



Canada's Climate Change Voluntary Challenge & Registry Inc.



VCR-MVR inc.

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1998

Annual Report





Retrospective 1998

It is with great pride that we look back upon our achievements since the incorporation of VCR Inc. in October 1997.

A little over a year ago, the Voluntary Challenge and Registry transformed from a government-incubated program to a private-public partnership (VCR Inc.). Our first action was to establish a Council of Champions, to appoint a Board of Directors, and to form a Technical Advisory

Committee. Another was to establish a new, more rigorous system of reporting. And a third was to engage more registrants, while we continued to work closely with existing ones.

*An
active and vital
corporation that
counts more than
870 registrants*

We have worked hard to implement these actions because we recognized that they were critical elements of a smooth transition. In March 1998, at our 1st Annual Council of Champions Meeting, we officially appointed our Board of Directors; it is drawn from our Council of Champions comprised of senior leaders within industry sectors, as well as federal, provincial and territorial governments across Canada.

We have also established a broadly based Technical Advisory Committee (TAC), comprised of experts in the field of climate change. TAC's function is to ensure that our Board receives appropriate multi-stakeholder input to decision-making. It has also worked actively with us to establish our

Champion Reporting System, which is designed to encourage continuous improvement in the preparation of reports posted on the VCR Inc. Registry. The establishment of more rigorous entry requirements and the continuous improvement that is encouraged by this new System will serve to deepen the level of reporting significantly.

Since our incorporation, we have also continued to develop strong ties with industry associations, relying on them to act as the key agent of change within their respective sectors, and encouraging them to recruit registrants, to deepen climate change commitments and to build momentum for the voluntary approach. Similarly, we have worked closely with governments from across the country, partnering with existing federal, provincial, territorial and municipal programs such as the *Canadian Industry Program for Energy Conservation*, the Federation of Canadian Municipalities' *Partners for Climate Protection Program*, and Natural Resources Canada's *Office of Energy Efficiency* initiatives, to meet our climate change objectives together.

In addition, we have developed internal business and communications strategies with detailed feedback mechanisms, designed to help us fashion messages and respond to the continually changing environment. We have also launched a new VCR Inc. web site and Registry database, and have strengthened both through a web site public promotion campaign.

Most recently, we have initiated a baseline survey of VCR Inc. stakeholders, registrants and other interested parties in order to measure their satisfaction with our activities and to gain insight for ongoing improvement.

The result of this work, in conjunction with the accomplishments of our registrants who are committed to the reduction of greenhouse gas (GHG) generation, is an active and vital corporation that now counts more than 870 participants. Together, these organizations represent over 75 per cent of the opportunity for business and government operations to reduce GHG generation in Canada. The number of sector associations involved has also increased to a current total of 24. And these numbers continue to grow.

We have also been playing a significant role on several climate change issue tables and committees. VCR Inc. has been an active member of the *Credit for Early Action Table*, the *Enhanced Voluntary Action Table*, the *Greenhouse Gas Emission Reduction Trading (GERT) Pilot's Steering and Technical Committees*, and the *National Round Table on*

the Environment and the Economy's Multi-stakeholder Expert Group on Domestic Emissions Trading. In each of these forums, leading experts from across Canada are gathered to consider the elements of a national strategy for climate change mitigation. This consultation process has stimulated significant interest and activity in finding innovative ways to reduce GHG generation and to share it publicly on VCR Inc.'s Registry.

At the request of the Joint Ministers of Energy and Environment, we are actively supporting the development of a system designed to give credit for early GHG reduction efforts. We have prepared to register these credits electronically on our web site, as the system is implemented. We also stand ready to post and track the traded credits resulting from the activity of the GERT Pilot. We are convinced that the introduction of credit for early action and GHG credit trading will provide an effective stimulus to the number and depth of action plans registered with VCR Inc.

There is much work to be done, and we are up for the challenge. The *voluntary* approach towards GHG reduction is a very important element of Canada's climate change effort and is consistent with the need to ensure that economic and environmental sustainability go hand in hand. We are confident that VCR Inc. will play a leading role in enhancing the reach of such activities.

We thank you for the support you have given us during this transition period, and we look forward to continued collaboration in the years ahead, as we work together to pursue Canada's climate change objectives.

Sincerely,



Ron Munkley
Chair, VCR Inc. Board of Directors



Robert A. Flemington, P. Eng.
President, VCR Inc.

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- Canadian Chemical Producers Association
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- Canadian Energy Pipeline Association
- Canadian Fertilizer Institute
- Canadian Gas Association
- Canadian Lime Institute
- Canadian Petroleum Products Institute
- Canadian Portland Cement Association
- Canadian Pulp and Paper Association
- Canadian Steel Producers Association
- Canadian Textile Institute
- Canadian Vehicle Manufacturers' Association
- Coal Association of Canada
- Government of Canada — Department of Environment Canada
- Government of Canada — Department of Natural Resources Canada
- Government of Newfoundland and Labrador — Department of Energy and Mines
- Government of Newfoundland and Labrador — Department of Environment
- Government of Yukon
- Mining Association of Canada
- Government of Northwest Territories
- Province of Alberta
- Province of British Columbia
- Province of Nova Scotia — Department of Environment
- Province of Nova Scotia — Department of Natural Resources
- Province of Ontario – Department of Environment and Energy
- Province of Prince Edward Island
- Province of Saskatchewan — Department of Energy and Mines
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1. Background

Since its inception in 1995, the Voluntary Challenge and Registry (VCR) has undertaken a tremendous amount of work in its efforts to support Canada's climate change objectives.

The VCR was first established by Natural Resources Canada (NRCan) as a key element of Canada's National Action Program on Climate Change.¹ Its purpose is to encourage companies and organizations from all sectors of the economy to accept greater accountability for GHG generation, serving as a catalyst to ensure that Canada's overall climate change objectives are met by both private and public sectors alike through voluntary actions. It is not intended to develop Canadian policy on climate change, nor to serve as the sole support in the drive to encourage GHG emission reduction activities.

*VCR has
completed
its transition to
a private-public
partnership*

The Registry component of the VCR records the actions planned and executed by registrants, providing them with the opportunity to exchange information and to share best practices with their peers.

It is not intended to provide an inventory of GHG emissions, but rather to serve as a means of demonstrating and recording the contributions being made by registrants to the overall GHG emission reduction initiative.

In its first three years as a government-incubated program, the VCR succeeded in engaging approximately 700 companies and organizations in the challenge. It also made substantial progress in securing sector leadership through alliances with over 20 associations.

From the outset, however, the intention was always to house the program in an independent organization for its ongoing operation; in October 1997, this intention became a reality. VCR completed its transition from a government program to a private-public partnership, implementing a December 1996 decision made by the federal and provincial ministers of energy and environment to incorporate VCR Inc. as an independent entity.

¹ In the spring of 1990, federal, provincial and territorial energy and environment ministers and their officials began work on a national strategy to address climate change. Ensuing discussions resulted in the development of the *National Action Program on Climate Change*, which sets out the principles, strategic directions and opportunity areas that Canada will pursue to reduce GHG emissions.

The incorporation of the VCR marked the official end of its incubation period with NRCan. The organization now operates as a stand-alone, not-for-profit corporation, drawing two-thirds of its operating funds from the private sector and the balance from federal and provincial governments.

In its new form, VCR Inc. reports to a *Council of Champions*, comprised of top-of-the-house executives from leading organizations and government bodies supporting the corporation. Each council member is expected to serve as the ‘champion’ of the voluntary challenge in his/her sector or region.

A *Board of Directors* was drawn from the Council and was officially established during the 1st Annual Council of Champions Meeting on March 12, 1998. Its purpose is to provide broad corporate direction to the VCR Inc. office.

A *Technical Advisory Committee* was also formed to provide the Board with recommendations concerning all technical issues. It is comprised of representatives from academia, environmental non-government organizations (ENGOS), industry and governments.

Since its transition, VCR Inc. has continued to build on the success and experiences of its registrants. Over the past year, the following objectives were achieved:

- ▶ registration increased to 874 companies and organizations from virtually all sectors of the economy;
- ▶ work with existing registrants and partners continued;
- ▶ a new, more rigorous “Champion-level” system of reporting was developed;
- ▶ a VCR Inc. Strategic Plan, Communications Strategy, and 1999 Annual Business Plan were developed and approved by the Board;
- ▶ the inaugural Council of Champions Meeting took place in March 1998;
- ▶ planning for the first Leadership Awards Ceremony, which will be held in conjunction with the 2nd Annual Council of Champions Meeting, was completed;
- ▶ three issues of the bimonthly VCR Inc. newsletter, *Champion News*, were produced;
- ▶ two VCR Inc. Success Stories were distributed, as part of an ongoing bimonthly series alternating with the distribution of *Champion News*;
- ▶ a new VCR Inc. web site and Registry database were launched, and supported by a web site public promotion campaign;
- ▶ Mr. Ron Munkley, VCR Inc. Chair, and Mr. Robert Flemington, VCR Inc. President, made a presentation to the October 1998 Joint Ministers’ Meeting in Halifax;
- ▶ Mr. Flemington participated in a series of events, delivering speeches and presentations to audiences across Canada; and
- ▶ Mr. Flemington participated actively in a variety of tables and committees including the *Credit for Early Action Table*, the *Enhanced Voluntary Action Table*, the *Greenhouse Gas Emission Reduction Trading Pilot Steering and Technical Committees*, and the *National Round Table on the Environment and the Economy’s* Multi-Stakeholder Expert Group on Domestic Emissions Trading.

Mission

Provide the means for promoting, assessing and recognizing the effectiveness of the voluntary approach in addressing Canada's climate change objectives.

Mandate

- ▶ Recruit broad participation from all economic sectors and geographic regions, with the support of the VCR Inc. Council of Champions and in conjunction with sector associations.
- ▶ Record and document participation, action plans, best practices and achievements of VCR Inc. registrants.
- ▶ Analyze actions and achievements, consider their potential for further progress and provide related support to VCR Inc. registrants.
- ▶ Recognize, publicize and promote VCR Inc. registrants making progress towards Canada's climate change objectives with the support of the VCR Inc. Technical Advisory Committee.
- ▶ Prepare progress reports and annual reports, and identify issues for consideration in the evolution of VCR Inc.



2. Reporting System

When VCR Inc. incorporated in October 1997, it inherited a system of reporting that required all registrants to submit Letters of Intent, Action Plans and Progress Reports. These submissions tended to vary significantly in depth and quality. Following its incorporation, VCR Inc. sought feedback from its registrants and other interested parties on the events that had transpired during the transition period. Among the more frequent comments it received in this regard was that the existing reporting system needed to be enhanced in order to maintain credibility within the scope of the National Climate Change Process and in the eyes of the public.

2.1 Go for Gold!

*Fostering
continuous
improvement*

In the spirit of fostering continuous improvement, VCR Inc. has worked with TAC to develop a new, more rigorous reporting mechanism called the *Champion Reporting System*. This system has been coupled with a logo program that invites registrants at the various reporting levels to use special VCR Inc. logos, specific to the reporting status that they have achieved.

The *Champion Reporting System* introduces the Bronze, Silver and Gold (BS&G) levels of reporting. These designations will bring more profile, structure and credibility to registered submissions, publicly recognizing the depth of commitment and continued improvements in reporting actions to address climate change. As each registrant is encouraged to progress through subsequent reporting levels (BS&G) as quickly as possible, he/she is given the opportunity to report to VCR Inc. in an iterative fashion. Not only does this process serve to support each registrant's business cycle, but it also encourages registrants to report improvements as they arise, rather than accumulating data for year-end reports.

Over the past two years, various industry associations, ENGOs and VCR Inc. itself have taken the initiative to formulate reporting guidelines specific to the execution of their respective mandates. It is with these various guidelines in mind, in combination with the expertise found within TAC, that VCR Inc. will release guidelines for the *Champion*

Reporting System in early 1999. By April 1999, these guidelines will have been incorporated into VCR Inc.'s new *Participant's Handbook*.

2.2 Raising the Bar

VCR Inc.'s multi-stakeholder Technical Advisory Committee brings together different points of view with regard to reporting progress. After extensive discussion and consultation with TAC, VCR Inc. has raised the bar for entry into its Registry. Beginning in the first quarter of 1999, it has been phasing out the posting of *Letters of Intent*. Effective April 15, 1999, all registered submissions must include the elements of a very basic action plan: senior management support, a commitment to regular reporting and a base year calculation. We are working with existing registrants to assist them in meeting this new requirement.

2.3 Registry Developments

In April 1998, VCR Inc. began to replace its Registry database with a much improved document retrieval system and, in June 1998, the new Registry was unveiled. The new database is updated daily and has been well received thus far by registrants and other interested parties.

2.3.1 Improvements

The new Registry forms an integral component of the VCR Inc. web site. It allows users to search for registrants and for their submissions to VCR Inc. by registrant name, region, sector and/or report type. In addition, users may browse reports using key words, making the Registry an important research tool. Another key feature of the new Registry is the option to download reports as PDF (portable document format) files that are universally compatible on all MAC, PC and UNIX platforms using the Adobe Acrobat Viewer (available at no cost on the Internet). Improving the availability of reports in this way has considerably reduced not only the amount of requests that the VCR Inc. office receives on a regular basis for paper copies of registrant submissions, but also the amount of time it takes to respond to these requests.

In 1999, on-line Registration will be introduced, making the process of registration and registrant profile updating even easier. This move towards on-line Registration will encourage registrants to become more accountable for their profile on the Registry. Templates have been developed that will allow a registrant representative to update contact information, as well as submissions in real-time. The process will be conducted in a password-protected environment, using state-of-the-art security features.

2.3.2 Canadian GHG Credit Registry

In April 1998, the Joint Ministers of Energy and the Environment mandated VCR Inc. to become the national registry for GHG credits for early action (CEA). VCR Inc. is actively fulfilling this role, as well as registering credits approved by the GERT Pilot.

VCR Inc. will record the ownership and movement of all GHG emissions credits issued in, or imported into, Canada. As such, in the design of the Credit Registry, VCR Inc. has chosen to accommodate credits issued within the CEA process, the GERT Pilot and other programs in one database. Furthermore, the Canadian GHG Credit Registry database will be integrated with VCR Inc.'s existing Registry and web site, which record the voluntary efforts of participating companies in mitigating GHG emissions.

2.4 Leadership Awards

VCR Inc. has developed a new award program called the *Leadership Awards*. These awards will be granted based on the achievements of registrants, with the intention of recognizing VCR Inc. participants for their contributions in meeting Canada's commitment to reduce GHG emissions.

Eligible submissions for the 1998 Leadership Awards were drawn from registered plans submitted to VCR Inc. between October 1, 1997, and October 31, 1998. TAC developed the selection criteria for the awards and also acted as the judging committee for the 1998 program. Throughout the judging process, special emphasis was placed on finding companies/organizations who had demonstrated *commitment*, *action* and *leadership* within their economic sector.

Recognition for *commitment* and *action* will be granted to eligible registrants based on their action plan and/or progress report. Those recipients who are recognized for *leadership* will be drawn from a list of nominated individuals or associations that have been widely active as advocates for the voluntary climate change challenge.



3. Sector Profiles

3.1 Context

VCR Inc. has begun the process of mapping GHG emissions reduction trends by sector. This task has proven to be substantial and will continue to present a challenge in coming years.

Of the sectors that are featured in this chapter, at least five have reduced their GHG emissions to below their respective 1990 levels. Not all of the reductions achieved by these companies and organizations have been documented within the VCR Inc. Registry; the sector profiles that follow, however, suggest that voluntary efforts towards meeting Canada's climate change challenge are producing innovative and effective results.

Over 75 per cent of the opportunity for business and governments to reduce GHG generation is represented at VCR Inc.

While the National Greenhouse Gas Inventory was being built, Environment Canada and Natural Resources Canada measured (in most instances) gross energy consumption from the *top down*. The following sector profiles, however, are the result of aggregating the actions of individual organizations from the *bottom up*. Further research will be required to directly relate GHG emissions reduction activities by individual VCR Inc. registrants (point sources) to the overall Canadian inventory.

“Those responsible for the national GHG inventory would prefer a point source oriented system but, at present, such data are not forthcoming in relation to GHG emissions. In August 1998, a Draft Foundation Work Plan on *The Canadian Greenhouse Gas Emissions Reporting Initiative* was forwarded by the PDB [Pollution Data Branch, Environment Canada]. This plan outlines the long-term resources that would be required to develop a national inventory that is more ‘bottom up’ in nature and more related to VCR [Inc.], PERT [Pilot Emissions Reduction Trading], GERT [Greenhouse Gas Emission Reduction Trading Pilot] and other initiatives.”²

² Cope, D. Enterprises, *Linking a Credit for Early Action System to the National GHG Inventory (second draft)*, (October 1998), section 2.6.

Table 3.1 provides the relationship between the total Canadian GHG emissions inventory and the percentage of reduction potential represented by the companies and organizations registered in the VCR Inc. Registry.

Table 3.1: National GHG Emissions Inventory Breakdown

Sector	Details	1996 GHG Estimate ³ (Mt CO ₂ e)	Portion of National Total	Estimate of Sector Coverage within VCR Inc. Registry
Households	Includes residential heating and cooling, and personal transportation.	130.8	19.5%	—
Manufacturing and Metal Mining	Includes aluminum, cement, chemical, forestry, general manufacturing, metal mining, pulp and paper, steel, textiles, vehicles, and parts manufacturing.	124.5	18.5%	70% ⁴
Electric Utilities	Includes all generation facilities operated by utility companies.	103.8	15.4%	100% ⁵
Oil, Gas and Coal	Includes production, transformation and transportation related to oil, gas and coal.	97.4	14.5%	95% ⁶
Transportation (Commercial)	Includes air, marine, rail, off-road and road vehicles. All fleet vehicle emissions are also included.	93.9	14.0%	65% ⁷
Agriculture	Includes non-combustion related emissions.	63.7	9.5%	—
Institutional and Commercial	Includes energy-related emissions from federal, provincial and municipal governments (including fugitive emissions related to municipal waste disposal); health and educational institutions; and commercial buildings.	52.5	7.8%	45% ⁸
Other	Includes construction, land use change, forestry and other combustion.	5.7	0.8%	—
Total		672.3	100.0%	78%

In striving to illustrate the activity and progress of the sectors featured in this chapter, a significant amount of information was gleaned from sector association reports and contacts. These associations were particularly helpful in sharing the analytical work that they had completed on their sectors' GHG emissions reduction activities. A considerable amount of information was also drawn from a variety of Climate Change Process Table Foundation Papers.

³ The Conference Board of Canada & Paul Griss, *Enhanced Voluntary Action Table Foundation Paper*, (November 1998), p. 56.

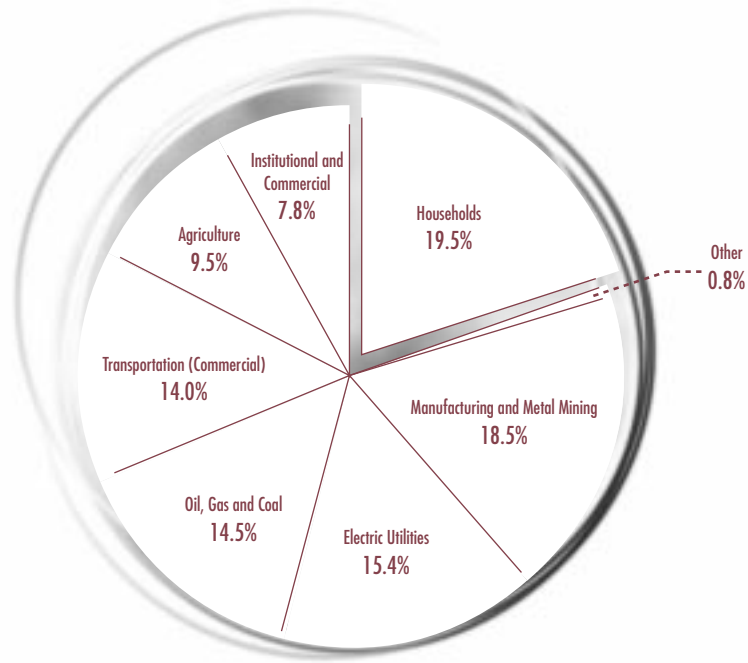
⁴ Canadian Industry Program for Energy Conservation, *1997 Aggregated Results*, (December 1998 Presentation to CIPEC Task Group Leaders).

⁵ Canadian Electricity Association.

⁶ Weighted average using oil, gas and coal sector statistics.

⁷ VCR Inc. estimation. More analysis is required to relate mobile sources to the VCR Inc. Registry.

⁸ Assumes 100 per cent of government emissions, in addition to 10 per cent of other buildings.

Figure 3-1: Canada's GHG Emissions Inventory Estimate (1996) ⁹

3.2 Energy

GHG emissions (combustion- and fugitive-related) generated by VCR Inc. registrants within the electric utilities, oil, natural gas and coal industries are covered in this section. Endorsement of the voluntary approach towards mitigating climate change has traditionally been strong in these sectors. Thorough and regular reporting by sector associations and companies continues to illustrate progress.

3.2.1 Electric Utilities

The electric utilities sector is represented by the Canadian Electricity Association and by several companies across Canada involved in the generation, transmission and distribution of electric power. 22 electric utilities are currently registered with VCR Inc. Of these companies, 15 have submitted action plans, and 13 have submitted progress reports.

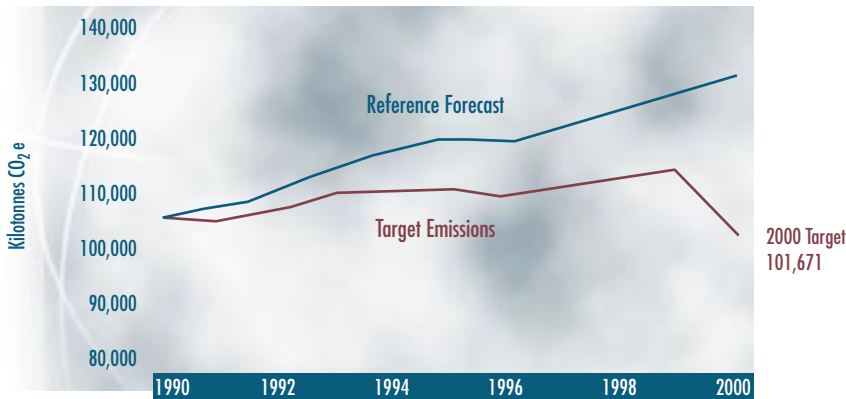
Electricity generation sources include hydro, nuclear and fossil fuels such as coal, natural gas, oil and diesel. In its 1997 submission to VCR Inc., the Canadian Electricity Association predicted that GHG emissions of registered electric utilities would amount to approximately 3.5 per cent below the 1990 baseline in 2000, measuring 101.67 Mt CO₂ e.

In an effort to meet their GHG emissions objectives, electric utilities have identified several actions to reduce GHG emissions within their sector. A number of utilities have pursued both foreign and domestic offsets, including reforestation and alternative energy sources. Domestically, some of Canada's major electric utilities have partnered with key industries to build and operate co-generation facilities. The sector has also increased the testing and development of GHG emissions reduction technologies and renewable energy sources, while it also continues to implement improvements in generation, transmission and distribution efficiencies. In addition,

⁹ The Conference Board of Canada & Paul Griss, *Enhanced Voluntary Action Issue Table Foundation Paper*, (November 1998), p. 56.

electric utilities are currently working on Demand Side Management (DSM) with their residential, industrial and commercial customers. Collectively, it is predicted that the implementation of these actions will reduce GHG emissions from electric power generation by 29.71 Mt CO₂ e annually by 2000.¹⁰

Figure 3-2: Impact of GHG Reductions in the Electricity Sector (1990-2000) ¹¹



“Employees at B.C. Hydro’s Qualicum Beach office on Vancouver Island launched an innovative bicycle meter reading program that helps to eliminate the reliance on vehicles to cover meter reading routes.”

BC Hydro

TransAlta Corporation and Husky Oil Corporation have formed a partnership to build, operate and finance the Meridian Co-generation Project. The co-generation plant will supply 210 MW to SaskPower, while providing steam for Husky Oil Corporation’s Lloydminster Upgrader. All three participants in this project are VCR Inc. members. Estimated GHG emissions reductions are in excess of 250,000 tonnes CO₂ e.

Husky Oil Corporation, TransAlta Corporation and SaskPower

3.2.2 Oil and Gas

This sector encompasses companies and associations involved in the production, refining, distribution and/or marketing of oil and gas. At present, VCR Inc. has a total of 141 registrants from this sector, 119 of which have registered action plans and 67 of which have registered progress reports.

Associations linked to this sector such as the Canadian Association of Petroleum Producers (CAPP), the Canadian Petroleum Products Institute (CPPI), the Canadian Gas Association (CGA) and the Canadian Energy Pipeline Association (CEPA) have reported their progress to VCR Inc. on a regular basis. Their reports serve not only to describe the initiatives undertaken by the individual associations to encourage participation in VCR Inc., but also to outline the types of actions that member companies are implementing to limit their GHG emissions. CAPP has also released its *Global Climate Change Voluntary Challenge Guide* in an effort to help oil and gas companies formulate their reports to VCR Inc.

¹⁰ These reductions are based on a business-as-usual reference case.

¹¹ Canadian Electricity Association, *1997 Progress Report*, (October 1997), p. 9.

CAPP companies representing over 90 per cent of GHG emissions, and CGA companies representing 80 per cent of GHG emissions, are currently registered with VCR Inc. In addition, all CPPI and CEPA members are also represented at VCR Inc.

In the oil and gas sector, many actions taken by associations and companies provide opportunities for partnerships. In 1998, members of CEPA and CGA teamed up to develop and distribute a four-part series of educational newsletters on climate change called the *Climate Change Chronicles*. More than 15 000 individuals received the newsletters, which were the cornerstone of many employee awareness programs implemented by CEPA and CGA members.

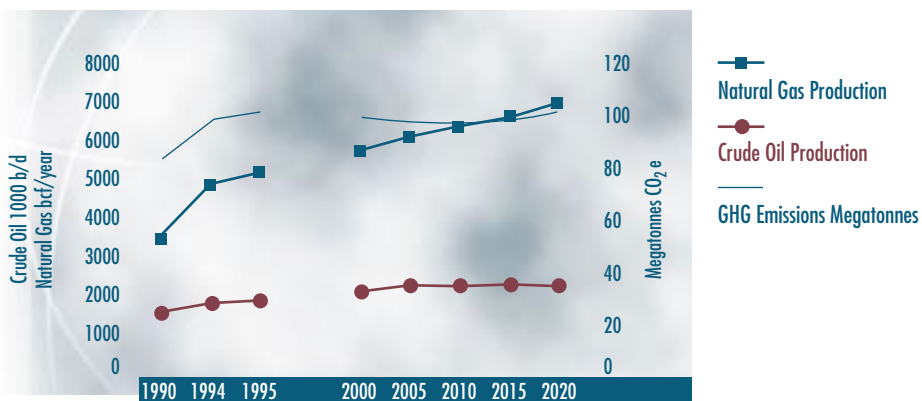
In September 1998, associations representing the major areas in the oil and gas sector submitted a *Foundation Paper* to the National Climate Change Secretariat, as part of the process to develop options for a national strategy on climate change. Chapter 4 of this report provides more detail concerning the role of VCR Inc. in this process. The following associations were involved in the project:

- ▶ Canadian Association of Geophysical Contractors
- ▶ Canadian Association of Oilwell Drilling Contractors *
- ▶ Canadian Association of Petroleum Producers*
- ▶ Canadian Energy Pipeline Association*
- ▶ Canadian Gas Association*
- ▶ Canadian Petroleum Products Institute*
- ▶ Small Explorers and Producers Association of Canada
- ▶ Petroleum Service Association of Canada*

* Registered members of VCR Inc.

This *Foundation Paper* sets out the range of positions that exist within the oil and gas industry on the various facets of climate change. Figure 3-3 is drawn from this report.

Figure 3-3: Oil and Natural Gas Production and GHG Emissions 1990-1995 (including NRCan Projections to 2020) ¹²



¹² Oil and Natural Gas Industry Foundation Paper, (September 1998), p. 38.

"In 1996, Union Gas Demand Side Management programs resulted in savings of more than 7.8 million m³ of natural gas or 14.7 kt CO₂ e. By the year 2000, the total greenhouse gas emission reduction attributable to Union Gas DSM [demand side management] programs are estimated to be 170 kt CO₂ e per year. This represents approximately 23 per cent of 1990 greenhouse gas emissions from company operations."

Union Gas/Westcoast Energy Inc.

"In November 1997, Petro-Canada entered into a joint venture with Iogen Corporation of Ottawa to develop a promising alternative fuel technology. The process produces ethanol from biomass with very low greenhouse gas emissions over the full life cycle of the production and use."

Petro-Canada

3.2.3 Coal

The coal sector represents the majority of mining and processing of coal in Canada. Five individual coal companies have registered with VCR Inc. Three of these companies have submitted action plans, and one company has submitted a progress report.

Most GHG emissions from this sector are directly linked to energy consumption. Diesel, electricity, natural gas and propane, in addition to coal, are the coal sector's major sources of energy. As an energy source, coal is used in mineral processing as a reductant in metallurgical industries and in various other industrial applications requiring heat for drying or steam generation.

Methane released during the mining process represents another source of GHG emissions. Methane levels at coal mines vary depending on prevailing geological conditions. Site specific measurements are required to accurately differentiate one coal field from another.

Overall, VCR Inc. registrants from the coal sector are working hard to reduce GHG emissions. Energy-efficiency initiatives such as improved mining techniques, processing modifications and purchasing plans that seek out energy-efficient equipment continue to provide the coal sector with opportunities to reduce its GHG emissions. In an effort to bring the climate change message closer to individuals, companies have also introduced employee awareness programs that encourage the adoption of innovative and effective actions to reduce GHG emissions within their operations.

Registered submissions in the VCR Inc. Registry predict that some members of the coal sector may be able to achieve the national GHG emissions reduction targets of 6 per cent below 1990 levels.

"Luscar Ltd.'s mountain mines have had a significant increase in coal production from 1990 to 1997. Despite this increase, the mountain mines have reduced emissions through initiatives such as... increasing coal plant efficiency by 3-6 per cent and overburden truck productivity by 86 per cent."

Luscar Ltd.

3.3 Manufacturing and Metal Mining

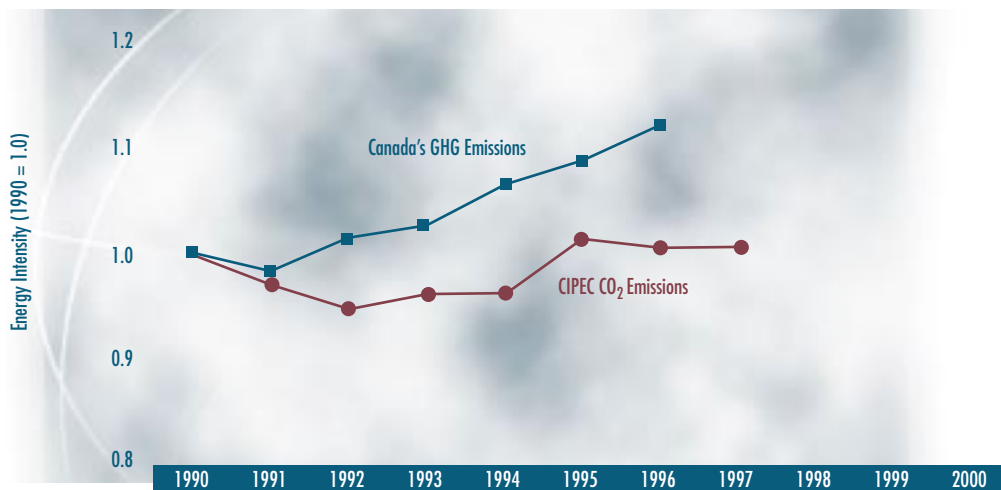
Industries that fall within the manufacturing and metal mining sector play an important role in meeting Canada's overall climate change commitments. They account for approximately 18.5 per cent of Canada's total GHG emissions, and the majority of their emissions are derived from energy use in the production process. Of Canada's total GHG inventory, approximately 85 per cent of emissions are the result of energy consumption.

As a key element of NRCan's Industrial Energy Efficiency Initiative, the Canadian Industry Program for Energy Conservation (CIPEC) has recently refocused its efforts to encourage energy efficiency throughout the

industrial sectors. It has played an instrumental role in promoting energy efficiency as a means to limit energy-related GHG emissions and to increase economic competitiveness.

CIPEC's efforts to date have resulted in an average annual energy intensity improvement of 0.9 per cent from 1990 to 1997 within the manufacturing and metal mining sectors. As illustrated in Figure 3-4, CO₂ emissions have increased by only 0.5 per cent in this same period – equal to a virtual stabilization of emissions. Energy intensity improvements have also made a significant impact on GHG emissions, resulting in an overall 6 per cent reduction in CO₂ emissions per unit output from 1990 levels.

Figure 3-4: GHG Emissions from CIPEC Companies (1990-1997)



3.3.1 Cement

The cement sector consists of cement and concrete producers in Canada. The Canadian Portland Cement Association (CPCA), which accounts for 100 per cent of Canada's cement industry, has been actively involved in the climate change challenge since 1995.

Six of the eight CPCA members are currently registered with VCR Inc., in addition to a U.S.-based company, whose Canadian operations are registered with VCR Inc. All seven of these companies have registered action plans, and one has followed up with a progress report.

60 per cent of GHG emissions in the cement sector are derived from the natural process of limestone (a cement ingredient) calcination. The remaining 40 per cent are a result of the combustion of fossil fuels used during the manufacturing process. Cement production requires combustion at extremely high temperatures (sustained at 1500°C). Traditionally, coal has represented the industry's primary energy source, followed by natural gas.

In an effort to lower energy-related GHG emissions, the industry continues to increase the use of waste materials (i.e. tires, used oils, paints, cleaning solvents and chemically treated woods) destined for municipal landfills. Using these materials as fuels "...offers a solution, not only to the costs and hazards of storage/landfills, but also to the emissions associated with 'accidental' burning."¹³ In addition, other industries that burn coal as an energy source produce waste materials (i.e., blast furnace slag, silica fume and fly ash) that can be used to supplement cement production processes.

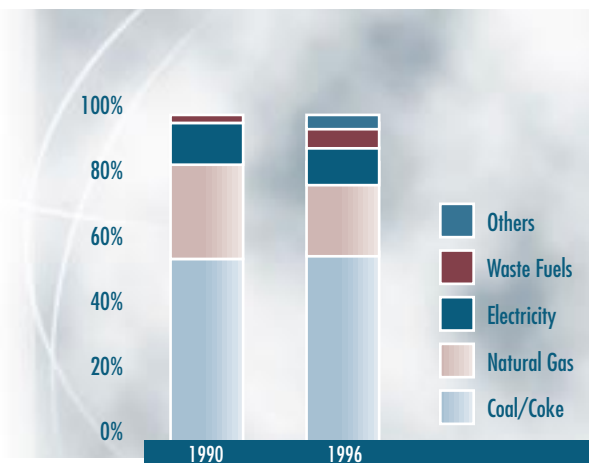
¹³ Canadian Portland Cement Association, *Concrete Contributions to Meeting Canada's Kyoto Commitment: An Industry View*, (September 1998), p.4.

The industry is proud of its efforts to explore energy-conscious options, which have become a part of the industry's Code of Practice. Figure 3-5 illustrates this fuel-switching trend.

The cement industry also continues to make significant progress in its conversion from an energy intensive wet manufacturing process to a state-of-the-art dry process that is considerably less fuel intensive. Developing pre-heater and pre-calciner heat recovery systems has also helped the sector to achieve an overall 30 per cent reduction in energy consumption per tonne of end product. These changes in processes and equipment are elements of a long-term manufacturing evolution, implemented as current capital stock is retired and funds become available to invest in modernization.

The CPCA predicts that by the year 2000, total GHG emissions associated with domestic cement consumption will be six per cent below 1990 levels, assuming a 12 per cent increase in domestic consumption between 1997 and 2000. In terms of cement emissions per tonne of its end product, concrete, CO₂ should drop by 14 per cent.

Figure 3-5: Energy Source Comparison, Cement Sector (1990-1996)¹⁴



"The Canadian Portland Cement Association works in close co-operation with its U.S. equivalent, the Portland Cement Association (PCA). Many of our Canadian members have U.S. parent companies, who in turn have links to European parent companies. Sharing expertise, resources and scientific research with the U.S. gives the Canadian industry a broader perspective on common points of reference and accelerates the modernization of technology and practices."
Canadian Portland Cement Association

3.3.2 Chemical

The chemical sector is comprised of manufacturers from a broad range of petrochemicals, inorganic chemicals, polymers, and other organic and specialty chemicals. A total of 87 chemical companies are currently registered with VCR Inc., 78 of which have registered action plans. In addition, 19 companies have registered progress reports.

The key GHG emissions source in the chemical sector is energy consumption in the manufacturing process, as CO₂ is emitted as a result of burning hydrocarbon fuels. Manufacturing processes also account for 90 per cent of direct methane emissions, while fugitive methane

¹⁴ Minister of Public Works and Government Services Canada, 1996-1997 CIPEC Annual Report, (1998), p.15.

emissions account for the remaining 10 per cent. Virtually all nitrous oxide generated by this sector is a result of processes rather than combustion.

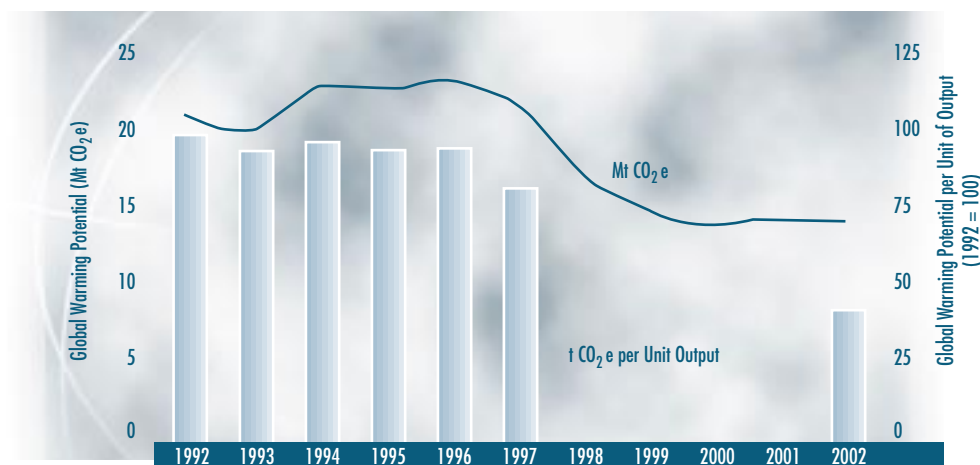
In an effort to reduce GHG emissions from their sector, chemical manufacturers have focused their actions on implementing new emissions abatement technologies, on capturing methane (that was previously vented to the atmosphere) to supplement purchased fuel, on implementing fugitive emissions control systems, and on pursuing energy-efficiency initiatives (including co-generation). Many chemical companies have also committed to the development and implementation of communications programs designed to educate company employees, industry peers and the general public on climate change issues.

The Canadian Chemical Producers' Association (CCPA) submits regular reports to VCR Inc., detailing the progress of its membership with regard to their efforts to limit GHG emissions from their operations. The association's report typically describes measures adopted by its members, as well as the results achieved through these actions. To date, registered VCR Inc. members from the chemical sector account for over 90 per cent of all CO₂ e generated by CCPA members.

The CCPA's 1998 submission to VCR Inc., *Reducing Emissions 6*, indicates that GHG emissions from the chemical sector in 1997, as compared to 1996, have decreased from 23.6 Mt CO₂ e to 22.0 Mt CO₂ e. This total reduction includes an 18 per cent reduction in CH₄ emissions, a 13 per cent reduction in N₂O emissions, and a slightly lower reduction in CO₂ emissions. More dramatic reductions in N₂O emissions are expected in the near future, as new emissions abatement technology is implemented.

As illustrated in Figure 3-6, CCPA member companies have indicated that the sector's net GHG emissions are projected to decline to 42 per cent of 1992 levels by the year 2002.

Figure 3-6: Global Warming Potential of Emissions from CCPA Member Operations¹⁵



"NOVA Chemicals is very proud to report that in 1997 we achieved our lowest total emissions to date, a 13 per cent decrease from those reported in 1990!"

NOVA Chemicals

"Methanex became the first company to achieve compliance with the Canadian Standards of Responsible Care in all the facilities world wide."

Methanex Corporation

"Voluntary emission reductions which included the greenhouse gases, CFCs and HCFCs, have resulted in an over 50 per cent reduction since 1990."

Dow Chemical Canada Inc.

¹⁵ Canadian Chemical Producers' Association, *Reducing Emissions 6, 1998 Emissions Inventory and Five-year Projections*, (1998), p. 24.

3.3.3 Forestry, Pulp and Paper

The forestry, pulp and paper sector includes harvest and forest management, solid-wood production, and paper and allied products. A total of 47 companies from this sector are currently registered with VCR Inc., 39 of which have registered action plans, and 26 of which have followed up with progress reports. The Canadian Pulp and Paper Association (CPPA) estimates that 28 of the companies that are currently registered with VCR Inc. represent approximately 75 per cent of the industry’s total production and energy consumption.

Approximately 80 per cent of GHG emissions from the forestry, pulp and paper sector are derived from the combustion of fossil fuels used to meet energy needs. Landfills, limerock consumption and other minor sources make up the remaining 20 per cent.¹⁶

CPPA’s 1998 annual report to VCR Inc. indicates that the sector is making significant progress in reducing GHG emissions. CPPA has also published its *Greenhouse Gas Action Plan Guidelines* in an effort to help forestry, pulp and paper companies to find ways to reduce their GHG emissions and to report their progress to VCR Inc.

Despite an increase in production of one to three per cent per year, the forestry, pulp and paper sector predicts that energy supply will become less GHG intensive in the future through fossil fuel substitution. Other measures adopted by sector companies that are specifically targeted to reduce GHG emissions include: carbon sequestration projects, substitution of fossil fuels with biomass and/or natural gas, support of research and development projects, sustainable forest management, and the promotion of climate change awareness issues to employees, suppliers and other important stakeholders.

The *CPPA 1997-98 Industry Report* indicates that “... not only did the industry’s GHG emissions decrease on an absolute (total) basis, [but] they also declined on a per tonne of production basis.

Figure 3-7: Forestry, Pulp and Paper Sector: Biomass Energy Source Consumption (1990–1996)¹⁷

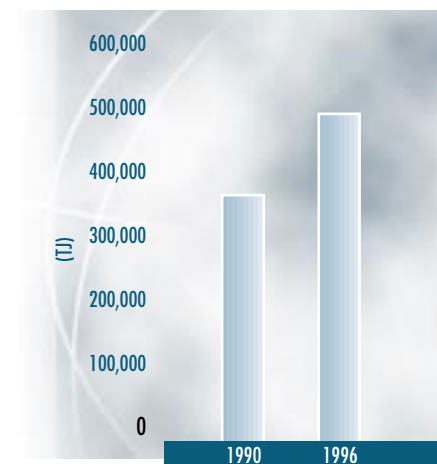
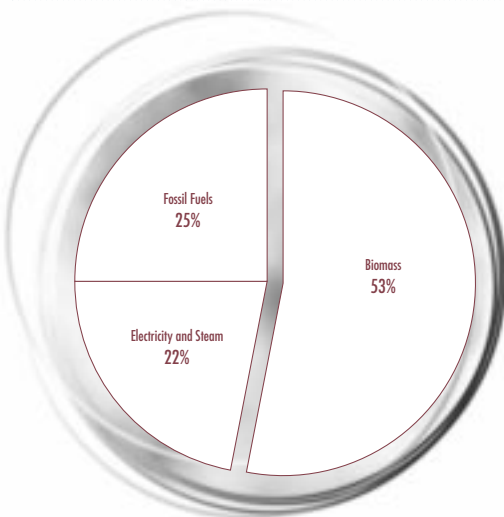


Figure 3-8: Forestry Pulp and Paper Sector: 1996 Energy Source Comparison¹⁸



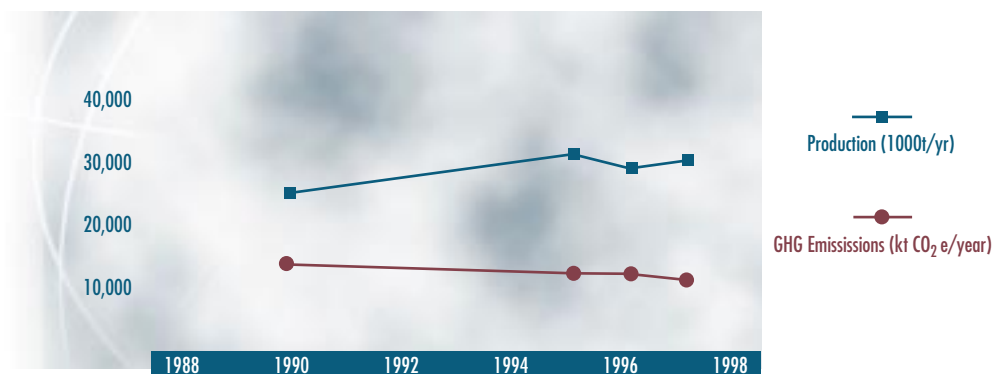
16 Canadian Pulp and Paper Association, *CPPA 1997-1998 Pulp and Paper Industry Report*, (October 1998), p. 4-5.

17 Minister of Public Works and Government Services Canada, *1996-1997 CIPEC Annual Report*, (1998), p. 37, 49.

18 Minister of Public Works and Government Services Canada, *1996-1997 CIPEC Annual Report*, (1998), p. 37, 49.

For this same time period, production levels increased by 21 per cent.”¹⁹ Figure 3-9 illustrates that even with this increase in production level, GHG emissions remain below 1990 levels.

Figure 3-9: CPPA Production and GHG Emissions Comparison ²⁰



“In 1997, GHG emissions were 11 580 kt CO₂ e/yr, 16 per cent below 1990 values.”

The Canadian Pulp and Paper Association

“Although Donohue’s total production increased by 25.4 per cent between 1990 and 1997, total fossil CO₂ emissions decreased by 30.73 per cent in absolute value, and by 42.24 per cent per tonne of product.”

Donohue Forest Products Inc.

“In 1996, net GHG emissions decreased by 7 per cent from 1995, from 162 900 tonnes CO₂ e to 152 100 tonnes CO₂ e. Net GHG emissions in 1996 were 43 per cent lower than 1990 baseline levels.”

Abitibi-Consolidated Inc.

3.3.4 Metal Mining

Gold, base metals and iron mines are covered by the metal mining sector. VCR Inc. has enlisted 29 companies from this sector, 20 of which have registered action plans, and nine of which have registered progress reports.

The metal mining sector is the seventh largest industrial energy user in Canada, accounting for more than 3.3 per cent of Canada’s total industrial energy use.²¹ As such, the majority of GHG emissions in the metal mining sector arise from energy use. Levels of GHG emissions, however, fluctuate dramatically due to volatile production rates linked to global supply and demand.

The metal mining sector has a strong history of implementing energy-efficiency improvements, and the industry continues to evolve in this direction. Actions to reduce GHG emissions in the metal mining sector have included fuel switching and the opening of new, energy-efficient mines. In an effort to encourage action on climate change in its sector, the Mining Association of Canada has published the *VCR Action Plan Workbook*, which provides guidance to metal mining companies on reporting to VCR Inc. The metal mining sector has committed to work towards the stabilization of GHG emissions at 1990 levels by the year 2000.²²

Underground mine equipment is often kept running when it is exposed to extreme winter temperatures at the surface. By “car pooling” work crews, and not bringing underground equipment to surface, less vehicles are left idling. This results in fuel cost savings, as well as greenhouse gas emissions reduction.

Placer Dome, Musselwhite Mine

¹⁹ Canadian Pulp and Paper Association, *CPPA 1997-1998 Pulp and Paper Industry Report*, (October 1998), p. 5.

²⁰ Canadian Pulp and Paper Association, *CPPA 1997-1998 Pulp and Paper Industry Report*, (October 1998), p. 6.

²¹ Canadian Industry Program for Energy Conservation, *CIPEC 1995-1996 Annual Report*, (1997), p. 43.

²² Minister of Public Works and Government Services Canada, *CIPEC 1996/1997 Annual Report*, (1998), p. 31.

3.3.5 Steel

Since 1995, Canadian steel producers have been active VCR Inc. registrants. The steel industry has committed to improve (on an annual basis) its specific energy consumption by one per cent per year for the period 1990–2010, against an adjusted 1990 starting point of 21.18 GJ/tonnes shipped. The industry currently stands ahead of its target.

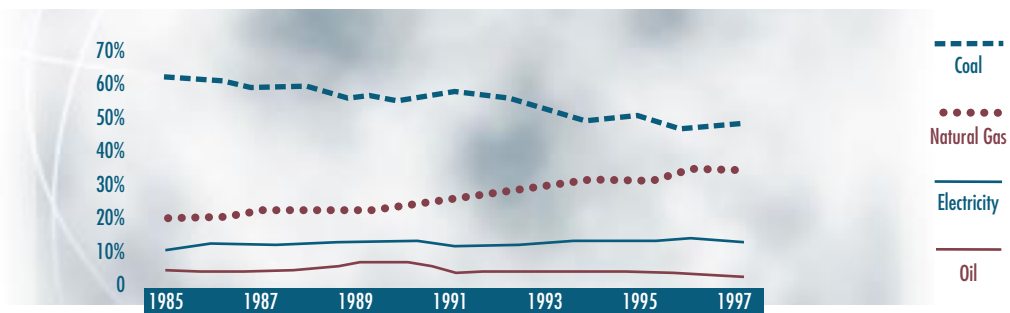
Like many other industries, however, global economics has had a significant impact on steel production. The industry currently faces challenges stemming from the globalization of its major customers and the continuing pressures from offshore over-capacity.

In an effort to reduce their costs and energy consumption, steel producers have worked extensively to rationalize equipment and to incorporate state-of-the-art technology. These new technologies have presented a variety of GHG emissions reduction opportunities. One such rationalization involved the replacement of an alternating two-furnace operation with a continuous, high-reliability furnace operation.

Changes in the types of fuel used in steel production have also contributed significantly to GHG emission reductions within this industry. Each of the three integrated producers – Stelco Inc., Dofasco Inc. and Algoma Steel Inc. – have taken steps to reduce the use of coke in their blast furnaces, replacing it with any of the three less carbon intensive reductants – coal, oil or natural gas. In addition, some companies are pursuing CO₂ offsets, including forestry. Gerdaul Courtice Steel Inc. recently began to recover landfill gas to replace purchased natural gas in its reheat furnaces.

All steel producing companies reporting to the VCR Inc. Registry do so through NRCan’s Industrial Energy Innovators Program, which focuses its efforts on improving energy efficiency. The industry in aggregate estimates that its 19 per cent improvement in specific energy consumption from 1990 has offset CO₂ emissions by 3.3 Mt.

Figure 3-10: Changes in Energy Mix (1985-1997), Steel Industry



A “state-of-the-art” method of producing steel sheets, called Direct Strip Production,²³ is dramatically reducing greenhouse gas emissions and fuel consumption. This process eliminates significant energy consumption associated with re-heating and rolling processed steel.

Algoma Steel

²³ Direct Strip Production refers to a process by which the three conventional processes of thick slab casting, re-heating and rolling have been joined in a single process incorporating a thin slab caster, a soaking furnace and reduced rolling.

3.4 Transportation (Commercial)

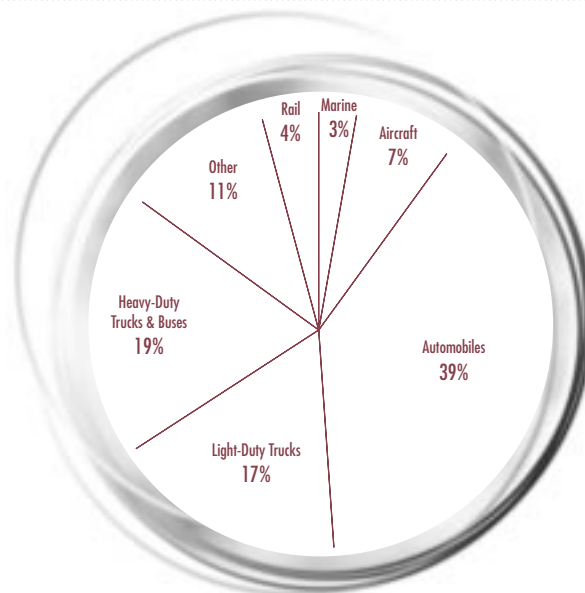
The transportation sector represents mobile sources of GHG emissions including aircraft, marine, rail, off-road vehicles, trucks and fleet automobiles. VCR Inc. has enlisted eleven transportation companies and organizations to date, seven of which have registered action plans, and three of which have followed up with progress reports.

Canada's unique geography and trade-driven economy necessitates a complex transportation system that relies heavily on fossil fuels. As a result of economic growth in the 1990s, there has also been considerable growth in transportation-related GHG emissions nation-wide. In 1996, 171 Mt of GHG emissions were attributed to mobile sources including aircraft, marine, rail, off-road vehicles, trucks, and personal and fleet automobiles.²⁴ Approximately 40 per cent of these emissions are directly related to personal vehicle fuel consumption.²⁵

To date, some difficulty has arisen in accounting for GHG emissions from the transportation sector. This is due largely to the fact that there has been a desire "...to collate, calculate and report emissions in a format that is internationally compatible."²⁶ Working within international categorizations has led to the inclusion or exclusion within Canada's national GHG emissions inventory of various mobile sources. The effect of GHG emissions from fleet and off-road vehicles are often reported through the plans submitted by VCR Inc. registrants, with no regard for their status within the national inventory.

With improvements in energy efficiency, GHG emissions have been reduced. For example, passenger and freight transportation activity grew by 17.8 per cent and 14.7 per cent respectively between 1990 and 1996; GHG emissions, however, did not grow as significantly. This fact has been attributed primarily to stock turnover and to the retirement of inefficient vehicles.

Figure 3-11: Transportation Sector GHG Emissions ²⁷



"Our corporate goal [is] to raise corporate fuel economy to 8.0 miles per U.S. gallon in 1999."

Bison Transport

²⁴ The Conference Board of Canada & Paul Griss, *Enhanced Voluntary Action Issue Table Foundation Paper*, (November 1998), p. 55.

²⁵ The Conference Board of Canada & Paul Griss, *Enhanced Voluntary Action Issue Table Foundation Paper*, (November 1998), p. 56.

²⁶ Cope, D. Enterprises, *Linking a Credit for Early Action System to the National GHG Inventory (second draft)*, (October 1998), section 2.1.

²⁷ The Conference Board of Canada & Paul Griss, *Enhanced Voluntary Action Issue Table Foundation Paper*, (November 1998), p. 66.

3.5 Institutional and Commercial

The institutional and commercial sector includes governments, health and educational institutions, and retail and commercial operations in Canada. GHG emissions generated by this sector are derived largely from energy consumption for comfort and fleet vehicles.

3.5.1 Federal, Provincial and Territorial Governments

Federal, provincial and territorial governments play influential roles in reducing GHG emissions in Canada through a wide variety of programs and activities in support of the sectors listed throughout this report. In addition, the federal government has a goal to reduce GHG emissions from its own operations and fleets to 20 per cent below 1990 levels by 2005. Various provinces and territories have also set similar goals in their own government operations and fleets. At present, the federal government has submitted an action plan and annual progress reports with VCR Inc. each year since 1995. As well, nine provincial and territorial governments have filed action plans, and five have followed up with progress reports.

The two primary sources of GHG emissions generated by governments stem from buildings and vehicle fleets.

Buildings accounted for 70 to 90 per cent of GHG emissions in 1997. All governments registered with VCR Inc. continue to make investments that are designed to reduce energy consumption and GHG emissions from their buildings and vehicle fleets. Investments such as those made by NRCan's *Federal Buildings Initiative* have also resulted in significant cost savings, serving in this particular case to save the federal government approximately \$22 million annually.

Fleet vehicles generate significant GHG emissions. All levels of government, however, are rationalizing fleets in an attempt to cut both GHG emissions and financial costs. Management practices with respect to fleet vehicles are being reviewed with more emphasis on emissions. Specifically, the number of vehicles and the kilometres driven are being examined and reduced wherever possible. As well, fleet vehicle purchasing plans now include considerations of fuel efficiency and alternative fuels, while driver education programs address fuel efficiency.

Staff and public education programs have also been implemented. Office buildings, for example, now provide bicycle parking wherever possible, and vehicle parking policies are being developed to encourage car-pooling, use of public transportation, and energy-efficient vehicles.

"Within their sustainable development strategies, many departments adopted the... priorities set out in the 1995 Greening of Government Operations policy. Two of the seven priorities – improved energy use in buildings and reduced energy consumption by federal motor vehicle fleets – are helping Canada to achieve its commitment to reduce GHG emissions in federal operations..."

Natural Resources Canada

"During the fiscal year 1996-97, the Ontario government [achieved] a reduction of about 32 per cent from 1990 levels."

Government of Ontario

"Awareness of climate change issues has increased through the development of a school curriculum. The topics of greenhouse gases and global warming are addressed in the curriculum for the compulsory courses of social studies (Grade 11) and the new secondary science programs (Grades 7-12). The topic is also addressed in optional courses such as environmental and outdoor education (Grades 7-12) and in natural resource studies (career and technology studies, Grades 8-12)."

Government of Alberta

3.5.2 Municipal Governments

Municipal governments also play an instrumental role in meeting Canada's climate change objectives. Much like federal, provincial and territorial governments, GHG emissions generated by municipal governments are derived, in large part, from buildings and fleet vehicles. To date, VCR Inc. has enlisted 53 municipalities, 41 of which have registered action plans, and one of which has followed up with a progress report.

The Federation of Canadian Municipalities (FCM) has recently teamed up with the International Council for Local Environmental Initiatives (ICLEI) to forge a partnership known as the *Partners for Climate Protection* (PCP)²⁸ – a program designed to provide municipalities with increased support in preparing and implementing climate change action plans. Within this new partnership, FCM will act as the political partner, assuming responsibility for formal relations with the federal government. ICLEI will act with FCM as a technical partner, providing municipalities with the tools that they need to become effective community leaders in the climate change challenge. There are currently 63 municipalities participating in PCP.

This partnership will be further enhanced by supporting organizations such as Green Communities, the Institute for Catastrophic Loss Reduction, NRCan's Renewable Energy Deployment Initiative, Fleet \$mart and Energy Innovator programs, ICLEI's Energy Services, and the Climate Action Fund. Through this strong support mechanism, members of the PCP program will be able to exercise a leadership role in their respective communities.

Municipalities across Canada have implemented a variety of actions to reduce GHG emissions within their own operations including the following:

- ▶ lighting optimization and retrofitting;
- ▶ fuel switching in fleets of public transportation vehicles in Hamilton-Wentworth, Ontario;
- ▶ landfill gas recovery in many cities; and
- ▶ building community energy systems.

Municipalities have also set up a number of programs that involve members of the general public, thus bringing the climate change message into individual homes across Canada. Some of these programs include the following:

- ▶ tree planting in local parks through programs like *Adopt-A-Park* (Edmonton, Alberta);
- ▶ building a city-wide bikeway network that integrates cyclists into the existing transportation network (Vancouver, British Columbia);
- ▶ encouraging the use of public transportation and car-pooling, as well as studying the potential impact of telecommuting; and
- ▶ implementing a more efficient computerized traffic control system that adjusts light signal timings in frequent, small increments reflecting the actual vehicle demand, thus significantly reducing traffic congestion, vehicle travel times, traffic accidents and fuel consumption (Halifax, Nova Scotia).

²⁸ The initiative known as the 20% Club has been integrated into this new program.

"Reductions in vehicle-kilometres traveled, vehicle downsizing, more fuel efficient vehicles, and driver education are all important components of fleet energy reduction strategies... The City's fleet now uses an impressive 17.4 per cent less energy than it did in 1990."

City of Ottawa

3.5.3 Health Services and Education

The health services and education sector encompasses hospitals, health care facilities, school boards, colleges and universities. Statistics to date show that these sectors are well represented within the VCR Inc. Registry. 63 facilities from the health services sector are currently registered, 13 of which have submitted action plans, and one of which has followed up with a progress report. In the education sector, 145 institutions are currently registered, 79 of which have submitted action plans, and six of which have submitted subsequent progress reports.

GHG emissions generated by the health and education sector are derived from operations specifically related to buildings, more so than to fleets. For this reason, the most effective means to reduce these GHG emissions comes from improving the energy efficiency of these facilities. Several VCR Inc. registrants have invested in 'smart buildings', which are buildings outfitted with computerized systems that serve to optimize and control energy consumption linked to the lighting and heating of buildings.

Fleet vehicles operated by the health and education sector are also being optimized not only to reduce GHG emissions, but also to reduce operating costs. Fuel switching in existing vehicle fleets, in addition to environmentally-conscious purchasing plans for new vehicles, represent two examples of ways in which institutions are effectively achieving these goals. In addition, mobile staff such as parking enforcement officers and parking meter readers are being encouraged to take advantage of cycling during the summer months.

"[Our] 1998/99 Action Plan...[includes] working with the Canadian Red Cross to do an energy study for their 57 000 ft² building."

Children's & Women's Health Centre of British Columbia

90 buildings and schools are controlled by a computerized energy management system. Many different systems are under control of the system, not simply the "...high payback items. By having more points under control (111 average per school), we gain a much higher level of comfort."

Edmonton Catholic Schools

3.5.4 Commercial

The commercial sector covers not only retail spaces, but also the owners, developers and operators of all commercial spaces. Due to the fact that much of Canadian business is housed in leased commercial spaces, this sector tends to touch on a number of different sectors. 116 commercial entities are currently registered with VCR Inc. 39 have submitted action plans, and three have followed up with progress reports.

Much like the institutional sector, the bulk of the commercial sector's GHG emissions are a result of energy consumption in building operations. Energy efficiency in this area has traditionally presented the most effective method of reducing GHG emissions, while serving at the same time to reduce overall operating costs. Retrofitting lighting and heating systems, as well as implementing 'smart buildings' systems, represent just a few of the actions that have been taken

by this sector in its pursuit of more efficient operations. Results have been similar to those of the institutional sector, such as optimization and better control of heating and lighting in commercial buildings.

"In the fall of 1996, through 1997, and to date, we have completed lighting retrofits in over 150 branches in Canada impacting an estimated 1.2 million ft² and saving 5.5 million kWh per year."

Royal Bank of Canada



4. Towards a National Climate Change Strategy

4.1 Canada's National Climate Change Process – Issue Tables

At the December 1997 Conference of the Parties in Kyoto, Japan, Canada, along with 160 other countries, developed a Protocol that called for reductions in GHG emissions over the next 15 years. Under this Protocol, Canada would implement GHG reduction of six percent below 1990 levels within the period extending from 2008 to 2012.

Since Kyoto, Canada's First Ministers – the Prime Minister, provincial premiers and territorial leaders – have directed energy and environment ministers to establish a process that would serve to examine the consequences of the Protocol in advance of Canada's ratification. In addition, they agreed that both federal and provincial/territorial governments would participate fully in any implementation and management of the Protocol.

*VCR Inc.
is an active
participant*

Federal, provincial and territorial energy and environment ministers met in April 1998 at a Joint Ministers' Meeting, where they approved a process to engage governments and stakeholders in an effort to examine the impacts, costs and benefits of the Protocol's implementation and management. It was also at this meeting that the Ministers approved the creation of the National Climate Change Secretariat, an organization responsible for the management and support of the national engagement process and for the development of a national implementation strategy.

Energy and environment ministers also agreed to create multi-stakeholder Issue Tables, which are designed to provide expert advice on the identification and analysis of GHG reduction opportunities and to identify the challenges and benefits of the various options open to Canada. Tables are typically comprised of 15 to 25 members, but they draw from a broader body of experts to guide their discussions. The National Climate Change Secretariat is responsible for consolidating and integrating the work produced by the Tables and by other processes.

Of the fourteen existing Tables, VCR Inc. is an active participant in two: the Credit for Early Action Table and the Enhanced Voluntary Action Table.

4.1.1 Credit for Early Action Table

In April 1998, the Joint Ministers of Energy and Environment announced that a CEA system would be implemented in Canada by early 1999. VCR Inc. has agreed to fulfill its role as the national registry not only for CEA, but also for the GERT Pilot.

The CEA Table has been working to recommend possible program designs and implementation strategies to recognize Canadian entities that have taken early action to reduce GHG emissions.

The initial work of the CEA Table was divided into three main areas covering (a) the creation of GHG emission credits, (b) the system design for managing GHG emission credits, and (c) the exploration of possible uses for GHG emission credits.

As the lead for the System Design Task Group, Mr. Flemington has helped the CEA Table to manage the development and execution of three research projects in the following areas:

- ▶ linking a CEA system to the Canadian National GHG Inventory;
- ▶ surveying early credit systems outside of Canada; and
- ▶ quantifying GHG reductions that might attract credits.

Work continues in the development of a viable system to credit early actions designed to reduce GHG emissions.

4.1.2 Enhanced Voluntary Action (EVA) Table

The National Climate Change Secretariat understands that significant efforts must be made by all regions and sectors across Canada in order to maximize the potential for voluntary action to limit GHG emissions. The EVA Table was created to study ways in which to encourage such voluntary action. This Table shares a particularly strong link with VCR Inc. due to the similar nature of its work.

VCR Inc. has been supporting the EVA Table's work, helping with the formulation of the Table's Foundation Paper, which was completed in December 1998. The Foundation Paper identifies barriers to action, incentives, and opportunities for voluntary action.

The EVA Table will continue to work during 1999, investigating and recommending ways in which to translate its findings into concrete options that will further facilitate the voluntary response to climate change.

4.2 Greenhouse Gas Emission Reduction Trading Pilot

The GERT Pilot was established to explore the option of GHG emission credit trading. Launched by a multi-stakeholder partnership in June 1998, the Pilot provides an opportunity for interested parties to gain practical experience with this market-based approach to limiting GHG emissions in Canada.

VCR Inc. is active on both the Steering and Technical Committees of the GERT Pilot. In its role as the national registry for GHG emission credits, VCR Inc. has also agreed to act as the registry for any credits traded within the GERT Pilot.

4.3 National Round Table on the Environment and the Economy (NRTEE)

Climate change is just one public policy area in which the NRTEE has been keenly involved. Established by Parliament in 1988 and reporting directly to the Prime Minister, the NRTEE's mandate is to identify, explain and promote the principles and practices of sustainable development at the national level. The Round Table's work has been instrumental in promoting and enhancing public debate on climate change and other important issues.

VCR Inc. has been an active member of the Round Table's Multi-stakeholder Expert Group on Domestic Emissions Trading. The work reviewed by this group became the initial foundation material for the ad-hoc Tradable Credit Steering Group within the National Climate Change Process that was charged with the responsibility of producing options papers and recommendations for a **mandatory** Canadian GHG credit trading system. The same background material will be used by the CEA Table to prepare similar options papers and recommendations for a **voluntary** credit trading system.



5. Periodicals

Over the past year, VCR Inc. has developed a series of periodicals, each designed to serve the needs of a particular audience. These mail pieces have proven a great success and are now produced regularly for distribution to a wide readership. Should you wish to be added to the distribution list, please contact the VCR Inc. office.

5.1 Progress Reports

VCR Inc.'s *Progress Report* is distributed at the beginning of each month to an interested group of approximately 100 readers, including Council of Champions/Board of Directors members, association heads, government officials and TAC members. Its purpose is to keep VCR Inc. stakeholders apprised of the corporation's progress on a month-to-month basis.

*Mail
pieces have
proven a great
success*

5.2 Champion News

Published every second month, VCR Inc.'s newsletter, *Champion News*, is distributed to all VCR Inc. registrants and to other interested parties by mail and is also available on-line at www.vcr-mvr.ca under the *What's New?* section. Its purpose is to keep readers apprised of VCR Inc. activities, providing them with information on a variety of topics including growing membership, similar activities in other countries, upcoming meetings/events and other voluntary initiatives.

VCR Inc. has distributed three issues to date to a total of more than 1 500 contacts on its mailing list. Its most recent issue was mailed out on December 1, 1998, and the next issue is scheduled for release on February 1, 1999.

5.3 Success Stories

Alternating with the distribution of *Champion News*, VCR Inc. also mails out regular Success Stories to all of its registrants and to other interested parties, highlighting the achievements of various registrants. These stories are also available on-line at www.vcr-mvr.ca under the *Success Stories* section.

VCR Inc. has distributed two stories to date, featuring Petro-Canada and Dupont Canada Inc. The next success story is scheduled for release on January 4, 1999.

Should you wish for your organization to be featured in this series, please contact the VCR Inc. Office.

5.4 Participant's Handbook

The *Participant's Handbook* currently in circulation was written by NRCan over three years ago and is significantly out-of-date. Its purpose is to provide registrants with specific guidelines in preparing their action plans and progress reports.

With the assistance of VCR Inc.'s Technical Advisory Committee, this document is currently in the process of being completely re-written, so as to reflect the detailed work that has been undertaken by several sector associations in this regard and to allow for the description of VCR Inc.'s new Champion Reporting System. By April 15, 1999, VCR Inc. plans to have incorporated the Champion-level guidelines into the Handbook, which is then scheduled for release to all registrants and to other interested parties at that time. The Handbook will be distributed by mail and will also be available on-line at www.vcr-mvr.ca under the *Get Involved!* section.

Following its April release, the Handbook will be updated annually to reflect new developments as they materialize.

5.5 Annual Report

This document will be released on an annual basis at VCR Inc.'s Council of Champions Meeting. Following its official release at this annual event, it will then be distributed to all VCR Inc. registrants and other interested parties by mail. Its purpose is to provide readers with a comprehensive overview of VCR Inc. activities over the previous year.



6. Outreach Strategies

6.1 Sector Engagement

Since its incorporation, VCR Inc. has continued to develop strong ties with its stakeholders and registrants in an effort to broaden and deepen engagement from all sectors of the economy.

6.1.1 Board of Directors / Council of Champions

VCR Inc. relies on board/council members to act as the key agent of change within their respective sectors, encouraging them to recruit registrants, to deepen climate change commitments and to build momentum for the voluntary approach. Each member serves as the ‘champion’ of the voluntary challenge in his/her sector.

*Strong ties to
sector associations
and governments
across Canada*

6.1.2 Government

The *upper* ranks of government, at the federal, provincial and territorial levels, support VCR Inc. Representatives from two federal departments (Natural Resources Canada and Environment Canada) and three provincial departments (Alberta Energy, Ontario Energy and Nova Scotia Environment) currently sit on the Board, while representatives from four provincial departments (British Columbia Energy, Newfoundland Environment, Prince Edward Island Development and Saskatchewan Energy) and two territorial departments (Northwest Territories Resources and Yukon Economic Development) sit on the Council.

Building on this strong government support, VCR Inc. also seeks to promulgate awareness of the VCR Inc. mission and mandate throughout *lower* ranks of government. It has solicited the support of federal, provincial and territorial governments in *all* areas of activity to recruit broad participation from all sectors of the economy, to deepen climate change commitments, and to build momentum for the voluntary approach. Targeted audiences have included Assistant Deputy Ministers,

Director Generals, Directors, and Program and Communications Managers from a variety of federal, provincial and territorial departments across Canada.

In addition, VCR Inc. has also partnered with existing federal, provincial, territorial and municipal programs such as the *Canadian Industry Program for Energy Conservation*, the Federation of Canadian Municipalities' *Partners for Climate Protection Program*, and NRCan's *Office of Energy Efficiency* initiatives, in an effort to pursue Canada's climate change objectives together as a team.

6.1.3 Associations

VCR Inc. relies on industry associations to act as the key agent of change within their respective sectors, as it strives to forge new alliances with associations who are not yet registered. Over the past year, it has conducted targeted briefing sessions with association heads from various sectors in an attempt to solidify their support and to recruit new members.

Strategic alliances with sector associations offer a unique marketing and communications advantage. Information is passed effectively and efficiently across the membership through conferences, workshops and newsletters. More importantly, associations are able to consolidate the view and concerns of membership, which may represent an entire sector of the economy. They also have the ability to inform their members about the importance of deepening voluntary commitments, and to stimulate the momentum required to ensure a majority of members are involved.

Thus far, the number of associations involved in VCR Inc. has increased to 24 in 1998. These associations have submitted annual reports and/or committed to provide funding.

6.1.4 Companies/Organizations

Past strategies have focused upon engagement and the achievement of progress among existing registrants. VCR Inc. has sought to build on this momentum as it attempts to recruit registrants from other sectors of the economy, to deepen their climate change commitments, and to build real momentum for the voluntary approach.

There are currently 874 companies and organizations registered with VCR Inc. This figure represents an increase of approximately 21 per cent in the participation rate since October 1997 when there were just over 700 registrants.

6.2 Speaking Opportunities

Throughout 1998, Mr. Flemington, participated in a variety of meetings, conferences and briefings, with the objective of promoting general awareness of VCR Inc. activities. These events presented the perfect opportunity to promote the corporation's corporate image to audiences across Canada, while serving at the same time to increase VCR Inc.'s registrants' base. Among the events that Mr. Flemington attended are the following:

Events	Date	Location
VCR Inc. Board of Directors Meetings	March 12, 1998	Ottawa, ON
	May 14, 1998	Ottawa, ON
	September 10, 1998	Ottawa, ON
	November 26, 1998	Ottawa, ON
VCR Inc. Annual Council of Champions and Annual General Meeting	March 12, 1998	Ottawa, ON
Transportation Workshop	April 2, 1998	Toronto, ON
Canadian Energy Research Institute Conference	May 4-5, 1998	Calgary, AB
Air and Waste Management Association Annual Meeting	May 6, 1998	Winnipeg, MB
Ontario Association for Impact Assessment Meeting	May 8, 1998	Toronto, ON
Environmental Trade Show and Conference	May 26-27, 1998	Toronto, ON
CIPEC Task Force Council Meeting	June 25, 1998	Toronto, ON
	September 17, 1998	Toronto, ON
	December 2, 1998	Toronto, ON
CCPA Climate Change Sub-committee Meeting	June 26, 1998	Ottawa, ON
VCR Inc. TAC Meeting	August 27, 1998	Toronto, ON
	October 22, 1998	Ottawa, ON
Climate Change Symposium for the Oil and Gas Industry	September 15-17, 1998	Calgary, AB
Joint Ministers of Energy and Environment Meeting	October 19-20, 1998	Halifax, NS
Environment and Energy Conference of Ontario	November 25, 1998	Toronto, ON



7. Success Indicators

VCR Inc. has established a series of indicators to measure the success of voluntary action as reflected in the VCR Inc. Registry. These indicators are based on the following criteria:

- *number of registrants (Breadth);*
- *comprehensiveness of action plans/progress reports submitted by registrants (Depth); and*
- *quantification of actions undertaken and planned (Momentum).*

The following charts, together with the sector profiles in Chapter 3, are the result of this work.

7.1 Breadth

The number of 1998 action plans exceeded those of 1997 by over 50 per cent!

The total number of VCR Inc. registrants by end of 1998 was 874, including companies and organizations from all sectors of the economy. Membership is strongest in the sectors listed below:

Table 7.1 Percentage of Sector GHG Represented at VCR Inc.

Sector	Percentage of Sector GHG Represented at VCR Inc.
Federal Government	100%
Provincial Governments	100%
Pipelines (Oil and Gas)	100%
Petroleum Products Refining	100%
Coal	100%
Electricity	100%
Chemical	100%
Steel	100%
Aluminum	100%
Cement	98%
Oil and Gas Production	93%
Natural Gas	80%
Oilwell Drilling	71%
Metal Mining	45%

Membership is growing incrementally in areas of non-automotive transportation, general manufacturing, the agricultural sector, commercial and institutional sectors and financial services. 1999 recruitment efforts will focus on companies/organizations from these sectors in an effort to accelerate this growth.

7.2 Depth

VCR Inc. registrants are submitting more and more plans and reports. In fact, the number of 1998 action plans exceeded those of 1997 by over 50 per cent! In addition, registrants are increasing their level of involvement by submitting more thorough and detailed reports.

Throughout this past year, VCR Inc. took steps to stimulate further depth in reporting. In 1999, VCR Inc. registrants must now submit a minimum level action plan, comprised of the following three elements: senior management support, a commitment to regular reporting and a base year calculation. In addition, TAC helped VCR Inc. to develop the Champion Reporting System, which will be launched in early 1999. Both of these initiatives will encourage regular, thorough reporting on the part of registrants. VCR Inc. anticipates that the preparation work done this year will lead to significant, measurable improvements in reporting depth in future years.

Figure 7-1 Progress Chart

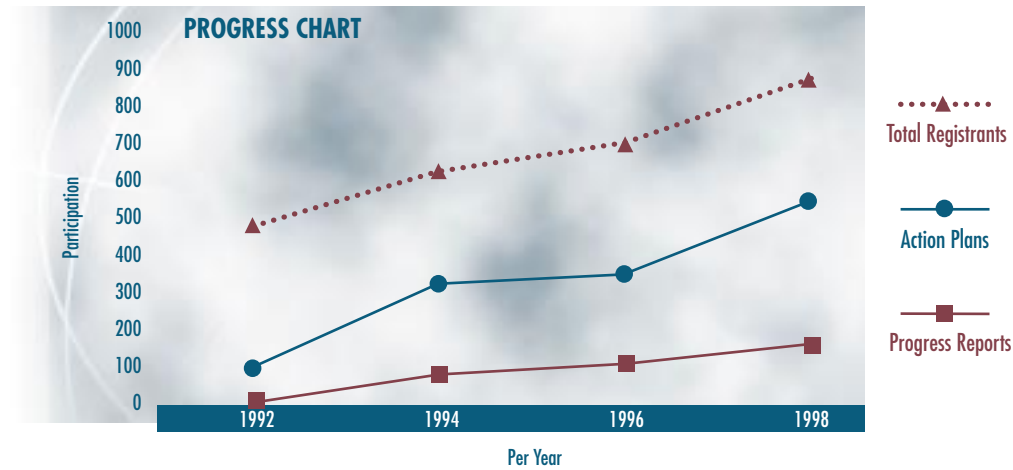


Table 7.2 Total Registrants, Action Plans, Progress Reports

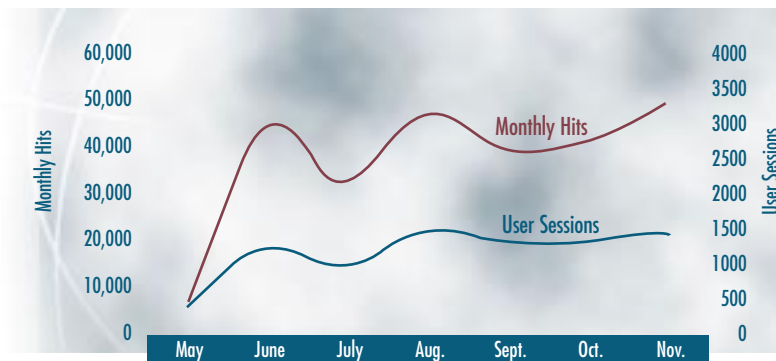
	Total Registrants	Action Plans	Progress Reports
1995	475	94	4
1996	619	331	88
1997	701	354	112
1998	874	547	168

7.3 Momentum

- Web Site Hits**

Unveiled on May 25, 1998, the new VCR Inc. web site has undergone a major transformation. The Registry was re-constructed, providing users with better access to registrant reports. Another new feature is a search engine that can help users to find reports with user-defined key words such as ‘offsets’ or ‘smart buildings’. Documents such as newsletters, success stories and handbooks have been posted on-line. The site has been promoted to several search engines and has been advertised in all VCR Inc. mail-outs, resulting in growing awareness. Since May, the number of visitors to the site has grown to over 49 000 hits per month in over 1 400 user sessions.

Figure 7-2: Monthly Hits and User Sessions



Hit: An action on the web server, such as when a user views a page or downloads a file.

User Session: A session of activity (all hits) for one user of a Web site. A unique user is determined by the IP address or domain name.

Table 7.3: Monthly Hits and User Sessions

Month	Hits	User Sessions
May	4 988	364
June	43 414	1 247
July	32 449	954
August	46 899	1 458
September	39 319	1 341
October	40 775	1 314
November	49 452	1 460
December	45 178	1 245

- Satisfaction Quotient**

VCR Inc. is currently in the process of conducting its first baseline survey, which is designed to measure stakeholder perception of its progress since it incorporated in October 1997. The survey is being managed by a Canadian public relations firm and began in December 1998. Selected VCR Inc. stakeholders, registrants and other interested parties will be interviewed in an effort to gauge general awareness and effectiveness of the initiative. This survey will serve as the baseline for comparison at the end of 1999, when a new survey is launched.

8. Management and Organization

In its new form, VCR Inc. reports to a *Council of Champions*, comprised of senior representatives from leading industry organizations and government bodies supporting the corporation. Industry representatives are elected on an annual basis at VCR Inc.'s Council of Champions Meeting, while government representatives are appointed annually by the federal minister of Natural Resources Canada. The Council currently consists of 27 members. Together, these people represent over 75 per cent of the opportunity for business and government operations to reduce GHG generation in Canada.

VCR Inc.'s *Board of Directors* is drawn from the Council and was officially established during the 1st Annual Council of Champions Meeting on March 12, 1998. Its purpose is to provide broad corporate direction to the VCR Inc. office. Other key responsibilities include the following:

*VCR Inc.'s
Board of Directors
was established on
March 12, 1998*

- ▶ participate in the *Recruitment* and *Deepening* goals of VCR Inc.;
- ▶ build momentum for the voluntary approach;
- ▶ increase corporate and public awareness of VCR Inc.;
- ▶ play an advisory role to the Joint Council of federal and provincial ministers of energy and environment; and
- ▶ ensure VCR Inc. credibility.

The Board receives guidance from the following three committees:

The *Governance Committee* was established to permit review of the issues related to the elections and nomination of board members and to assess the performance of the Technical Advisory Committee. Comprised of three members, its responsibilities include the following:

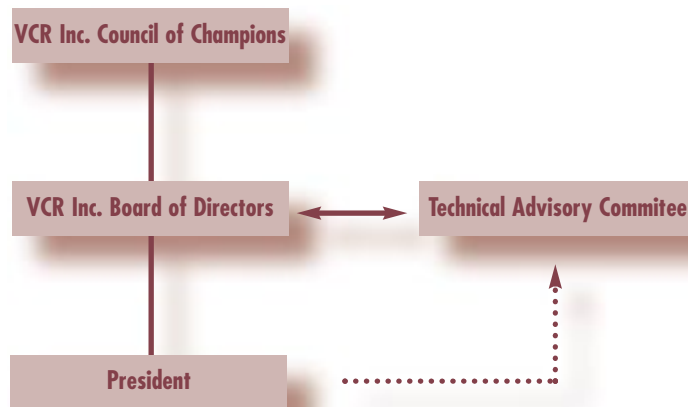
- ▶ solicit nominations and make recommendations to the Board regarding the election of directors according to VCR Inc.'s corporate by-laws;
- ▶ develop approaches to governance issues including the guidelines for the Board and issues related to the VCR Inc. Registry and its registrants;
- ▶ review and make recommendations concerning the membership and function of the Technical Advisory Committee.
- ▶ review and make recommendations regarding the terms of reference for the Chair and Board members, including delegation of responsibilities to the President and Committees;
- ▶ provide support to the Chair in developing and managing the Board's agenda;
- ▶ evaluate on an annual basis the effectiveness of the Board, other than the Chair and President; and
- ▶ review and ensure provision of appropriate training and education for both new and current Board members.

The *Audit Committee* was created to review the audited year-end financial statements and reports and to meet with the auditors. Much like the Governance Committee, it is also comprised of three members, and its responsibilities are to satisfy itself, on behalf of the Board, that the following requirements are met:

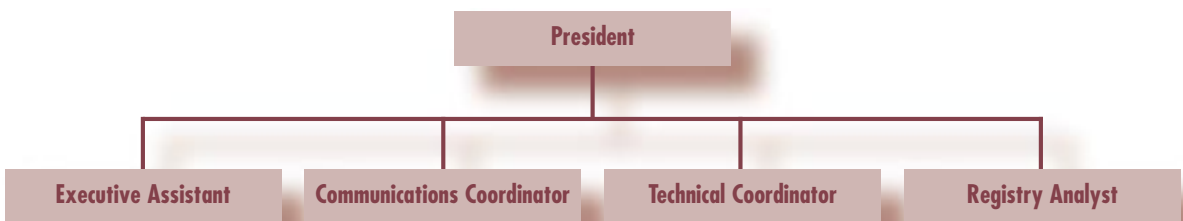
- ▶ the corporation has implemented appropriate systems to identify, monitor and mitigate significant business risks;
- ▶ the corporation has implemented appropriate systems of internal control to ensure compliance with legal, ethical and regulatory requirements and that these systems are operating effectively;
- ▶ the corporation has implemented appropriate systems of internal control to ensure compliance with its policies and procedures and that these systems are operating effectively;
- ▶ the corporation has implemented appropriate systems of internal control over financial reporting and that these systems are operating effectively;
- ▶ the corporation's annual financial statements are fairly presented in all material respects in accordance with generally accepted accounting principles, the selection of accounting policies is appropriate and the annual financial statements should be approved by the Board;
- ▶ the information contained in the corporation's audited financial report to members is accurate and complete and fairly presents the financial position and the risks of the organization;
- ▶ the audit function has been effectively carried out, and any matter that the auditors wish to bring to the attention of the Board has been given adequate attention; and
- ▶ the committee will also recommend to the Board the reappointment or appointment of auditors.

The *Technical Advisory Committee* provides the Board with recommendations concerning all technical issues. It is comprised of 23 representatives from academia, ENGOs, industry and governments. TAC's three main areas of responsibility are as follows:

- ▶ provide ongoing advice to the Board concerning the technical criteria by which actions and plans undertaken by registrants will be evaluated;
- ▶ develop criteria by which successful action plans will be recognized and celebrated; and
- ▶ recommend initiatives to the Board through which VCR Inc.'s stature and integrity will be enhanced.



The VCR Inc. office was established to support the Council of Champions in the development of an engagement strategy to recruit more companies/organizations, more partnerships with associations and more awareness of the voluntary approach by all Canadians. VCR Inc. office staff is comprised of five full-time employees: President, Executive Assistant, Communications Coordinator, Technical Coordinator and Registry Analyst.



VCR Inc. registrants currently total 874, and include companies and organizations from all sectors of the economy. The following is a list of VCR Inc. participants as of December 1998:

3M Canada Company

A

A. Clark Exteriors (A Division of A. Clark Shingle Co. Ltd.)
 ABCO Property Management Inc.
 Abitibi-Consolidated Inc.
 Acadia University
 Accomodex Franchise Management Inc. (Howard Johnson)
 Accuride Canada Inc.
 Adventure Electronics
 Agassiz School Division No.13
 Agmont
 Agrium
 Air Canada
 Air Products Canada Ltd.
 Albarrie Canada Ltd.
 Alberta College of Art & Design
 Alberta Energy Company
 Alberta Hospital Edmonton
 Alberta Natural Gas Company Ltd.
 Alberta Power Limited
 Alberta Vocational College – Lac La Biche
 Albert's Draperies Inc.
 Alcan Smelters and Chemicals Ltd / Société d'électrolyse et de chimie Alcan ltée.
 Algoma Steel Inc.
 Algonquin College of Applied Arts and Technology
 Alliance Pipeline Ltd.
 Allied Colloids (Canada) Inc.
 Allied Signal Aerospace Canada
 Altana Exploration Company / Roan Resources Ltd.
 Altek Auto Castings
 Aluminerie Alouette inc.
 Aluminerie de Bécancour
 Aluminerie Luralco Inc.
 Aluminum Industry Association
 Amoco Canada Petroleum Company Ltd.
 Anderson Exploration Ltd.
 Andrés Wines Ltd.
 Anmore, City of
 Annapolis Valley Regional School Board
 Apache Canada Ltd.
 Archean Energy Ltd.
 ASCOLECTRIC Limited

Ashland Chemicals Canada Ltd.
 Associated Freezers Corporation
 Association minière du Québec Inc.
 Association québécoise pour la maîtrise de l'énergie
 Atlantic Health Sciences Corporation
 Atlantic Shopping Centres
 Atlas Specialty Steels Inc.
 Atlific Hotels & Resorts
 Atomic Transportation System Inc.
 Augustana University College
 Aur Resources Inc.
 Avalon East School Board, The
 Avalon Health Care Institutions Board
 Avalon West School District
 Avenor Inc.

B

Baffin Divisional Board of Education
 Barrick Gold Corporation
 Barrington Petroleum Ltd.
 BASF Canada Ltd.
 Bayer Inc.
 BC Gas Utility Ltd.
 BC Hydro
 Beau Canada Exploration Ltd.
 Berkley Petroleum Corporation
 Best Western International, Inc. (Canada)
 BetzDesborn Canada Inc.
 BHP Diamonds
 Bishop's University
 Bison Transport
 Black & Whites Ink
 Black Gold Regional Schools
 Block Drug Company (Canada) Ltd.
 Blue Circle Canada Inc.
 Blue Range Resources Corporation
 Boehme Filatex Canada Inc.
 Boeing Company
 Boliden Westmin Limited
 Bombardier Inc.
 Bowater Mersey Paper Company Limited
 Brandon University
 Brantford, City of
 Brilliant Gem
 Britex Group

8. Management and Organization

British Columbia Institute of Technology
Broan Limited
Brunswick Mining and Smelting Corporation Ltd.
(Noranda Inc.)
Brunswick Smelting and Fertilizer (Noranda Inc.)
Buffalo Trail Regional #28
Bumper Development Corporation Ltd.
Burger King Restaurants of Canada
Burns Foods (1985) Limited

C

Cabre Exploration Ltd.
Cadillac Fairview Corporation Limited, The
Calahoo Petroleum Ltd.
Calgary Board of Education
Calgary Regional Health Authority (CRHA)
Calgary, City of
Cambior inc.
Cambrian College of Applied Arts and Technology
Cambridge Shopping Centre Ltd.
Cambridge Towel Corporation
Canada Cordage Inc.
Canada Hair Cloth Co. Limited
Canada Trust
Canadian Airlines International Inc.
Canadian Association of Oilwell Drilling Contractors
Canadian Association of Petroleum Producers
Canadian Chemical Producers' Association
Canadian Conquest Exploration Inc.
Canadian Copper Refinery (Noranda Metallurgy Inc)
Canadian Electricity Association
Canadian Energy Pipeline Association
Canadian Forest Oil Ltd.
Canadian Gas Association
Canadian General – Tower Limited
Canadian Home Builders' Association
Canadian Hunter Exploration (Noranda Inc.)
Canadian National Railway Co.
Canadian Natural Resources Ltd.
Canadian Occidental Petroleum Ltd.
Canadian Pacific Hotels and Resorts
Canadian Petroleum Products Institute
Canadian Portland Cement Association
Canadian Pulp and Paper Association
Canadian Steel Producers' Association
Canadian Textiles Institute
Canadian Uniform Limited
Canadian Vehicle Manufacturers Association
Canadian Western Natural Gas Company Ltd.
Canadore College
Canfor Corporation and Subsidiaries
Canmore, City of
CANOR Energy Ltd.
Cape Breton – Victoria Regional School Board
Cape Breton Development Corporation
CARA Operations Ltd.
Carleton Manor Inc.
Caryl Baker Visage Cosmetics
Cascades Paperboard International Inc.
Casco Inc.
Cavalier Textiles
Cégep André-Laurendeau
Cégep de Chicoutimi
Cégep de Matane
Cégep de Saint-Hyacinthe
Cégep de Saint-Jérôme
Cégep de Sept-Îles
Cégep Joliette – De Lanaudière
Celanese Canada Inc.
Centra Gas Alberta Inc.
Centra Gas British Columbia Inc.
Centra Gas Manitoba Inc.
Centre hospitalier de Lameque
Centre hospitalier de l'Enfant-Jesus RHSJ
Centre hospitalier de Tracadie
Centre hospitalier régional de Bathurst
Champion Feed Services Ltd.
Chelsea, City of
Chemical Lime Company of Canada
CHEMPROX Chemicals Inc.
Chevron Canada Resources Limited
Children's and Women's Health Centre of
British Columbia
Chinook Group
Chinook's Edge Region No.5
Chrysler Canada Ltd.
Church of St. John and St. Stephen Home Inc., The
Churchill Falls (Labrador) Corp.
CIBA Specialty Chemicals
CIBC Development Corporation
Coal Association of Canada
Coast Hotels and Resorts
Coats Bell Division of Coats Canada Inc.
Coats Patons Canada Inc.
Collège de Bois-de-Boulogne
College de Rosemont

College de Shawinigan
 College of New Caledonia
 College of the Rockies
 Collingwood, City of
 Collingwood Fabrics Inc.
 Collins & Aikman
 Cominco Ltd.
 Comstate Resources Ltd.
 Concordia Hospital
 Conoco Canada Limited
 Consolidated Fast Frate Inc.
 Consoltex Inc.
 Consumers Gas Company Limited
 Continental Lime Ltd.
 Cookshire Tex
 Cooper Energy Services
 Coquitlam, City of
 Coquitlam College
 Co-Steel LASCO
 Cotton Ginny Ltd.
 Cove Guest Home, The
 Coyle & Greer Awards Canada Ltd.
 Crestar Energy Inc.
 Crestbrook Forest Industries Ltd.
 Crown Cork and Seal Canada Inc.
 Cuddy Food Products Inc.
 Culinar inc.
 Cullen Gardens Inc
 CXY Chemicals Canada
 Cytec Canada Inc.

D

Dairy Queen Canada Inc.
 Daishowa Inc., Division de Québec
 Dalhousie Co-op
 Degussa Canada Ltd.
 Delmar Chemicals Inc.
 Delta, City of
 Delta Hotels and Resorts
 Delta School District
 Denninghouse Inc.
 Denro Management Ltd.
 Devon Energy Canada Corporation
 Distinctive Gifts
 District scolaire nos. 07 et 09
 Districts scolaires 3 et 5
 Dofasco Inc.
 Dominion Energy Canada Ltd.

Dominion Textile Inc.
 Domtar Inc.
 Donohue Inc.
 Dorset Exploration Ltd.
 Dow Chemical Inc.
 Downeast Plastics Ltd.
 Dr. V. A. Snow Centre Inc.
 Dundee Realty
 DuPont Canada Inc.
 Durham College of Applied Arts & Technology

E

E.B. Eddy Forest Products Ltd.
 East Central Alberta Catholic Separate Schools
 Regional Division # 16
 Eastern School District
 Eaton Centre Edmonton
 Eaton Corporation
 Edmonton Catholic Schools
 Edmonton Power (EPCOR)
 Edmonton, City of (Public Works)
 Eka Chemicals Canada Inc.
 Elf Atochem Canada Inc.
 Elk Island Catholic Separate School Regional
 District No.41
 Encal Energy Ltd.
 Energy Reduction Audit Services (ERAS)
 Enmax Power Corporation
 Enron Oil Canada Ltd.
 Enterprise Property Group Limited
 Envirogard Products Ltd.
 Environmental Resource Centre
 Escalator Handrail Company Inc.
 ESSROC Canada Inc.
 Ethyl Canada Inc.
 Euclid-Hitachi Heavy Equipment Ltd.
 Eurocan Pulp and Paper Co.
 Express Pipeline Ltd.

F

F.F. Soucy Inc.
 Fabrene Inc.
 Falconbridge Limited
 Family Alterations
 Fanshawe College
 Federated Co-operatives Limited
 Federation of Canadian Municipalities (FCM)
 Fibrex Insulations Inc.

Fisher & Company
Fletcher Challenge Canada Limited
Fletcher Challenge Energy Inc.
FMC of Canada Limited
Foothills Pipe Lines Ltd.
Ford Motor Company of Canada, Ltd.
Fording Coal Limited
Fort Garry Hotel, The
Fort James -Marathon Ltd.
Fort Simpson, City of
Forth Smith, City of
Fortune Energy Inc.
Founders Energy Ltd.
Four Seasons Hotel – Toronto
Foyer St. Joseph de St. Basile Inc.
Fraser-Burrard Hospital Society
Fredericton Direct Charge Co-op
Fredericton, City of
Freightliner of Canada Ltd.

G

Gander, Town of
Gap Canada
Garden Province Meats
Garland Commercial Ranges Ltd.
Gates Canada Inc.
Gateway Cigar Store
Gaz Métropolitain
Gazoduc TQM
General Electric Canada Inc.
General Motors of Canada Ltd.
Genesis Exploration Ltd.
Genesport Industries Limited
Gentleman's Court I and II
Geo. E. Knowles Ltd.
George Brown College of Applied Arts and
Technology
Georgian College of Applied Arts and Technology
Gerdau Courtice Steel Inc.
Glendale Yarns Inc.
Global Stone Corporation
Gloucester, City of
Gould Shawmut Company
Government of Alberta
Government of British Columbia
Government of Canada
Government of Manitoba
Government of New Brunswick

Government of Newfoundland and Labrador
Government of Northwest Territories
Government of Nova Scotia
Government of Ontario
Government of Prince Edward Island
Government of Saskatchewan
Government of Yukon
Grad & Walker Energy Corporation
Grand & Toy Limited
Grand Erie District School Board
Granger Energy Corp.
Grant MacEwan Community College
Graybec Calcium Inc.
Great Atlantic & Pacific Company of Canada
Limited (A&P), The
Greater St. Albert Catholic Regional Division No.29
Greater Vancouver Regional District, City of
Greater Victoria School District
Green Things
Greenarm Corporation
Greif Containers Inc.
Grenfell Regional Health Services
Griffon Petroleum Ltd.
Groupe-Tech
GSW Water Heating Company
Guelph, City of
Gulf Canada Resources Ltd.

H

H.J. Heinz Company of Canada Ltd.
H.L. Blachford Ltd.
HRM, City of (Halifax Regional Municipality)
Haldimand Board of Education
Halifax Regional School Board
Halton Catholic District School Board
Hamilton, City of
Hamilton Health Sciences Corporation
Hamilton-Wentworth, City of
Harbour Petroleum Company Ltd.
Harcros Pigments
Havelock Lime (a Division of Goldcorp Inc.)
Health Care Corporation of St. John's
Hemlo Gold Mines Inc. (Noranda Inc.)
Henkel Canada Ltd.
Hercules Canada Inc.
Highridge Exploration Ltd.
Hillsborough Resource Limited
Hoechst Canada (1996) Inc.

Holy Spirit Roman Catholic Separate Regional
Division No. 4
Honeywell Ltd.
Hôpital Général Juif – Sir Mortimer B. Davis
Hôpital Laval
Hôpital Notre-Dame
Hôpital Sainte-Croix
Hub Meat Packers Ltd. – Sunrise Brand
Hudson Bay Mining and Smelting Co. Ltd.
Hudsons Bay Company
Hudson's Hope, City of
Huls Canada Inc.
Humber College of Applied Arts and Technology
Humber River Regional Hospital
Hunt Oil Company – Canadian Division
Huntsman Chemical Company of Canada Inc.
Huntsman Corporation Canada Inc.
Husky Injection Molding System Ltd.
Husky Oil Corporation
Hydro Agri Canada L.P./S.E.C.
Hydro-Electric Commission of the City of Nepean

I

IBM Canada Ltd.
ICI Canada
Ikea Properties Limited
Imasco Limited
IMC Kallium Canada Ltd.
Imperial Oil Ltd.
Imperial Tobacco Limited
Imperial Wallcoverings (Canada) Inc.
In Fine Company
INCO Ltd.
Ingram & Bell Inc.
Inland Cement Limited
Interface Flooring Systems (Canada), Inc.
International Paper Industries Ltd.
Interprovincial Pipe Line Inc.
Iron Ore Company of Canada
Irving Oil Limited – Refining Division
ITT Sheraton Centre Toronto
IVACO Inc.

J

J.L. de BALL Canada Inc.
James Maclaren Industries Inc. (Noranda Inc.)
Jannock Brick Group
Janssen-Ortho Inc.

Jones Packaging Inc.
Journey's End
Just Elaine's

K

Kamloops, City of
Keewatin-Patricia District School Board
Keg Restaurants Ltd.
Kelsey Hayes Canada Ltd.
Kenneth E. Spencer Memorial Home Inc.
Kenora Board of Education
KFC-Canada, A Division of Pepsi-Cola Canada Ltd.
Kimberly-Clark Inc.
Kindred Industries
King Edward Toronto, The
Kingston General Hospital
Kitchener, City of
Kmart Canada Company
Koch Exploration Company Inc.
Kodak Canada Inc.
Ko's Gifts
Kraft Canada Inc.
Kronos Canada Inc.
Kruger Inc.
Kwantlen University College

L

La commission scolaire catholique de Sherbrooke
La corporation Cadillac Fairview limitée –
Portefeuille de l'Est du Canada
Labatt Breweries of Canada
Lachine, City of
Lacombe, Town of
Lafarge Canada Inc.
LaGran Canada Inc.
Laidlaw Inc.
Lakeshore School Division No. 23
Lambton College
Landswest School Division No. 123
Laurel Steel
Laval, City of
Le Conseil scolaire de district du
Centre-Sud- Ouest
LePage
Les Résidences Lucien Saindon, Inc.
Les Résidences Mgr. Chiasson Inc.
Lethbridge Community College
Lexxor Energy Inc.

Lincoln Fabrics Ltd.
Lincourt Manor Inc.
Little Treasures
Lively Pharmacy
Lloydminster Public School Division
Loch Lomond Villa Inc.
Lo-Cost Drug Mart
Londonderry Mall
Loyalist College
Lubrizol Canada Inc.
LUSCAR Ltd.

M

MacPhee Workshop
Magin Energy
Magna Cosma Body and Chassis Systems
Maksteel Service Centre – Division of Makagon Industries Ltd.
Malaspina University-College – Nanaimo Campus
Malette Kraft Pulp & Power
Manitoba Hydro
Manoir St-Jean-Baptiste
Maple Leaf Foods Franchise Operations – Country Style Donuts
Maple Leaf Meats
Maple Leaf Pork
Maple Lodge Farms Ltd.
Marcel Lauzon Inc.
Marie Claire
Maritime Electric
Maritime Paper Products Ltd.
Markham Hydro Electric Commission
Markville Gifts and Postal Service
Markville Playcare
Marsulex Inc.
Maxx Petroleum Ltd.
McFadzen Holdings Limited
MDS Nordion Inc.
Medicine Hat, City of
Memorial University
Meridian Clemmer Industries Ltd.
Métallurgie Noranda Inc. – Fonderie Horne
Methanex Corporation
Metroland Printing, Publishing and Distributing
Metropolitan Toronto School Board, The
Michelin North America
Mines et exploration – Division Matagami (Noranda Inc.)

Mines Wabash (gérées par la Compagnie Minière Cliffs inc.)
Mining Association of Canada
MMT Management Group
Mobil Oil Canada
Molson Breweries
Moncton, City of
Montell Canada Inc.
Montréal, Ville de
Moose Jaw-Thunder Creek District Health Board
Moosehead Breweries Ltd.
Morgan Falls Power Company
Morton International Ltd.
Mount Saint Joseph Nursing Home
Mount Saint Vincent University
MTS Communications Inc.
Mullen Trucking
Murphy Oil Company Limited

N

Nacan Products Limited
NAL Resources Management
Nalco Canada Inc.
Nalco/Exxon Energy Chemicals Canada Inc.
Nashwaak Villa Inc.
National Agriculture Environment Committee
National Dairy Council of Canada
National Silicates Limited
NCE Resources Group Inc.
Neste Chemicals Holding Inc./Neste Resins Canada
Nestlé Canada Inc.
New Brunswick Community College – Bathurst
New Brunswick Community College – Campbellton Campus
New Brunswick Community College – Edmundston
New Brunswick Community College – Miramichi
New Brunswick Community College – Moncton
New Brunswick Community College – Saint John
New Brunswick Community College – St. Andrews
New Brunswick Power Corporation
New Cache Petroleums Ltd.
New Glasgow, City of
New Westminster, City of
Newfoundland and Labrador Hydro
Newfoundland Power
Newport Petroleum Corporation
Nexacor Realty Management Inc.

Noranda Forest Inc.
 Noranda Inc.
 Norcen Energy Resources Ltd. (Noranda Inc.)
 Nortel
 North Island College
 North Star Cement Ltd.
 North Vancouver, City of
 North West Company, The
 North York Hydro
 Northern College of Applied Arts and Technology
 Northern Lights College
 Northlands Park
 Northrock Resources Ltd.
 Northstar Energy Corporation
 Northwest Catholic District School Board
 Northwest Territories Power Corporation
 Northwestern Utilities Ltd. (ATCO)
 Northwood Pulp and Timber Limited (Noranda Inc.)
 Northwoodcare Incorporated
 NOVA Corporation
 Nova Scotia College of Art and Design
 Nova Scotia Community College of Geographical Sciences
 Nova Scotia Power Inc.
 Nova Scotia Textiles, Limited
 NRI Industries
 Numac Energy

O

O & Y Enterprise
 Ocelot Energy Inc.
 Okanagan University College
 Olds College
 Ontario College of Art
 Ontario Hydro
 Orenda Aerospace Corporation
 Orion Bus Industries
 Osram Sylvania Ltd.
 Ottawa, City of
 Ottawa-Carleton, City of
 Ottawa-Carleton District School Board
 Outremont, La ville d'
 Oxford Properties Canada Limited
 Oxychem Durez Canada

P

Pacific Northern Gas Ltd.
 Pacifica Papers Inc.

PanCanadian Petroleum Ltd.
 PanCanadian Resources
 Paramount Resources Ltd.
 Parkland Refining Ltd.
 Passamaquoddy Lodge
 Peace Wapiti School Board No. 33
 Peerless Carpets
 Pembina Corporation
 Penn West Petroleum Ltd.
 Peoples Park Tower inc.
 PEPSI-COLA CANADA BEVERAGES
 Perth, City of
 Petresan Canada Inc.
 Petro-Canada
 Petroleum Services Association of Canada
 Petromet Resources Ltd.
 Pétromont Inc.
 Petrorep Resources Ltd.
 Pictures
 Pine Falls Paper Company
 Pioneer Natural Resources Canada Inc.
 Pipestone District Health Board
 Placer Dome Canada Limited
 POCO Petroleum Ltd.
 Polar Plastics Limited
 Polyainers Inc.
 Polywheels Manufacturing Ltd.
 Port Hope, City of
 Port Moody, , City of
 Potash Corporation of Saskatchewan Inc.
 – Allan Division
 Potash Corporation of Saskatchewan Inc.
 – Cory Division
 Potash Corporation of Saskatchewan Inc. – Lanigan Division
 Potash Corporation of Saskatchewan Inc.
 – New Brunswick Division
 Potash Corporation of Saskatchewan Inc. – Patience Lake Division
 Potash Corporation of Saskatchewan Inc.
 – Rocanville Division
 PPG Canada Inc.
 Preston Medical Pharmacy
 Prévost Car Inc.
 Price Waterhouse
 Prime West Energy Inc.
 Princeton House
 Procter & Gamble Inc.
 Producers Pipelines Inc.

PRO-ECO Ltd.
Prospec Chemicals
Public Utilities Commission, City of Kingston
Purcell Energy Ltd.
Pursuit Resources Corporation

Q

QIT – Fer et Titane Inc.
Québec, Ville de
Quebec Cartier Mining Company
Queens University

R

RDC, City of
R.D. MacLean Co. Ltd.
Radio Shack
Raisio Chemicals Canada Inc.
Ranger Oil Ltd. – Heavy Oil Division
Ranger Oil Ltd.
Rapid Photo
Raylo Chemicals
Recochem Inc.
Red Deer College
Red River Community College
Regency Towers
Regent Eco Canada
Regent Resources Ltd.
Regina, City of
Regina Health District
Regina School Division No.4 of Saskatchewan
Region 7 Hospital Corporation
Reichhold Chemicals, Inc.
Remington Energy
Renaissance Energy Ltd.
Renata Resources
Renfrew County Board of Education
Renfrew Tape Ltd.
Réno-Dépôt inc.
Repap Enterprises Inc.
Resman Oil and Gas Ltd.
Resource Integration Systems Ltd. (RIS)
Retail Council of Canada
Rhône-Poulenc Canada Inc.
Richland Petroleum Corporation
Rife Resources Ltd.
Rigel Oil and Gas Ltd.
Rio Alto Exploration Ltd.
River East School Division No. 9

Riverside Hospital of Ottawa
Rockwell International
Rohm and Haas Canada Inc.
RohMax Canada
Rolls Royce Industries of Canada Inc.
Rosetown School Division No. 43
Ross Ventures Ltd.
Royal Alexandra Hospital
Royal Bank of Canada
Royal Inland Hospital
Russell Drummond Inc.
Ryerson Polytechnic University

S

S.C. Johnson Wax and Son, Limited
Saan Stores Ltd.
Saanich, City of
Saanich School District No. 63
Sabre Energy Ltd.
Safety-Kleen
Saint John Co-Operative Supply Depot
Saint John, City of
Samson Canada
Sask Central School Division #121
Saskatoon (West) School Division No. 42
Saskatoon Catholic School Board
Saskatoon District Health – Administration
Saskatoon, City of
SaskEnergy Inc.
SaskPower
Scarborough Town Centre
School District #5: Baie Verte, Central, Connaigre
School District 36 Surrey –
Board of School Trustees
School District No. 23 (Central Okanagan)
School District No. 46 (Sunshine Coast)
School District No. 62 (SOOKE)
School District No. 67 (Okanaga Skaha)
School District of Mystery Lake No. 2355
Schreiter's Furniture
Scott's Food Services Inc.
Scugog, City of
Sears Canada Inc.
Seven Oaks School Division No. 10
Shelburne County District School Board
Shell Canada
Shell Chemicals Ltd.
Sheridan College

Sheritt International
 Shiningbank Energy Ltd.
 Signalta Resources Ltd.
 Sika Canada Inc.
 Simmons Canada Inc.
 Simon Fraser University
 SIR Corp
 Sir Sandford Fleming College
 Slater Steels HSB Div.
 Sleeman Brewing and Malting Co. Ltd.
 Smoky River Coal Ltd.
 SoapBerry Shop
 Société canadienne de métaux Reynolds limitée
 Société de transport de la communauté urbaine
 de Montréal
 Société immobilière Métivier & Associés Inc.
 Solutia Canada Inc.
 South East Health Care Corporation
 South East Health District
 South Fraser Health Region
 South Westman Regional Health Authority
 Southern Alberta Institute of Technology
 Spinrite Inc.
 Spire Energy
 Spruce Falls Inc.
 St. Albert Protestant Schools
 St. Anne-Nackawic Pulp Company Ltd.
 St. Clair College of Applied Arts & Technology
 St. James-Assiniboia School Division No. 2
 St. Jean PhotoChemicals Inc.
 St. Joseph's Hospital
 St. John's, City of
 St. Laurent Paperboard Inc.
 St. Lawrence Cement Co.
 St. Lawrence Corporation
 St. Marys Paper Ltd.
 St. Thomas University
 Standard Products (Canada) Limited
 Star Oil & Gas Ltd.
 Starcan Corporation
 Startech Energy Inc.
 Starvest Capital Inc.
 Stefi Lara Investments Ltd.
 Stelco Inc.
 Stepan Canada Inc.
 Sterling Pulp Chemicals Ltd.
 Stewart Group
 Stora Forest Industries Limited

Sturgeon Community Hospital & Health Centre
 Sulco Chemicals Limited
 Summit Resources Limited
 Suncor Inc.
 Sunoma Energy Corporation
 Superior North Catholic District School Board
 Superior Propane Inc.
 Superior Radiant Products Ltd.
 Surrey, City of
 Sydney Steel Corporation
 Syncrude Canada Ltd.
 Synergistics Industries Limited

T

T. Eaton Co. Ltd.
 Talisman Energy Inc.
 Tamrock Canada Ltd.
 Tarragon Oil and Gas Limited
 Teck Corporation
 Teknion Furniture Systems
 Tembec Inc.
 Texaco Canada Petroleum Inc.
 Thunder Bay, City of
 Tilbury Cement Limited
 Tim Donut Limited (Tim Hortons)
 Timecraft
 Timmins and District Hospital
 Tioxide Canada Inc.
 Toronto East General and Orthopaedic Hospital, Inc.
 Toronto Hospital (The), A University of Toronto
 Teaching Hospital
 Toronto Hydro
 Toronto, City of
 Torrington Resources Ltd.
 Toyota Motor Manufacturing Canada Inc.
 Trade Centre Limited
 Trade Secrets
 Trak Engineering Inc.
 Trans Mountain Pipe Line Company Ltd.
 TransAlta Corporation
 TransCanada Pipelines
 Trans-Northern Pipelines Inc
 Transportation Association of Canada
 Transwest Energy Inc.
 Trimac
 Trinity Western University
 Triumph Energy Corporation
 Truscan Property Corporation

Twin Rivers Health District

U

Ulster Petroleums Ltd.

Ultramar Canada Inc.

Unilever Canada Ltd.

Union Carbide Canada Inc.

Union Felt Products Inc.

Union Gas Limited

UNIROYAL Chemical Ltd.

United Church Home For Senior Citizens Inc.,The

Université de Moncton

Université du Québec

Université du Québec – École de
technologie supérieure

Université du Québec à Chicoutimi

Université du Québec à Hull

Université du Québec à Montréal

University College of Cape Breton

University College of the Fraser Valley

University of Alberta

University of Alberta Hospital site of the Capital
Health Authority

University of British Columbia

University of Calgary

University of Guelph

University of Manitoba

University of New Brunswick – Fredericton Campus

University of Northern British Columbia

University of Ottawa

University of Regina

University of St. Jerome's College

University of Toronto

University of Victoria

University of Waterloo

University of Winnipeg

Unocal Canada Management Limited

Upton Resources Inc.

V

Vagden Mills Ltd.

Valise

Vancouver, City of

Vancouver City Savings Credit Union

Vancouver Community College

Vancouver School Board –
School District No. 39

Vansco Electronics Ltd.

Velcro Canada Inc.

Versa Services Ltd.

Versacold Corporation

VFT Inc.

Victoria General Hospital

Victoria Glen Manor Inc.

VicWest Steel • Les Aciers VicWest

Villa Du Repos Inc.

Villa Providence Shediak Inc.

Vision Quest Windelectric Inc.

Viskase Canada Inc.

Vitafoam Products Canada Ltd.

Volvo Canada Ltd.

W

Wabash Alloys Ontario

Wascana Energy Inc.

Waterloo Region District School Board

Waukehegan Manor Inc.

Weavexx Inc.

Weldwood of Canada Ltd.

Wellington County Roman Catholic
Separate School Board

Wescast Industries Inc.

West Edmonton Mall

West Fraser Timber Co. Ltd.

Westaim Corporation, The

Westcoast Energy – Pipeline Division

Western Health Care Corporation

Western Québec School Board –
Commission scolaire Western Québec

Westford Health Nursing Care Inc.

Westward Energy Ltd.

Weyburn, City of

Weyerhaeuser Canada Ltd.

Whistler, City of

White Spot Restaurants

Winchester District Memorial Hospital

Witco Canada Inc.

Woodbridge Foam –
Division of Woodbridge Group

Woolworth Canada Inc.

Workers' Compensation Board of British Columbia

Wyeth-Ayerst Canada Inc.

Y

Yellowknife, City of

Yellowknife Education District No. 1
of the Northwest Territories

List of Acronyms

b/d	barrels per day
bcf/year	billion cubic feet per year
BS&G	bronze, silver and gold (VCR Inc. levels of reporting)
CAC	Coal Association of Canada
CAPP	Canadian Association of Petroleum Producers
CCPA	Canadian Chemical Producers' Association
CEA	credit for early action
CEPA	Canadian Energy Pipeline Association
CFC	chlorofluorocarbon
CGA	Canadian Gas Association
CH ₄	methane
CIPEC	Canadian Industry Program for Energy Conservation
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent (a comparison of global warming potential for GHGs expressed as an equivalent quantity of carbon dioxide)
CPCA	Canadian Portland Cement Association
CPPA	Canadian Pulp and Paper Association
CPPI	Canadian Petroleum Producers Institute
ENGO	environmental non-government organization
EVA	enhanced voluntary action
ft ²	square feet
FCM	Federation of Canadian Municipalities
GERT	Greenhouse Gas Emission Reduction Trading Pilot
GHG	greenhouse gas
GJ	gigajoule (1 GJ = 1 × 10 ⁹ joules)
GWP	global warming potential (as defined by IPCC)
HCFC	hydrochlorofluorocarbon
ICLEI	International Council for Local Environmental Initiatives
IPCC	Intergovernmental Panel on Climate Change
kt	kilotonne (1 kt = 1,000 tonnes)
kWh	kilowatt hour
m ³	cubic metres
Mt	megatonne (1 Mt = 1,000,000 tonnes or 10 ⁹ kg)
MW	megawatt (1 MW = 1,000,000 watts)
N ₂ O	nitrous oxide
NRCan	Natural Resources Canada
NRTEE	National Round Table on the Environment and the Economy
OEE	Office of Energy Efficiency (part of Natural Resources Canada)
PCA	Portland Cement Association
PCP	Partners for Climate Protection
PERT	Pilot Emissions Reduction Trading
t	tonne (1 t = 1,000 kilograms)
TJ	terajoule (1 TJ = 1 × 10 ¹² joules)
TAC	Technical Advisory Committee to VCR Inc.
VCR Inc.	Canada's Climate Change Voluntary Challenge and Registry Incorporated