

**Government of Canada's  
Action Plan 2000  
on Climate Change and Specific SF<sub>6</sub>  
Reduction Strategies for the  
Magnesium Sector**

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**Canada**

# Outline of Presentation

- Introduction
- Canada's Action Plan 2000 on Climate Change
- Minerals and Metals Program
- SF<sub>6</sub> Inventory and Initiatives
- Contact Information (websites)



# Introduction

- Canada signed UN framework Convention on Climate Change (Rio 1992)
- Signatory to Kyoto Protocol (1997)
- Target reduction of 6% from 1990 levels by 2012



# Canada's Actions on Climate Change

- Climate Change Action Fund established (1998)
- Sustainable Development Technology Fund announced (2000)
- Government's intention to ratify Kyoto Accord announced (September 2002)



# Canada's Action Plan 2000 on Climate Change

- Primary focus on GHG mitigation
- \$500 million allocated over five years (2001-2006)
- Key sectors targeted (e.g., energy, transportation, primary industries)
- Up to 65 Mt in GHG reductions by 2010



# Minerals & Metals Program under Climate Change

Programs in four areas:

- Cement and Concrete
- Supplementary Cementing Materials
- Enhanced Recycling, and
- Monitoring and Studies



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# Minerals & Metals Program under Climate Change (cont'd)

- Managed by a steering committee and technical advisory groups
- \$10 million available over 5 year period (2001 - 2006)



# Monitoring and Studies

- Importance of SF<sub>6</sub>
  - high Global Warming Potential (GWP), long atmospheric life, listed in Kyoto Accord)
- Magnesium Production - principal source in Canada
- Replacement gas identified in Climate Change Foundation and Options reports



# Current Actions on SF<sub>6</sub>

- Funding support for IMA Study - \$75K over three years
- Funding support for SF<sub>6</sub> conference
- Voluntary measures by producers



## Current Actions on SF<sub>6</sub> (cont'd)

- Inventory development
- Development of methodologies
- Addition of SF<sub>6</sub> to National Pollutant Release Inventory



# Current Actions on SF<sub>6</sub> (cont'd)

- Dissemination of information
- R&D on cover gases



# Current Actions on SF<sub>6</sub> (cont'd)

## SF<sub>6</sub> Use in the Magnesium Industry

- Primary ingot producers
- High pressure die casting operations
- Gravity sand casting foundries
- R&D laboratories



# Current Actions on SF<sub>6</sub> (cont'd)

## Primary Mg Producers in Canada

- Norsk Hydro Magnesium in Becancour, Quebec
- Noranda Magnolas's new facility in Danville, Quebec
- Timminco Ltd. in Haley Station, Ontario



# Current Actions on SF<sub>6</sub> (cont'd)

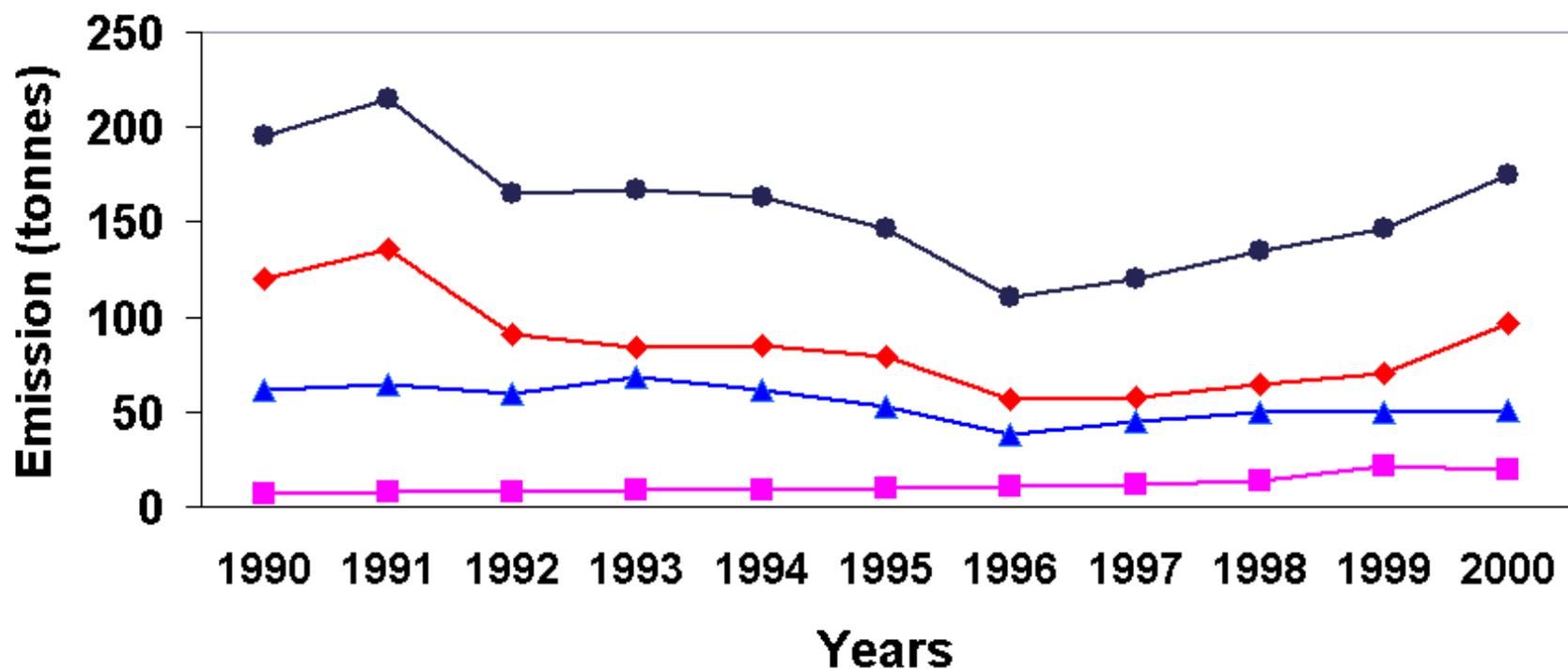
## Some Trends

- Canadian SF<sub>6</sub> Emissions Inventory
- Canadian SF<sub>6</sub> Net Supply
- SF<sub>6</sub> demands by market segment
- SF<sub>6</sub> emissions



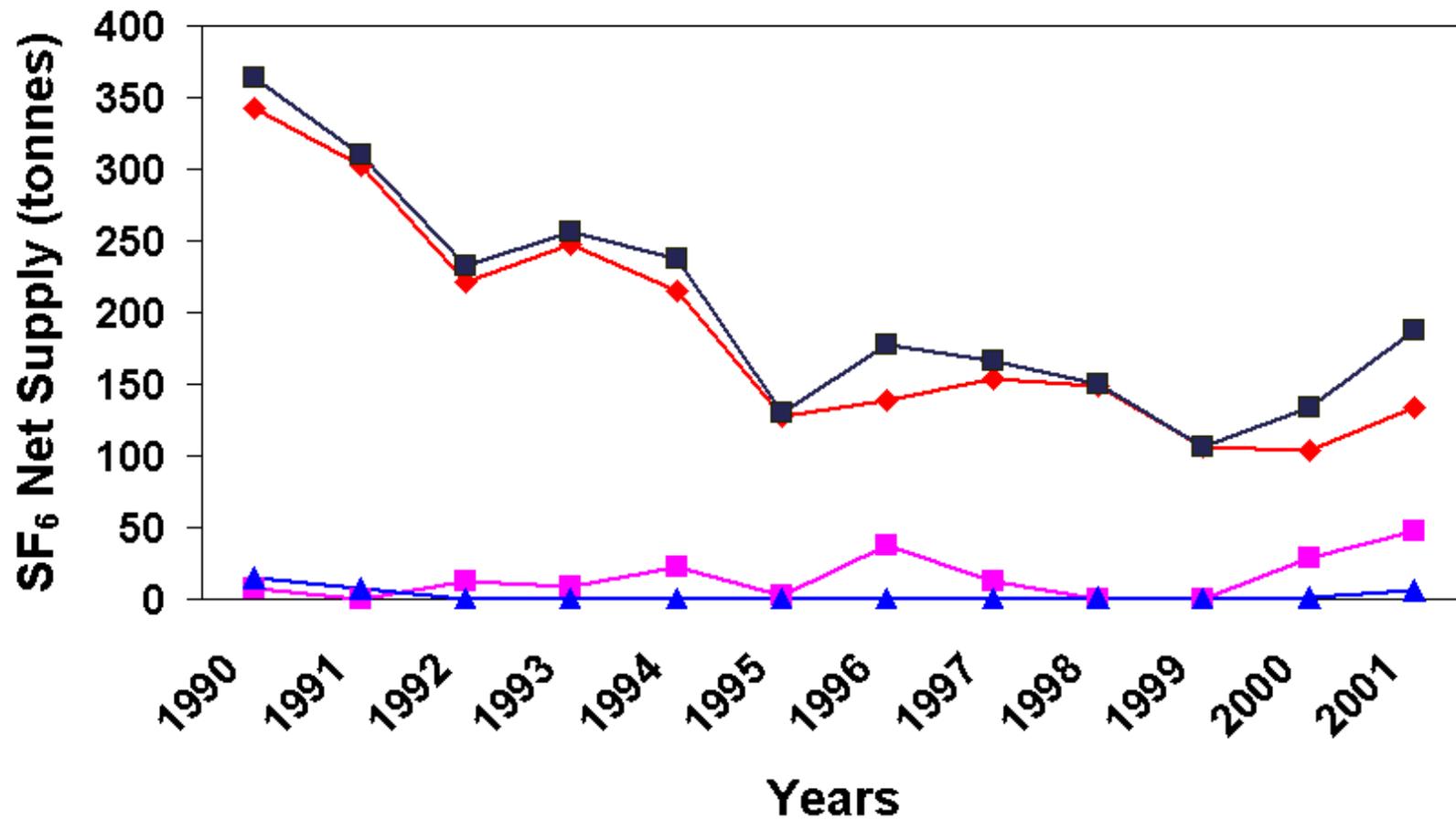
## Canadian SF<sub>6</sub> Emission Inventory (1990-2000)

◆ Primary Mg Production    ■ Mg Product Casting  
▲ Electrical Equipment    ● Total SF<sub>6</sub>



## Canadian SF<sub>6</sub> Net Supply (1990-2001)

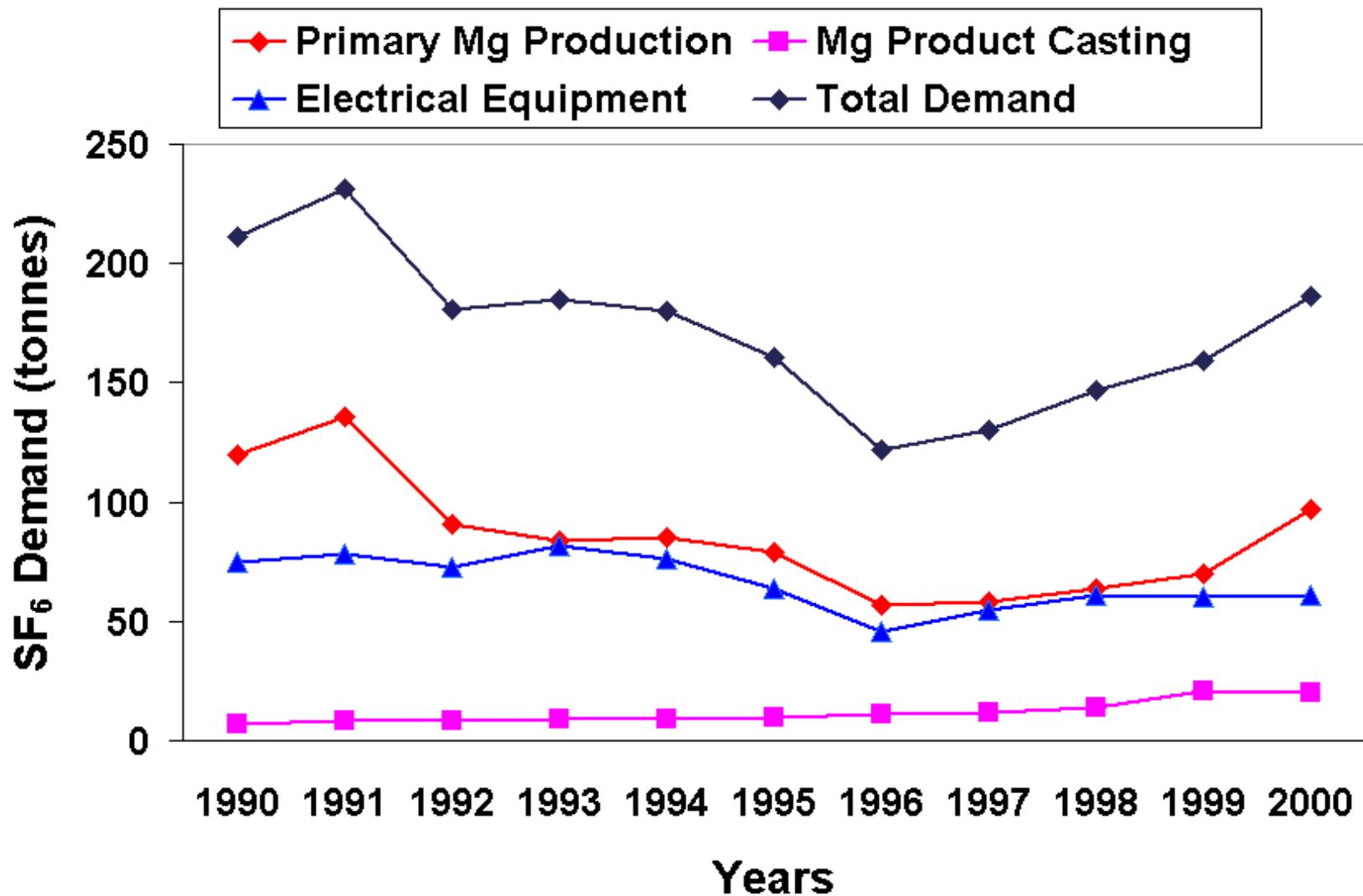
—◆— U.S. —■— Germany —▲— Other —■— Total Imports

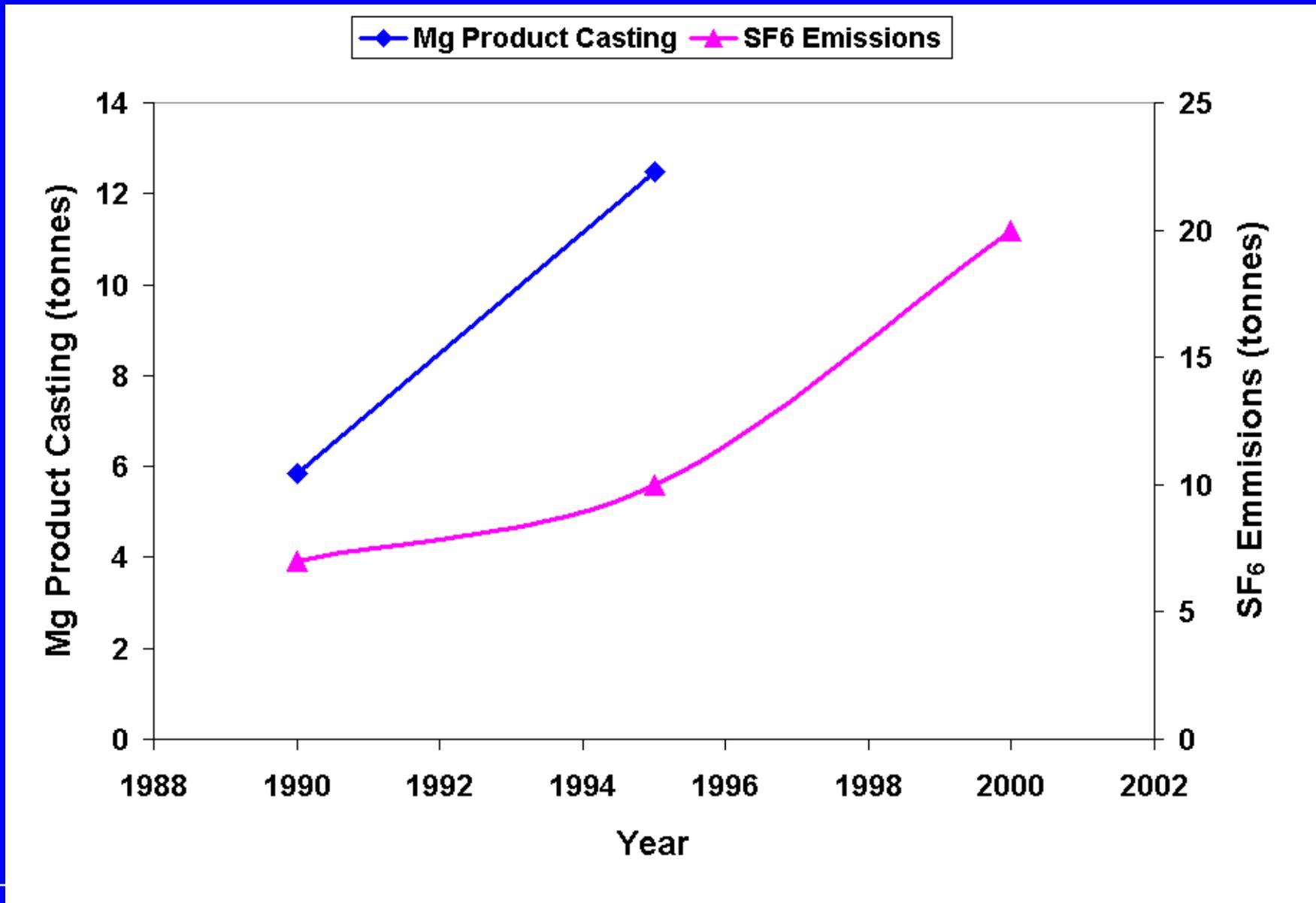


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## SF<sub>6</sub> Demand by market segment (1990-2000)





# Current Actions on SF<sub>6</sub> (cont'd)

## Summary

- The recently completed SF<sub>6</sub> emission's inventory by Environment Canada is a good start in the development of an accurate database for SF<sub>6</sub> import and use in the Mg industry
- The voluntary reduction in SF<sub>6</sub> use by several die casters and other Mg producers is a welcomed development that is consistent with an industry that is looking for a solution



# Current Actions on SF<sub>6</sub> (cont'd)

## Summary (con'td)

- Continued and ongoing dialogue is necessary between R&D performers, industrial gas suppliers and new gasses developers, and the magnesium producers
- With the ongoing R&D initiatives to replace SF<sub>6</sub> use in Mg industry, a significant reduction in SF<sub>6</sub> use should be expected once a replacement gas is found.



# Websites

- Government of Canada Climate Change site: <http://www.climatechange.gc.ca>
- National Climate Change Process: [http:// www.nccp.ca](http://www.nccp.ca)
- Environment Canada, Minerals and Metals Division: [http:// www.ec.gc.ca/nopp/metals](http://www.ec.gc.ca/nopp/metals)
- Environment Canada, Greenhouse Gas Division: [http:// www.ec.gc.ca/pdb/ghg](http://www.ec.gc.ca/pdb/ghg)
- Natural Resources Canada: [http:// www.NRCan-RNCan.gc.ca](http://www.NRCan-RNCan.gc.ca)
- Voluntary Challenge and Registry Inc.: [http:// www.vcr-mvr.ca](http://www.vcr-mvr.ca)

