

Chapter

# 1

Climate Change Plans Under  
the *Kyoto Protocol Implementation Act*

The Report is available on our website at [www.oag-bvg.gc.ca](http://www.oag-bvg.gc.ca).

For copies of the Report or other Office of the Auditor General publications, contact

Office of the Auditor General of Canada  
240 Sparks Street, Stop 1047D  
Ottawa, Ontario  
K1A 0G6

Telephone: 613-952-0213, ext. 5000, or 1-888-761-5953

Fax: 613-943-5485

Hearing impaired only TTY: 613-954-8042

Email: [distribution@oag-bvg.gc.ca](mailto:distribution@oag-bvg.gc.ca)

*Ce document est également publié en français.*

© Her Majesty the Queen in Right of Canada, represented by the Minister of Public Works and Government Services, 2011.

Cat. No. FA1-2/2011-1E-PDF

ISBN 978-1-100-18511-8

ISSN 1495-0782

# Table of Contents

<b>Main Points</b>	15
<b>Introduction</b>	17
Mandate of the Commissioner of the Environment and Sustainable Development	19
Focus of the audit	19
<b>Part 1—Compliance with the <i>Kyoto Protocol Implementation Act</i></b>	20
<b>Observations</b>	20
<b>Preparing the climate change plans</b>	20
The annual climate change plans are not in compliance with the Act	20
<b>Implementing the plans and achieving results</b>	25
The government has lowered its expected greenhouse gas emission reductions by 90 percent since 2007	25
Not all measures are reported to have achieved their expected greenhouse gas emission reductions for 2008	28
Environment Canada has made progress in implementing previous recommendations	28
<b>Meeting Kyoto Protocol obligations</b>	29
Canada is not on track to meet its greenhouse gas emissions target under the Kyoto Protocol	29
<b>Recommendations</b>	30
<b>Part 2—Managing Climate Change Plans</b>	33
<b>Observations</b>	33
<b>Establishing management systems</b>	34
The government has not put in place management systems and tools needed to achieve, measure, and report on greenhouse gas emission reductions	35
<b>Reporting financial information</b>	37
Financial information is not reported consistently for the measures in the 2010 plan	37
<b>Establishing quality assurance and quality control systems</b>	40
Quality assurance systems have been implemented for reporting Canada’s greenhouse gas emissions	41
Adequate quality assurance systems have not been established for reporting actual greenhouse gas emission reductions for 2008	41

<b>Recommendations</b>	44
<b>Conclusion</b>	47
Government commitments	47
Concluding observations	47
Subsequent events	48
<b>About the Audit</b>	49
<b>Appendix</b>	
List of recommendations	53



# Climate Change Plans Under the *Kyoto Protocol Implementation Act*

---

## Main Points

### What we examined

In 2007, Parliament passed the *Kyoto Protocol Implementation Act* “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.” The Act requires that the Minister of the Environment prepare an annual climate change plan on behalf of the federal government that includes measures designed to ensure that the Kyoto obligations are met.

The Act requires the Commissioner of the Environment and Sustainable Development to analyze the government’s progress in implementing the plans and in meeting the Kyoto obligations. It provides that every two years, up to and including 2012, the Commissioner should report on progress in meeting these obligations and on any other matters of importance. We presented our first report to Parliament in May 2009; this is our second mandatory report under the Act.

We examined whether the climate change plans include all the information required by the Act and analyzed progress made in implementing the plans and in meeting Canada’s greenhouse gas emissions target under the Kyoto Protocol. We followed up on Environment Canada’s progress in meeting commitments made in response to recommendations from our first audit under this mandate, published in 2009.

We also examined whether the climate change plans include the management systems and tools needed to achieve, measure, and report on greenhouse gas emission reductions.

Our audit work included Environment Canada as well as other federal organizations— Agriculture and Agri-Food Canada, the Department of Finance Canada, Natural Resources Canada, and Transport Canada—who are responsible for implementing measures set out in the climate change plans.

Audit work for this report was substantially completed on 2 November 2010.

**Why it's important**

Canada first agreed to reduce its greenhouse gas emissions when it ratified the United Nations Framework Convention on Climate Change in 1992. When it ratified the Kyoto Protocol in 2002, along with 193 other parties, Canada made commitments to reduce emissions to an average of 6 percent below its 1990 level during the Kyoto commitment period, between 2008 and 2012.

To meet these commitments or subsequent commitments, such as those under the Copenhagen Accord and the Federal Sustainable Development Strategy, it is important to establish a comprehensive plan and an effective governance structure to implement it.

**What we found**

- The climate change plans developed by Environment Canada in response to the *Kyoto Protocol Implementation Act* are not in compliance with the Act because required information is missing. Environment Canada has made some improvements in the completeness and transparency of the information contained in the climate change plans since 2007. However, the measures contained in the plans are not sufficient to achieve the Kyoto Protocol obligations for reductions in greenhouse gas emissions.
- Canada is not on track to meet its Kyoto Protocol greenhouse gas emissions target. The 2010 National Inventory data indicates that in 2008, Canada's greenhouse gas emissions were 31 percent higher than the Kyoto target. Even if all the measures in the first (2007) annual climate change plan had been implemented as planned and their expected greenhouse gas reductions had been achieved, the reductions would not be sufficient to meet the government's Kyoto Protocol obligations. Expected reductions set out in the climate change plans have dropped by 90 percent since the first plan was published in 2007.
- More than \$9 billion has been allocated to implement the measures outlined in the 2010 climate change plan. However, the government has not established a governance structure that sets out clear roles and responsibilities, quality assurance systems for reporting on greenhouse gas reductions achieved, and financial and performance reporting systems and mechanisms for evaluating the climate change plans.

**The departments have responded.** The departments agree with our recommendations except for the recommendation on the reporting of financial information (paragraph 1.82). Their detailed responses follow the recommendations throughout the chapter.

## Introduction

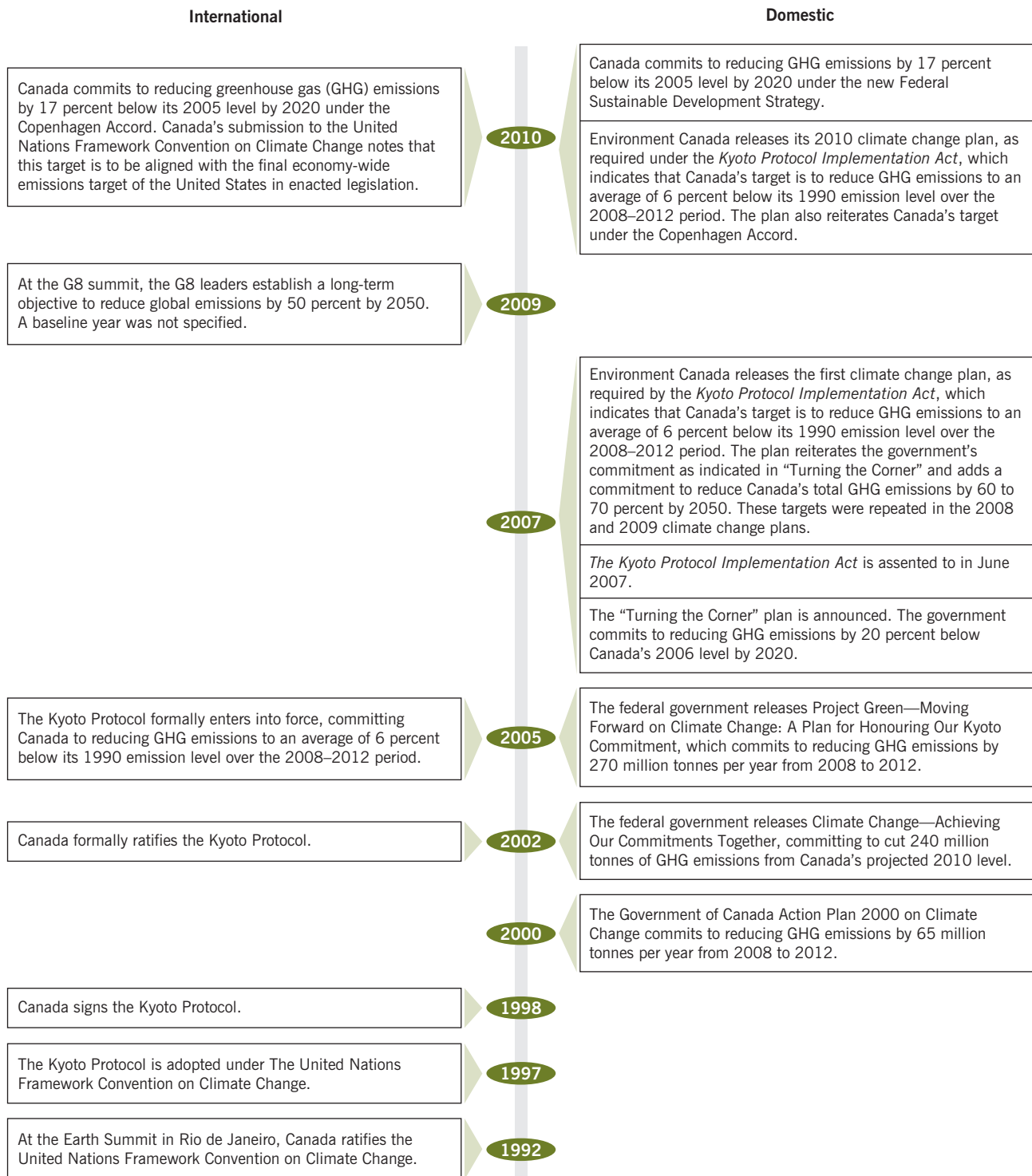
**1.1** Canada's government has recognized that climate change is an issue of major concern for Canadians and that climate change is a key challenge facing the world in the 21st century. Recent studies by the Government of Canada indicate that climate change is already having a major impact on Canadian ecosystems and on the health of Canadians. Since 1992, the Government of Canada has made domestic and international commitments to address climate change, including committing to reduce its greenhouse gas (GHG) emissions (Exhibit 1.1). To fulfill these commitments, it has developed plans and programs, monitored and reported on GHG emissions, and allocated billions of dollars.

**1.2** 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 GHG emissions. To date, 193 countries have ratified the Kyoto Protocol, including Canada in 2002. In 2007, the *Kyoto Protocol Implementation Act* was enacted 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** to be taken to achieve the necessary emissions target committed to under the Kyoto Protocol—that is, to reduce GHG emissions to an average of 6 percent below its 1990 level during the five-year Kyoto commitment period from 2008 to 2012.

**1.3** Environment Canada is responsible for preparing the annual climate change plans under the *Kyoto Protocol Implementation Act* and has to date published four plans, one for each year from 2007 to 2010. Departments responsible for implementing the measures in the plans include Agriculture and Agri-Food Canada, the Department of Finance Canada, Environment Canada, Natural Resources Canada, and Transport Canada.

**Measures**—Government actions, described in the climate change plans, taken to ensure that Canada achieves its greenhouse gas emissions target under the Kyoto Protocol. Measures can be regulatory, market-based, or fiscal and can include federal programs, initiatives, regulations, and incentives.

**Exhibit 1.1 The federal government has made domestic and international commitments to address climate change and reduce greenhouse gas emissions**





## **Mandate of the Commissioner of the Environment and Sustainable Development**

**1.4** 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.

### **Focus of the audit**

**1.5** This is the second audit required under subsection 10.1(1) of the Act. Part 1 of this report describes our analysis of whether Environment Canada, and other responsible government departments, have developed and implemented climate change plans in accordance with the requirements of the Act. In our audit, we examined whether the 2009 and 2010 climate change plans fulfilled all the requirements set out in subsection 5(1). As part of our mandate under subsection 10.1(1)(a), we also looked at whether the measures in the climate change plans were implemented. Under our mandate provided in subsection 10.1(1)(b) of the Act, we examined whether Canada was on track to attain its GHG emissions target mandated under the Kyoto Protocol.

**1.6** The work presented in Part 2 of this report was conducted under our mandate in subsections 10.1(1)(a) and (c) of the Act. It provides observations and recommendations that we wish to bring to the attention of Parliament regarding the management systems and practices in place for the climate change plans.

**1.7** Our recommendations for Part 1 and Part 2 appear at the end of each part. More details about the audit objectives, scope, approach, and criteria are in **About the Audit** at the end of this chapter.

# Part 1—Compliance with the *Kyoto Protocol Implementation Act*

## Observations

**1.8** 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 . . .”. The Act requires that the Minister of the Environment prepare annual climate change plans that include specific elements, such as

- a description of the measures to be taken to ensure that Canada meets its obligations under the Protocol,
- effective dates for the measures,
- greenhouse gas emission reductions expected and achieved, and
- a report describing the implementation of the measures and the plans from the previous year.

Exhibit 1.2 lists the specific requirements of subsection 5(1).

### Preparing the climate change plans

**1.9** In our 2009 audit of the *Kyoto Protocol Implementation Act*, we reviewed the 2007 and 2008 climate change plans to determine if the plans contained all the information required by the Act. At that time, we found that the plans did not meet the requirements of the Act and we recommended that the next annual plans fulfill all the requirements of subsection 5(1) of the *Kyoto Protocol Implementation Act*. Environment Canada accepted this recommendation.

**1.10** In this current audit, we examined the 2009 and 2010 climate change plans to determine if the plans contained all the information required by the Act. In order to do this, we analyzed the plans and other documentation and conducted interviews with the federal departments with responsibilities for the measures listed in the plans.

### The annual climate change plans are not in compliance with the Act

**1.11** We found that a number of the requirements of the Act, as set out in subsection 5(1), were not met. Although we noted some improvement since our last audit, one or both of the 2009 and 2010 climate change plans have not

- described measures to be taken that will ensure that Canada meets its Kyoto Protocol obligations,

- provided an effective date for all measures,
- explicitly compared expected emission levels by year with Canada's greenhouse gas (GHG) emission obligation in the Kyoto period,
- included an adequate explanation of how an equitable distribution of GHG emission reductions among economic sectors was calculated, or
- indicated how measures that have not been implemented will be redressed.

**Exhibit 1.2** The *Kyoto Protocol Implementation Act* requires that annual climate change plans contain specific elements

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) 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;

(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.

Source: *Kyoto Protocol Implementation Act*

The following paragraphs (1.12–1.19) elaborate on the extent to which the climate change plans complied with the requirements in subsection 5(1) of the Act.

**1.12 Description of measures.** The 2009 and 2010 climate change plans were prepared by Environment Canada with information provided by departments responsible for implementing each measure. Each plan included at least 19 measures with expected annual GHG emission reductions for the Kyoto commitment period (2008 to 2012). A description was provided for each measure; however, subsection 5(1)(a) of the Act requires that the measures described “ensure that Canada meets its obligations” under the Kyoto Protocol. We found that neither the 2009 nor the 2010 plan indicated that these measures were designed to ensure that Canada meets its obligation under Article 3, paragraph 1, of the Kyoto Protocol, which requires Canada to reduce its national GHG emissions to an average of 6 percent below its 1990 level in the commitment period 2008 to 2012. Therefore, as designed, the plans do not describe measures that will ensure that Canada meets its obligation, as required by the Act. We also noted that the plans contained over a dozen measures without expected GHG emission reductions.

**1.13 Date the measure will come into effect.** We found that the plans have improved on this reporting requirement from 2009 to 2010. In the 2010 plan, all measures included a date that the measure would come into effect. By contrast, in the 2009 plan, 10 of 19 measures reported an effective date.

**1.14 Amount of GHG emission reductions.** The 2009 and 2010 plans each identified 19 measures with expected GHG emission reductions (Exhibit 1.3). The plans did not, however, comply with the Act’s requirement to compare the expected GHG reductions of each measure with the GHG emission levels in the most recently available **National Inventory Report**, which provides information regarding GHG emission levels in Canada.

**1.15 Projected GHG emission levels in Canada.** 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.

**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 and the Kyoto Protocol specify reporting requirements for the inventory.

**Exhibit 1.3 Measures listed in the 2009 and 2010 climate change plans include expected and actual greenhouse gas emission reductions (million tonnes)**

Lead responsible department	Measure	Expected emission reductions for 2008–2012 as reported in 2009 Plan	Expected emission reductions for 2009–2012 as reported in 2010 Plan	Actual emission reductions for 2008 as reported in 2010 Plan
Environment Canada	Regulatory Framework for Industrial Greenhouse Gas Emissions	164.4	Not included in the 2010 Plan	Not included in the 2010 Plan
	Regulating Renewable Fuels Content	3.4	4.18	N/A
	Reducing Greenhouse Gas Emissions from New Cars and Light Trucks	No estimates in the 2009 Plan	2.5	N/A
	National Vehicle Scrappage Program	0.085	0.027	0.001
Natural Resources Canada	ecoENERGY for Industry	1.61	5.55	0.64
	ecoENERGY for Personal Vehicles Program	0.35	0.38	0.05
	ecoENERGY for Fleets Program (also included under ecoFREIGHT Program)	2.03	0.62	0.08
	Strengthening Energy Efficiency Standards	6.05	4.91	0.09
	ecoENERGY for Renewable Heat	0.07	0.074	0.003
	ecoENERGY for Buildings and Houses	5.6	5.54	0.58
	ecoENERGY Retrofit Initiative	5.65	6.27	0.39
	ecoENERGY for Renewable Power	24.73	19.3	1.35
Indian and Northern Affairs Canada	ecoENERGY for Aboriginal and Northern Communities	Not included in the 2009 Plan	0.041	N/A
Transport Canada	Marine Shore Power Program (also included under ecoFREIGHT Program)	0.027	0.015	N/A
	ecoMobility	0.331	0.331	N/A
	ecoTechnology for Vehicles Program	0.523	0.523	N/A
	ecoFREIGHT Program (includes 6 programs — reductions for Marine Shore Power Program and ecoENERGY for Fleets Program are reported separately)	4.711	4.72	N/A
	ecoAUTO Rebate Program	0.05	0.04	0.01–0.03
Department of Finance Canada	Green Levy	0.84	0.74	0.09–0.1
	Promoting Sustainable Urban Transit (Public Transit Tax Credit)	0.174	0.138	0.032
	Clean Air and Climate Change Trust Fund	80.0	No estimates in the 2010 Plan	N/A

Note: There are other measures listed in the plans that do not have quantified emission reductions.

N/A (not applicable) means that these measures did not have actual emission reductions for 2008.

Source: A Climate Change Plan for the Purposes of the *Kyoto Protocol Implementation Act*, 2009, 2010.

**1.16 Equitable distribution of GHG emission reductions.** 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. For example:

- The criterion for an equitable distribution and the methodology used to determine if there was an equitable distribution of GHG emission reductions among sectors was not specified.
- The units of measurement were not provided.
- Inconsistencies in the presentation of data regarding the economic sectors that contribute to GHG emissions made it difficult to compare emission levels with emission reductions by sector. The classification of sectors used to determine an equitable distribution is not consistent with that in the National Inventory Report, nor is it consistent between the 2009 and 2010 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.

**1.17 Implementation of measures for the previous year.** 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.

**1.18 Measures implemented by the date projected.** Reporting on this requirement has improved since the last audit as the reports for the majority of measures listed in both the 2009 and 2010 plans indicate that the measures were implemented by the date projected (although the date was not provided in many cases). However, almost one quarter of the measures were not yet fully implemented and therefore this information could not be provided for these measures. The 2010 plan stated that only one measure was not implemented by the date projected and explained that this failure was redressed with an interim approach.

**1.19 Measures to be redressed.** The Act requires that an explanation be provided for how the failure to implement a measure by the date projected in the plan would be **redressed**. Our audit found that the 2010 plan does 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 government's GHG emission

**Redress**—In the context of the *Kyoto Protocol Implementation Act*, compensation for the loss of greenhouse gas emission reductions resulting from the failure to implement a measure.

reductions in the 2009 plan, would be redressed (see Exhibit 1.5 for a description of the framework).

**1.20** We have concluded that the 2009 and 2010 climate change plans are not in compliance with the Act as they do not include all of the information required by subsection 5(1).

**1.21** Recommendations regarding these observations are found at paragraphs 1.42 and 1.43.

### Implementing the plans and achieving results

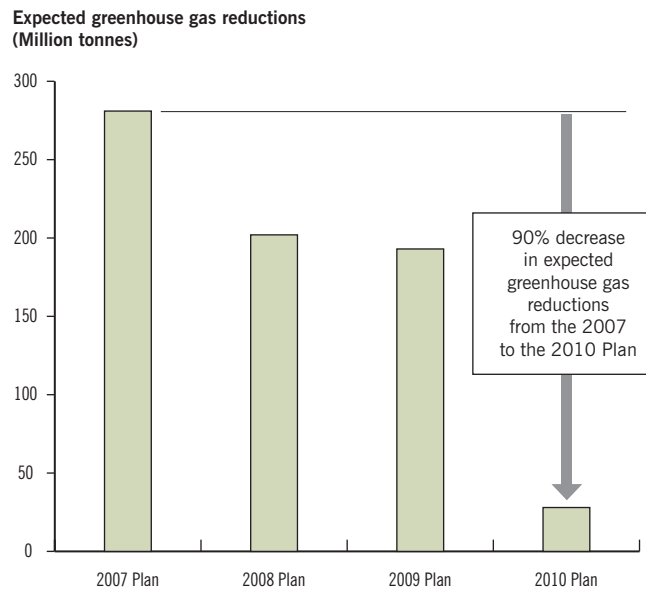
**1.22** Subsection 10.1 (1)(a) of the *Kyoto Protocol Implementation Act* requires that “[. . .] the Commissioner of the Environment and Sustainable Development shall prepare a report that includes . . . an analysis of Canada’s progress in implementing the Climate Change Plans . . .”. As part of our audit, we examined whether Environment Canada and other responsible departments had implemented the measures as reported in the 2009 and 2010 plans. To examine implementation, we considered a variety of information, including whether the plan stated that the measure was implemented, if funding for the measure had been allocated, and if the measure had expected or achieved greenhouse gas (GHG) emission reductions. We also followed up on whether Environment Canada had made progress in implementing selected recommendations from our 2009 audit.

#### **The government has lowered its expected greenhouse gas emission reductions by 90 percent since 2007**

**1.23** In examining whether the measures in the plans had been implemented, we reviewed all four climate change plans, from 2007 to 2010, to determine whether the expected GHG emission reductions and the results achieved had remained consistent among the plans. We noted that the amount of expected reductions from the plans decreased from an estimated 282 million tonnes in the 2007 plan to 28 million tonnes in the 2010 plan, a reduction of 90 percent (Exhibit 1.4).

**1.24** In the 2007, 2008, and 2009 plans, the most significant amount of expected emission reductions from federal measures were to come from

- the Regulatory Framework for Industrial Greenhouse Gas Emissions, which is no longer included in the 2010 plan; and
- the Clean Air and Climate Change Trust Fund, whose reductions are attributed to provincial rather than federal measures in the 2010 plan.

**Exhibit 1.4 Total expected greenhouse gas emission reductions in the climate change plans have dropped by 90 percent since 2007**

Source: 2007 data calculated by the Office of the Auditor General. Other data is from A Climate Change Plan for the Purposes of the *Kyoto Protocol Implementation Act*, published annually since 2007.

**1.25 Regulatory Framework for Industrial Greenhouse Gas**

**Emissions.** This measure, managed by Environment Canada, was to have accounted for about 85 percent (164 million tonnes total in the 2009 plan) of the total amount of expected GHG emission reductions for the 2008 to 2012 Kyoto period (Exhibit 1.5). During our 2009 audit, Environment Canada indicated that the framework would be in place by 1 January 2010. At that time, we noted that there had been delays in implementing the framework and, as a consequence, it was unlikely that the Department would be able to meet its target date for implementation. The framework was eliminated from the 2010 plan.

**1.26** The 2010 climate change plan and Environment Canada officials noted that the Regulatory Framework for Industrial Greenhouse Gas Emissions was not implemented due to a decision to align Government of Canada actions to address climate change with those of the United States. The 2010 plan reported that the Government of Canada is developing regulations in specific sectors and launching collaborative initiatives with the United States. However, we noted that no equivalent measures with quantified GHG emission reductions have been reported, as required by the Act, to redress the expected reductions that will not occur due to the Regulatory Framework not being implemented.

**1.27** A recommendation regarding these observations is found at paragraph 1.43.



**Exhibit 1.5 The proposed Regulatory Framework for Industrial Greenhouse Gas Emissions would have imposed mandatory targets**

In April 2007, the federal government announced plans to develop the Regulatory Framework for Industrial Greenhouse Gas Emissions, which contained two key components:

- mandatory short-term, medium-term, and long-term targets that would have set a limit on the amount of GHG emissions allowed per unit of industrial production—that is, GHG emissions intensity (for example, GHG emissions per barrel of oil produced); and
- compliance mechanisms that provided firms with flexibility in how they meet their targets.

The Regulatory Framework was expected to reduce GHG emissions by about 164 million tonnes between 2008 and 2012.

Source: Adapted from A Climate Change Plan for the Purposes of the *Kyoto Protocol Implementation Act*, 2009.

**1.28 Clean Air and Climate Change Trust Fund.** The measure in the 2007, 2008, and 2009 climate change plans that was to account for the second largest amount of reductions (80 million tonnes total from 2008 through 2012) was the \$1.5-billion Clean Air and Climate Change Trust Fund, which provides federal funding to provinces and territories for GHG emission reduction measures. The fund was designed and implemented by the Department of Finance Canada, and the measures are reported in the plans by Environment Canada. Although previous plans contained initial estimates of GHG emission reductions from the trust fund, the 2010 plan noted that because the fund was established on an arm's-length basis, provincial and territorial governments were not required to report to the federal government on how the resources were used and that therefore the impact of the fund on GHG reductions could not be assessed. This matter has been highlighted in previous audits by the Commissioner of the Environment and Sustainable Development and by the Auditor General (December 2008).

**1.29** Environment Canada has since approached provinces and territories about quantifying reductions associated with the trust fund and has reported this information in the plans. Officials told us that in order to increase transparency and accuracy in reporting on GHG emission reductions in the plans, Environment Canada no longer attributes any GHG reductions from the trust fund to federal measures. Instead, Environment Canada told us that the GHG reductions reported by provinces and territories have been incorporated into the baseline (projected GHG emissions excluding federal government measures). We noted that this amount of GHG reductions is not specifically reported in the plan.

**Not all measures are reported to have achieved their expected greenhouse gas emission reductions for 2008**

**1.30** The 2010 climate change plan was the first plan to report GHG emission reductions achieved during the Kyoto period because of a two-year lag required to measure and report actual GHG reduction results. We examined whether the GHG emission reductions achieved in 2008, as reported in the 2010 plan, met the expected reductions presented in earlier plans for each measure and in total.

**1.31** Since 2007, the climate change plans have contained 19 measures aimed at reducing GHG emissions. Of the measures originally associated with expected reductions for 2008, 12 were reported to have achieved reductions in the 2010 plan. Most of these reported reductions were lower than originally projected: of the 12 measures, 4 achieved the 2008 emission reductions estimated in the 2007 plan. We noted that there has been no redress for the loss of overestimated reductions.

**Environment Canada has made progress in implementing previous recommendations**

**1.32** As part of this audit, we followed up on whether Environment Canada has made progress in implementing selected recommendations in our 2009 audit.

**1.33 Uncertainty ranges.** Our 2009 audit recommended that the annual climate change plans describe the quantitative or qualitative uncertainties related to the expected GHG emission reductions for the annual plans as a whole and for the individual measures where possible. Specifying the uncertainty range is important so that data limitations and the extent to which results are accurate are clear.

**1.34** Regarding individual measures, we found that the 2009 climate change plan listed an uncertainty range for expected GHG emission reductions for 16 of 19 measures and that the 2010 climate change plan listed an uncertainty range for 14 of 19 measures. The plans did not explain the absence of uncertainty ranges for some measures. An annex to the 2010 climate change plan provides the methodology used to estimate uncertainties for the projections. We did not examine the accuracy of each estimate because this type of annual analysis is conducted by the National Round Table on the Environment and the Economy. We nevertheless can conclude that Environment Canada and other responsible departments made progress by providing an uncertainty range for most of the individual measures. We also noted that for the plans as a whole, the uncertainty analysis carried out does not provide a range of GHG reduction estimates.

**1.35 Methodology for measuring reductions.** In our 2009 audit, we recommended that Environment Canada indicate how it would measure actual GHG emission reductions for each of the measures in the plan. 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, although the detail of the methodology provided varied significantly. Some measures provided limited information regarding the methodology used to estimate reductions, stating that GHG reductions were based on program participation. Nevertheless, Environment Canada has made progress implementing our recommendation to include an explanation of the methodology used to report actual reductions.

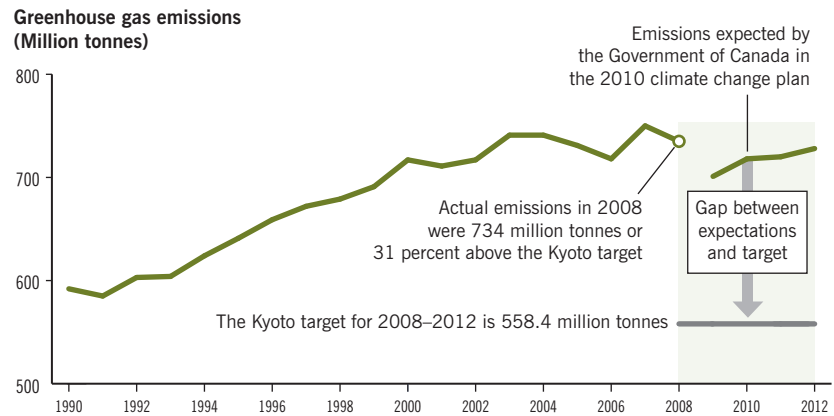
### Meeting Kyoto Protocol obligations

**1.36** Our mandate in the *Kyoto Protocol Implementation Act* under subsection 10.1(1)(b) requires that we report on Canada's progress in meeting its greenhouse gas (GHG) emissions target under the Kyoto Protocol. Ultimately, it is the United Nations Framework Convention on Climate Change Secretariat that will determine, in 2014, if Canada and other countries have met their obligations. However, the Kyoto Protocol states that "each Party [. . .] shall, by 2005, have made demonstrable progress in achieving its commitments under this Protocol" and subsection 5(1)(a) of the Act requires the Minister of the Environment to develop climate change plans to meet these obligations. Therefore, we assessed whether Canada was on track to meet its Kyoto Protocol GHG emissions target based on the 2010 plan.

**1.37** 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, or 558.4 million tonnes. More specifically, this means that for this five-year period, the total GHG emissions in Canada should not exceed 2,792 million tonnes.

#### **Canada is not on track to meet its greenhouse gas emissions target under the Kyoto Protocol**

**1.38** The 2010 annual National Inventory Report of GHG emissions was published on 15 April. It noted that, in 2008 (the first year of the commitment period to contribute to the calculation of the average GHG emissions level against the target), the emissions level for Canada was 734 million tonnes or 31 percent above the required target (Exhibit 1.6).

**Exhibit 1.6 A gap exists between the Kyoto Protocol target and the Government of Canada's expected greenhouse gas emissions in the 2010 climate change plan**

Note: Information for 2009 was not available at the time of our audit.

Source: Adapted from Environment Canada's National Inventory Report, 1990–2008: Greenhouse Gas Sources and Sinks in Canada (May 2010) and A Climate Change Plan for the Purposes of the *Kyoto Protocol Implementation Act* (May 2010)

**1.39** Our audit found that even if all the measures in the first annual climate change plan had been implemented as planned, and achieved their expected GHG emission reductions, they would not be sufficient to meet the government's Kyoto Protocol target. Since the first plan, expected GHG reductions have been lowered by 90 percent in subsequent climate change plans. In the absence of additional information, in our view, Canada is not on track to meet its GHG emissions target under the Kyoto Protocol and the *Kyoto Protocol Implementation Act*.

## Recommendations

**1.40** The federal government's 2009 and 2010 climate change plans do not contain all the information required under the *Kyoto Protocol Implementation Act*. The plans have not established sufficient measures to achieve the government's commitments under the Kyoto Protocol, and do not include all of the information that Parliament has requested in order to carry out its oversight of the government's efforts to meet its international obligations.

**1.41** Since 2007, the federal measure expected to result in the most significant amount of GHG emission reductions was the Regulatory Framework for Industrial Greenhouse Gas Emissions. The framework

is not included in the 2010 climate change plan, and no equivalent measures have been reported to redress the reductions that will not occur in the absence of the framework.

**1.42 Recommendation.** Environment Canada should ensure that future climate change plans for the purposes of the *Kyoto Protocol Implementation Act* contain all the information required by the Act or clearly state why the plans do not do so.

**The Department's response.** 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 *Kyoto Protocol Implementation Act's* information requirements to the furthest extent possible. 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.

This recommendation has implications for a number of federal departments, and they have been consulted on this response.

**1.43 Recommendation.** 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.

**The departments' response.** Agreed. Environment Canada and responsible departments will continue to provide up-to-date information on federal climate change activities. 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.

The Government of Canada has been clear that it is moving forward on meeting its commitment to reduce GHG emissions by 17 percent by 2020 compared with 2005 levels. It has replaced its earlier regulatory approach, entitled *Turning the Corner*, with a new sector-based approach that, where appropriate, aligns with actions taken in the U.S. Significant progress has been made in the electricity and transportation sectors (emission standards for new passenger automobiles and light trucks), and the actions taken so far by the federal and provincial governments are expected to achieve one

quarter of the emission reductions needed by 2020 to meet our commitment of reducing Canada's annual GHG emissions to the target level of 607 million tonnes.

Canada is participating in a global approach under the Cancun Agreements, which were signed by developed and developing countries accounting for over 85 percent of global GHG emissions.

## Part 2—Managing Climate Change Plans

### Observations

**Horizontal initiative**—According to the Treasury Board of Canada Secretariat, an initiative in which partners from two or more organizations have established a formal funding agreement to work toward the achievement of shared outcomes. The objective of reporting on horizontal initiatives is to provide parliamentarians, the public, and government with an overall picture of public expenditures, plans, and performance regarding these shared outcomes.

**1.44** Climate change is a complex issue. Developing and implementing plans that address Canada’s national and international climate change commitments is inherently challenging. The government has acknowledged that a complex issue that implicates a number of federal organizations, such as climate change, requires effective management of **horizontal initiatives**, including the need for appropriate governance and accountability mechanisms.

**1.45** Our past audits dealing with the management of climate change in 1998, 2000, 2001, and 2006, and our past audit of horizontal initiatives in 2005, identified key management gaps. These audits found, among other things, that the government had not created an effective governance structure for managing climate change activities and that insufficient attention paid to horizontal initiatives had caused weaknesses in horizontal governance, accountability, and coordination.

**1.46** Since these audit reports were issued, the *Kyoto Protocol Implementation Act* was put in place and the government has developed four climate change plans. This part of our report presents observations and recommendations that we wish to bring to the attention of Parliament, commensurate with our mandate under subsections 10.1(1)(a) and (c) of the *Kyoto Protocol Implementation Act*. During our audit work designed to examine progress in implementing the climate change plans, we looked at the extent to which

- the government has put in place the management systems and tools needed to achieve, measure, and report on greenhouse gas (GHG) emission reductions;
- the government has reported on funding allocated to measures in the annual climate change plans; and
- quality assurance and verification systems were in place to report on GHG emissions and reductions in the plans.

Although these items are not requirements of the *Kyoto Protocol Implementation Act*, they are key elements important to support sound program management. If the federal government is to reduce GHG emissions and meet its national and international commitments, it will need appropriate governance and accountability mechanisms to do so.

**Establishing management systems**

**1.47** The November 2005 Report of the Auditor General of Canada, Chapter 4, Managing Horizontal Initiatives, found that the government had not developed enough specialized tools for the governance, accountability, and coordination of federal efforts to manage horizontal initiatives. In the 2006 Commissioner of the Environment and Sustainable Development chapter, Managing the Federal Approach to Climate Change, we recommended that the government ensure the development and implementation of effective governance and accountability for the climate change issue. In response, the government agreed that climate change was a complex issue requiring effective horizontal management and in 2007 developed a horizontal management accountability and reporting framework for its Clean Air Agenda (Exhibit 1.7). Although we did not examine the Clean Air Agenda in this audit, and cannot attest to its effectiveness, it is an example of how an accountability and reporting framework has been developed to address matters related to climate change. Just over half of the measures listed in the climate change plans are also part of the Clean Air Agenda. The rest of the measures in the plans are not part of a horizontal management accountability and reporting framework.

**1.48** According to Treasury Board of Canada Secretariat guidance documents, a results-based management accountability framework for a horizontal initiative includes, among other things, a governance structure that specifies roles and responsibilities and common goals and objectives; performance measurement and financial reporting information that links resources to results; and an evaluation strategy.

---

**Exhibit 1.7 A horizontal management accountability and reporting framework was developed for the Clean Air Agenda**

In 2007, the federal government established the Clean Air Agenda as its response to achieving tangible improvements in Canada's environment, including reduced air pollution and greenhouse gas emissions. The Clean Air Agenda included over 40 programs and initiatives and initial budget allocations of \$1.9 billion between 2007 and 2011.

In approving the Clean Air Agenda, ministers from nine federal departments and agencies put in place a management framework to ensure effective horizontal governance and accountability. The framework is led by Environment Canada.

Source: Horizontal Initiative: The Clean Air Agenda, 2007



**The government has not put in place management systems and tools needed to achieve, measure, and report on greenhouse gas emission reductions**

**1.49** We found that there is no overall horizontal management accountability initiative in place for the climate change plans. Officials told us that after the Act was passed in June 2007, the first climate change plan was assembled by August 2007 with no additional funding, resources, or new policy direction. We found that most of the measures contained in the plans were already in place at the time the Act came into effect and the first plan was prepared. These measures had individual reporting and accountability mechanisms as well as a variety of objectives, funding sources, and implementation dates. However, there was no overall management system for the plans that integrated these individual reporting and accountability requirements to achieve, measure, and report on the plan as a whole. We found the following management systems and tools were missing or unclear in the 2009 and 2010 climate change plans.

**1.50 Roles and responsibilities.** Documented roles and responsibilities are an important part of a successful management system. In order to prepare the annual climate change plans, Environment Canada collects information each year from the departments responsible for implementing the measures using a template that is signed off by the responsible deputy minister. However, we found that the roles and responsibilities for implementing, measuring, and reporting on the GHG reductions expected and achieved were not always clear.

**1.51** For example, while the Department of Finance Canada is responsible for implementing the Public Transit Tax Credit, Environment Canada is responsible for ensuring the quality of the results reported, even though it is the Deputy Minister of Finance that signs off on the template providing the information for the climate change plan. In another example, roles and responsibilities for the Clean Air and Climate Change Trust Fund were not documented and were still being discussed during our audit. Two entities responsible for the implementation of measures in the plans told us that it is unclear why their measures are included in the plans at all since they were in place before the first plan was published. Documented roles and responsibilities would clarify the ways in which partners are accountable to each other and to Parliament for the implementation, measurement, and reporting on measures in the climate change plans.

**1.52 Goals and objectives.** Treasury Board guidance indicates that a horizontal initiative needs to be built on a foundation of common values and goals that should be explicit. We found inconsistencies between the purpose of the plans and the goals and objectives of the measures in the plans. For example, although the purpose of the Act is to ensure that the Kyoto Protocol GHG emissions target is met, we found that none of the measures in the plans specified this as a goal or objective. Furthermore, although the Act requires reporting the annual amount of expected and actual GHG emissions and reductions in the plans, some department officials told us that it is not always possible to report results in this manner as they will not be quantifiable until the end of the program.

**1.53** Also, we found that several of the measures identified in the plans have no expected emission reductions associated with them, or will not result in emission reductions until after 2012, the end of the Kyoto Protocol commitment period. There were 14 of these initiatives in the 2009 plan and 15 in the 2010 plan. Examples include Natural Resources Canada's \$1.48 billion ecoENERGY for Biofuels Initiative, Agriculture and Agri-Food Canada's \$159.4 million ecoAGRICULTURE Biofuels Capital Initiative, and the \$500-million Sustainable Development Technology Canada NextGen Biofuels Fund (Exhibit 1.8). Clarification of the objectives for the plans and the criteria for including specific measures in the plans would help ensure that all the measures are working toward a foundation of common goals and objectives.

**1.54 Evaluation.** An important element of public accountability is the requirement for departments that are allocated resources to periodically evaluate the effectiveness of plans and policies to ensure that they are achieving their objectives as intended. While many of the measures in the plans had evaluations planned, under way, or completed, other measures had not been evaluated. Examples of measures not formally evaluated include the Green Levy on fuel-inefficient vehicles and the Clean Air and Climate Change Trust Fund. Furthermore, Environment Canada does not have plans in place to conduct an evaluation of the climate change plan as a whole. Therefore, the extent to which measures are working together to address the overall objectives of the plan is unknown, and the relationship between resources and results is unclear.

**1.55 Performance measurement.** An ongoing performance measurement strategy that outlines how information will be collected and how progress will be measured against planned results is a key feature of an effective management system. We looked at two aspects of performance measurement, including the reporting of financial information and quality assurance on GHG emission reduction results achieved. In both cases, we found a lack of consistent information that would allow Parliament to link resources to results. We discuss these aspects in more detail in the following sections.

**1.56** A recommendation regarding these observations is found at paragraph 1.81.

### Reporting financial information

**1.57** Although reporting of financial information is not a requirement for the climate change plans under the *Kyoto Protocol Implementation Act*, it is a sound principle of good management to include this information in the plans so that departments, Parliament, and Canadians can understand the links between resources and results achieved by the measures. We examined funding allocated to the measures in the annual climate change plans. We interviewed departmental staff and reviewed departmental performance reports, Treasury Board submission documents, evaluation reports, and internal correspondence to determine the funds allocated for these measures.

#### **Financial information is not reported consistently for the measures in the 2010 plan**

**1.58** We found that there was no financial reporting for the climate change plan as a whole that provided information on funding allocated and spent to reduce greenhouse gas (GHG) emissions. We found that 6 of the 19 measures with expected GHG reductions in the 2010 climate change plan did not report any financial information in the plan.

**1.59** Because financial information was not consistently available in the 2010 plan, we sought to determine how much had been allocated to the measures. We found that, as of November 2010, more than \$9 billion had been allocated among seven departments to the measures listed in the plans. We also found that several of these measures, allocated approximately \$5.9 billion, are not expected to achieve any GHG emission reductions during the Kyoto Protocol commitment period (Exhibit 1.8).

**Exhibit 1.8 Measures listed in the 2010 climate change plans amount to more than \$9 billion in allocated funding**

Lead responsible department	Measure	Total funding allocated for each measure for all program years (in millions)
Environment Canada	Regulating Renewable Fuels Content	\$7.7
	Reducing Greenhouse Gas Emissions from New Cars and Light Trucks	\$15.7
	National Vehicle Scrappage Program	\$92.0
Natural Resources Canada	ecoENERGY for Industry	\$18.0
	ecoENERGY for Personal Vehicles Program	\$21.0
	ecoENERGY for Fleets Program (also included under ecoFREIGHT Program)	\$22.0
	Strengthening Energy Efficiency Standards	\$32.0
	ecoENERGY for Renewable Heat	\$36.0
	ecoENERGY for Buildings and Houses	\$61.0
	ecoENERGY Retrofit Initiative	\$805.0
ecoENERGY for Renewable Power	\$1,480.0	
Indian and Northern Affairs Canada	ecoENERGY for Aboriginal and Northern Communities	\$15.0
Transport Canada	Marine Shore Power Program (also included under ecoFREIGHT Program)	\$6.0
	ecoMobility	\$10.0
	ecoTechnology for Vehicles Program	\$15.0
	ecoFREIGHT Program (includes 6 programs—reductions for Marine Shore Power Program and ecoENERGY for Fleets Program are reported separately)	\$33.0
	ecoAUTO Rebate Program	\$264.0
Department of Finance Canada	Green Levy	N/A <sup>1</sup>
	Promoting Sustainable Urban Transit (Public Transit Tax Credit)	\$389.0
Various departments (measures in plans without quantified GHG emission reductions expected)	Clean Air and Climate Change Trust Fund	\$1,519.0
	ecoENERGY for Biofuels Initiative	\$1,480.0
	ecoAGRICULTURE Biofuels Capital Initiative	\$159.4
	Sustainable Development Technology Canada in next generation renewable fuels	\$500.0
	Total for all other measures listed in plans with no quantified GHG emission reductions expected	\$2,305.4
<b>TOTAL</b>		<b>\$9,286.2</b>

1. Not applicable as the levy results in an increase in revenue.

Source: Funding information compiled by OAG with information supplied by departments.

**1.60** For the measures that did report financial information in the 2010 plan, we found the following:

- The funding levels indicated in the plans were not consistent with the funding information provided to us directly by department officials or indicated in other departmental reports for about half of these measures. This was most often due to differing administrative and reporting procedures across measures and among departments.
- The period of time over which the funds were allocated was not clear and was not consistently reported in the plans. Although the Kyoto commitment period is 5 years, from 2008 to 2012, we found that the funding allocations for the measures listed in the plans ranged from periods of 4 to 14 years, with one measure extending until 2021. While the plans are for the purposes of the Kyoto Protocol, it is not possible to determine from the plans how much funding was allocated to achieve GHG emission reductions during the Kyoto period.
- Funding for many of the measures is planned to end in 2011, although the Kyoto commitment period is 2008 to 2012.

**1.61** Overall, we found that reporting of financial information in the plans is not consistent among measures. Furthermore, the extent to which funding has been allocated to measures that are expected to result in GHG emission reductions during the Kyoto Protocol commitment period is not clear and transparent to Canadians.

**1.62** Each year, Environment Canada provides a template to departments responsible for implementing the measures that requests information for inclusion in the climate change plans. However, this does not include financial information. Requesting annual updates on funding allocated and spent on these measures and including this information with the GHG reduction results would ensure that Parliament and Canadians can link resources to results achieved.

**1.63** A recommendation regarding these observations is found at paragraph 1.82.

## Establishing quality assurance and quality control systems

**1.64** As part of our audit work related to ongoing performance measurement, we examined whether there were systems in place to monitor and report greenhouse gas (GHG) emissions and reductions data presented in the 2010 plan. Quality assurance and quality control (QA/QC) systems are important to ensure that credible information is reported to Parliament and Canadians as well as to the United Nations Framework Convention on Climate Change (UNFCCC). A number of international organizations have developed standards for quantifying, monitoring, reporting, and verifying GHG emissions and reductions (Exhibit 1.9).

**1.65** According to these standards, a QA/QC system consists of routine technical activities to assess and maintain the quality and completeness of the overall process, from initial data collection to the development of estimation methods to final publication of the GHG information. The system also includes a planned system of verification activities, preferably by independent experts. As part of these standards, the required activities are designed to improve the transparency, consistency, completeness, accuracy, and conservativeness of GHG reductions in the preparation and publication of GHG information.

---

### **Exhibit 1.9** There are established standards and guidelines for quantifying, monitoring, reporting, and verifying greenhouse gas (GHG) emissions and reductions

#### **ISO 14064, ISO 14065, and ISO 14066**

The International Organization for Standardization (ISO) has developed standards for GHG accounting and verification (ISO 14064–2006), for the accreditation of the bodies that carry out these activities (ISO 14065–2007), and for the certification of professionals providing GHG validation and verification services (ISO 14066–2011).

#### **2006 IPCC Guidelines for National Greenhouse Gas Inventories**

The Intergovernmental Panel on Climate Change (IPCC) has developed guidelines to assist countries in producing inventories that are neither over- nor under-estimated so far as can be judged, and in which quantitative and qualitative uncertainties related to GHG emissions are reduced as far as practicable.

#### **Greenhouse Gas Protocol Initiative**

This protocol, first published in 2001 by the World Resources Institute and the World Business Council for Sustainable Development, is a widely used international accounting and reporting standard for government and business leaders in quantifying and managing GHG emissions.

#### **Greenhouse Gas Accreditation Program**

This program was developed in 2009 by the Standards Council of Canada, which is currently the only Canadian organization offering internationally recognized accreditation for GHG validation and verification bodies. Accreditation is based on the ISO standards (see above) for GHG validation and verification bodies (ISO 14065).

---

**Quality assurance systems have been implemented for reporting Canada's greenhouse gas emissions**

**1.66** In accordance with the reporting requirements of the UNFCCC and the Kyoto Protocol, Environment Canada publishes, on behalf of the Government of Canada, an annual GHG emissions inventory, the National Inventory Report, which estimates sectoral and overall GHG emissions for Canada. We examined whether Environment Canada had established and implemented a QA/QC system that conforms with the UNFCCC and Kyoto Protocol reporting requirements.

**1.67** We found that Environment Canada has developed and implemented a QA/QC system that is integrated in the inventory development process. Canada's 2010 QA/QC system generally conformed to the requirements of the UNFCCC. Environment Canada's plan and schedule for the QA/QC system have, for the most part, been implemented as planned. The inventory includes a comprehensive description of the methods used in compiling the inventory, the data sources, the institutional structures, and QA/QC activities.

**1.68** Furthermore, the UNFCCC has independent expert review teams that examine annual GHG inventories to assess the extent to which they are transparent, accurate, and complete, and that they conform to the reporting guidelines. The review of Canada's 2009 National Inventory Report indicated that Canada has improved the implementation of its QA/QC plan and the methodologies for estimating GHG emissions from the energy sector. This review also indicated that the 2009 Report generally contains the required information, including information on the QA/QC system, and that it is generally in line with the reporting guidelines. However, we noted that the review made a number of recommendations, mainly to continue to improve the transparency and/or completeness of the reporting on the energy, waste, and chemical industry sector, as well as the land use, land use change, and forestry sector.

**Adequate quality assurance systems have not been established for reporting actual greenhouse gas emission reductions for 2008**

**1.69** The 2010 climate change plan is the first to report actual GHG reduction results for 2008. We examined whether adequate QA/QC systems were in place for selected measures that reported actual GHG emission reductions for 2008 in the 2010 plan. We also examined whether these systems were in place for reporting on the total 2 million tonnes of actual GHG reductions reported for 2008 in the 2010 plan.

**1.70** Of the 12 measures that reported actual GHG reductions for 2008 in the 2010 climate change plan, we selected the 7 measures with the most reductions, which accounted for over 95 percent of the actual reductions as reported by responsible departments (Exhibit 1.3). Of these 7 measures, 6 were implemented by Natural Resources Canada, and 1 was under the shared responsibility of the Department of Finance Canada and Transport Canada. Environment Canada was responsible for combining the actual reductions reported by departments and reporting the total actual reductions for 2008.

**1.71** We examined whether there was an adequate QA/QC system in place for quantifying, monitoring, and reporting each selected measure's actual GHG reductions achieved in 2008 as well as for the total actual GHG reductions achieved in 2008 by the plan. We reviewed the 2010 plan to determine whether it reported on QA/QC systems consistent with the key principles of established standards (Exhibit 1.9) that are designed to improve the transparency, completeness, and accuracy, or conservativeness of the reported actual reductions as well as to ensure the **additionality** of these reductions.

**Additionality**—A requirement that the greenhouse gas emission reductions from a measure be additional to what would have happened in the absence of the measure.

**1.72** We found that the 2010 plan did not include a discussion on QA/QC systems for the selected measures or for the plan as a whole. Therefore, we conducted audit work to determine whether the activities carried out to quantify, monitor, and report the actual GHG emission reductions for 2008 were consistent with key principles of established standards, such as ISO 14064-2. Specifically, we looked at whether

- the actual reductions reported for the selected measures and for the plan as a whole had been validated or verified by the responsible department or by an independent third party, including data quality management;
- the selected measures or the plan and the corresponding **baselines** against which the actual GHG reductions were estimated were described in the documentation provided by responsible departments, along with the calculation methods used in each case; and
- the documentation provided by responsible departments included a demonstration of the reported actual reductions' additionality.

**Baseline**—A hypothetical reference case describing the conditions most likely to occur in the absence of a proposed measure to reduce greenhouse gas emissions.

**1.73** We found that the actual GHG emission reductions reported for 2008 in the 2010 plan were not validated or verified against the established standards' key principles, which are usually satisfied by carrying out a number of activities. One of the recommended QA/QC



activities for data quality management consists of identifying and reducing the uncertainties related to GHG reductions as far as practicable. We found that among the seven measures examined, the Green Levy is the only one providing an uncertainty range for the actual reductions for 2008 in the 2010 plan. However, we noted that QA/QC activities are undertaken for all measures and for the plan as a whole to manage the quality of monitored data used in the calculation of the actual GHG reductions. For example, we found procedures for validating or verifying data relating to program participation, vehicles sales, and energy production.

**1.74** In the 2010 plan as well as in documents provided by the departments, we found that there were no transparent and complete descriptions of the measures together with their corresponding baselines and that their related GHG emissions were not identified. We also noted that the calculation methods, including justifications of assumptions and parameters as well as references, are not documented such that another party can reproduce the reported actual GHG reductions. Furthermore, demonstrations of the additionality of the actual reductions reported for 2008 relative to their corresponding baselines were not provided.

**1.75** Therefore, we found that although elements of a QA/QC system were implemented for managing data quality, other key elements were missing, mainly related to the transparency, completeness, accuracy, or conservativeness of the baselines. As such, the additionality of the reported actual reductions cannot be determined. Overall, we found no consistent QA/QC system across measures and the plan as a whole that conformed to key principles of established standards for reporting actual GHG emission reductions.

**1.76** Finally, we found that the departments responsible for implementing the measures and reporting the actual reductions for 2008 were not required by Environment Canada to provide information about QA/QC activities used for preparing and reporting their actual GHG reductions. We also noted that uncertainty analyses for the actual total reductions reported for 2008 (two million tonnes) were not provided, as is the case for the expected GHG reductions by measure.

**1.77** A recommendation regarding these observations is found at paragraph 1.83.

## Recommendations

**1.78** We found that the climate change plans lack key management systems and tools needed to achieve, measure, and report on greenhouse gas (GHG) emission reductions. Key elements missing include clear roles and responsibilities, goals and objectives, evaluation and performance measurement strategies to ensure effective financial reporting, and quality assurance on results reported. Therefore, Parliament and Canadians may not have all the information needed to hold the government to account for meeting its commitments on climate change.

**1.79** Despite allocating more than \$9 billion to the measures to reduce GHG emissions in its climate change plan, the federal government has no financial reporting structure in place for the plan as a whole, and financial information for the measures in the plans is not reported clearly or consistently.

**1.80** There is no comprehensive QA/QC system that is consistent across measures and the plan as a whole and based on established standards for the reporting of actual GHG reductions for 2008 in the 2010 plan. Thus, it is not possible to know the extent to which the reported actual GHG reductions are credible.

**1.81 Recommendation.** Environment Canada should ensure that future climate change plans are supported by an appropriate management accountability and reporting framework that includes

- 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.

**The Department's response.** Agreed. Environment Canada accepts this recommendation although it is not a requirement under the *Kyoto Protocol Implementation Act*.

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. The FSDS is a permanent and transparent mechanism that aligns well with the long-term nature of challenges associated with climate change. It will provide an integrated,

whole-of-government picture of actions and results on climate change and other environmental priorities. 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.

Where appropriate, references to these instruments will be made in the 2011 and future Plans for the Purposes of the *Kyoto Protocol Implementation Act*. These references will direct interested parties to these additional sources of information.

Departments responsible for implementing measures in the plans have been consulted on this response.

**1.82 Recommendation.** 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.

**The Department's response.** Disagreed. Environment Canada does not accept this recommendation.

The *Kyoto Protocol Implementation Act* is focused on the reporting of emission reductions associated with Government of Canada climate change initiatives and does not include any requirement for financial reporting in the annual plans. Such information is provided to Parliament through the existing Expenditure Management System, including departmental performance reports and reports on plans and priorities. Further, these instruments of financial reporting will be supplemented by additional reporting to Parliament under the new Federal Sustainable Development Strategy, which is designed to link with the Expenditure Management System and will include extensive reporting on efforts to reduce GHG emissions.

If there is a need to improve financial reporting on environmental activities, such as reducing GHG emissions, it would be more effective to do so through instruments designed for financial reporting, as opposed to the annual plans under the *Kyoto Protocol Implementation Act*.

Departments responsible for implementing measures in the plans have been consulted on this response.

**1.83 Recommendation.** 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

- 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.

**The departments' response.** 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

- 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.

In addition, departments preparing GHG estimates will be asked to provide a range for the actual GHG reductions associated with each measure. Environment Canada will also investigate ways through which to build upon the sensitivity analyses currently underpinning the reference case and alternative scenario for the total of all measures.

## Conclusion

### Government commitments

**1.84** The Government of Canada has committed to addressing climate change by reducing its national greenhouse gas (GHG) emissions in various plans and agreements since 1992 (Exhibit 1.1). Since this time, however, national GHG emissions have risen and were 24 percent higher in 2008 than in 1990 and 31 percent higher than Canada's Kyoto target.

**1.85** In 2010, the federal government committed to a new GHG emission reduction target under the Copenhagen Accord, an outcome of the 2009 Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), which aims to reduce GHG emissions after the Kyoto commitment period (2008–2012). In its January 2010 submission to the UNFCCC, Canada committed to a GHG emission reduction target of 17 percent, relative to its 2005 emissions level, by 2020. The submission also noted that this target was “to be aligned with the final economy-wide emissions target of the United States in enacted legislation.” The 2010 Federal Sustainable Development Strategy also committed to this GHG emission reduction target. In January 2011, Environment Canada reported that all existing government actions taken together would generate about one quarter of the reductions needed to achieve the 2020 Copenhagen target.

### Concluding observations

**1.86** 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*. Overall, we conclude that the climate change plans are not in compliance with the Act as they are missing information required by subsection 5(1). Furthermore, the measures in the plans are not sufficient to meet the Kyoto Protocol obligations for reducing greenhouse gas emissions.

**1.87** Environment Canada has made improvements in some reporting requirements in response to recommendations from our 2009 audit, including providing an uncertainty range for the expected reductions for the measures in the plans. These improvements have contributed to a more complete and transparent plan in 2010 as compared with the first plan in 2007. In substance, however, the 2010 plan does not contain measures with GHG emission reductions sufficient to achieve

the level required to meet the obligations of the Kyoto Protocol or the *Kyoto Protocol Implementation Act*. Furthermore, expected emission reductions reported in the plans have been revised downward by more than 90 percent between 2007 and 2010.

**1.88** We noted that, despite allocations of more than \$9 billion, the government has yet to establish the management systems and tools needed to achieve, measure, and report on greenhouse gas emission reductions. Key elements missing include consistent quality assurance and verification systems to report actual GHG emission reductions and clear and consistent financial reporting systems for the measures in the plans.

**1.89** The 2010 National Inventory Report indicates that national GHG emissions were 31 percent higher than the Kyoto target in 2008. Under the Copenhagen Accord and the 2010 Federal Sustainable Development Strategy, the government has committed to achieving a 17 percent reduction from the 2005 GHG emission level by 2020. If it is to do so, we believe the government will need to address the weaknesses in management practices we have observed with respect to the government's efforts to achieve its commitments under the Kyoto Protocol.

#### **Subsequent events**

**1.90** This report was originally planned for tabling in May 2011 in accordance with the *Kyoto Protocol Implementation Act*. However, due to the spring 2011 federal election, tabling of the report was delayed until the fall of 2011. As audit work for this chapter was completed in November 2010, our analysis did not include information from the most recent National Inventory Report or the most recent Climate Change Plan for the Purposes of the *Kyoto Protocol Implementation Act*, both of which were released by Environment Canada in May 2011. This information will be analyzed in our next audit to be completed under this mandate.

## 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 overall objective of our audit was to determine whether Environment Canada and selected entities have complied with the *Kyoto Protocol Implementation Act* by preparing and implementing annual climate change plans, and by reporting on whether Canada is on track to meet its obligation to reduce its greenhouse gas emissions, under Article 3, paragraph 1, of the Kyoto Protocol, in accordance with the Act.

Our sub-objectives were to determine whether

- Environment Canada, in its 2009 and 2010 climate change plans, has implemented selected recommendations made in the Commissioner of the Environment and Sustainable Development May 2009 report;
- Environment Canada and selected entities have
  - implemented the measures in the annual climate change plans—including funding allocated and spent—by the date projected,
  - reported emission reduction results by measure for 2008 in the 2010 plan, and
  - appropriately designed quality assurance systems for reporting emission reduction results for 2008 in the 2010 plan; and
- Environment Canada can show, through its National Inventory Report, that Canada is on track to meet its obligation to reduce its greenhouse gas emissions, under Article 3, paragraph 1 of the Kyoto Protocol, in accordance with the Act.

### Scope and approach

The audit was conducted pursuant to the requirements 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.

Environment Canada is the responsible authority for preparing annual climate change plans under the *Kyoto Protocol Implementation Act*. Environment Canada is also the designated authority responsible for reporting on greenhouse gas emissions to the United Nations Framework Convention on Climate Change (UNFCCC) under the Kyoto Protocol. Therefore, Environment Canada was the lead department included in this audit and has responsibilities that are addressed under all three sub-objectives listed above.

There are other federal departments involved in implementing measures identified in the climate change plans and in meeting Canada's Kyoto target. Under the second sub-objective, the audit included those

departments that have responsibilities for implementing measures that are identified in the climate change plans (2007 to 2010). These responsibilities are sometimes shared and include Agriculture and Agri-Food Canada, the Department of Finance Canada, Natural Resources Canada, Sustainable Development Technology Canada, and Transport Canada. Indian and Northern Affairs Canada is responsible for a measure included in the 2010 climate change plan for the first time but was not included in the scope of this audit.

Statistics Canada is not specifically responsible for the implementation of measures in climate change plans, but it was included in the audit as it collects, analyzes, and supplies information to entities for the purposes of measuring and reporting on greenhouse gas emissions.

For each audit sub-objective, we interviewed key departmental officials in the National Capital Region. We also interviewed other stakeholders and consulted with experts in the field, including the Reporting and Data Analysis Program at the UNFCCC. We reviewed documentation supplied to us by the departments and gathered information from selected departments using a questionnaire.

**Criteria**

To determine whether Environment Canada has implemented selected recommendations from our 2009 audit, we used the following criteria:	
Criteria	Sources
Environment Canada’s 2009 and 2010 climate change plans fulfill the requirements of subsection 5(1) of the <i>Kyoto Protocol Implementation Act</i> .	<ul style="list-style-type: none"> <li>• <i>Kyoto Protocol Implementation Act</i>, subsection 5(1)</li> <li>• 2009 Spring Report of the Commissioner of the Environment and Sustainable Development, Chapter 2, recommendation 2.9</li> <li>• Environment Canada’s response to recommendation 2.9</li> </ul>
In its 2009 and 2010 climate change plans, Environment Canada describes the uncertainties related to the expected greenhouse gas emission reductions of each measure and for the annual plan as a whole.	<ul style="list-style-type: none"> <li>• 2009 Spring Report of the Commissioner of the Environment and Sustainable Development, Chapter 2, recommendation 2.28</li> <li>• Environment Canada’s response to recommendation 2.28</li> </ul>
Environment Canada explains in the 2010 climate change plan how it has estimated each of the reported actual greenhouse gas emission reductions for 2008.	<ul style="list-style-type: none"> <li>• 2009 Spring Report of the Commissioner of the Environment and Sustainable Development, Chapter 2, recommendation 2.34</li> <li>• Environment Canada’s response to recommendation 2.34</li> </ul>
To determine whether Environment Canada and selected entities have implemented measures in climate change plans, we used the following criteria:	
Criteria	Sources
Environment Canada and selected entities have implemented the measures proposed in the 2007, 2008, and 2009 climate change plans or have indicated why the measure was not implemented and how this will be redressed.	<ul style="list-style-type: none"> <li>• <i>Kyoto Protocol Implementation Act</i>, subsection 5(1) paragraphs (b), (e), and (f)</li> <li>• Performance Reporting: Good Practices Handbook, Treasury Board of Canada Secretariat, 2007</li> <li>• Clean Air Agenda Horizontal Management Accountability and Reporting Framework</li> </ul>



<p>Environment Canada and selected entities can demonstrate that they have appropriately designed quality assurance systems in place for reporting emission reduction results for 2008 in the 2010 climate change plan.</p>	<ul style="list-style-type: none"> <li>• <i>Kyoto Protocol Implementation Act</i>, subsection 5(1)(b)(ii)</li> <li>• Environment Canada’s quality assurance and quality control for reporting greenhouse gas emissions sources and sinks to the United Nations Framework Convention on Climate Change, National Inventory Report, 2010</li> <li>• ISO 14064-1, Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, International Organization for Standardization, 2006</li> <li>• ISO 14064-2, Specification with guidance at the project level for quantification, monitoring, and reporting of greenhouse gas emission reductions or removal enhancements, International Organization for Standardization, 2006</li> <li>• ISO 14064-3, Specification with guidance for the validation and verification of greenhouse gas assertions, International Organization for Standardization, 2006</li> <li>• GHG Protocol Initiative, World Resources Institute and the World Business Council for Sustainable Development</li> <li>• 2006 IPCC (Intergovernmental Panel on Climate Change) Guidelines for National Greenhouse Gas Inventories: Volume 1—General Guidance and Reporting; Chapter 6, Quality Assurance/Quality Control and Verification</li> </ul>
<p><b>To determine whether Environment Canada can show that Canada is on track to meet its Kyoto Protocol obligations for reducing greenhouse gas emissions, we used the following criteria:</b></p>	
<p><b>Criteria</b></p>	<p><b>Sources</b></p>
<p>Climate change plans prepared by Environment Canada include measures taken that are designed to ensure that Canada meets its obligations under Article 3, paragraph 1 of the Kyoto Protocol, in accordance with the Act.</p>	<ul style="list-style-type: none"> <li>• <i>Kyoto Protocol Implementation Act</i>, section 5(1)(a)</li> <li>• Kyoto Protocol, Article 3</li> </ul>
<p>Environment Canada has developed and implemented adequate quality assurance/quality control and verification systems for reporting the required information on greenhouse gas emissions to the United Nations Framework Convention on Climate Change.</p>	<ul style="list-style-type: none"> <li>• United Nations Framework Convention on Climate Change</li> <li>• 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 1—General Guidance and Reporting; Chapter 6, Quality Assurance/Quality Control and Verification</li> <li>• Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories, Intergovernmental Panel on Climate Change, 2000</li> <li>• Environment Canada’s quality assurance/quality control for reporting greenhouse gas emissions sources and sinks to the United Nations Framework Convention on Climate Change, National Inventory Report, 2010</li> </ul>
<p>The Government of Canada is on track to meet its obligations under Article 3, paragraph 1, of the Kyoto Protocol, as reported by Environment Canada, in accordance with the Act.</p>	<ul style="list-style-type: none"> <li>• <i>Kyoto Protocol Implementation Act</i>, section 7</li> <li>• Kyoto Protocol, Article 3</li> <li>• United Nations Framework Convention on Climate Change</li> </ul>

Management reviewed and accepted the suitability of the criteria used in the audit, with the exception of the Department of Finance Canada. Although the Department accepted responsibility for the design and implementation of the Green Levy and the Public Transit Tax Credit, it did not accept responsibility for ensuring appropriately designed quality assurance systems for reporting emission reduction results for 2008 in the 2010 climate change plan—a responsibility that it shares with other departments.

**Period covered by the audit**

The audit covered the period between June 2007 to November 2010. Audit work was substantially completed on 2 November 2010.

**Audit team**

Commissioner of the Environment and Sustainable Development: Scott Vaughan

Principals: Bruce Sloan, Richard Arseneault

Director: Kimberley Leach

Tanya Burger

Charles Cameron

Roger Hillier

Nicole Hutchinson

Sylvie Marchand

For information, please contact Communications at 613-995-3708 or 1-888-761-5953 (toll-free).

## Appendix List of recommendations

The following is a list of recommendations found in Chapter 1. The number in front of the recommendation indicates the paragraph number where it appears in the chapter. The numbers in parentheses indicate the paragraph numbers where the topic is discussed.

Recommendation	Response
<b>Preparing the climate change plans</b>	
<p><b>1.42</b> 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. (1.9–1.21)</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</i>’s information requirements to the furthest extent possible. 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>This recommendation has implications for a number of federal departments, and they have been consulted on this response.</p>
<b>Implementing the plans and achieving results</b>	
<p><b>1.43</b> 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. (1.22–1.26)</p>	<p>Agreed. Environment Canada and responsible departments will continue to provide up-to-date information on federal climate change activities. 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 Government of Canada has been clear that it is moving forward on meeting its commitment to reduce GHG emissions by 17 percent by 2020 compared with 2005 levels. It has replaced its earlier regulatory approach, entitled Turning the Corner, with a new sector-based approach that, where appropriate, aligns with actions taken in the U.S. Significant progress has been made in the electricity and transportation (emission standards for new passenger automobiles and light trucks) sectors, and the actions taken so far by the federal and provincial governments are expected to achieve one quarter of the emission reductions needed by 2020 to meet our commitment of reducing Canada’s annual GHG emissions to the target level of 607 million tonnes (Mt).</p>

Recommendation	Response
	<p>Canada is participating in a global approach under the Cancun Agreements, which were signed by developed and developing countries accounting for over 85 percent of global GHG emissions.</p>
<p><b>Establishing management systems</b></p> <p><b>1.81</b> 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"> <li>• clear roles and responsibilities,</li> <li>• clear goals and objectives for the plans and for the measures,</li> <li>• an evaluation strategy, and</li> <li>• ongoing performance measurement that includes transparent financial reporting and quality assurance on greenhouse gas emissions and reductions reported.</li> </ul> <p><b>(1.47–1.56)</b></p>	<p>Agreed. Environment Canada accepts this recommendation although it is not a requirement under the <i>Kyoto Protocol Implementation Act</i>.</p> <p>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. The FSDS is a permanent and transparent mechanism that aligns well with the long-term nature of challenges associated with climate change. It will provide an integrated, whole-of-government picture of actions and results on climate change and other environmental priorities. 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.</p> <p>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>Where appropriate, references to these instruments will be made in the 2011 and future Plans for the Purposes of the <i>Kyoto Protocol Implementation Act</i>. These references will direct interested parties to these additional sources of information.</p> <p>Departments responsible for implementing measures in the plans have been consulted on this response.</p>

Recommendation	Response
<p><b>Reporting financial information</b></p> <p><b>1.82</b> 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. (1.57–1.62)</p>	<p>Disagreed. Environment Canada does not accept this recommendation.</p> <p>The <i>Kyoto Protocol Implementation Act</i> is focused on the reporting of emission reductions associated with Government of Canada climate change initiatives and does not include any requirement for financial reporting in the annual plans. Such information is provided to Parliament through the existing Expenditure Management System, including departmental performance reports and reports on plans and priorities. Further, these instruments of financial reporting will be supplemented by additional reporting to Parliament under the new Federal Sustainable Development Strategy, which is designed to link with the Expenditure Management System and will include extensive reporting on efforts to reduce GHG emissions.</p> <p>If there is a need to improve financial reporting on environmental activities, such as reducing GHG emissions, it would be more effective to do so through instruments designed for financial reporting, as opposed to the annual plans under the <i>Kyoto Protocol Implementation Act</i>.</p> <p>Departments responsible for implementing measures in the plans have been consulted on this response.</p>

Recommendation	Response
<b>Establishing quality assurance and quality control systems</b>	
<p><b>1.83</b> 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"> <li>• 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</li> <li>• 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. <b>(1.64–1.76)</b></li> </ul>	<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"> <li>• the analysis, including methodology and assumptions, underlying the measures;</li> <li>• the process that departments used to develop the baseline(s);</li> <li>• the calculation methods for GHG reductions; and</li> <li>• how the criterion of additionality has been defined and met.</li> </ul> <p>In addition, departments preparing GHG estimates will be asked to provide a range for the actual GHG reductions associated with each measure. Environment Canada will also investigate ways through which to build upon the sensitivity analyses currently underpinning the reference case and alternative scenario for the total of all measures.</p>