



National Round Table
on the Environment
and the Economy

Table ronde nationale
sur l'environnement
et l'économie

**Response of the National Round Table
on the Environment and the Economy to its
Obligations under the *Kyoto Protocol*
*Implementation Act***

July 2011



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on the Environment
and the Economy

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Disclaimer: The views expressed in this document do not necessarily represent those of the organizations with which individual Round Table members are associated or otherwise employed. The NRTEE strives for consensus but does not demand unanimity. The NRTEE's deliberations included vigorous discussion and debate reflecting diversity of opinion.

TRANSMITTAL LETTER FROM THE INTERIM CHAIR AND PRESIDENT AND CEO

July 2011

Dear Minister:

The National Round Table on the Environment and the Economy (NRTEE or Round Table) is pleased to submit to you its fifth response to its obligations under the *Kyoto Protocol Implementation Act* (KPIA) with respect to the government's 2011 Climate Change Plan.

In carrying out its statutory obligations, the NRTEE has undertaken research, gathered information, and produced a written response as required. This activity focused on addressing Subsections 10(1)(b)(i) and 10(1)(b)(ii) of the *Act*. As allowed for under Subsection 10(1)(b)(iii), the Round Table has also reviewed and commented upon broader aspects of the issue as they relate to the government's Plan and Statement.

With this document, the NRTEE has fulfilled the filing requirements of Section 10 of the *Kyoto Protocol Implementation Act*.

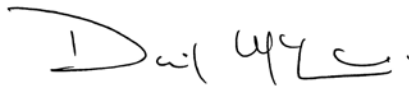
We wish to thank officials of Environment Canada, Natural Resources Canada, and Transport Canada and the Commissioner of the Environment and Sustainable Development for their cooperation in providing information that we used in the preparation of this response.

We hope this document will be useful to you, the government, and Parliament in considering climate change policies and greenhouse gas emission reductions.

Yours sincerely,



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THE NATIONAL ROUND TABLE ON THE ENVIRONMENT AND THE ECONOMY: ABOUT US

Emerging from the famous Brundtland Report, *Our Common Future*, the National Round Table on the Environment and the Economy (NRTEE) has become a model for convening diverse and competing interests around one table to create consensus ideas and viable suggestions for sustainable development. The NRTEE focuses on sustaining Canada's prosperity without borrowing resources from future generations or compromising their ability to live securely.

The NRTEE is in the unique position of being an independent policy advisory agency that advises the federal government on sustainable development solutions. We raise awareness among Canadians and their governments about the challenges of sustainable development. We advocate for positive change. We strive to promote credible and impartial policy solutions that are in the best interest of all Canadians based on research, stakeholder engagement, and consideration by Round Table members.

We accomplish that mission by fostering sound, well-researched reports on priority issues and by offering advice to governments on how best to reconcile and integrate the often divergent challenges of economic prosperity and environmental conservation.

The NRTEE brings together a group of distinguished sustainability leaders active in businesses, universities, environmentalism, labour, public policy, and community life from across Canada. Our members are appointed by the federal government for a mandate of up to three years. They meet in a round table format that offers a safe haven for discussion and encourages the unfettered exchange of ideas leading to consensus. This is how we reconcile positions that have traditionally been at odds.

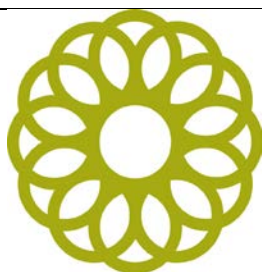
We also reach out to expert organizations, industries, and individuals to assist us in conducting our work on behalf of Canadians.

The *NRTEE Act* underlines the independent nature of the Round Table and its work. The NRTEE reports, at this time, to the Government of Canada and Parliament through the Minister of the Environment.

The NRTEE maintains a secretariat, which commissions and analyzes the research required by its members in their work.

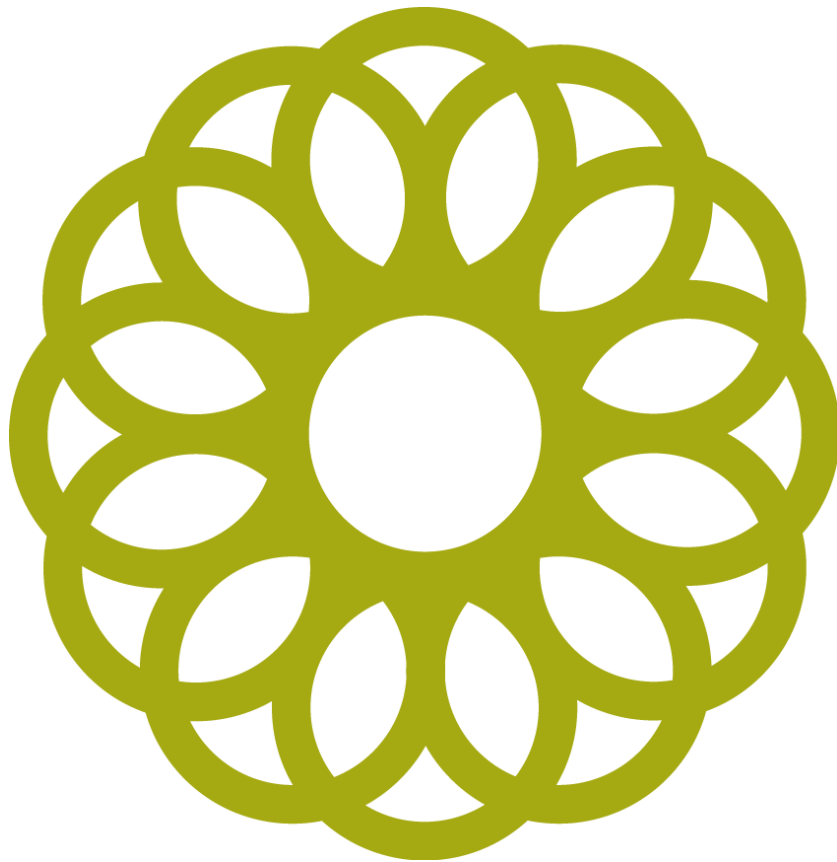
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1.0

/ INTRODUCTION



1.0 INTRODUCTION

On June 22, 2007, the *Kyoto Protocol Implementation Act* (Bill C-288, henceforth called KPIA) received Royal Assent.

The KPIA stipulates that the Government of Canada is obliged to prepare — on an annual basis — a Climate Change Plan describing measures and policies enacted by the government to “ensure that Canada meets its obligations under Article 3, paragraph 1, of the Kyoto Protocol” [Subsection 5(1)]. The government’s fifth Climate Change Plan was released on June 2, 2011.

Subsection 10(1) of the Act requires the National Round Table on the Environment and the Economy (NRTEE or Round Table) to, within 60 days of the publication of the Climate Change Plan stipulated in Subsection 5(1), perform the following with respect to the Plan:

- a) *undertake research and gather information and analyses on the Plan or statement in the context of sustainable development; and*
- b) *advise the Minister on issues that are within its purpose, as set out in section 4 of the National Round Table on the Environment and the Economy Act, including the following, to the extent that they are within that purpose:*
 - i) *the likelihood that each of the proposed measures or regulations will achieve the emission reductions projected in the Plan or statement;*
 - ii) *the likelihood that the proposed measures or regulations will enable Canada to meet its obligations under Article 3, paragraph 1, of the Kyoto Protocol, and*
 - iii) *any other matters that the Round Table considers relevant.*

This report represents the fifth response of the National Round Table on the Environment and the Economy to the requirements created by the *Kyoto Protocol Implementation Act* with respect to the government’s annual Climate Change Plan. In carrying out its statutory obligations, the NRTEE has undertaken research and gathered information. This activity focused on addressing Subsections 10(1)(b)(i) and 10(1)(b)(ii). As allowed for under Subsection 10(1)(b)(iii), the NRTEE has also reviewed and commented upon broader aspects of the KPIA as it relates to the government’s Plan.

In accordance with the stipulations of the Act, our Response has been provided to the Minister of the Environment. This fulfills the NRTEE’s current obligations under the KPIA.

The government’s 2011 KPIA Plan, *A Climate Change Plan for the Purposes of the Kyoto Protocol Implementation Act* – May 2011 (henceforth referred to as the 2011 Plan)¹, details expected emissions reductions resulting from specific measures to address climate change, as well as an integrated modelling analysis¹ that presents the reductions expected to accrue from the full suite of policies relative to a reference case, or *business as usual* emissions pathway.² The stated emissions reductions for individual policies outlined in the 2011 Plan are derived from initiative-level evaluations performed by Environment Canada, Natural Resources Canada (NRCan), and Transport Canada, while the integrated modelling figures are compiled by Environment Canada.

¹ Following a recommendation from the NRTEE

² Denoted in the 2011 Plan as “emissions excluding federal government measures.”

The analysis in this Response examines the likelihood that the stated emissions reductions attributed both to the full suite of policies and to individual policies accurately reflects the incremental emissions reductions we should expect to see as a result of their implementation.³ By extension, it also assesses the likelihood that emissions projections reflect the best expectations of actual greenhouse gas (GHG) emissions for the years 2008–2012, or the Kyoto period. It also assesses whether Canada will achieve its Kyoto Protocol GHG emissions target over the defined Kyoto Protocol period.

The 2011 Plan notes the NRTEE’s contribution from previous Responses and the government’s “commitment to transparency.” The NRTEE wishes to acknowledge at the outset that the government continues to make improvements to its forecasting and that the NRTEE is broadly supportive of the integrated modelling presented in the Plan. We hope that the 2011 Response from the NRTEE can further assist the government in its ongoing efforts to improve GHG forecasting and policy evaluation.

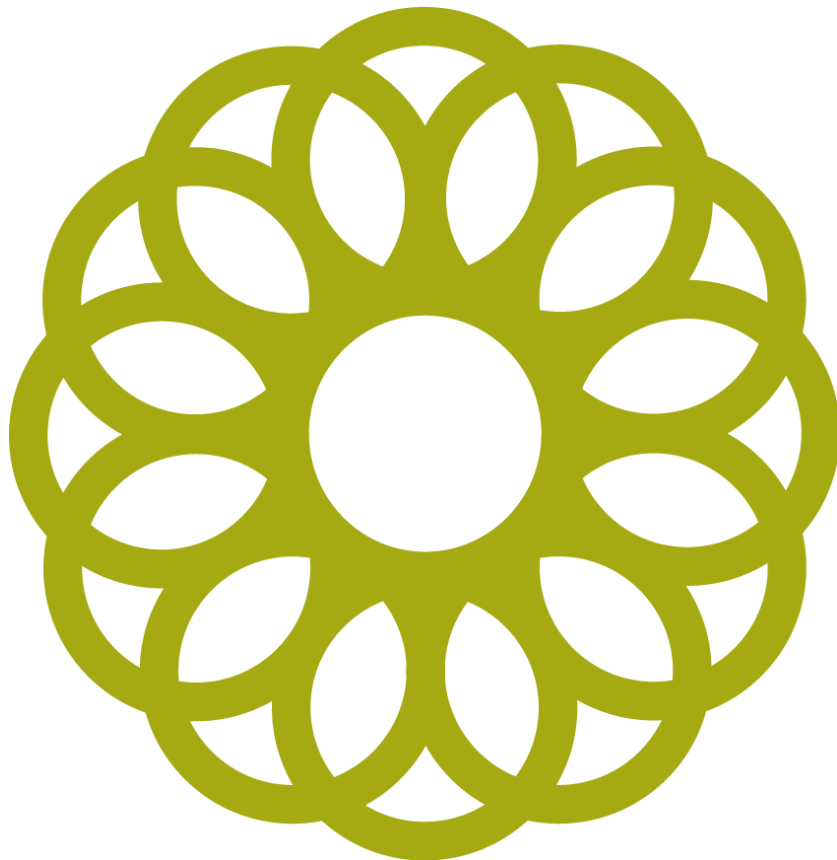
This Response is organized as follows: Section 2 describes the methodological approach taken by the NRTEE in its analysis. Section 3 provides an overview of the 2011 Plan itself. Section 4 highlights the key issues that emerged from our analysis and assessment. Section 5 evaluates the Plan in the context of Canada’s Kyoto Protocol obligations. Finally, Section 6 draws conclusions and provides recommendations. Analysis of individual policies and programs is provided in Appendix A.

³ Incremental emissions reductions are those that occur over and above what could reasonably have been expected to occur absent the policies or actions.



2.0

/ METHODOLOGY



2.0 METHODOLOGY

In its 2007 Response to its obligations under the KPIA, the NRTEE developed an analytical framework to evaluate the likelihood that the proposed measures or regulations would achieve the projected emission reductions in the Plan, and the likelihood that the proposed measures would allow Canada to meet its requirements under the Kyoto Protocol. The NRTEE used the same methodological approach in its 2008, 2009, and 2010 Responses, and continues to use this approach for the 2011 Response.

To produce the KPIA Response, the NRTEE assesses the assumptions and methodologies underlying estimates of emission reductions set out in the Plan. It compares the 2011 Plan to previous Plans to assess changes or improvements and the extent to which previous NRTEE recommendations have been met. The NRTEE's analysis is therefore qualitative, not quantitative. An alternative set of numbers for comparison are not produced given the limited time and resources available within the confines of the Act. While the NRTEE can conclude with confidence that stated emission reductions will likely or not likely be achieved, we cannot say definitively by how much or what the exact number might be, as this would require extensive alternative modelling and analysis. It is important to recognize that emission forecasting is not an exact science. Its utility lies particularly in the directions it conveys and policy choices it helps illuminate for decision makers.

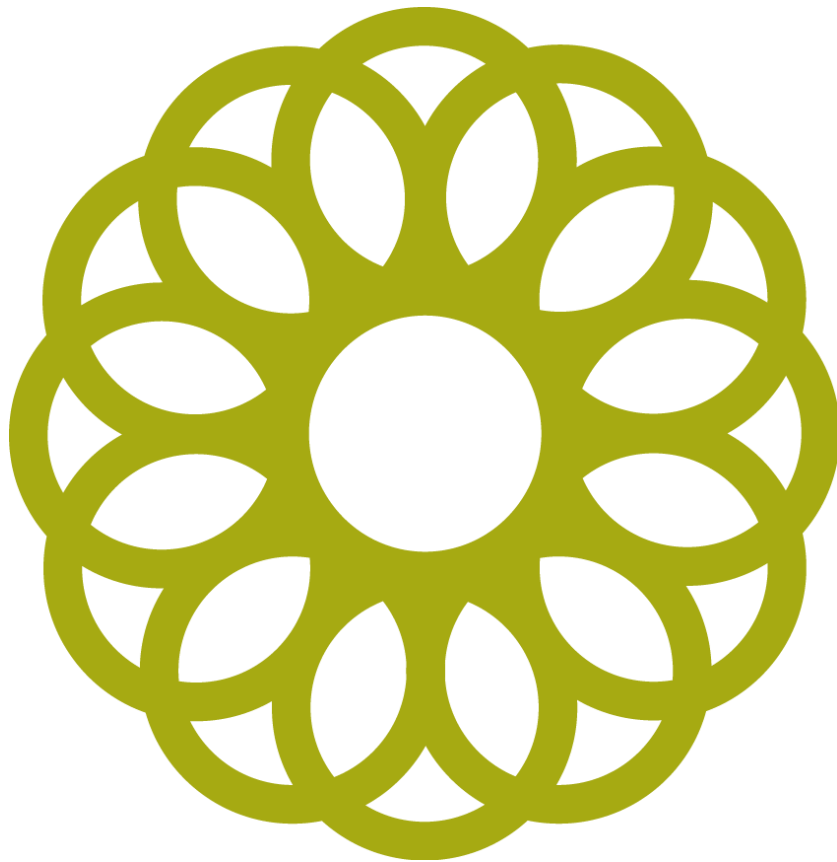
An initial assessment of the necessary (and available) analytical tools and methodologies led the NRTEE to conclude that the best approach to assessing *likelihood* was to determine whether the estimates provided were accurate descriptions of the outcomes that could reasonably be expected from the policies and program initiatives described in the government's Plan. Given the nature of the mandate and the timelines involved, the presentation of a qualitative sense of predictive accuracy as opposed to a complete modelling of policy outcomes has been chosen as most appropriate. As a result, the NRTEE has derived, where possible, a qualitative conclusion for each policy or measure based on the information presented in the Plan or provided by government officials in interviews. The evidence and underlying assumptions will suggest one of the following:

- An overestimate of eventual emissions reductions
- A reliable estimate of eventual emissions reductions
- An underestimate of eventual emissions reductions.

To be clear, the NRTEE is not in a position to provide a definitive statement on the actual emissions reduction level attributable to each policy and measure individually, or in total. Rather, we provide an assessment — on the basis of what is known about the underlying assumptions — of whether the measures and policies described in the Plan are likely to result in the suggested emissions reduction levels. All forecasting is uncertain and cannot be expected to be 100 per cent accurate. A qualitative assessment for significant programs or measures using this framework is provided in Appendix A.

3.0

/ THE 2011 PLAN



3.0 THE 2011 PLAN

DEFINITIONS FOR FORECAST SCENARIO LABELS

Two kinds of scenarios are relevant for estimating emissions reductions induced by policies:

1. The *business as usual — or reference case —* scenario is the forecast of emissions in the absence of additional policies. The integrated modelling in the 2011 KPIA Plan refers to this forecast as *emissions excluding federal government measures*.
2. The *policy scenario* is the forecast of emissions when a given policy or suite of policies is implemented. The integrated modelling in the 2011 KPIA Plan refers to this forecast as *emissions including federal government measures*.

The difference between the emissions forecast under these two scenarios is the *reductions* expected to be induced by the policies included in the *policy scenario*. The integrated modelling in the 2011 KPIA Plan reports this difference as *emissions reductions from federal measures*.

Overall, while some elements of the 2011 KPIA Plan are different from the 2010 Plan, the broad approach to estimating emissions reductions is unchanged. The 2011 Plan first presents projected emissions reductions from individual policies or programs, as developed by the department responsible for the measure. It also presents an overall projection from the full suite of measures; Environment Canada develops this estimate using an integrated modelling framework.⁴ The Plan uses this integrated modelling to assess Canada's expected compliance with the Kyoto Protocol.

The 2011 integrated modelling is very similar to that used in 2010, with only small changes in assumptions leading to corresponding small changes in the estimated emissions reductions, as illustrated in Table 1.⁵

Changes include the following:

- The 2011 Plan uses updated macro-economic assumptions to reflect new information and trends in oil and gas prices and economic growth in the integrated modelling forecasts. As the Plan states, "the short-term economic outlook underlying the emissions reference case is grounded in the GDP growth forecast in Budget 2011."ⁱⁱ Similarly, while the 2010 Plan relied on oil and gas projections from Natural Resources Canada, the 2011 Plan uses more recent projections from the National Energy Board (NEB).
- The 2011 Plan includes additional sensitivity analysis using the integrated modelling framework. The 2010 Plan included one alternative scenario that explored the implications of higher energy prices and higher economic growth. The 2011 Plan explores uncertainty in both energy prices and consumer responsiveness to government policies, and reports the highest and lowest emissions scenarios that result under different combinations of assumptions for these two drivers.

⁴ In the 2008 Plan, the Government introduced its integrated modelling framework for the purposes of the KPIA. The modelling is undertaken using Environment Canada's Energy-Economy-Environment Model for Canada, or E3MC. Under this approach, all policies are modelled together in the E3MC model, which simulates the supply, price, and demand for all fuels and also includes macroeconomic effects. Free-ridership, additionality, and interaction effects are addressed through integrated modelling.

⁵ Note that as stated in the Plan, unlike expected overall emissions levels (i.e., expected future GHG Inventories), actual emissions *reductions* can only be estimated, not measured, because they are relative to a hypothetical reference case or *business-as-usual* scenario.

Table 1: Differences in estimated emissions reductions for integrated modelling between 2010 and 2011 KPIA Plans (Mt)

Year	2008*	2009*	2010	2011	2012	Total	Comment (reason for differences / changes)
2011 estimates of total emission reductions using integrated modelling	2	4	5	7	9	27	Updated oil and gas forecasts (based on updated NEB forecast); updated economic growth assumptions (based on Budget 2011).
Change in integrated modelling estimates of emissions reductions 2010 to 2011	0	1	0	-1	-1	-1	

*estimated historical ("actual") emissions reductions

The 2011 Plan also updates some measure-by-measure forecasts, as illustrated in Table 2, omits some programs that had been discussed in previous plans, and introduces one new program. Key changes to the estimates of emissions reductions for specific policies and programs include the following:

- The 2011 Plan includes updated methodology with additional detail in appendix A describing how emissions reductions were estimated for each measure. Most notably, assumptions regarding the reference case (what would have occurred had the measure not been implemented) are specified clearly for each measure. Additional details such as emissions factors for renewable fuels used to estimate reductions under the regulations for renewable fuel content are also included in the 2011 methodologies.
- The 2011 Plan focuses exclusively on measures that lead to quantifiable emissions reductions during the Kyoto period. As a result, the 2011 Plan omits several programs discussed in previous Plans such as the Clean Energy Fund, which the 2010 Plan explored, but did not attribute any emissions reductions during the Kyoto period to the measure.
- The 2011 now Plan includes estimates of expected emissions reductions from the new Pulp and Paper Green Transformation Program, a program that supports innovation and environmentally friendly investments in pulp and paper mills in Canada. New data was available from this measure as mills signed funding agreements under the program for emissions reductions projects.

Table 2: Differences in reported emissions reductions for key program forecasts between 2010 and 2011 KPIA Plans (Mt)

Year	2008*	2009*	2010	2011	2012	Total	Comment (reason for differences / changes)
Energy Efficiency Regulations	0.00	-0.01	0.00	-0.03	-1.57	-1.60	Delay in ban on incandescent light bulbs
Regulating Renewable Fuels Content	0.00	0.00	-0.16	-0.68	-0.36	-1.20	Updated analysis under RIAS (regulatory impact analysis statement) process. Regulatory delay; changes in biodiesel timelines.
ecoENERGY for Renewable Power	-0.22	-0.41	-0.80	-0.40	0.00	-1.83	Delayed or cancelled projects, mostly wind generation projects, change in calendar year accounting
ecoENERGY Retrofit Initiative	-0.10	-0.01	-0.49	-0.64	-0.64	-1.88	Updated information on actual reductions based on NRCan program evaluation (fewer actual reductions than predicted).
ecoENERGY for Fleets	0.05	0.12	0.22	0.25	0.25	0.89	New data on number of program participants used that was not available for last KPIA Plan.
Regulating Cars and Light Trucks	0.00	0.00	-0.13	-0.58	-1.05	-1.76	Methodology adjusted slightly to be consistent with National GHG Inventory numbers.
Pulp and Paper Green Transformation	N/A	N/A	N/A	N/A	N/A	N/A	Program was not reported on last year because expected projects had not yet been registered.
Full suite of measures through integrated modelling	0	1	0	-1	-1	-1	Updated oil and gas forecasts (based on updated NEB forecast); updated economic growth assumptions (based on Budget 2011).

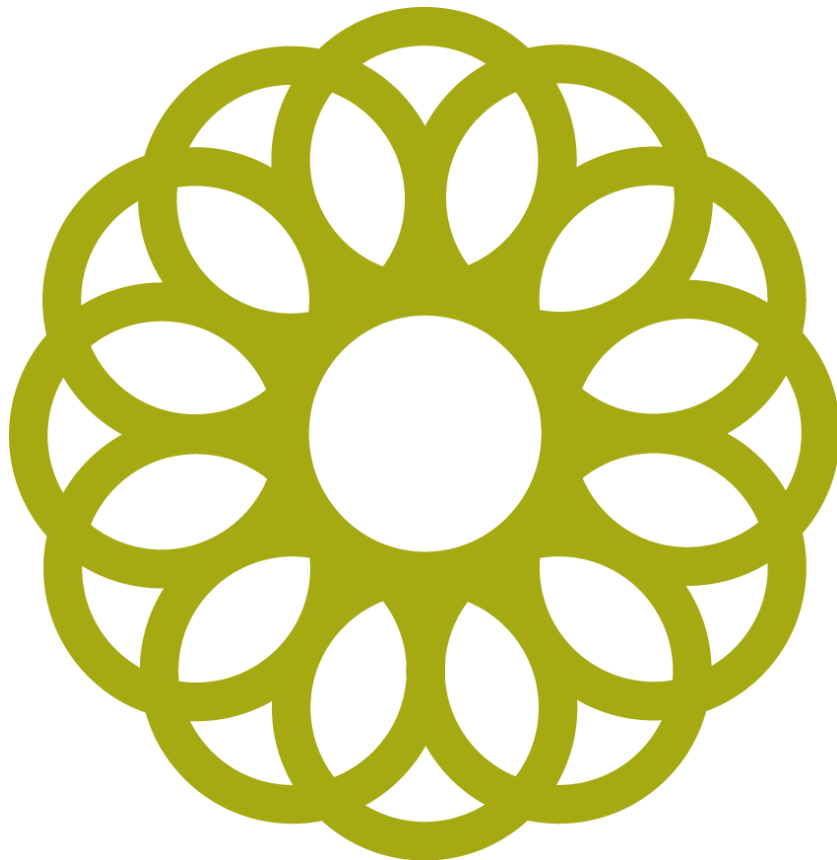
*estimated historical ("actual") emissions reductions

Finally, other key changes in the structure and presentation of Plan include the following:

- The 2011 Plan is more explicit in providing information specifically required under the KPIA for the assessment of each individual program or policy. For each measure assessed, the Plan includes additional information under the following headings: **Description of measure** — KPIA Section 5 (1) (a); **Date measure has or will come into effect** — KPIA Section 5 (1) (b) (ii); **Greenhouse gas emission reductions** — KPIA Section 5 (1) (b) (ii); **Implementation status and activities for the previous calendar year** — KPIA Sections 5 (1) (e) and 5 (1) (f).
- The 2011 Plan no longer includes expenditure data for any policies or programs. The 2010 Plan had included information on the costs of some programs. For example, the 2010 Plan stated, "the ecoENERGY for Buildings and Houses program is investing \$60 million over 4 years."ⁱⁱⁱ While the ecoENERGY for Buildings and Houses program is unchanged for 2011, this statement does not appear in the 2011 Plan.

4.0

/ ANALYSIS AND ASSESSMENT



4.0 ANALYSIS AND ASSESSMENT

SUMMARY OF KEY KPIA IMPROVEMENTS IN RESPONSE TO NRTEE RECOMMENDATIONS

The government has taken steps to improve its emissions forecasts substantially since the first KPIA Plan in 2007. We summarize key improvements in the Plans that have responded to NRTEE recommendations as follows:

In its 2007 Response, the NRTEE recommended that the government report on measures using an integrated approach to account for interaction effects between programs that could result in an overstatement of emissions reductions. Also in its 2007 Response, the NRTEE recommended that future KPIA Plans include greater transparency and clarity related to key assumptions and methods. Beginning with the 2008 and subsequent Plans, the government Plan has responded to these recommendations by using an integrated modelling framework and including greater detail on its modelling assumptions.

In its 2008 Response, the NRTEE recommended that only impacts of announced and reasonably expected provincial actions be included in KPIA modelling. In its 2009 Response, the NRTEE recommended that the Plan estimate emissions reductions in terms of projected changes in Environment Canada's GHG Inventory. The NRTEE also recommended that future KPIA Plans reflect both emissions forecasts and actual emissions data documented in the Environment Canada GHG Inventory. The government responded to these recommendations in its 2010 Plan. The integrated modelling in the 2010 Plan used a consistent definition for an emission reduction, namely the difference between a forecast *including* federal policies and programs, and a forecast *excluding* these measures. This approach also served to more transparently account for the effect of provincial policies. Actual emissions were shown for 2008 and compared to the integrated modelling forecasts, providing context for actual emissions in the Kyoto period.

In its 2010 Response, the NRTEE recommended that emissions reductions for each individual measure be consistently estimated as the difference in emissions between a policy case and a reference case. The 2011 Plan now includes assumptions for a reference case for each measure. The NRTEE made this recommendation as an approach to accounting for additionality in the measure-by-measure estimates. While assumptions for the reference case are still not fully consistent throughout all estimates in the Plan, estimates for some programs, like the ecoENERGY for Retrofit Initiative, have for the first time accounted for additionality.

The 2010 NRTEE Response also recommended that the government could further improve transparency by making publicly available the details of both a reference case and policy scenario in the context of Canada's longer-term emissions targets. The NRTEE notes that in January 2011, Environment Canada published overviews of reference case and policy scenarios to 2020 on its www.climatechange.gc.ca website.

The NRTEE's 2011 analysis and assessment examines key improvements in the 2011 KPIA Plan as well as remaining issues in the forecasts.

Improvements in the 2011 Plan

The 2011 Plan improves on the previous Plan and explicitly addresses some of the NRTEE's 2010 recommendations. Overall, the 2011 Plan is more transparent than the 2010 Plan, and the changes made since 2010 improve the reliability of some estimates and provide greater clarity. We outline these improvements here, highlighting a general improvement in transparency across all the measure-by-measure estimates as well as specific improvements in two individual measure-by-measure estimates.

The methodology presented in the Plan to estimate measure-by-measure emissions reductions is more transparent.

Language throughout the measure-by-measure forecasts clearly defines the reference case assumptions — that is, what the analysis assumes would have occurred in the absence of any policy. While these assumptions are not always sufficiently supported by evidence, they are more transparent. We discuss specific reference case assumptions below.

Additional detail in the parameters used to estimate measure-by-measure reductions further improves transparency. For example, in assessing the impact of *Renewable Fuels Regulations*, the 2011 Plan includes more detail with regard to emissions factors used to calculate impacts, and the Plan acknowledges that some level of imported biofuels from the U.S. would be required to meet the regulation during the first three years to allow for growth in Canadian capacity. The 2010 NRTEE Response raised the issue of accounting for trade effects in calculating emissions reductions. Similarly, the 2011 Plan provides more detail on the capacity factors, expected production, and expected emission reductions under the ecoENERGY for Renewable Power program.

The 2011 Plan improves the reliability of estimated emissions reductions from the ecoENERGY Retrofit Initiative using the results of *ex-post* (after the fact) program effectiveness evaluation to better account for additionality and consumer behaviour, as recommended by the NRTEE in previous KPIA Responses.

For the ecoENERGY Retrofit Initiative, the Methodological Annex in the 2011 Plan notes that “a 2010 evaluation that covered the elements of this program concluded that net-to-gross ratios for their impacts ranges from 0.26 to 0.84.”^{iv} The net-to-gross ratio measures the degree to which previous estimates predicted actual emissions reductions. This evaluation^v assessed the impacts of free-ridership, rebound, and additionality on the effectiveness of the retrofit program, as the NRTEE recommended in each previous KPIA Response. It indicated that these factors led to fewer emissions reductions under the program than previously expected. As a result, estimated emissions reductions from this program were revised down, and the NRTEE considers the updated forecast to be a reliable estimate of the program impacts.

The updates to the estimates for the ecoENERGY Retrofit Initiative demonstrate the value of on-going evaluation of program effectiveness. The government could use these evaluations both to refine emissions reduction estimates for existing programs and to inform estimates for future initiatives. For example, the NRTEE’s assessments of the ecoENERGY Retrofit program in previous KPIA Responses referenced program effectiveness analysis from the similar EnerGuide for Houses program^{vi} as evidence that the estimates for the ecoENERGY Retrofit Initiative should account for free-ridership and rebound effects. Similarly, the 2011 Plan documents the use of an *ex-post* program evaluation for assessing forecasts under the ecoAUTO Rebate Program. Closing the loop between program evaluation and previous forecasts of expected emissions reductions in this fashion leads to improvements of forecasting processes over time.

The 2011 Plan provides an alternative methodology for estimating emissions reductions from an individual measure in the assessment of the *Passenger Automobile and Light Truck GHG Regulations*.

In previous KPIA Responses, the NRTEE suggested that the integrated modelling framework could be used to further explore the incremental effects of individual policies and programs. The NRTEE proposed that integrated modelling could assess how much emissions would increase if each individual measure were removed from the full suite of programs and policies in order to assess its incremental contribution to emissions reductions. The 2011 KPIA Plan explores this approach in assessing the *Passenger Automobile and Light Truck GHG Regulations* as an alternative assessment in the Methodological Annex of the Plan.

ENVIRONMENT CANADA PUBLISHED THE EMISSIONS PROJECTIONS UNDER ITS REFERENCE CASE AND POLICY SCENARIOS TO 2020

In its 2010 Response, the NRTEE recommended that the government “make publicly available the details and underlying assumptions for both a consistent reference case and a policy scenario.” While not part of the KPIA process, Environment Canada responded to this recommendation by making these two scenarios available on its www.climatechange.gc.ca website in January 2011. While the scenarios do not include sector- and regional-level detail, they do increase transparency in the government’s assessment of its climate change policies. These scenarios also respond to NRTEE recommendations by providing longer-term estimates of Canadian emissions and emissions reductions under current federal policies.

Remaining Issues in the 2011 Plan

A key issue identified in previous NRTEE Responses remains in the 2011 Plan. While some of the measure-by-measure estimates have been improved in 2011, the NRTEE notes that questions remain regarding the degree to which estimates account for *additionality* (estimates for some measures do while others do not). Partially as a result of these issues, substantial inconsistency emerges in the Plan between measure-by-measure estimates and the integrated modelling; while some inconsistency should be expected, the measure-by-measure estimates aggregated together result in approximately double the emissions reductions estimated using the integrated modelling.

While the 2011 Plan better defines reference case assumptions for each measure-by-measure estimate, for some measures — including the ecoENERGY for Renewable Power, ecoENERGY for Buildings and Houses, ecoENERGY for Industry, and Pulp and Paper Green Transformation programs — the Plan requires further evidence to support these assumptions.

In its 2010 KPIA Response, the NRTEE stated:

In order to ensure consistency across all forecasts in the KPIA Plan, including the integrated modelling and measure-by-measure assessments from various government departments, the NRTEE recommends: a) that emissions reductions projections for each program and measure in the Plan be consistently estimated as the difference in expected GHG inventory emissions between a reference case without the measure in place, and a policy case with the measure in place; and b) that consistent assumptions be used to define the reference case across all estimates.

As noted above, the 2011 Plan has partially met this recommendation. It now explicitly and consistently estimates emissions reductions as the difference in estimated emissions under a reference case and policy case, meeting the first part of the NRTEE recommendation. However, assumptions underlying the reference cases used in some of the measure-by-measure estimates must be further supported with evidence in the Plan. In the ecoENERGY for Renewable Power program, for example, the Plan explicitly states, “The program considers that all projects funded are incremental and would not have been done without program support.”^{vii} As the NRTEE noted in its 2010 Response, this assumption is likely not reliable. Five projects, accounting for 370 megawatts (MW), received financing through the program despite being commissioned prior to the announcement of the program.^{viii} Further, provincial and municipal policies and programs also provide support to renewable power projects. As a result, some additionality concerns remain in this estimate, making it a likely overestimate of emissions reductions from this measure. Appendix A provides more detailed assessment of estimates for individual policies and programs.

DEFINITIONS FOR ADDITIONALITY AND REBOUND EFFECT

Additionality issues refer to challenges in differentiating actions by firms and households to reduce emissions that are induced by a policy from actions that they would have taken even if that policy had not been implemented. Some firms and households choose to reduce their emissions based on existing preferences and market signals, while others would take action only if and when the policy is in place. For example, some households would install new windows even if the government did not provide incentives for making homes more efficient. Estimated emissions reductions from such a government incentive should include only the incremental, or *additional*, households that choose to make the renovation as a result of the government program to avoid double counting.

The related problem of *free-ridership* arises when stated reductions include the actions of industry and households that are rewarded but not influenced by the policies. Free-ridership occurs when subsidies are paid to all firms or individuals that take an emissions-reducing action, regardless of whether they did so because of the subsidy. Those who would have taken the action regardless are termed free riders, and their behaviour has already been accounted for in the reference case. Not correcting for this issue implies that induced emissions reductions will be over-estimated by the proportion of free-riders.

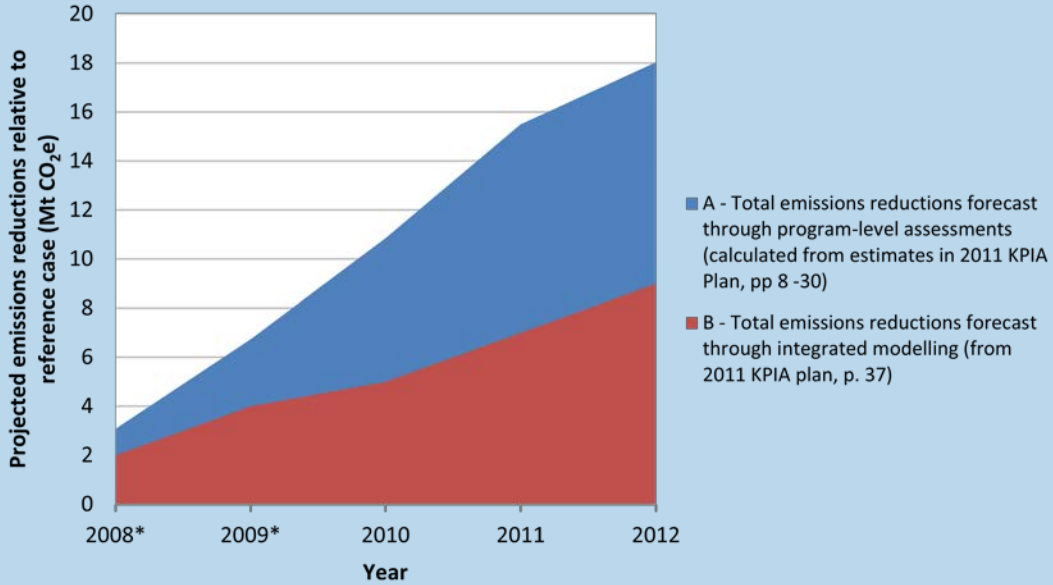
The *Rebound Effect* describes the increased use of a more efficient product. For example, more energy efficient cars are cheaper to drive and so people may drive them more.

Similar to previous NRTEE KPIA responses, significant differences exist between the total emissions reductions predicted on a measure-by-measure basis and the emissions reductions predicted through integrated modelling. The NRTEE supports the forecasts from the integrated modelling in the Plan as reliable, as they account for policy interaction, additionality, and rebound effects. However, when summed together, we would expect estimates from the individual policies and programs to lead to comparable estimated emissions reductions with those reported from the integrated modelling approach. Part of this discrepancy results from the additionality and free-ridership issues in some of the measure-by-measure estimates.

Figure 2 illustrates the difference between the two sets of emissions reduction projections based on a comparison of the two approaches to estimation. Curve A in the figure is calculated by adding up the reductions attributed to each individual measure in the measure-by-measure estimates contained in the 2011 Plan. Collectively, these estimates suggest approximately 18 megatonnes (Mt) of emission reductions for 2012 are attributed to the full set of programs and policies included in the 2011 Plan. Curve B represents the estimated overall emission reductions from all programs and policies in the Plan as calculated by the integrated modelling. As the figure illustrates, the 2011 Plan forecasts that when implemented together, all the programs and policies in the Plan will result in about 9 Mt of emissions reductions in 2012. By the end of the Kyoto period, the cumulative emissions reductions are forecast to be 54 Mt on an individual measure-by-measure basis but only 27 Mt on an integrated modelling basis.

Figure 2: Comparison of Total Emissions Reductions Attributed to Individual Measures in the 2011 KPIA Plan and Emissions Reductions of these Measures Projected Using Integrated Modelling, 2008–2012

(Data from or derived from 2011 KPIA Plan; both estimates include all policies and programs reported in the 2011 Plan)



*estimated historical (“actual”) emissions reductions

	2008*	2009*	2010	2011	2012	Total
■ A - Total emissions reductions forecast through program-level assessments (calculated from estimates in 2011 KPIA Plan, pp 8–30)	3	7	11	15	18	54
■ B - Total emissions reductions forecast through integrated modelling (from 2011 KPIA plan, p. 37)	2	4	5	7	9	27

As set out in previous Responses, the NRTEE acknowledges that some of this discrepancy between the integrated modelling and the program-by-program analysis is unavoidable due to *policy interaction effects*. In particular, as noted by Environment Canada, the integrated modelling simultaneously accounts for changes in the emissions intensity of energy supply as well as changes in energy consumed, while the measure-by-measure analysis isolates these effects, not taking both into account. For example, the ecoENERGY for Renewable Power program will likely reduce the emissions intensity of electricity supply. As a result of this change, the effect of other programs that reduced energy consumption — for example, of the energy efficiency regulations — would be dampened. While the integrated modelling would account for this effect, the measure-by-measure assessments do not, thereby likely overestimating the expected emissions reductions estimated for some individual measures.

Further, some differences between the forecasts could result from inconsistent assumptions with respect to international trade. The measure-by-measure estimate for the ecoENERGY for Renewable Power program assumes that all new generation displaces existing generation, while the integrated modelling accounts for electricity trade, so new generation could also displace imported power or additional generation could be exported. Given the uncertainty with this issue, either assumption could be legitimate, but the assumption will affect the estimates.

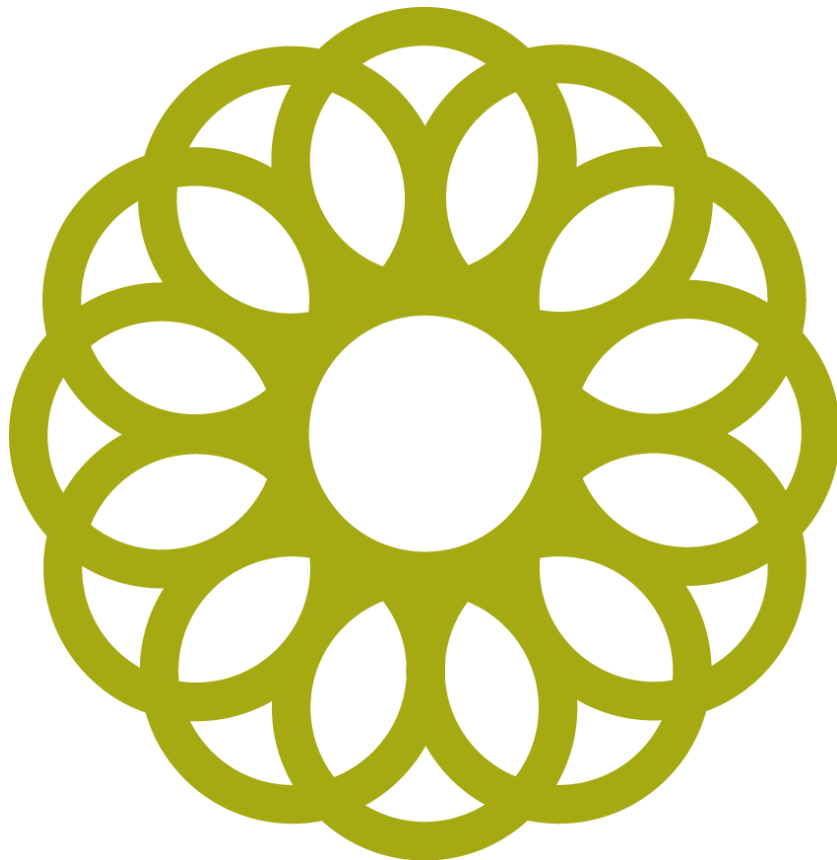
Overall, the discrepancy between the integrated modelling and the measure-by-measure estimates is too large to result only from policy interaction effects. The NRTEE analysis of the estimates for individual policies and programs in the Plan — as presented in Appendix A — suggests that a substantial share of this discrepancy is likely also due to inconsistent consideration of free-ridership, other additionality issues, and rebound effects, which lead to likely overestimates of emissions reductions for some individual measures.⁶

⁶ It is important to recognize that individual programs and policies can have multiple policy objectives beyond emissions reductions, including providing public information, inciting technology adoption, or acting as a catalyst for other policy goals. In the context of the KPIA, however, we are assessing only one projected outcome of policies — forecasted emissions reductions.



5.0

/ KYOTO OBLIGATIONS



5.0 KYOTO OBLIGATIONS

The KPIA requires the NRTEE to assess the likelihood that the proposed measures will enable Canada to meet its Kyoto obligations. According to the KPIA Plan, “Domestic emissions are expected to be some 805 Mt above Canada’s Kyoto Protocol target of 2792 Mt during the 2008–2012 period.”^{ix} The NRTEE considers this estimate reliable. Table 3 illustrates the gap between the Kyoto targets and expected emissions.

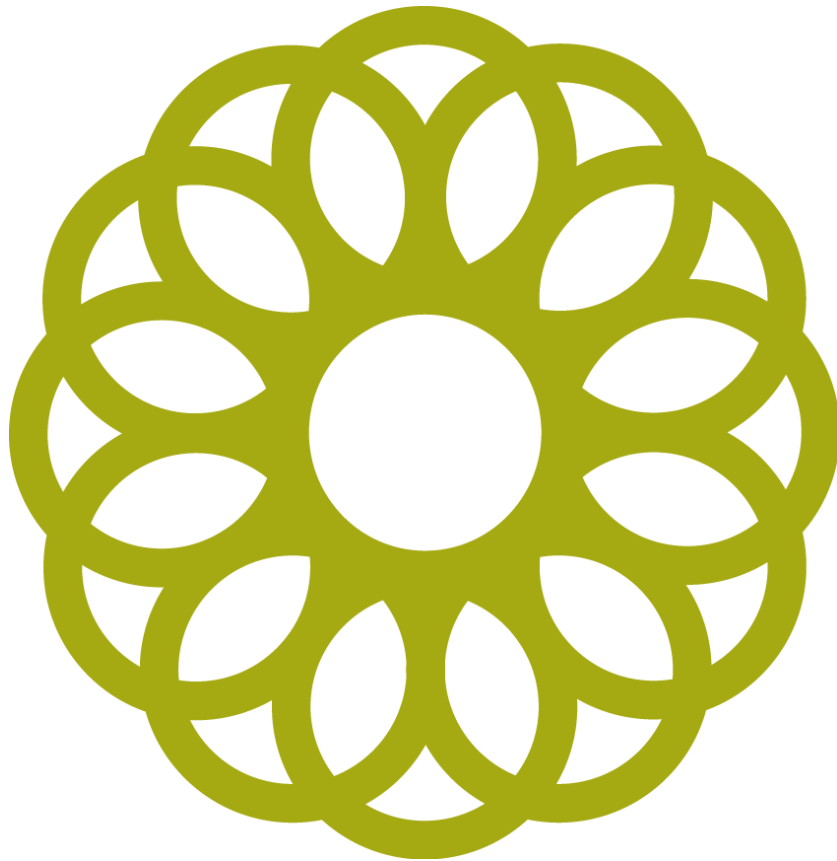
In order to be considered in compliance with the Kyoto Protocol in terms of total emissions, Canada’s emissions must not exceed its total assigned commitment, except where offset through the use of approved flexibility mechanisms such as the Clean Development Mechanism. A final conclusion on Canada’s compliance or non-compliance with its Kyoto Protocol obligations will have to wait until after 2012 when final, actual emissions are inventoried and any use of international flexibility mechanisms is reconciled.

Table 3: Annual Allowable Units, Projected Emissions, and Excess Emissions over the First Commitment Period (2008–2012) Under the Kyoto Protocol^x

Year	2008	2009	2010	2011	2012
Allowable emissions under the Kyoto Protocol, 2008–2012 (Mt)	2792				
Kyoto Target (2008–2012 average) (Mt)	558				
Actual Emissions Projections (Mt)	732	690	721	723	731
Average Kyoto Gap (Mt/year)	161				
Commitment Period Projected Excess Emissions (Mt)	805				

6.0

/ CONCLUSIONS AND RECOMMENDATIONS



6.0 CONCLUSIONS AND RECOMMENDATIONS

The NRTEE's analysis of the 2011 KPIA Plan leads to several conclusions.

First, similar to its 2010 Response, the NRTEE considers Environment Canada's integrated modelling in the Plan to provide a reliable estimate of emissions and emissions reductions attributable to federal programs and policies within the Kyoto period.

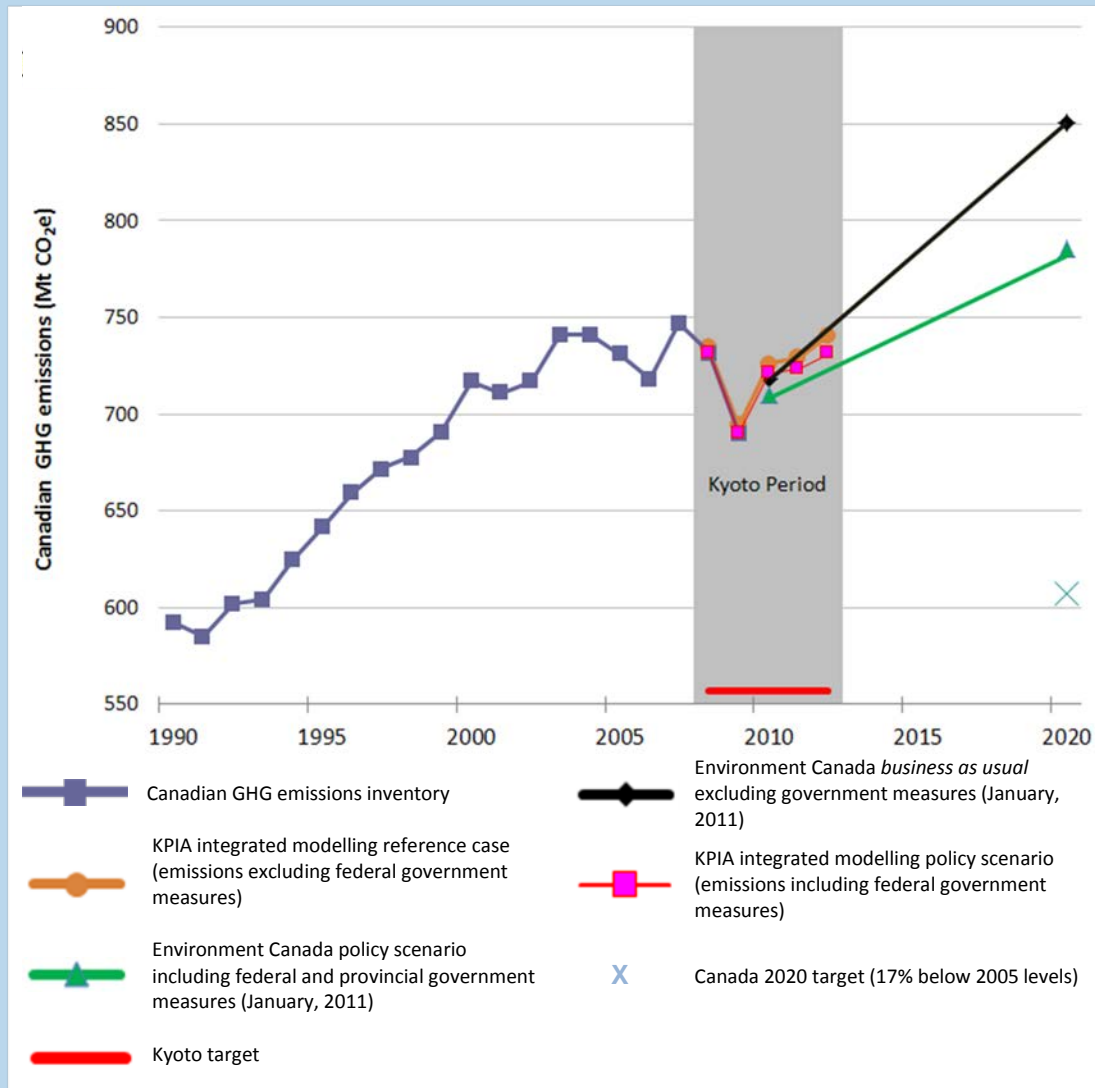
Second, the 2011 Plans shows improved transparency in the data and methodologies presented. Assumptions used in the estimation of actual and projected GHG emissions are more explicitly stated. The Plan also shows some improvement in estimates for specific programs such as the ecoENERGY Retrofit Initiative. The improved forecast for this program is linked to an independent program effectiveness evaluation that explored the impact of free-ridership and additionality. This kind of *ex-post* analysis is a useful approach to improving both forecasting practices and program design and could be applied to other programs.

Third, similar to previous Plans, some estimates for individual measures do not provide sufficient justification for reference case assumptions used in the estimates. The NRTEE's analysis suggests these assumptions result in overestimates in projected emissions reductions for some individual measures and as a result, inconsistency between the integrated modelling and the measure-by-measure estimates in the Plan. While some differences should be expected, the size of the discrepancy between the integrated modelling and the measure-by-measure projections is likely a result of this issue in some measure-by-measure estimates.

Fourth, as stated in previous Responses, the NRTEE continues to believe there is value in broadening the process of evaluation to longer-term assessments. Over the longer term, similar kinds of transparent processes for comparing expected and actual emissions reduction from government programs and policies can help Canada track its progress as it seeks to achieve its 2020 emissions reductions target. As a step toward greater accountability with respect to longer-term targets, the NRTEE recognizes and applauds the government's progress in making emissions forecasts to 2020 publicly available.

Figure 3 below shows the KPIA integrated modelling forecasts as well as the government's 2020 forecasts. Within the Kyoto period, it highlights projected emissions with and without federal programs and policies. The difference between these two trajectories is the projected emissions reductions attributable to federal policies. As the integrated modelling in the Plan indicates, Canada will likely not achieve its Kyoto target through domestic emissions reductions. The figure also highlights the government's longer-term forecasts, both excluding government policy, and including both federal and provincial measures. As the figure illustrates, Canada will likely not achieve its 2020 emissions reduction target just with the suite of policies and programs currently being implemented.

Figure 3: Comparison of GHG Emissions Pathways under Various Scenarios

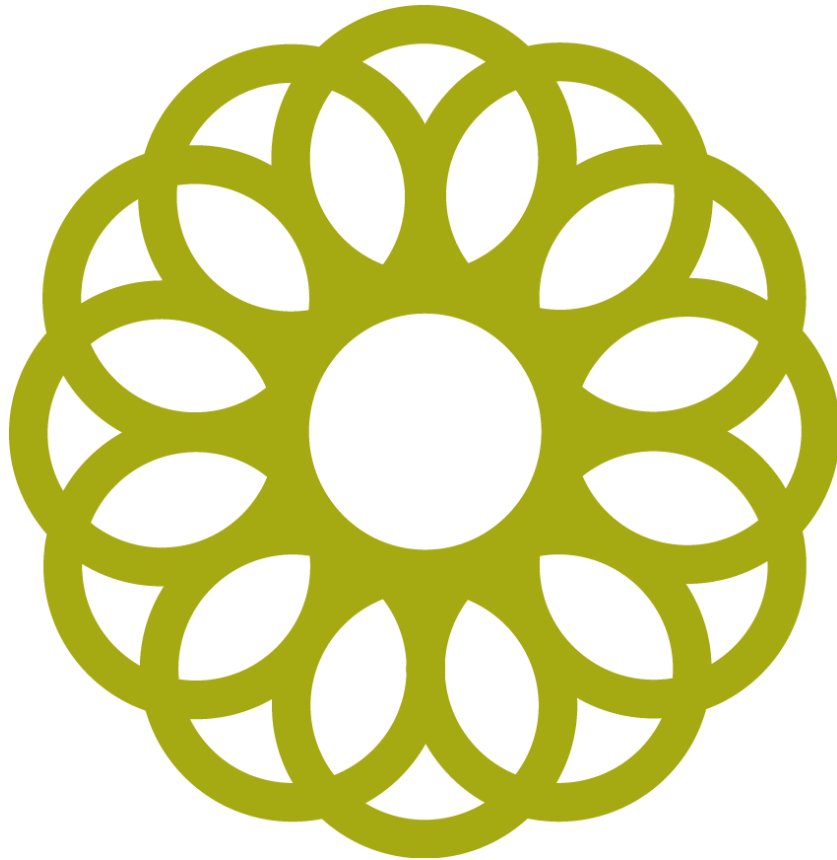


The NRTEE recognizes the continued improvement in forecasting and transparency in the KPIA Plans. These improvements allow for more effective evaluation of policies and programs. To continue this cycle of improvement, the NRTEE makes the following recommendations:

1. To improve the consistency between the integrated modelling estimates and measure-by-measure estimates of emissions reductions, the NRTEE recommends that consistent, reliable, and substantiated assumptions be used to define the reference case across all estimates. In particular, if the reference case assumption is that none of the mitigating actions would have occurred in the absence of the policy, the Plan should present sufficient evidence to substantiate this assumption. This recommendation applies in particular for the ecoENERGY for Renewable Power, ecoENERGY for Buildings and Houses, ecoENERGY for Industry, and Pulp and Paper Green Transformation programs.
2. To acquire additional evidence regarding the effectiveness of policies and programs, the NRTEE recommends the government implement additional *ex-post* (after the fact) policy evaluations. Studies like the analysis implemented by NRCan to explore the actual emissions reductions realized from the ecoENERGY Retrofit Initiative can provide valuable insights as to how the policy has performed historically. As existing programs wind down, these insights can be used to improve estimates of likely future reductions, and can also inform future policy design choices by exploring the effectiveness and cost-effectiveness of existing programs.
3. To help Canada continue to be accountable to its emissions reductions objectives, the NRTEE recommends the government continue to broaden its public process for evaluating its climate policies over the long term. The NRTEE applauds the government for publishing its 2020 emissions forecasts in January 2011. The government should continue to publish updated forecasts as it implements new policies and programs and moves toward long-term emissions reductions.
4. To move forward with a coordinated Canadian climate strategy, the NRTEE recommends that consideration be given to how federal, provincial/territorial, and municipal policies can be better coordinated to complement and reinforce current and future efforts. Assessing the effectiveness of provincial/territorial/municipal policies can help highlight the important role of these policies in contributing to Canada's national emissions reductions objectives and inform future federal action in support.

7.0

/ APPENDIX A: ANALYSIS AND ASSESSMENT OF INDIVIDUAL MEASURES



APPENDIX A: ANALYSIS AND ASSESSMENT OF INDIVIDUAL MEASURES

The 2011 KPIA Plan provides a breakdown of the expected emissions reductions associated with each individual policy or program expected to have a role in reducing GHG emissions. The NRTEE's mandate includes examining the likely accuracy of these measure-level estimates in order to determine the likelihood of each program achieving the stated emissions reductions.

The measure-by-measure estimates in the 2011 Plan are broadly very similar to those in the 2010 Plan. Rather than reproducing the detailed analysis presented in the 2010 Response for all individual measures (as many remain unchanged), the analysis in this Appendix instead focuses on key changes in the 2011 Plan. The tables below provide an overview of estimates for individual programs and policies that have been forecast to lead to at least 1 Mt of emissions reductions within the Kyoto period. For each of these measures, the tables show the total cumulative emissions reductions expected over the KPIA period as reported in the Plan, as well as the magnitude of the change from the 2010 Plan. It presents the NRTEE's overall assessment of the reliability of each estimate. Each table also documents changes in the methodologies from 2010 to 2011 and assesses whether these changes have led to improvements in the estimate with relevant commentary. For additional details, please refer to appendix A of the 2010 Response of the National Round Table on the Environment and the Economy to its Obligations under the *Kyoto Protocol Implementation Act*.

Energy Efficiency Regulations				
Cumulative actual and predicted emissions reductions (2008–2012) reported in 2011 Plan	Change in reported cumulative 2008–2012 emissions reductions from 2010 Plan	Predictive accuracy	Key determinant of accuracy	Change in methodology
3.39	-1.60	Likely overestimate.	No accounting for rebound effects.	No significant changes in methodology.
Comment on estimate reliability: Changes from 2010 Plan result from the fact that regulatory amendments, including a proposed ban on incandescent light bulbs, were delayed. This change in timing altered emissions reductions estimates for 2012. As detailed in previous NRTEE responses, not accounting for the rebound effect likely leads to a small (<10%) over-estimate, although emissions reductions are likely to lie within the specified range.				

Regulating Renewable Fuels Content				
Cumulative actual and predicted emissions reductions (2008–2012) reported in 2011 Plan	Change in reported cumulative 2008–2012 emissions reductions from 2010 Plan	Predictive accuracy	Key determinant of accuracy	Change in methodology
2.98	-1.20	Likely reliable estimate.	Consistency of estimates between KPIA Plan and RIAS.	No significant changes in methodology.
<p>Comment on estimate reliability: The 5% renewable fuel in gasoline requirement was delayed 3.5 months —from September 2010 to December 15, 2010 — resulting in a decrease in expected emissions reductions for 2010. The NRTEE notes that expected emissions reductions for 2011 and 2012 are lower than those for the same programs in the February 26, 2010, RIAS from Environment Canada. Some uncertainty remains in the reliability of the estimate as a result of uncertainty in trade in renewable fuels. As emphasized in the NRTEE 2010 Response, emissions reductions will depend on the proportion of the requirement met through imports and the degree to which increased renewable fuel production displaces existing and forecast conventional fuel production. Finally, in June 2011, Environment Canada announced that Quebec and the Atlantic provinces would be exempt from the biodiesel requirement until December 31, 2012.^{xi} This change occurred after the KPIA Plan was released and is therefore not captured in the KPIA estimate. While this change will likely affect the emissions reductions expected from this policy in the future, it does not change the reliability of the 2011 estimate.</p>				

ecoENERGY for Renewable Power				
Cumulative actual and predicted emissions reductions (2008–2012) reported in 2011 Plan	Change in reported cumulative 2008–2012 emissions reductions from 2010 Plan	Predictive accuracy	Key determinant of accuracy	Change in methodology
18.82	-1.83	Likely overestimate.	All projects assumed to be incremental, all new generation assumed to displace existing generation.	No significant changes in methodology, but improved transparency with respect to assumptions.
<p>Comment on estimate reliability:</p> <p>Since the release of the 2010 Plan, some projects that had been included in emissions reduction estimates were delayed or cancelled, which led to an update of the emissions reductions. Estimates for 2012 are unchanged as projects were funded in lieu of those that had been cancelled. As in previous years, the methodology, “considers that all projects funded are incremental and would not have been done without program support,”^{xii} and so does not adjust for projects that may have been built in the absence of funding or for the role of provincial policies that provide significant support to some projects. As noted in the 2010 NRTEE Response, some funded projects were built and commissioned before the program was announced in January 2007, which directly contradicts this assumption. Further, the estimate of emissions reductions assumes that all funded generation displaces electricity from other sources, and does not allow for the potential for increased generation to increase electricity exports. These concerns with regard to the <i>additionality</i> of estimated emissions reductions and the emissions reduction factors used lead to a conclusion of a <i>likely overestimate</i> as in previous NRTEE responses.</p>				

ecoENERGY Retrofit Initiative				
Cumulative actual and predicted emissions reductions (2008–2012) reported in 2011 Plan	Change in reported cumulative 2008–2012 emissions reductions from 2010 Plan	Predictive accuracy	Key determinant of accuracy	Change in methodology
4.78	-1.88	Likely reliable estimate.	Improved treatment of incremental program impacts complements engineering data from home audits and granting information.	Improvements in methodology and some improvements in transparency with respect to assumptions.
<p>Comment on estimate reliability: The updated estimates in the 2011 Plan reflect conclusions from NRCan’s audit report,^{xiii} which concluded that in the ecoENERGY Retrofit for House program, approximately 25% of the funded renovations would have been undertaken without the grant, that only 63% of the retrofits recommended by auditors were undertaken, and that 27–29% of households did not realize estimated changes in energy use. The NRCan audit also found that ecoENERGY Retrofit for Industry (Small- and Medium-sized businesses) program did not meet its GHG objectives. The audit report states that, “26% of the energy savings achieved are directly attributable to the ecoENERGY Retrofit for Small and Medium Organizations (Industry) Program,”^{xiv} while the other 74% of emissions reductions would have occurred anyway. The estimates in the Plan were adjusted by a <i>net-to-gross</i> factor of 74% to reflect these findings. This adjustment is consistent with previous recommendations by the NRTEE to assess the degree to which emissions reductions are incremental to outcomes which would have prevailed in the absence of the program. As a result, the NRTEE sees the amended estimates as <i>likely reliable</i>.</p> <p>While the estimated reductions for this program in the 2011 Plan do appear to acknowledge the additionality issue, the language in the methodology section could be made more transparent in order to make this change clear. Regarding the methodology used for the ecoENERGY Retrofit Initiative, the Plan states, “the baseline assumption is that grant applicants would not have made investments to realize expected incremental energy savings without encouragement from the program. However, a range is provided considering the uncertainty of this assumption.” Since the core estimates in the Plan, not just the high and low estimates, seem to have been adjusted based on the evaluation report, this language is not entirely clear.</p>				

Regulating Cars and Light Trucks				
Cumulative actual and predicted emissions reductions (2008–2012) reported in 2011 Plan	Change in reported cumulative 2008–2012 emissions reductions from 2010 Plan	Predictive accuracy	Key determinant of accuracy	Change in methodology
0.74	-1.76	Likely reliable estimate.	Integrated model used to compare policy scenario to baseline, with improved baseline assumptions.	No significant changes in methodology.
<p>Comment on estimate reliability: As was the case in the 2010 Plan, the estimated emissions reductions are generated using an integrated model that accounts for broad economic trends and commodity prices that each affect vehicle sales, and thus the rate at which regulations reduce fuel consumption and emissions. The estimates compare a policy with a baseline simulation under the same economic assumptions. Most importantly, consistent with recommendations made by the NRTEE in 2010, the baseline, “assumes a continuous improvement in new vehicle fuel efficiency driven by policy in the U.S.”^{xv} While the NRTEE finds this estimate to be reliable, we note that early action and compliance payments are not included in the modelling. These measures could result in fewer actual emissions reductions resulting from the policy than estimated in the Plan. However, follow-up correspondence with Environment Canada officials suggests that the Plan’s assumption that the effect of these flexibility mechanisms will be minimal is justified. Given the revealed consumer preferences in the last 18 months (e.g., the preference for more fuel efficient vehicles in a time of high gasoline prices) and Environment Canada’s assumption that gasoline prices will continue to increase, it believes that the need for manufacturers/retailers to rely on the credit for early action and payment compliance option to meet the regulations will be minimal. The NRTEE suggests that including rationales such as this for key assumptions in the Plan itself would further improve transparency.</p>				

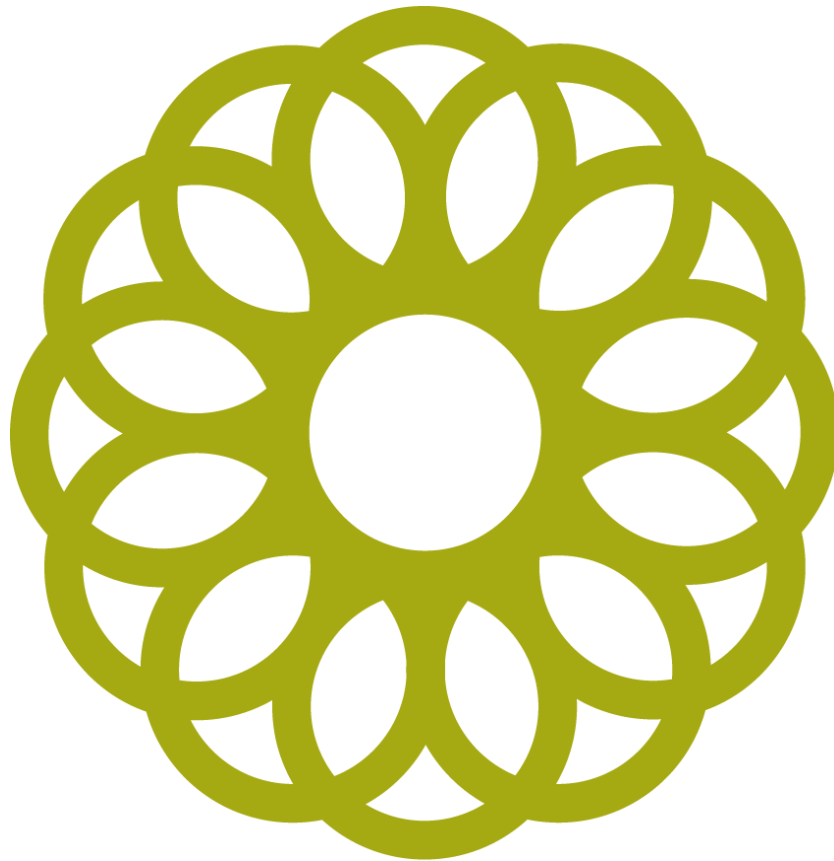
ecoENERGY for Buildings and Houses				
Cumulative actual and predicted emissions reductions (2008–2012) reported in 2011 Plan	Change in reported cumulative 2008–2012 emissions reductions from 2010 Plan	Predictive accuracy	Key determinant of accuracy	Change in methodology
6.6	0.48	Likely over-estimate.	Methodology assumes that no energy-rated buildings or houses would be built without the labelling program.	No significant changes from 2010.
<p>Comment on estimate reliability: As in previous Plans, the emissions reductions attributed to the ecoENERGY for Buildings and Houses program attaches significant leverage to energy rating systems. In particular, the analysis in the Plan assumes that, “houses rated under best-in-class energy efficiency initiatives such as the R-2000 Standard and ENERGY STAR for New Homes,”^{xvi} would otherwise exhibit the average (baseline) energy consumption of typical new homes.” Similarly, for programs on existing homes, the program attributes all energy savings associated with renovations performed after having an energy audit to the program, assuming that none of the renovations would have occurred absent the program. As in previous NRTEE Responses, we find that these assumptions are likely to significantly over-estimate program impacts.</p>				

ecoENERGY for Industry				
Cumulative actual and predicted emissions reductions (2008–2012) reported in 2011 Plan	Change in reported cumulative 2008–2012 emissions reductions from 2010 Plan	Predictive accuracy	Key determinant of accuracy	Change in methodology
6.17	-0.02	Likely over-estimate.	Methodology predicts significant emissions reductions from participation in training sessions and receipt of mailings.	No significant changes from 2010.
<p>Comment on estimate reliability: As in previous Plans, the estimates provided in the 2011 Plan assume that significant energy savings can be achieved through the provision of information. As the NRTEE has stipulated previously, it is difficult to assess the impact of information; however, it seems implausible that a facility receiving a newsletter would have the same induced emissions reductions as a facility sending representatives to attend seminars on energy conservation. This assumption has not changed from previous years, and we continue to believe that it likely leads to an overestimate of the program’s impact on emissions.</p>				

Pulp and Paper Green Transformation program				
Cumulative actual and predicted emissions reductions (2008–2012) reported in 2011 Plan	Change in reported cumulative 2008–2012 emissions reductions from 2010 Plan	Predictive accuracy	Key determinant of accuracy	Change in methodology
1.52	N/A	Likely over-estimate.	Attribution of projects to program financing is well justified. Impact of the program on production is not accounted for.	Newly listed program.
<p>Comment on estimate reliability:</p> <p>The Pulp and Paper Green Transformation program (PPGTP) is listed for the first time in the 2011 Plan, despite being first announced by the Government in 2009.^{xvii} The PPGTP allocates \$1 billion of funding for projects that “will improve... environmental performance in areas such as enhanced energy efficiency and increased production of renewable energy from forest biomass.” The program provides credits for the production of black liquor at \$0.16c/l for production during calendar year 2009, and these credits may be used to provide capital for environmental projects. Thirty-eight mills across Canada received credits for black liquor production, while contribution agreements have been signed for 51 capital projects. The estimated emissions reductions are calculated based on direct reduction in facility emissions, and indirect reductions due to reduced electricity consumption.</p> <p>The methodology explains that “extreme capital constraints (worsened by the economic downturn) forced mills to devote their limited resources to emergency maintenance, rather than the type of system-level improvements funded by this program.”^{xix} As a result, the estimate assumes that none of the projects would have gone ahead without the PPGTP and that, “all of the projected emissions reductions associated with PPGTP projects are considered directly attributable to this program.”^{xx} Regardless of economic conditions, this assumption represents a best-case scenario. Further, since the improved energy efficiency results in decreased operating costs, we should expect increased production at the affected mills relative to what would be the case in the absence of the program. Finance Canada states that the PPGTP “is enabling pulp and paper mills in all regions to reduce greenhouse gas emissions while helping them become leaders in the production of renewable energy from biomass, improve their competitiveness and create and sustain jobs.”^{xxi} This suggests that the program was designed to drive an increase in activity in the sector relative to that which would have been the case otherwise. The Plan omits any increases in activity, relative to what would have otherwise occurred, from the discussion of the impacts of this program, leading to concerns about additionality. As a result of these concerns with respect to additionality, the NRTEE expects that the methodology employed will likely overestimate the emissions reductions attributable to this program.</p>				

8.0

**/ APPENDIX B: *KYOTO*
PROTOCOL
*IMPLEMENTATION ACT***



APPENDIX B: *KYOTO PROTOCOL IMPLEMENTATION ACT*



Department of Justice
Canada

Ministère de la Justice
Canada



Kyoto Protocol Implementation Act (2007, c. 30)

Disclaimer: This document is not the official version.

Act current to September 21st, 2007

Attention: See coming into force provision and notes, where applicable.

Kyoto Protocol Implementation Act

2007, c. 30

K-9.5

[Assented to June 22nd, 2007]

An Act to ensure Canada meets its global climate change obligations under the Kyoto Protocol

Preamble

Recognizing that:

Canadians have a deep pride in their natural environment, and in being responsible stewards of their land,

Canada is committed to the principle of environmentally sustainable development, a healthy economy and a healthy society depend on a healthy environment,

Canadians want to take responsibility for their environmental problems, and not pass those problems on to future generations,

global climate change is one of the most serious threats facing humanity and Canada, and poses significant risks to our environment, economy, society and human health,

the national science academies of Canada, Brazil, China, France, Germany, India, Italy, Japan, Russia, the United Kingdom and the United States declared the following in June 2005: “The scientific understanding of climate change is now sufficiently clear to justify nations taking prompt action. It is vital that all nations identify cost-effective steps that they can take now, to contribute to substantial and long-term reduction in net global greenhouse gas emissions.”,

climate change is a global problem that crosses national borders,

Canada has a clear responsibility to take action on climate change, given that our per capita greenhouse gas emissions and wealth are among the highest in the world, and that some of the most severe impacts of climate change are already unfolding in Canada, particularly in the Arctic,

the objective of the United Nations Framework Convention on Climate Change (UNFCCC) is “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”,

Canada has ratified the UNFCCC, which entered into force in 1994,

the Kyoto Protocol requires that Canada reduce its average annual greenhouse gas emissions during the period 2008-2012 to six per cent below their level in 1990,

Canada ratified the Kyoto Protocol in 2002 following a majority vote in Parliament, and the Protocol entered into force in 2005,

this legislation is intended to meet, in part, Canada's obligations under the UNFCCC and the Kyoto Protocol, and

the problem of climate change requires immediate action by all governments in Canada as well as by corporations and individual Canadians,

NOW, THEREFORE, Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada enacts as follows:

SHORT TITLE

Short title

1. This Act may be cited as the Kyoto Protocol Implementation Act.

INTERPRETATION

Definitions

2. The definitions in this section apply in this Act.

"Climate Change Plan"

«*Plan sur les changements climatiques* »

"Climate Change Plan" means a plan that meets the conditions set out in section 5.

"greenhouse gas"

«*gaz à effet de serre* »

"greenhouse gas" means one of the greenhouse gases listed in Annex A to the Kyoto Protocol.

"Kyoto Protocol"

«*Protocole de Kyoto* »

"Kyoto Protocol" means the Kyoto Protocol to the United Nations Framework Convention on Climate Change, agreed to on December 11, 1997 at Kyoto, Japan, and ratified by Canada on December 17, 2002, as amended from time to time, to the extent that the amendment is binding on Canada.

"Minister"

«*ministre* »

"Minister" means the Minister of the Environment.

PURPOSE

Purpose

3. The purpose of this Act is to ensure that Canada takes effective and timely action to meet its obligations under the Kyoto Protocol and help address the problem of global climate change.

HER MAJESTY

Binding on Her Majesty

4. This Act is binding on Her Majesty in Right of Canada.

CLIMATE CHANGE PLAN

Climate Change Plan

5. (1) Within 60 days after this Act comes into force and not later than May 31 of every year thereafter until 2013, the Minister shall prepare a Climate Change Plan that includes
 - a) a description of the measures to be taken to ensure that Canada meets its obligations under Article 3, paragraph 1, of the Kyoto Protocol, including measures respecting
 - i) regulated emission limits and performance standards,
 - ii) market-based mechanisms such as emissions trading or offsets,
 - iii) spending or fiscal measures or incentives,
 - iii.1) a just transition for workers affected by greenhouse gas emission reductions, and
 - iv) cooperative measures or agreements with provinces, territories or other governments;
 - b) each measure referred to in paragraph (a),
 - i) the date on which it will come into effect, and
 - ii) the amount of greenhouse gas emission reductions that have resulted or are expected to result for each year up to and including 2012, compared to the levels in the most recently available emission inventory for Canada;
 - c) the projected greenhouse gas emission level in Canada for each year from 2008 to 2012, taking into account the measures referred to in paragraph (a), and a comparison of those levels with Canada's obligations under Article 3, paragraph 1, of the Kyoto Protocol;
 - d) an equitable distribution of greenhouse gas emission reduction levels among the sectors of the economy that contribute to greenhouse gas emissions;
 - e) a report describing the implementation of the Climate Change Plan for the previous calendar year; and
 - f) a statement indicating whether each measure proposed in the Climate Change Plan for the previous calendar year has been implemented by the date projected in the Plan and, if not, an explanation of the reason why the measure was not implemented and how that failure has been or will be redressed.

Provinces

- (2) A Climate Change Plan shall respect provincial jurisdiction and take into account the relative greenhouse gas emission levels of provinces.

Publication

- (3) The Minister shall publish

- a) within 2 days after the expiry of each period referred to in subsection (1), a Climate Change Plan in any manner the Minister considers appropriate, with an indication that persons may submit comments about the Plan to the Minister within 30 days of the Plan's publication; and
- b) within 10 days after the expiry of each period referred to in subsection (1), a notice of the publication of the Plan in the *Canada Gazette*.

Tabling

(4) The Minister shall table each Climate Change Plan in each House of Parliament by the day set out in subsection (1) or on any of the first three days on which that House is sitting after that day.

Committee

(5) A Climate Change Plan that is laid before the House of Commons is deemed to be referred to the standing committee of the House that normally considers matters relating to the environment or to any other committee that that House may designate for the purposes of this section.

REGULATIONS**Regulations**

6. (1) The Governor in Council may make regulations
- a) limiting the amount of greenhouse gases that may be released into the environment;
 - (1) within the limits of federal constitutional authority, limiting the amount of greenhouse gases that may be released in each province by applying to each province Article 3, paragraphs 1, 3, 4, 7, 8, and 10 to 12, of the Kyoto Protocol, with any modifications that the circumstances require;
 - b) establishing performance standards designed to limit greenhouse gas emissions;
 - c) respecting the use or production of any equipment, technology, fuel, vehicle or process in order to limit greenhouse gas emissions;
 - d) respecting permits or approvals for the release of any greenhouse gas;
 - e) respecting trading in greenhouse gas emission reductions, removals, permits, credits, or other units;
 - f) respecting monitoring, inspections, investigations, reporting, enforcement, penalties or other matters to promote compliance with regulations made under this Act;
 - g) designating the contravention of a provision or class of provisions of the regulations by a person or class of persons as an offence punishable by indictment or on summary conviction and prescribing, for a person or class of persons, the amount of the fine and imprisonment for the offence; and
 - h) respecting any other matter that is necessary to carry out the purposes of this Act.

Measures province considers appropriate

(2) Despite paragraph (1)(a.1), and for greater certainty, each province may take any measure that it considers appropriate to limit greenhouse gas emissions.

Obligation to implement Kyoto Protocol

7. (1) Within 180 days after this Act comes into force, the Governor in Council shall ensure that Canada fully meets its obligations under Article 3, paragraph 1, of the Kyoto Protocol by making, amending or repealing the necessary regulations under this or any other Act.

Obligation to maintain implementation of Kyoto Protocol

- (2) At all times after the period referred to in subsection (1), the Governor in Council shall ensure that Canada fully meets its obligations under Article 3, paragraph 1, of the Kyoto Protocol by making, amending or repealing the necessary regulations under this or any other Act.

Other governmental measures

- (3) In ensuring that Canada fully meets its obligations under Article 3, paragraph 1, of the Kyoto Protocol, pursuant to subsections (1) and (2), the Governor in Council may take into account any reductions in greenhouse gas emissions that are reasonably expected to result from the implementation of other governmental measures, including spending and federal-provincial agreements.

Consultation for proposed regulations

8. At least 60 days before making a regulation under this Act or, with respect to subsections 7(1) and (2), any other Act, the Governor in Council shall publish the proposed regulation in the Canada Gazette for consultation purposes with statements:
 - a) setting out the greenhouse gas emission reductions that are reasonably expected to result from the regulation for every year it will be in force, up to and including 2012; and
 - b) indicating that persons may submit comments to the Minister within 30 days after the publication of the regulation.

EXPECTED REDUCTIONS**Minister's statement**

9. (1) Within 120 days after this Act comes into force, the Minister shall prepare a statement setting out the greenhouse gas emission reductions that are reasonably expected to result for each year up to and including 2012 from
 - a) each regulation made or to be made to ensure that Canada fully meets its obligations under Article 3, paragraph 1, of the Kyoto Protocol, pursuant to subsections 7(1) and (2); and
 - b) each measure referred to in subsection 7(3).

Minister

- (2) The Minister shall
 - a) publish the statement in the Canada Gazette and in any other manner that the Minister considers appropriate within 10 days of the period set out in subsection (1); and
 - b) table the statement in each House of Parliament by the day set out in subsection (1) or on any of the first three days on which that House is sitting after that day.

REPORT

National Round Table on the Environment and the Economy

10. (1) Within 60 days after the Minister publishes a Climate Change Plan under subsection 5(3), or within 30 days after the Minister publishes a statement under subsection 9(2), the National Round Table on the Environment and the Economy established by section 3 of the National Round Table on the Environment and the Economy Act shall perform the following with respect to the Plan or statement:
- a) undertake research and gather information and analyses on the Plan or statement in the context of sustainable development; and
 - b) advise the Minister on issues that are within its purpose, as set out in section 4 of the National Round Table on the Environment and the Economy Act, including the following, to the extent that they are within that purpose:
 - i) the likelihood that each of the proposed measures or regulations will achieve the emission reductions projected in the Plan or statement,
 - ii) the likelihood that the proposed measures or regulations will enable Canada to meet its obligations under Article 3, paragraph 1, of the Kyoto Protocol, and
 - iii) any other matters that the Round Table considers relevant.

Minister

- (2) The Minister shall
- a) within three days after receiving the advice referred to in paragraph (1)(b):
 - i) publish it in any manner that the Minister considers appropriate, and
 - ii) submit it to the Speakers of the Senate and the House of Commons and the Speakers shall table it in their respective Houses on any of the first three days on which that House is sitting after the day on which the Speaker receives the advice; and
 - b) within 10 days after receiving the advice, publish a notice in the Canada Gazette setting out how the advice was published and how a copy of the publication may be obtained.

Commissioner of the Environment and Sustainable Development

- 10.1 (1) At least once every two years after this Act comes into force, up to and including 2012, the Commissioner of the Environment and Sustainable Development shall prepare a report that includes
- a) an analysis of Canada's progress in implementing the Climate Change Plans;
 - b) an analysis of Canada's progress in meeting its obligations under Article 3, paragraph 1, of the Kyoto Protocol; and
 - c) any observations and recommendations on any matter that the Commissioner considers relevant.

Publication of report

- (2) The Commissioner shall publish the report in any manner the Commissioner considers appropriate within the period referred to in subsection (1).

Report to the House of Commons

(3) The Commissioner shall submit the report to the Speaker of the House of Commons on or before the day it is published, and the Speaker shall table the report in the House on any of the first three days on which that House is sitting after the Speaker receives it.

OFFENCES AND PENALTIES**Offences**

11. (1) Every person who contravenes a regulation made under this Act is guilty of an offence punishable by indictment or on summary conviction, as prescribed by the regulations, and liable to a fine or to imprisonment as prescribed by the regulations.

Subsequent offence

(2) If a person is convicted of an offence a subsequent time, the amount of the fine for the subsequent offence may, despite the regulations, be double the amount set out in the regulations.

Continuing offence

(3) A person who commits or continues an offence on more than one day is liable to be convicted for a separate offence for each day on which the offence is committed or continued.

Additional fine

(4) If a person is convicted of an offence and the court is satisfied that monetary benefits accrued to the person as a result of the commission of the offence, the court may order the person to pay an additional fine in an amount equal to the court's estimation of the amount of the monetary benefits, which additional fine may exceed the maximum amount of any fine that may otherwise be imposed under the regulations.

Officers, etc., of corporations

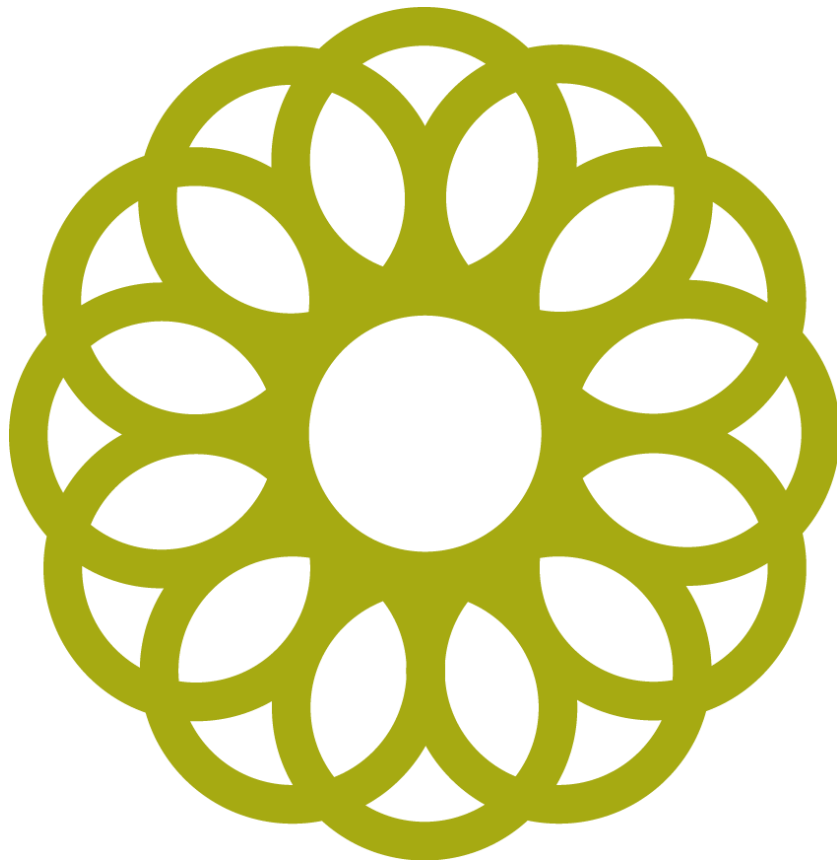
(5) If a corporation commits an offence, any officer, director, agent or mandatory of the corporation who directed, authorized, assented to, or acquiesced or participated in, the commission of the offence is a party to and guilty of the offence and is liable on conviction to the punishment provided for the offence, whether or not the corporation has been prosecuted or convicted.

Offences by employees or agents

(6) In any prosecution for an offence, the accused may be convicted of the offence if it is established that it was committed by an employee, agent or mandatory of the accused, whether or not the employee, agent or mandatory has been prosecuted for the offence.

9.0

/ REFERENCES



REFERENCES

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ⁱ Canada, 2011a.

ⁱⁱ Canada, 2011a, p. 36.

ⁱⁱⁱ Canada, 2010a, p. 15

^{iv} Canada, 2011a, p. 58

^v Canada, 2010b.

^{vi} Canada, 2006.

^{vii} Canada 2011a, p. 50

^{viii} NRTEE, 2010, p.43

^{ix} Canada, 2010a, p. 34

^x Canada, 2010a.

^{xi} Canada, 2011c.

^{xii} Canada 2011a, p. 50.

^{xiii} Canada 2010b.

^{xiv} Canada, 2010b.

^{xv} Canada, 2011a, pp.43 – 44.

^{xvi} Canada, 2011a, pp.55.

^{xvii} Canada, 2009.

^{xviii} Canada 2011a, p. 11.

^{xix} Canada, 2011a, p. 49.

^{xx} Canada, 2011a, p. 49.

^{xxi} Canada, 2011b.