

CHAPTER 1

Kyoto Protocol Implementation Act

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Kyoto Protocol Implementation Act

Main Points

What we examined

Parliament passed the *Kyoto Protocol Implementation Act* in 2007 to ensure that Canada would take effective and timely action to meet its commitments and obligations under the 1997 Kyoto Protocol. The Act required that the government publish annual climate change plans describing the measures it would take to achieve the Kyoto Protocol target—that is, to reduce greenhouse gas (GHG) emissions to an average of 6 percent below their 1990 level during the Kyoto commitment period, from 2008 to 2012.

Environment Canada is responsible for preparing the annual climate change plans under the *Kyoto Protocol Implementation Act*; and from 2007 to 2011, it published five plans. As the Act requires of the Commissioner of the Environment and Sustainable Development, we audited progress in implementing the government's climate change plans and whether Canada is on track to meet its Kyoto Protocol obligations. This report is our third and final audit under this mandate, which required us to report every two years up to and including 2012.

Audit work for this chapter was substantially completed on 21 February 2012. More details on the conduct of the audit are in **About the Audit** at the end of this chapter.

Why it's important

Climate change has far-reaching impacts on Canada's economy, infrastructure, and natural environment, and on human health. Recent reports by the federal government indicate that every region of Canada has already been affected by the changing climate; in particular, Canadian communities and critical infrastructure are vulnerable to extreme weather events, such as drought, heat waves, flooding, and coastal storms.

Although the Government of Canada has announced that it will withdraw from the Kyoto Protocol, the *Kyoto Protocol Implementation Act* remains in effect as an Act of Parliament, and obligations for the Commissioner set out in that Act remain. In addition, the Government of Canada remains a Party to the United Nations

Framework Convention on Climate Change and as such remains subject to various reporting mechanisms, including the annual National Inventory Report on GHG emissions.

What we found

- The 2011 climate change plan provides more information than previous plans. Furthermore, this plan is more explicit than previous plans, as it organizes information on each measure by the requirements set out in subsection 5(1) of the Act.
- The 2011 plan estimates total emission reductions expected for the period 2008–2012 at 27 million tonnes. This estimate has significantly declined since the 2007 plan estimated an expected emission reduction of 282 million tonnes during the same period. According to the 2011 plan, actual reductions in 2008 and 2009 totalled 6 million tonnes.
- Although Environment Canada has provided more information in the 2011 climate change plan where possible, the plan still does not meet the requirements of the Act because the measures it describes will not ensure that Canada meets its greenhouse gas emission reduction obligations under Article 3, paragraph 1, of the Kyoto Protocol.
- If all the measures in the annual climate change plan had been implemented and the total expected reductions in the plan had been achieved, it would still not have been sufficient to meet the government's Kyoto Protocol target. To meet the target, GHG emissions would have to be reduced by an additional 805 million tonnes by 2012.

Introduction

1.1 The Kyoto Protocol was adopted under the United Nations Framework Convention on Climate Change (UNFCCC) in 1997 and contains legally binding commitments for countries to reduce and limit greenhouse gas (GHG) emissions. In 2007, Canada enacted the *Kyoto Protocol Implementation Act* to ensure that Canada takes effective and timely action to meet its obligations under the Kyoto Protocol. The Act requires that the government publish annual climate change plans that describe the measures it intends to take to achieve the emissions target it has committed to under the Kyoto Protocol. That commitment was to reduce GHG emissions to an average of 6 percent below their 1990 level during the five-year Kyoto commitment period from 2008 to 2012. Environment Canada has published five plans to date, one for each year from 2007 to 2011.

1.2 In December 2011, the Minister of the Environment announced that Canada would be withdrawing from the Kyoto Protocol. This withdrawal is to become effective on 15 December 2012, in accordance with Article 27(2) of the Kyoto Protocol. The Government of Canada has stated that it will, however, remain a Party to the UNFCCC and will continue to prepare the annual **National Inventory Report** on Canada's GHG emissions.

National Inventory Report—An annual inventory published by Environment Canada on behalf of the Government of Canada that provides information regarding greenhouse gas emission levels in Canada. The United Nations Framework Convention on Climate Change specifies reporting requirements for the inventory.

Mandate of the Commissioner of the Environment and Sustainable Development

1.3 Subsection 10.1(1) of the *Kyoto Protocol Implementation Act* requires the Commissioner of the Environment and Sustainable Development to report on progress made in meeting the requirements of the Act:

At least once every two years after this Act comes into force [22 June 2007], 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.

Observations

1.4 The purpose of the *Kyoto Protocol Implementation Act* is to “ensure that Canada takes effective and timely action to meet its obligations under the Kyoto Protocol.” Since 2007, Environment Canada has published five climate change plans in accordance with its obligations under the Act.

1.5 We analyzed the 2011 climate change plan as well as other documents prepared by Environment Canada, including the 2011 National Inventory Report, to determine if the plan contained all the information required under subsection 5(1) of the Act. We also examined whether Environment Canada had prepared and implemented a plan to meet Canada’s obligations to reduce greenhouse gas (GHG) emissions under the Kyoto Protocol.

Climate change plan

The 2011 climate change plan is more complete than previous plans

1.6 The 2011 climate change plan identifies 20 federal government measures intended to reduce greenhouse gas (GHG) emissions. Environment Canada expects that the measures will reduce emissions by 27 million tonnes during the Kyoto commitment period (2008 to 2012). Environment Canada indicates that actual emission reductions total 6 million tonnes for 2008 and 2009, the most recent years for which actual emissions have been published (Exhibit 1.1).

1.7 The 2011 climate change plan is more explicit than previous plans published under the *Kyoto Protocol Implementation Act*, as it organizes information for each measure by the requirements set out in subsection 5(1) of the Act. Our audit found that the 2011 climate change plan includes more of the information required under subsection 5(1) of the Act than did the previous plans (Exhibit 1.2). For example, in the 2007 climate change plan, only one measure included a date on which it would come into effect (as required under subsection 5(1)(b)(i) of the Act), while in the 2011 plan, all measures included this information. In the 2008 climate change plan, only 20 percent of the measures included a statement indicating whether each measure had been implemented by the date projected (as required under subsection 5(1)(f) of the Act). The 2011 plan included such statements for all measures.

Exhibit 1.1 Measures identified in the 2011 climate change plan included expected and actual greenhouse gas emission reductions (million tonnes)

Measures	Greenhouse gas emission reduction					Total reductions
	Actual		Expected			
	2008	2009	2010	2011	2012	2008–2012
Strengthening Energy Efficiency Standards	0.09	0.22	0.61	1.05	1.42	3.39
Reducing Greenhouse Gas Emissions from New Cars and Light Trucks	0	0	0.07	0.22	0.45	0.74
Regulating Renewable Fuels Content	0	0	0.03	1.3	1.65	2.98
Pulp and Paper Green Transformation Program	0	0	0.02*	0.41	1.09	1.52
ecoENERGY for Renewable Power	1.13	2.19	3.9	5.6	6.0	18.82
ecoENERGY for Renewable Heat	0.004	0.01	0.02	0.03	0.03	0.094
ecoENERGY for Buildings and Houses	0.58	0.99	1.4	1.66	1.97	6.6
ecoENERGY Retrofit Initiative	0.29	0.66	1.23	1.3	1.3	4.78
ecoENERGY for Industry	0.64	1.02	1.43	1.54	1.54	6.17
ecoENERGY for Aboriginal and Northern Communities	0	0.001	0.002	0.003	0.009	0.015
ecoAUTO Rebate Program	0.01	0.01	0.01	0.01	0.01	0.05
Green Levy	0.1	0.14	0.17	0.2	0.23	0.84
ecoENERGY for Personal Vehicles Program	0.08	0.14	0.2	0.21	0.21	0.84
ecoMOBILITY	0	0	0.11	0.11	0.11	0.33
National Vehicle Scrappage Program	0.001	0.012	0.019	0.011	0	0.043
ecoTECHNOLOGY for Vehicles Program	0	0.07**	0.1	0.15	0.2	0.52
ecoENERGY for Fleets Program	0.13	0.26	0.38	0.41	0.41	1.59
ecoFREIGHT Program	0	0.98**	1.12	1.25	1.37	4.72
Marine Shore Power Program	0	0.003**	0.004	0.004	0.004	0.015
Promoting Sustainable Urban Transit	0.03	0.03	0.03	0.03	0.03	0.15
Total reductions calculated with an integrated model***	2	4	5	7	9	27

* Actual emissions

** Expected emissions

*** These numbers are not sums, but were calculated by Environment Canada using its integrated Energy, Emissions and Economy Model for Canada.

Source: Environment Canada's Climate Change Plan for the Purposes of the *Kyoto Protocol Implementation Act* (2011); as compiled by Environment Canada.

Exhibit 1.2 The 2011 climate change plan contained more of the information required by the *Kyoto Protocol Implementation Act* than previous plans

Requirements of the <i>Kyoto Protocol Implementation Act</i> , subsection 5(1)	Reports of the Commissioner of the Environment and Sustainable Development		
	Observations in the 2009 report, Chapter 2, about the 2007 and 2008 Climate Change Plans	Observations in the 2011 report, Chapter 1, about the 2009 and 2010 Climate Change Plans	Observations in the 2012 report, Chapter 1, about the 2011 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. . . .	<ul style="list-style-type: none"> The plans included measures under each category. 	<ul style="list-style-type: none"> The plans included 19 measures with expected greenhouse gas (GHG) emission reductions. A description was provided for each measure. Neither the 2009 nor the 2010 plan indicated that these measures were designed to ensure that Canada meets its obligations under the Kyoto Protocol. 	<ul style="list-style-type: none"> The 2011 climate change plan contained 20 measures to reduce GHG emissions. A description was provided for each measure. These measures in the 2011 plan will not ensure that Canada meets its obligations under the Kyoto Protocol.
(b) for 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;	<ul style="list-style-type: none"> The dates (month, year) on which a measure will come or has come into effect are provided for 8 of 19 measures in the 2008 plan. The 2007 plan included a date for only 1 of the 19 measures reported. The plans did not compare GHG reductions for each measure with the most recently available emissions data for Canada. 	<ul style="list-style-type: none"> In the 2010 plan, all measures included a date when the measure would come into effect. In the 2009 plan, 10 of 19 measures reported an effective date. The 2009 and 2010 plans each identified 19 measures with expected GHG emission reductions. 	<ul style="list-style-type: none"> All 20 measures listed a date when they will come into effect and their actual or expected GHG emission reductions.
(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;	<ul style="list-style-type: none"> The plans present the projected total GHG emission levels for Canada during the Kyoto period. However, the plans do not compare these emission levels with Canada's obligations under Article 3, paragraph 1, of the Kyoto Protocol. 	<ul style="list-style-type: none"> The projected GHG emission level for each year from 2008 to 2012 was provided in both the 2009 and 2010 plans; however, the levels were not explicitly compared by year with Canada's obligation under Article 3, paragraph 1, of the Kyoto Protocol. 	<ul style="list-style-type: none"> The projected GHG emission level for each year was provided in the 2011 plan; however, the levels were not explicitly compared by year with Canada's obligation under Article 3, paragraph 1, of the Kyoto Protocol.

Exhibit 1.2 The 2011 climate change plan contained more of the information required by the *Kyoto Protocol Implementation Act* than previous plans (continued)

Requirements of the <i>Kyoto Protocol Implementation Act</i> , subsection 5(1)	Reports of the Commissioner of the Environment and Sustainable Development		
	Observations in the 2009 report, Chapter 2, about the 2007 and 2008 Climate Change Plans	Observations in the 2011 report, Chapter 1, about the 2009 and 2010 Climate Change Plans	Observations in the 2012 report, Chapter 1, about the 2011 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			
(d) an equitable distribution of greenhouse gas emission reduction levels among the sectors of the economy that contribute to greenhouse gas emissions;	<ul style="list-style-type: none"> The plans do not describe how they address equitable distribution. 	<ul style="list-style-type: none"> The 2009 and 2010 climate change plans indicated that an analysis had been conducted, and it was determined that there would not be any notable inequities among economic sectors that contribute to GHG emissions. However, we found this conclusion difficult to confirm with the information provided in the plans. In our view, the information in the 2009 and 2010 plans on the equitable distribution of GHG emission reductions does not satisfy the requirement of subsection 5(1)(d) of the Act. 	<ul style="list-style-type: none"> The 2011 climate change plan indicated that an analysis had been conducted, and it was determined that there would not be any notable inequities among economic sectors that contribute to GHG emissions. However, we found this conclusion difficult to confirm with the information provided in the plans. In our view, the information in the 2011 plan on the equitable distribution of GHG emission reductions does not satisfy the requirement of subsection 5(1)(d) of the Act.
(e) a report describing the implementation of the Climate Change Plan for the previous calendar year; and	<ul style="list-style-type: none"> Information provided is inconsistent; however, information is provided for all 19 measures in the 2008 plan. 	<ul style="list-style-type: none"> The majority of measures included a report describing what had been implemented in the previous year; however, about a quarter of the measures did not provide sufficient detail to be considered as having met this requirement. 	<ul style="list-style-type: none"> All measures in the 2011 plan included a report for the implementation of the plan for the previous calendar year.
(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.	<ul style="list-style-type: none"> A clear statement of whether a measure has been implemented by the date projected is provided for about 20 percent of the measures. 	<ul style="list-style-type: none"> The majority of measures listed in both the 2009 and 2010 plans indicate that the measures were implemented by the date projected. The 2010 plan did not describe how the failure to implement the Regulatory Framework for Industrial Greenhouse Gas Emissions, which was to account for over 85 percent of the GHG emission reductions in the 2009 plan, would be redressed. 	<ul style="list-style-type: none"> All measures in the 2011 plan indicated that they were implemented by the date projected.

1.8 There are key differences between the 2011 plan and previous plans in terms of both the completeness of information presented as well as what the measures in the plans are expected to achieve:

- All measures included in the 2011 plan stated that they are expected to contribute to GHG emission reductions during the Kyoto commitment period (2008 to 2012). Previous plans contained up to a dozen measures that did not state emission reductions expected during the Kyoto commitment period.
- The 2011 climate change plan did not present any financial information regarding the funding allocated and spent on measures to reduce GHG emissions. Our last audit observed that although over \$9 billion had been allocated to the measures listed in the 2010 climate change plan, financial information was not reported consistently. We recommended that financial information, including funds allocated and spent, be reported for all measures in the annual climate change plans.
- The total expected emission reductions outlined in the 2011 plan for 2008 to 2012 are 27 million tonnes. The 2007 climate change plan expected to reduce emissions during the commitment period by an estimated 282 million tonnes. Compared with 2007, the 2011 climate change plan shows a 90 percent decrease in expected emission reductions.

Environment Canada's 2011 climate change plan has not met the requirements of the Kyoto Protocol Implementation Act

1.9 Although we noted improvements since our last audit, we found that the 2011 climate change plan did not

- describe measures to be taken to ensure that Canada meets its Kyoto Protocol obligations,
- explicitly compare expected emission levels by year with Canada's GHG emission obligation in the Kyoto period, and
- include an adequate explanation of how the government calculated an equitable distribution of GHG emission reductions among economic sectors.

1.10 Since our first audit of Environment Canada's climate change plans, in 2009, we have made nine recommendations to the Department and other responsible departments. These recommendations are listed in the Appendix and ranged from including in the plans all of the information required by the Act, to more effectively quantifying expected and actual GHG emissions and

financial information. Environment Canada agreed with all but two of our recommendations and took steps to address them. For example, we found in our 2011 audit that Environment Canada made progress in ensuring that uncertainties regarding the quantification of expected emissions were explicit in its reporting (Appendix).

1.11 Overall, on recommendations that could be satisfied by providing additional information, Environment Canada has made progress. However, because the 2011 plan does not describe measures that will ensure that Canada meets its Kyoto Protocol obligations, the plan does not fully satisfy our recommendations or the requirements of subsection 5(1) of the *Kyoto Protocol Implementation Act*.

Emissions target

Canada will not meet its greenhouse gas emissions target initially agreed to under the Kyoto Protocol

1.12 Ultimately, it is the United Nations Framework Convention on Climate Change (UNFCCC) review and compliance system established under the Kyoto Protocol that will determine, in 2015 and 2016, if Canada and other countries have met their obligations under the protocol. It is not clear how the UNFCCC will assess Canada's progress given that Canada has announced its withdrawal from the Kyoto Protocol. However, the Kyoto Protocol states that "each Party . . . shall, by 2005, have made demonstrable progress in achieving its commitments under this Protocol." Therefore, as in our last audit, we assessed whether Canada was on track to meet its Kyoto Protocol greenhouse gas (GHG) emissions target.

1.13 Article 3, paragraph 1, of the Kyoto Protocol requires that, between 2008 and 2012, Canada's average GHG emission level should be at least 6 percent below its 1990 emission level. More specifically, this means that for this five-year period, total GHG emissions in Canada should not exceed 2,792 million tonnes. Given the actual emissions for 2008 and 2009 (732 and 690 million tonnes, respectively) as well as the reductions anticipated from the measures in the 2011 plan, GHG emissions are expected to be some 805 million tonnes above Canada's Kyoto Protocol target of 2,792 million tonnes during the 2008 to 2012 period.

1.14 The 2011 climate change plan states that measures in the plan are expected to reduce GHG emissions by 27 million tonnes over the Kyoto period, and that actual GHG reductions totalled 4 million tonnes in 2009 and 2 million tonnes in 2008. Even if all the measures in the 2011 climate change plan are implemented as planned and achieve the total expected GHG emission reductions, it will not be

sufficient to meet the government's Kyoto Protocol target. Therefore, Canada will not meet its GHG emissions target initially agreed to under the Kyoto Protocol and the *Kyoto Protocol Implementation Act*.

Conclusion

1.15 Environment Canada, on behalf of the Minister of the Environment, is responsible for the preparation of the annual climate change plans for the purposes of the *Kyoto Protocol Implementation Act*. Environment Canada has made improvements in reporting requirements in response to recommendations from our 2009 and 2011 audits. These improvements have contributed to a more complete and explicit plan in 2011 as compared with previous plans. However, the 2011 plan is still missing several key elements.

1.16 In substance, the 2011 plan does not contain measures with greenhouse gas (GHG) emission reductions sufficient to achieve the level required to meet the obligations of the Kyoto Protocol or the *Kyoto Protocol Implementation Act*. According to the 2011 plan, actual reductions in 2008 and 2009 totalled 6 million tonnes. To meet the target, GHG emissions would have to be reduced by an additional 805 million tonnes by 2012.

1.17 Although Environment Canada has provided more information in the 2011 climate change plan where possible, the plan does not meet the requirements of the Act because its measures will not ensure that Canada meets its GHG emission reduction obligations under Article 3, paragraph 1, of the Kyoto Protocol.

About the Audit

All of the audit work in this chapter was conducted in accordance with the standards for assurance engagements set by The Canadian Institute of Chartered Accountants. While the Office adopts these standards as the minimum requirement for our audits, we also draw upon the standards and practices of other disciplines.

Objectives

The objective of our audit was to determine whether Environment Canada has prepared and implemented annual climate change plans that meet Canada's greenhouse gas emission reduction obligations under Article 3, paragraph 1, of the Kyoto Protocol (an average of 6 percent below its 1990 level, to be achieved between 2008 and 2012).

Scope and approach

The audit was conducted pursuant to the requirements of the *Auditor General Act* as well as those of the *Kyoto Protocol Implementation Act*, which came into force on 22 June 2007. These requirements are described in subsection 10.1(1) of the Act and provide that we report on progress in implementing the climate change plans and in meeting the Kyoto Protocol obligations as well as any other matters we consider relevant. Although the government announced on 12 December 2011 that it would withdraw from the Kyoto Protocol, our mandate to conduct this audit remains in place as a result of the Act.

Environment Canada is the entity under audit for this topic due to its responsibilities under the *Kyoto Protocol Implementation Act*, the United Nations Framework Convention on Climate Change, and the Federal Sustainable Development Strategy.

Other federal departments are involved in implementing measures identified in the climate change plans and in meeting Canada's Kyoto target. However, they were not included in this audit.

We interviewed key departmental officials in the National Capital Region. We also interviewed other stakeholders, consulted with experts in the field, and reviewed documentation supplied to us by Environment Canada.

Criteria

Criteria	Sources
To determine whether Environment Canada has annual climate change plans that meet Canada's greenhouse gas emission reduction obligations under the Kyoto Protocol, we used the following criteria:	
The 2011 climate change plan fulfills the requirements of subsection 5(1) of the <i>Kyoto Protocol Implementation Act</i> .	<ul style="list-style-type: none"> • <i>Kyoto Protocol Implementation Act</i>
The climate change plans that Environment Canada prepares include measures designed to ensure that Canada meets its obligations under Article 3, paragraph 1, of the Kyoto Protocol.	<ul style="list-style-type: none"> • <i>Kyoto Protocol Implementation Act</i> • Kyoto Protocol
The National Inventory Report indicates that Canada is on track to reduce its emissions to an average of 6 percent below its 1990 level during the five-year Kyoto commitment period (2008 to 2012).	<ul style="list-style-type: none"> • <i>Kyoto Protocol Implementation Act</i> • Kyoto Protocol • United Nations Framework Convention on Climate Change

Management reviewed and accepted the suitability of the criteria used in the audit.

Period covered by the audit

The period covered by this audit was May 2007 to December 2011. Although this audit focuses specifically on the 2011 climate change plan, climate change plans have been published annually since 2007, and the commitment period for the Kyoto Protocol is 2008 to 2012. Audit work for this chapter was substantially completed on 21 February 2012.

Audit team

Principal: Kimberley Leach

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Appendix List of all recommendations made in audits under the *Kyoto Protocol Implementation Act*

2009 Spring Report, Chapter 2, <i>Kyoto Protocol Implementation Act</i>		2011 October Report, Chapter 1, <i>Climate Change Plans under the Kyoto Protocol Implementation Act</i>
Recommendations	Response to recommendations (summary)	Follow-up on recommendations
<p>2.9 Environment Canada should ensure that the next annual climate change plan fulfills all the requirements of subsection 5(1) of the <i>Kyoto Protocol Implementation Act</i>. . . .</p>	<p>Environment Canada accepts this recommendation.</p> <p>Environment Canada will provide further detail regarding effective dates, timelines, and descriptions of program implementation. Further, Environment Canada will more clearly provide a direct comparison of the projected greenhouse gas emission levels for the Kyoto period with Canada's obligations under the Kyoto Protocol. Environment Canada will consider providing additional information on how it arrived at the conclusions on measures regarding just transition for workers and equitable distribution among sectors.</p>	<p>Environment Canada has made some improvements in the completeness and transparency of the information contained in the climate change plans since 2007. However, the plans are not in compliance with the Act because required information is missing and the measures contained in the plans are not sufficient to achieve the Kyoto Protocol obligations to reduce greenhouse gas (GHG) emissions.</p>
<p>2.19 In accordance with the <i>Kyoto Protocol Implementation Act</i>, the projected greenhouse gas emission levels in Canada for each year from 2008 to 2012 should be reported for each measure in the annual climate change plan. Environment Canada should state its expected greenhouse gas emission reductions for the Regulatory Framework for Industrial Greenhouse Gas Emissions in the years that they are most likely to actually occur, rather than in the years that the payment is made to the technology fund and other compliance mechanisms. If this is not done, the Department should explain why in the next plan.</p>	<p>Environment Canada does not accept the recommendation at this time and will explain its approach more completely in the next plan.</p> <p>The Regulatory Framework provides a number of options to industry for meeting these obligations. Therefore, actual in-year reductions may vary from the plan's estimates, depending on the specific compliance options chosen by individual firms. Because the Framework is market-based, it is not possible to establish with certainty which options will be most used by industry, and any such estimate would be heavily dependent on a variety of technical assumptions. However, beginning with the 2009 climate change plan, Environment Canada proposes to explore providing a range of estimates for actual in-year reductions.</p>	<p>We did not follow up on this recommendation. The Regulatory Framework for Industrial Greenhouse Gas Emissions was not implemented and therefore was not included in climate change plans published after 2009.</p>
<p>2.28 Environment Canada and other responsible departments should describe in the annual climate change plans the quantitative or qualitative uncertainties related to the expected GHG emission reductions of each measure. A range of potential emission reduction levels should be presented for the annual plans as a whole and for the individual measures where possible.</p>	<p>Environment Canada accepts this recommendation.</p> <p>Environment Canada will work with other responsible departments to investigate options for presenting a range of expected emissions reductions where feasible and will consider including this information in the plans, beginning with the next plan in 2009.</p>	<p>Environment Canada and other responsible departments made progress by providing an uncertainty range for most of the individual measures. For the plans as a whole, the uncertainty analysis carried out does not provide a range of GHG reduction estimates.</p>

2009 Spring Report, Chapter 2, <i>Kyoto Protocol Implementation Act</i>		2011 October Report, Chapter 1, <i>Climate Change Plans under the Kyoto Protocol Implementation Act</i>
Recommendations	Response to recommendations (summary)	Follow-up on recommendations
<p>2.34 Environment Canada should clearly indicate how it will measure actual emission reductions for each of the GHG emission reduction measures in the plans. . . .</p>	<p>Environment Canada accepts this recommendation.</p> <p>For many of the programs that target a range of behaviours and sectors, such as the ecoACTION programs, emission reductions cannot be measured directly; they can only be estimated. The most practical and cost-effective way to calculate greenhouse gas emission reductions from individual measures is to take program data (e.g., reduction in energy used by households or vehicles, increases in renewable energy) and apply reasonable assumptions and methods to estimate the impact of the program on greenhouse gas emissions.</p> <p>Beginning with the 2010 plan, when the first results are known for the Kyoto period (2008–2012), the Government of Canada will provide the estimated emissions reductions achieved for the measures in the plan where it is possible, clearly indicating the methodology used.</p>	<p>In our 2011 audit, we found that 12 of the 19 measures listed in the 2010 plan were reported to have achieved reductions for 2008. All 12 measures included a discussion of the methodology used for measuring GHG reductions. However, we found that there was no comprehensive quality assurance or quality control system across measures and the plan as a whole that was based on established standards. We concluded that it was not therefore possible to know the extent to which the reported actual GHG reductions were credible.</p>
2011 October Report, Chapter 1, <i>Climate Change Plans under the Kyoto Protocol Implementation Act</i>		2012 Spring Report, Chapter 1, <i>Kyoto Protocol Implementation Act</i> , and Chapter 2, <i>Meeting Canada's 2020 Climate Change Commitments</i>
Recommendations	Response to recommendations (summary)	Follow-up on recommendations
<p>1.42 Environment Canada should ensure that future climate change plans for the purposes of the <i>Kyoto Protocol Implementation Act</i> contain all the information required by the Act or clearly state why the plans do not do so.</p>	<p>Agreed. Environment Canada has made significant annual improvements to the plans and produces a comprehensive and detailed document that reflects the government's commitment to comply with the <i>Kyoto Protocol Implementation Act's</i> information requirements to the furthest extent possible.</p> <p>The Commissioner of the Environment and Sustainable Development has identified specific areas where there is room for further improvement, such as strengthening details on implementation of measures. The Department, with the contribution of responsible departments, will seek to address these issues, beginning with the plan for 2011. . . .</p>	<p>The 2011 climate change plan is more explicit as it organizes information for each measure by the requirements under subsection 5(1) of the Act and it includes more of the information required. However, the 2011 plan is still missing several key elements.</p> <p>Refer to Exhibit 1.2 for additional details.</p>

2011 October Report, Chapter 1, Climate Change Plans under the <i>Kyoto Protocol Implementation Act</i>		2012 Spring Report, Chapter 1, <i>Kyoto Protocol Implementation Act</i> , and Chapter 2, Meeting Canada's 2020 Climate Change Commitments
Recommendations	Response to recommendations (summary)	Follow-up on recommendations
<p>1.43 Environment Canada and departments responsible for implementing measures in the climate change plans should include an explanation in the plans of how measures not implemented will be redressed in terms of greenhouse gas emission reductions.</p>	<p>Agreed. When measures for the previous calendar year have been delayed or not implemented, departments will provide a clear explanation for the change in implementation status.</p>	<p>The measures in the 2011 climate change plan were implemented from the previous year; therefore, there was no need for an explanation regarding redress of lost greenhouse gas emission reductions.</p>
<p>1.81 Environment Canada should ensure that future climate change plans are supported by an appropriate management accountability and reporting framework that includes</p> <ul style="list-style-type: none"> • clear roles and responsibilities, • clear goals and objectives for the plans and for the measures, • an evaluation strategy, and • ongoing performance measurement that includes transparent financial reporting and quality assurance on greenhouse gas emissions and reductions reported. 	<p>Agreed. The new Federal Sustainable Development Strategy (FSDS) provides a management and reporting instrument that will outline much of the information recommended by the Commissioner of the Environment and Sustainable Development.</p> <p>In linking to the government's expenditure planning and reporting system, it also makes transparent the resources associated with climate change initiatives. Finally, the FSDS uses the Canadian Environmental Sustainability Indicators to measure, monitor, and report on progress. The FSDS will augment core management accountability and reporting instruments operating outside of the Act. These include annual reports on plans and priorities, departmental performance reports, and the evaluation plans of departments consistent with Treasury Board's Policy on Evaluation.</p>	<p>The 2011 climate change plan did not contain any new references to the elements of a management accountability and reporting framework cited in the recommendation, nor did the 2011 plan contain any references to the new Federal Sustainable Development Strategy, which was cited in response to this recommendation.</p>
<p>1.82 Environment Canada should ensure that requirements for the reporting of financial information by departments responsible for implementing and reporting on measures in the climate change plans are clear and consistent. These departments should ensure that this financial information is provided in a timely manner. Environment Canada should ensure that financial information, including all funds allocated and spent, is reported for all measures in the annual climate change plans.</p>	<p>Disagreed. Environment Canada does not accept this recommendation. The <i>Kyoto Protocol Implementation Act</i> does not include any requirement for financial reporting in the annual plans. Further, these instruments of financial reporting will be supplemented by additional reporting to Parliament under the new Federal Sustainable Development Strategy.</p>	<p>The 2011 Climate Change Plan did not report financial information for any of the measures listed in the plan.</p>

2011 October Report, Chapter 1, Climate Change Plans under the <i>Kyoto Protocol Implementation Act</i>		2012 Spring Report, Chapter 1, <i>Kyoto Protocol Implementation Act</i> , and Chapter 2, Meeting Canada's 2020 Climate Change Commitments
Recommendations	Response to recommendations (summary)	Follow-up on recommendations
<p>1.83 Departments responsible for implementing and reporting on measures in the climate change plans—including Natural Resources Canada, Transport Canada, the Department of Finance Canada, and Environment Canada—should develop and implement a quality assurance and quality control system for reporting actual greenhouse gas emission reductions, measured or estimated against a baseline. This should include</p> <ul style="list-style-type: none"> publishing complete and transparent information regarding the analysis underlying each measure and its corresponding baseline, the calculation methods for the reductions, and how the criterion of additionality has been defined and met; and documenting the accuracy of the actual greenhouse gas emission reductions by providing an uncertainty range for each measure and for the total of all measures, for each remaining year of the Kyoto Period (2009 to 2012). This information should be published in the next climate change plans. 	<p>Agreed. Beginning with the 2011 plan, Environment Canada will work with other departments, wherever possible, to provide greater clarity on the consistency of quality assurance and verification systems by asking that departments preparing greenhouse gas (GHG) estimates clearly describe</p> <ul style="list-style-type: none"> the analysis, including methodology and assumptions, underlying the measures; the process that departments used to develop the baseline(s); the calculation methods for GHG reductions; and how the criterion of additionality has been defined and met. <p>In addition, departments preparing GHG estimates will be asked to provide a range for the actual GHG reductions associated with each measure.</p>	<p>We have not followed up on this recommendation in the 2012 audit.</p>