan-Canadian Framework includes commitments such as developing increasingly stringent building codes with that goal that provinces and territories adopt "net-zero energy ready" model codes by 2030; accelerating the phase out of traditional coal-fired electricity units to 2030, scaling up the use of renewable and non-emitting electricity and modernizing Canada's electricity system; and increasing stored carbon. The Government of Canada has announced unprecedented levels of investments, in green infrastructure and public transportation, and in clean technology and innovation, which are intended to support structural changes necessary to achieve deep emissions reductions. These investments include:

•A $2 billion Low Carbon Economy Fund to support new provincial and territorial actions to reduce emissions by 2030;

•$21.9 billion to support green infrastructure, including for electricity, renewable energy, reducing reliance on diesel in Indigenous, northern and remote communities, electric vehicle charging and natural gas and hydrogen refuelling stations, new building codes, and disaster mitigation and adaptation;

•$20.1 billion to support urban public transit; and,

•Over $2.2 billion in funding for clean technology initiatives, including nearly $1.4 billion in financing dedicated to financing clean technology firms. These investments support Canada's commitment in Mission Innovation to double investment in clean energy research, development and demonstration over the next five years.

Question by China at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: emission from the energy sector

It is shown that the emission trends of Canada were driven mainly by the increase from the energy sector. Has Canada considered to formulate a sectoral target for the energy industry to facilitate the achievement of 2020 target?

Answer by Canada, Friday, 28 April 2017

Canada is taking action to reduce emissions from the energy sector. For example, regulations to reduce methane emissions from the oil and gas sector by 40-45% by 2025 have been announced and will be phased-in starting in 2020.

In addition, as announced in the Pan-Canadian Framework on Clean Growth and Climate Change, Canada will also take action to improve industrial energy efficiency, including supporting the adoption of energy management systems, continuing to invest in research and development, and promoting deployment of new technologies that help reduce emissions. This includes a recent announcement of $200 million in funding to support clean technology research, development, demonstration and adoption of clean technology in Canada's natural resources sectors.

Federal, provincial, and territorial governments will also work with industry to identify demonstration projects for promising pre-commercial clean energy technologies required to reduce emissions from energy production and use in the Canadian economy, including in the oil and gas sector.

Provinces are also taking action to reduce emissions from the energy sector. For instance, Alberta has set a legislated maximum limit on emissions from the oil sands at 100 Mt in any year, with provisions for cogeneration and new upgrading capacity, which will help drive technological progress. British Columbia (B.C.) has introduced provincial legislation that will make its liquefied natural gas (LNG) sector the cleanest in the world, including by setting a greenhouse gas emissions intensity benchmark that is lower than any other LNG facility in the world. B.C. is also electrifying upstream development of natural gas, which will further reduce emissions. Carbon pricing systems, which currently cover 85% of Canada's economy and population, will be in place across all jurisdictions in Canada by 2018, and will also help to reduce emissions from the energy sector.

Question by China at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: usage of market-based mechanisms

Canada reported that it will consider the use of market-based mechanisms to achieve its target, but has not yet made a decision. Could Canada provide further information on the rules and standards to be applied when using market-based mechanism?

Answer by Canada, Friday, 28 April 2017

Canada recognizes the important potential of international carbon markets in realizing UNFCCC and Paris Agreement goals. Canada, which has recently adopted a national policy on carbon pricing, sees market mechanisms as effective tools to reduce emissions and stimulate investments in green infrastructure and low-carbon innovation.

It is important that rules and standards applied when using market-based mechanisms focus on establishing systems that provide the certainty and flexibility needed to encourage the use of market mechanisms by many sectors and actors, as well as promoting transparency, environmental integrity, and sustainable development.

Question by China at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: methodologies for LULUCF

According to the information contained in the TRR, Canada is developing the accounting methodologies for LULUCF which will allow the exclusion of natural disturbances, including wildfires and insect infestations. If Canada intend to account for the contribution from LULUCF to achieve its 2020 target but using different accounting rules, how can the comparability among the QEWERTs been ensured?

Answer by Canada, Sunday, 30 April 2017

Canada is examining its approach to accounting in the LULUCF sector.

Canada has developed an approach to remove the impacts of uncontrollable natural disturbances from GHG emissions and removals in the category forest land remaining forest land (FL-FL) reported in the National Inventory Report.

As a result of these methodological improvements, the large interannual variations in the net flux due to wildfires reported in previous submissions have been removed, leaving estimates that better represent human-controlled emissions and removals in managed forests (see figure attached). The approach remains consistent with previous methods in terms of area coverage and calculation and with the same model (Carbon Budget Model of the Canadian Forest Sector).

The improved approach for FL-FL emissions estimation has been incorporated into the 2017 Inventory submission to the UNFCCC and will be used for the projections for that category. The FL-FL methodology will be subject to continuous improvements over time.

Attachment: FLRFL.pdf

Question by United Kingdom of Great Britain and Northern Ireland at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Impact of the federal carbon tax

Can Canada give more information on what impact they expect the federal carbon tax to have on their emission projections?

Answer by Canada, Sunday, 30 April 2017

The ultimate impact of carbon pricing will depend on the choice of pricing system by each province and territory and on their decisions related to use of the revenue generated, as well as on the stringency of carbon pricing post-2022. As the details of these policies have not yet been finalized, it would be premature to provide an estimate of their overall economic impact.

The pan-Canadian approach to pricing carbon pollution will expand the application of carbon pricing, already in place in Canada's four largest provinces, to the rest of Canada.

Under this approach, all Canadian jurisdictions will have carbon pricing meeting a national benchmark in place by 2018. The goal of this benchmark is to ensure that carbon pricing applies to a broad set of emission sources throughout Canada and with increasing stringency

over time either through a rising price or declining caps.

Each province and territory has been given a choice in how to implement carbon pricing: they can put a direct price on carbon pollution (either by implementing a carbon tax or through a hybrid carbon pricing system that includes a levy on fuels and an emissions trading system with output-based allocation), or they can adopt a cap-and-trade system. For jurisdictions that set a direct price on carbon, the price is to start at a minimum of $10 per tonne in 2018 and rise by $10 per year to $50 per tonne in 2022. Provinces with cap-and-trade need (i) a 2030 emissions-reduction target equal to or greater than Canada's 30 percent reduction target and (ii) declining (more stringent) annual caps to at least 2022 that correspond, at a minimum, to the projected emissions reductions resulting from the carbon price that year in price-based systems. The Government of Canada will introduce an explicit price-based carbon pricing system that will apply in jurisdictions that do not meet the benchmark by implementing their own carbon pricing systems.

The overall approach will be reviewed by early 2022 to confirm the path forward, including continued increases in stringency.

To better understand the implications of implementing additional carbon pricing policies in Canada, the Working Group on Carbon Pricing Mechanisms reviewed three illustrative scenarios: 15/30 scenario, (starting at $15/tonne in 2018 and rising to $30/t in 2030); a 30/40 scenario (starting at $30/t in 2018 and rising to $40/t in 2030); and a 30/90 scenario (starting at $30/t in 2018 and rising to $90/t in 2030).

These scenarios were designed to broadly illustrate the impacts on the economy of carbon pricing at various levels of pricing rather than to reveal the impacts of a specific policy proposal. All three scenarios were run against a baseline scenario that reflected the federal, provincial and territorial policies in place before September 2015 (including BC’s carbon tax, Alberta’s emission trading system for large final emitters, and Quebec’s cap-and-trade system). The baseline did not include Ontario’s cap-and-trade system or Alberta’s carbon levy on fuels, both of which were implemented in 2017.

The modelling projected that the 15/30 scenario would lead to an additional 38 Mt of emission reductions relative to the baseline scenario in 2030, with larger reductions of 51 Mt for the 30/40 scenario and 95 Mt for the 30/90 scenario.

The final report of the Working Group on Carbon Pricing Mechanisms is available at the following link: http://www.climatechange.gc.ca/Content/6/4/7/64778DD5-E2D9-4930-BE59-D6DB7DB5CBC0/WG_Report_Carbon%20Pricing_e_v4.pdf

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Question by United Kingdom of Great Britain and Northern Ireland at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: LULUCF projections

LULUCF projections were described as under development in the Canadian BR. Are these now available, and if so could you share them? What role do you expect LULUCF to play in meeting Canada's NDC?

Answer by Canada, Sunday, 30 April 2017

First question:

Since the Second Biennial Report, Canada has developed an approach to remove natural disturbance impacts from emission estimates for the category forest land remaining forest land, which dominates the LULUCF sector for Canada. These new estimates, which focus on anthropogenic emissions and removals, are available in Canada's 2017 National Inventory Report. The improved approach for FL-FL emissions will be used for the projections for that category. The forest land remaining forest land (FL-FL) methodology will be subject to continuous improvements over time.

Work is underway to develop new emission projections for LULUCF based on these new estimates.

Second question:

Canada's Nationally Determined Contribution provides indications of the role of LULUCF in helping reaching its GHG targets. In its Nationally Determined Contribution , Canada indicated that it is "examining its approach to accounting in the land use, land-use change and forestry sector. Canada will use "the IPCC production approach" to account for harvested wood products and will exclude the impacts of natural disturbances and focus on anthropogenic emissions and removals."

Question by United Kingdom of Great Britain and Northern Ireland at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Oil price changes

Can Canada share quantified effects of oil price changes since the publishing of the BR2 on projected greenhouse gas emissions?

Answer by Canada, Sunday, 30 April 2017

Canada's GHG projections use oil price and production projection data provided by the National Energy Board. Higher oil prices generally increase emissions in oil and gas producing sectors and decrease emissions in sectors consuming oil, such as transportation.

Canada includes sensitivity scenarios in its projections to reflect the uncertainty of key variables, including oil and gas prices. The sensitivity scenarios in the 2016 projections included a low oil & gas price scenario, also based on the National Energy Board projections. In this scenario, low oil prices for the Western Canadian Select and West Texas Intermediate were estimated at 28 and 42 Real 2015 US$ Per Barrel respectively, which represent a -56% and -49% difference from the central case. GHG emissions in Canada reached 728 Mt in 2030 in this scenario, 15 Mt lower compared to the central case.

Question by Brazil at Monday, 27 February 2017

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

Type: Before 28 February

Title: Target 2020

Canada is committed to reduce its emissions by 17% below 2005 levels by 2020, which means 622 Mt CO2e in 2020. However, according to FIGURE 5-1, Canada's emission projections in 2020 are above the target. Could Canada please elaborate on that?

Answer by Canada, Friday, 28 April 2017

Canada is taking action to reduce emissions in the near term, and implementing policies that will send longer-term signals to facilitate Canada's transition to a low-carbon economy. The Pan-Canadian Framework on Clean Growth and Climate Change, which was released in December 2016, announced significant new action to reduce Canada's emissions. The Pan-Canadian Framework focuses on Canada's 2030 target of 30% below 2005 levels of emissions, but includes mitigation actions that will reduce emissions in the near term. For example, there will be a price on carbon pollution across Canada by 2018, starting at $10 per tonne and increasing to $30 per tonne by 2020. Regulations for HFCs are under development, and will be finalized this year (2017). Regulations to reduce methane emissions by 40-45% from the oil and gas sector by 2025 will be phased-in starting in 2020. Consultations on a clean fuel standard are underway and regulations are expected to be

developed by 2019.

Additional policies, plans, and measures to reduce emissions have also been announced at the provincial level, such as Ontario's cap-and-trade system; and Alberta's Climate Leadership Plan, which includes actions to phase-out coal-fired electricity, introduces a carbon levy, and sets a 100Mt annual cap on oil sands emissions. These measures will decrease Canada's future GHG emissions further.

Some of these new measures are reflected in Canada's 2016 greenhouse gas emissions Reference Case report (released December 2016), which is an update of the GHG projections shown in Canada's BR2. This new report shows that Canada's GHG emissions in 2020 would reach 731 Mt (without LULUCF), a reduction of 37 Mt compared to the GHG projections presented in the BR2.

However, many of the policies and regulations outlined in the Pan-Canadian Framework will require time to develop, in consultation with provinces and territories and stakeholders, and implement. Some of these measures will achieve fewer emission reductions in the near term, but will enable Canada to transition to a low-carbon economy over the medium to longer term. The Pan-Canadian Framework includes commitments such as developing increasingly stringent building codes with that goal that provinces and territories adopt "net-zero energy ready" model codes by 2030; accelerating the phase out of traditional coal-fired electricity units to 2030, scaling up the use of renewable and non-emitting electricity and modernizing Canada's electricity system; and increasing stored carbon. The Government of Canada has announced unprecedented levels of investments, in green infrastructure and public transportation, and in clean technology and innovation, which are intended to support structural changes necessary to achieve deep emissions reductions. These investments include:

- A $2 billion Low Carbon Economy Fund to support new provincial and territorial actions to reduce emissions by 2030;
- $21.9 billion to support green infrastructure, including for electricity, renewable energy, reducing reliance on diesel in Indigenous, northern and remote communities, electric vehicle charging and natural gas and hydrogen refuelling stations, new building codes, and disaster mitigation and adaptation;
- $20.1 billion to support urban public transit; and,
- Over $2.2 billion in funding for clean technology initiatives, including nearly $1.4 billion in financing dedicated to financing clean technology firms. These investments support Canada's commitment in Mission Innovation to double investment in clean energy research, development and demonstration over the next five years.

Question by Brazil at Monday, 27 February 2017

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

Type: Before 28 February

Title: Table 6 (b) - BR1 and BR2

Canada reported table 6 (b) “Information on updated greenhouse gas projections under a ‘without measures’ scenario” in both BR1 and BR2. However, regarding table 6 (b), there are not GHG emissions projected for 2020 in BR2, while this estimates had been presented in BR1. Please, explain the reasons for not informing GHG emissions projected for 2020 in BR2.

Answer by Canada, Friday, 28 April 2017

UNFCCC Reporting Guidelines on National Communications indicates that at minimum, Parties shall report a ‘with measures’ scenario, and may report ‘without measures’ and ‘with additional measures’ scenarios.

In BR2, Canada did not report on the ‘without measures scenario’ due to difficulties associated with constructing such a scenario. Specifically, constructing the ‘without measures scenario’ would necessitate removing policies from Canada’s model which have already entered into force, and for which the impacts are already accounted for in Canada’s historical emissions estimates. Over time, this task would become progressively more challenging, as an increasing number of policies would need to be accounted for in this regard. As such, the decision was taken to discontinue the ‘without measures scenario’.

Question by Brazil at Monday, 27 February 2017

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

Type: Before 28 February

Title: Table 6(a): BR1 and BR2

In BR1, in table 6(a) “Information on updated greenhouse gas projections under a ‘with measures’ scenario”, the GHG emissions projected for 2020 were 608,300.00 kt CO2 eq (with LULUCF) and 735,300.00 kt CO2 eq (without LULUCF). In regards to BR2, the GHG emissions projected for 2020 were 767,500.00 kt CO2 eq (without LULUCF), but there is no projections regarding GHG emission with LULUCF.

Could Canada please explain why the projections without LULUCF in BR2 are above to those projections contained in BR1? And why GHG emission projected by 2020 with

LULUCF is not being reported in BR2?

Answer by Canada, Friday, 28 April 2017

First question:

In the BR1, Canada projected total emissions in 2020 at 734 Mt of CO2e, including a -28 Mt of CO2 e contribution from LULUCF. Excluding the LULUCF contribution, the BR1 projected total emissions for 2020 to be 762 Mt in 2020 compared to 768 Mt as reported in the BR2 (which did not include a LULUCF contribution). The 6 Mt difference can be explained by revisions to the GWP for some GHGs (in particular methane), differences in the macroeconomic assumptions that were used to make the projections, as well as by differences in the assumptions related to the policies and measures that were in place at the time of release of each BR.

Second question:

On page 25 of its BR2, Canada stated that “its accounting for managed forests will exclude the impacts of natural disturbances (such as fires and insect infestations) because these impacts are non-anthropogenic. Work is underway to develop LULUCF estimates that focus on anthropogenic emissions and removals as a basis for improved reporting and accounting for LULUCF.”

Canada decided not to include information on the contribution of LULUCF to its target or projections in its BR2 as work was still underway to improve the methodology to develop estimates.

Question by United States of America at Monday, 27 February 2017

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

Type: Before 28 February

Title: Mitigation measures not included in projections

The introduction to the BR highlights a number of prominent actions to reduce GHG emissions at the subnational level, such as the intent of Ontario and Manitoba to develop and link multi-sector GHG cap-and-trade programs with Quebec’s current program (Ontario, Manitoba, Quebec Memorandum of Understanding, p.2; pp. 13-14). However, a number of these mitigation measures (Figure 4-1) are not included in the analysis of projected progress toward achievement of Canada’s economy-wide GHG emission reduction target (Annex 3, Table A31). Has Canada conducted subsequent analysis of projected progress that includes

the implementation of multi-sector cap-and-trade programs in Ontario and Manitoba, as well as other significant mitigation measures described in the BR that were not included in the analysis?

Answer by Canada, Friday, 28 April 2017

Canada only includes measures that have been fully funded, legislated or where sufficiently detailed data exists that make it possible to add to the modeling platform. These projections do not take into account the impact of broader strategies or future measures within existing plans where significant details are still under development. Canada's projections in the BR2 reflect the federal, provincial and territorial mitigation measures, as listed in Table A31.

At the time of the BR2, the Ontario and Manitoba measures were announced, but were not ready to be modeled, as there was insufficient detail available to model them. Since the release of the BR2, Ontario has implemented its cap-and-trade system. Manitobans elected a new provincial government in spring 2016; the new government does not currently plan to implement a cap-and-trade system, but is conducting public consultations on climate change policies, including carbon pricing.

More recent analysis of projected progress includes Canada's 2016 greenhouse gas emissions Reference Case report (released December 2016) and the Pan-Canadian Framework on Clean Growth and Climate Change (released December 2016). Both account for projected reductions from Ontario's cap-and-trade linkage with the Quebec system, but do not include Manitoba due to the considerations discussed in the previous paragraph.

Question by Brazil at Monday, 27 February 2017

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

Type: Before 28 February

Title: CTF Table 3: current estimates

In "CTF Table 3 Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects", mitigation impacts were estimated only for 2020. Are there any current estimates of mitigation impacts since the respective years of implementation?

Answer by Canada, Friday, 28 April 2017

As per the common tabular format for the Biennial Report guidelines (decision 19/CP.18), mitigation impacts have been estimated for the year 2020 in CTF Table 3.

Question by Brazil at Monday, 27 February 2017

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

Type: Before 28 February

Title: CTF Table 3: Lessons learned and barriers

Regarding “CTF Table 3 Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects”, please, inform the reasons for not reporting quantified mitigation impacts for all mitigation actions reported. What are the difficulties to do so?

Answer by Canada, Friday, 28 April 2017

Canada has endeavored to provide mitigation estimates for its policies and measures wherever possible. There are a number of reasons why certain policies and measures do not include a mitigation impact.

In some cases, policies and measures were recently announced and there was insufficient information to estimate mitigation impacts in 2020. This is the case for several provincial measures; for example, the Government of Alberta has announced a Climate Leadership Plan, however details of the plan and estimated reductions were not available at the time of submission.

To develop Canada’s Second Biennial Report, federal government officials consulted with provinces and territories, and the content provided in Table 3 reflects input received for the provincial and territorial measures. Canada will continue to work with provinces and territories to enhance the completeness of information provided in future reports.

Question by United States of America at Monday, 27 February 2017

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

emission reduction target

Type: Before 28 February

Title: Sectoral definitions

In the tables on page 18 of the BR, why do the reported and projected emissions from agriculture differ from the top table (IPCC sector) to the bottom (economic sector)? For transportation? How are the sectoral definitions different?

Answer by Canada, Friday, 28 April 2017

In table 5-1, emissions are broken down by source under the IPCC classification, while in table 5-2, emissions are broken by the economic sector from which emissions originate. As a result, emission totals differ across categories, including agriculture and transportation. The relationship between economic sectors and IPCC categories is illustrated in the attached table (Table 2–15 from Canada's 2015 NIR).

Agriculture:

Under the IPCC classification, agriculture emissions include GHGs released from fertilizers and soil amendments (inorganic products) that are added to soils to improve crop production and from farm animals themselves (digestion) and their manure during animal production. In the economic sector classification, emission estimates additionally include on-farm energy use – energy combustion for operating farm equipment and heat agricultural buildings. In 2013, this translates to a difference of 15 Mt of CO2e between the two categories. This difference, which represents emissions from on-farm energy use, is allocated to the energy sector under the IPCC methodology.

Transportation:

Under the IPCC classification, Transport is defined as the emissions from the combustion and evaporation of fuel for all transport activity, regardless of economic sector. This includes road transportation, domestic aviation, domestic marine vessel activity, and off road transportation. Off road transportation includes pipeline transportation, ground activities in airports and harbors, and mobile fuel combustion in construction, agriculture and industrial applications. Under the economic sector classification, transportation also includes the same transport activity, but there are some differences in what off road transportation includes. Under this classification, off road transportation is limited to residential and commercial applications and pipeline transportation is assigned to Oil and Gas. Off road transport emissions from construction, agriculture and industrial applications are assigned to their respective sector. In 2014, the differences account for approximately 32 Mt of CO2e between the two categories.

Attachment: 2015NIR - PT1-Table 2-15l.pdf

Question by United States of America at Monday, 27 February 2017

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

Type: Before 28 February

Title: Forest fires

Is Canada considering policies to address the increased risk of forest fires?

Answer by Canada, Friday, 28 April 2017

Canada's ability to address the increased risk of forest fire rests on the significant efforts that are already being taken to address fires. These include the following:

- A comprehensive Canadian Wildland Fire Information System that provides data and maps of fire danger conditions across Canada.
- A Canadian Forest Fire Danger Rating System that is increasingly used by management agencies, forest companies and researchers to assess the role and impact of fire in forest ecosystems.
- A diverse set of fire models and applications developed by the Canadian Forest Service of Natural Resources Canada to help fire managers make better decisions about how and where to allocate firefighting resources.
- Programs to encourage individuals, businesses and communities to become involved in fire management, including through the FireSmart Canada program.

In June 2016, the Canadian Council of Forest Ministers, which is made up of federal, provincial, and territorial Ministers responsible for forests, acknowledged that the predicted increase in the frequency and severity of wildland fires as a result of climate change poses significant risks for public health and safety, and infrastructure. Ministers reaffirmed their commitment to established goals and objectives for wildland fire prevention, mitigation, preparedness and suppression, and endorsed the renewed Canadian Wildland Fire Strategy.

The Canadian Wildland Fire Strategy: A 10-Year Review and Renewed Call to Action outlines next steps to move forward on the Strategy's objectives, including enhanced collaboration and integration; increased investment in innovation; enhanced prevention and mitigation capability; enhanced commitment to FireSmart initiatives and programs; and increased preparedness capacity, including enhanced firefighting capacity.

In addition, the Pan-Canadian Framework on Clean Growth and Climate Change recognized the increased risk of forest fires and committed to measures to address this issue. These measures include investing in traditional and natural infrastructure to reduce disaster risks and protect communities from climate-related hazards such as forest fires. Also, Canada will provide support to Indigenous communities to address and adapt to climate change impacts, including related to forest fires.

Canada's 2017 federal budget announced $2 billion for a Disaster Mitigation and Adaptation Fund to support national, provincial and municipal infrastructure required to deal with the effects of a changing climate.

Question by United States of America at Monday, 27 February 2017

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

Type: Before 28 February

Title: Emissions from reservoirs

Page 9 of the BR says "Canada's electricity sector is already one of the cleanest in the G7, with 79% of electricity generated from non-emitting sources."

Are emissions from reservoirs considered in the context of hydroenergy?

Answer by Canada, Sunday, 30 April 2017

Emissions from hydroelectric reservoirs are reported under the Wetlands-Flooded Lands category in the Land Use, Land-Use Change and Forestry (LULUCF) Sector of Canada's national Greenhouse Gas inventory.

Question by United States of America at Monday, 27 February 2017

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

Type: Before 28 February

Title: Net or gross emissions

Page four of the BR says “In 2013, Canada’s total GHG emissions were estimated to be 726 Mt of carbon dioxide equivalent (Mt CO2 eq), excluding LULUCF estimates. Footnote: National totals based on both the IPCC and economic sectors exclude emissions and removals from LULUCF. This is because the LULUCF estimates include large highly variable annual fluctuations due to natural disturbances on managed forest land, notably fires. In 2013, the LULUCF sector represented a net removal of 15 Mt.” and further “Canada’s emissions in 2013 were 23 Mt (3%) below the 2005 level (Figure 2-3).”

Is the comparison between 2005 and 2013 emissions net or gross (i.e., does it factor in removals from LULUCF)?

Answer by Canada, Sunday, 30 April 2017

The comparison between 2005 and 2013 emission levels excludes emissions and removals from LULUCF.

Question by United States of America at Monday, 27 February 2017

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

Type: Before 28 February

Title: Trade-exposed and non-trade-exposed industries

Page four of the BR says “This report also presents emissions by the following economic sectors: Electricity; Transportation; Oil and Gas; Buildings; Emissions-Intensive and Trade-Exposed (EITE) Industries; Agriculture; and Waste and Others.”

Where do non-trade exposed industries fall within the categorization, given the definition of Emissions-Intensive and Trade-Exposed (EITE) Industries” on page 12 of the BR?

Answer by Canada, Sunday, 30 April 2017

Emissions-Intensive and Trade-Exposed (EITE) industries include the following industries: mining, smelting and refining (non-ferrous metals), pulp and paper, iron and steel, cement, lime and gypsum and chemicals and fertilizers.

All other industries are classified as light manufacturing, including non-trade exposed industries. Light manufacturing is included into the broader Waste and Others category. Details on the sector can be found on p.34 of the BR2 under Table A16: Waste and others: emissions (Mt CO2e).

Question by United States of America at Monday, 27 February 2017

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

Type: Before 28 February

Title: Use of carbon pricing

The BR describes a number of carbon pricing measures implemented at the sub-national level, including cap-and-trade programs and carbon taxes. Are data available on the percentage of GHG emissions nationally and at the provincial level subject to such mitigation measures, and the percentage of GHG emissions by economic sector or source category at the national level subject to such measures?

Answer by Canada, Friday, 28 April 2017

Data on coverage of carbon pricing measures is available at national and sub-national levels. Data on coverage by economic sector or source category, however, is not available. The table below provides data on the coverage, for 2016 and 2020, of provincial carbon pricing measures.

	2016	2020
British Columbia	70%	70%
Alberta	50%	78%
Ontario	N/A	82%
Quebec	85%	85%

These values are based on estimates from provincial governments. Taken together, these measures cover about 35% and 65% of Canada’s projected GHG emissions in 2016 and 2020 respectively.

The Pan-Canadian approach to carbon pricing will increase national coverage of carbon pricing measures starting in 2018. As a result, the national coverage will be higher than 65% in 2020.

Canada outlined the Pan-Canadian approach to pricing carbon pollution on October 3, 2016, and included it as one of four pillars in the Pan-Canadian Framework on Clean Growth and Climate Change released on December 9, 2016. Under this approach, all Canadian jurisdictions will have carbon pricing by 2018 that meets a national benchmark. The goal of this benchmark is to ensure that carbon pricing applies to a broad set of emission sources throughout Canada and with increasing stringency over time either through a rising price or declining caps.

Each province and territory has been given a choice in how to implement carbon pricing: they can put a direct price on carbon pollution or they can adopt a cap-and-trade system. For jurisdictions that set a direct price on carbon, the price is to start at a minimum of $10 per tonne in 2018 and rise by $10 per year to $50 per tonne in 2022. Provinces with cap-and-trade need (i) a 2030 emissions-reduction target equal to or greater than Canada's 30 percent reduction target and (ii) declining (more stringent) annual caps to at least 2022 that correspond, at a minimum, to the projected emissions reductions resulting from the carbon price that year in price-based systems. The Government of Canada will introduce an explicit price-based carbon pricing system that will apply in jurisdictions that do not meet the benchmark by implementing their own carbon pricing systems.

Data on GHG emissions coverage from the Pan-Canadian approach to pricing carbon pollution will be available as carbon pricing measures are implemented across jurisdictions.

Question by Australia at Monday, 27 February 2017

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

Type: Before 28 February

Title: International market mechanisms

Canada states it may consider using international mechanisms to meet its emission reduction targets. Could Canada please provide an update on its current position? If Canada intends to use international mechanisms, can Canada quantify the abatement required from these sources to meet its targets, on either an annual or cumulative basis?

Answer by Canada, Sunday, 30 April 2017

Canada is still considering the use of international market-based mechanisms to meet emission reduction targets under the Convention, subject to the establishment of robust systems that provide the certainty and confidence needed to deliver emissions reductions that meet Canadian standards. Canada will work with Parties under the UNFCCC to ensure effective systems that ensure environmental integrity and apply robust accounting are established.

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