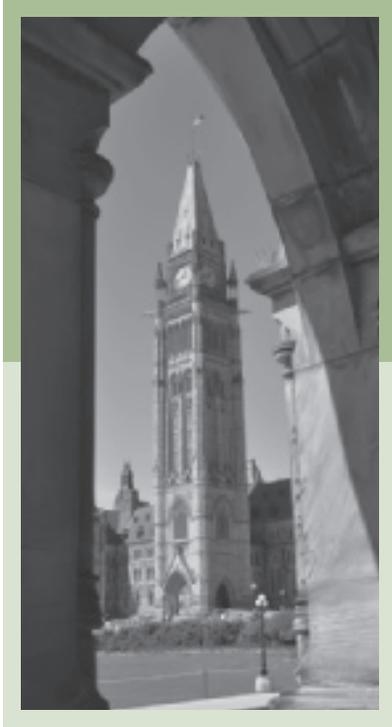


Spring 2012



Report of the Commissioner of the Environment and Sustainable Development to the House of Commons

The Commissioner's Perspective

CHAPTER 1

Kyoto Protocol Implementation Act

CHAPTER 2

Meeting Canada's 2020 Climate Change Commitments

CHAPTER 3

Federal Contaminated Sites and Their Impacts



Office of the Auditor General of Canada

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Commissioner of the Environment and Sustainable Development of Canada
Commissaire à l'environnement et au développement durable du Canada
Office of the Auditor General of Canada • Bureau du vérificateur général du Canada

To the Honourable Speaker of the House of Commons:

On behalf of the Auditor General of Canada, I have the honour to transmit herewith this Spring 2012 Report to the House of Commons, which is to be laid before the House in accordance with section 10.1 of the *Kyoto Protocol Implementation Act*.

A handwritten signature in black ink, appearing to read 'Scott Vaughan'.

Scott Vaughan
Commissioner of the Environment
and Sustainable Development

OTTAWA, 8 May 2012

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The Commissioner's Perspective

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Scott Vaughan
Commissioner of the Environment
and Sustainable Development

Two decades after the Earth Summit

Two decades have passed since the United Nations Conference on Environment and Development—commonly known as the Earth Summit—was held at Rio de Janeiro in Brazil. In the intervening years, much has been accomplished on the green agenda, from reducing some key air pollutants to applying new technologies such as satellite remote sensing to help us understand complex linkages within and between ecosystems.

Twenty years ago, one topic of debate that framed the Earth Summit was the relationship between economic growth and environmental protection. Some feared that controlling pollution or protecting forests would stifle economic growth, cripple productivity, and suffocate innovation. The debate was often referred to in shorthand as “jobs versus the environment.”

With another meeting in Rio scheduled for June 2012 to mark the 20th anniversary of the Earth Summit, this is a good time to take stock of the jobs-versus-environment debate. Two chapters in this report examine the financial aspects of environmental issues. One deals with federal contaminated sites and the associated environmental liabilities faced by taxpayers, amounting to roughly \$7.7 billion. The other chapter addresses the costs of the government’s approach to reducing greenhouse gas emissions through regulation.

Contaminated sites and environmental liabilities

The federal government is responsible for managing thousands of contaminated sites across Canada (Chapter 3, *Federal Contaminated Sites and Their Impacts*). The associated risks to human health and the environment are as varied as the contaminated sites themselves; these range from extremely large abandoned mines and nuclear waste dumps to hundreds of smaller sites, such as buried fuel tanks. The budget for managing the sites is approximately \$4 billion, and the funding is scheduled to end in 2020.

We report that the government has made progress in managing the Federal Contaminated Sites Inventory. About a third of the 22,000 sites have been closed; that is, they require no further action. Addressing the rest is likely to be a much tougher task, for several

reasons. First, the remaining budget for assessing the environmental and human health risks of sites has shrunk by more than 60 percent, and so the capacity to identify new risks has dwindled. Second, the government has identified the sites where environmental and human health risks are greatest and has channelled the bulk of financial resources to the largest four, including Giant Mine in the Northwest Territories and low-level radioactive waste sites in Port Hope, Ontario. With available funding consumed by a few priority sites, it is not clear how the more than 10,000 other sites will be managed. Third, the total estimated financial liability for federal contaminated sites is about \$500 million higher than the amount of dedicated funding that remains. Finally, there is no lead agency accountable for managing this environmental liability across the federal government.

Some of the thousands of contaminated sites are a testament to poor planning, the failure of initial assessments to anticipate and avoid future environmental and human health problems, and a lack of ongoing mitigation to lower the environmental risks during operations. Many of the sites are buried and out of sight, but they will impose environmental and financial burdens on coming generations.

Design and cost of environmental regulations

Chapter 2 of this report, Meeting Canada's 2020 Climate Change Commitments, notes that the federal government is taking a sector-by-sector regulatory approach to reaching its national target of reducing greenhouse gas emissions to 17 percent below 2005 levels by 2020. In concrete terms, Canada will need to reduce emissions by 178 million tonnes over the next eight years to meet the 2020 target. In comparison, the 2011 Climate Change Plan for the Purposes of the *Kyoto Protocol Implementation Act* reported actual reductions totalling 6 million tonnes for 2008 and 2009.

While 2020 may seem far off, for many energy-intensive sectors it is tomorrow in terms of the lead time for making the necessary capital investments in new equipment to comply with regulations. The rollout of new regulations takes several years, given the time needed for their design, consultations, adjustments, implementation, and enforcement. It will take longer to realize actual emission reductions. Although the federal government has begun to lower greenhouse gas emissions,

right now the reductions are not happening fast enough to meet the 2020 target. I look forward to seeing the details of the sector-by-sector approach as they are announced and implemented.

Policy coherence is important in the design of regulations, especially because the federal government's sector-by-sector strategy will involve all major sources of greenhouse gas emissions, from transportation and electricity generation to the oil and gas sector and the manufacturing sector. There are upstream and downstream linkages within and between key sectors, as well as a variety of provincial initiatives tackling greenhouse gas emissions. This makes it vital to have a coherent game plan ensuring that policies do not operate at cross purposes and instead work to reach least-cost emission reductions.

Decades of experience in environmental regulations show a range of approaches beyond the comparatively static command-and-control regulations. The one priority consistently expressed by business leaders is the need for regulatory predictability, allowing sufficient time to invest in new equipment. Businesses also need the flexibility to identify cost-effective, efficient ways of complying with regulations. The record shows that they have found more innovative and less expensive ways than anyone in Ottawa could have envisaged at the time the regulations were drafted.

The overall design of regulations is therefore important. Here, some useful lessons can be drawn from the climate approaches of the United States, with which Ottawa has said it will align when appropriate. The US Environmental Protection Agency often uses different kinds of environmental regulations that set clear ceilings on allowable emissions. Under those ceilings, however, businesses have flexibility to meet standards in ways that they find cost-effective.

The question of economic cost is crucial. The government's stated rationale for withdrawing from the Kyoto Protocol was the prohibitive projected cost to the economy, estimated at \$14 billion in December 2011. Accordingly, I expected that the government would have calculated the projected costs to the Canadian economy of its regulatory approach to meeting its new target of reducing greenhouse gases by 17 percent below our 2005 level by 2020. Right now, it has not done so. The result is that Parliament lacks a full picture of the combined costs of reaching the 2020 target.

Business and the environment

The past 20 years have seen considerable progress in identifying the economic cost of various environmental regulations. That brings us back to the jobs-versus-environment debate to look at how some businesses view and act on the changing green agenda.

It would be reasonable to expect a pushback against environmental protection from most businesses, given the global economic recession of recent years. However, a different picture emerges from the results of a 2011 global survey of business executives, conducted by the *MIT Sloan Management Review* and the Boston Consulting Group. The survey involved 3,000 executives in over 100 countries. As reported in *Sustainability Nears a Tipping Point* (January 2012), 70 percent of respondents said that sustainability had a permanent place on their business agenda—an increase over the previous year. Most business leaders said that environmental issues mattered to them because of competition and corporate reputation in the global marketplace. One third said that adding sustainability to their corporate goals had strengthened bottom-line profitability.

There is no question that environmental protection has economic costs: an average of 1 to 2 percent of a firm's total costs, according to estimates by the Organization for Economic Cooperation and Development. Within that range, environmental compliance costs can vary widely. They are highest for the petroleum and coal sectors, followed by energy-intensive sectors such as primary metals and cement. For the services sector, however, costs are lower. While 1 or 2 percent might not seem like much, estimates by Statistics Canada show that in 2008, Canadian businesses spent over \$9 billion on environmental protection, mostly to deal with pollutants after they had been generated.

It is no surprise that businesses are constantly finding ways to lower costs while meeting regulatory or other environmental targets. According to an analysis by Harvard Business School's Michael Porter, one of the world's leading authorities on business competitiveness, firms that meet stringent environmental regulations tend to have higher rates of innovation and productivity than industries that do not comply with those regulations. Porter's explanation is simple: pollution, inefficient energy systems, and industrial waste all represent wasted profits. Firms that reduce pollution are more often productive, innovative, and competitive. In a 2010 report by the Canadian Council of Chief Executives, Canadian business leaders said that in terms of the bottom line, it makes sense to improve energy efficiency.

In recent years, a growing number of Canadian companies have integrated green policies and procedures into their operations. More than 20 years ago, the Royal Bank of Canada was among the first Canadian banks to adopt an environmental policy. Since then, every major Canadian bank has adopted its own environmental procedures and subscribed to various national and international initiatives, including the Carbon Disclosure Project to measure their carbon footprint, the Equator Principles that set out measurable guidelines for environmental and social lending, and the UN Environment Programme's Finance Initiative. In the insurance sector, firms such as The Co-operators and others have adopted climate change policies because of growing trends in climate-related insurance losses. Some international companies, including Apple, have established environmental and social targets for all aspects of operations, and are using audits to improve the performance of their global suppliers.

In the forestry sector, associations such as the Forest Products Association of Canada have set ambitious goals to increase third-party certification in the advancement of sustainable forestry. In the retail food services area, Loblaw Companies and many others are providing a wider range of sustainably harvested produce, while Tim Hortons has company-wide targets to advance the sustainability of operations, including recycling programs and green building designs. In the pulp and paper sector, companies such as Cascades use recycled fibres as raw materials.

Measuring costs and benefits

What has also changed in the past 20 years is the way that upfront economic costs of regulatory compliance have come to be considered alongside the direct and longer-term societal benefits of a cleaner environment. The White House Office of Management and Budget looked at how the costs and benefits of environmental protection compare. It found that the combined costs of all US federal clean air and water regulations between 1999 and 2009 were between \$26 and \$29 billion a year. At the same time, it found between \$82 and \$533 billion in annual benefits—including lower costs for treating fewer diseases, such as smog-related respiratory illnesses.

Similarly, a recent study by the New York Academy of Sciences found that the damage costs from coal-fired electricity in the United States were approximately \$345 billion a year. The costs included the combined impacts of aerosolized, solid, and water pollutants associated

with the mining, processing, transport, and combustion of coal, and the impact of those pollutants on families and communities.

There have been different approaches to measuring the broader benefits of a clean and healthy environment—for example, complementing standard economic statistics with different indicators to measure the cost of pollution damages and the value of cleaner air, national parks, and clean water. Statistics Canada remains a leader in this area, while the Canadian Index of Wellbeing continues to make a valuable contribution to measuring different values.

Some look to the June 2012 Rio+20 Conference to find new ways of supporting innovative statistical approaches. The conference includes proposals from the government of the United Kingdom and others to advance environmental and social statistics with the aim of complementing measurements of gross domestic product. It will be interesting to see how actual business experience, and more inclusive measurement of the costs and benefits of environmental protection, continue to change the jobs-versus-environment debate.