

Ministry of
Energy, Mines and
Petroleum Resources

2007/08
Annual Service Plan Report



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Message from the Minister and Accountability Statement

We live in the best place on earth, bar none. What we have, others only dream about — abundant resources, an economy second to none, natural beauty, world-class cities and serene rural settings.

It was a record-breaking year for the Ministry of Energy, Mines and Petroleum Resources as both the oil and gas and mining sectors surged ahead.

Last year oil and gas revenues for the Government totalled \$2.36 billion. The industry generated more direct revenue for the Province than any other resource sector in 2007. The industry has seen significant growth in the past seven years compared to the 1990s. From 1991–2000 the oil and gas sector contributed an average of \$463 million a year to the Government coffers. Since 2001, Government revenue has increased to an average of \$2 billion a year. Industry investment soared from approximately \$1 billion per year to an average of \$4 billion per year during the same time periods.

The tremendous growth can be attributed to soaring industry confidence, surging interest in our unconventional resources, our innovative royalty programs and booming investment in exploration and infrastructure.

The Ministry was also instrumental in opening the \$12-million Oil and Gas Centre of Excellence in Fort St. John, which will develop training and opportunities for those wishing to pursue a career in the oil and gas industry.

The Ministry has been working with communities, industry, First Nations and environmental organizations to ensure the continued economic growth and development of these sectors is socially and environmentally responsible. We have signed an Economic Benefits Agreement with Treaty 8 First Nations and a Memorandum of Understanding that provides communities in Peace River Regional District with approximately \$26 million per year to help offset the costs of rapid growth.

Our abundant natural resources — including minerals and oil and gas — are the backbone of our economy, and help provide the essential services we require.

The Ministry continued its leadership role in helping Government achieve its commitment to cutting B.C.'s greenhouse gas emissions by 33 per cent by 2020 through continued implementation of the BC Energy Plan: A Vision for Clean Energy Leadership.

British Columbians are lucky to enjoy amongst the lowest electricity rates in North America. Our province also has tremendous electricity generation potential. Unfortunately inadequate investment was made prior to 2001 to increase generation in the province. As a result, BC Hydro has been a net importer of electricity in seven of the past 10 years, relying on power from the U.S. and other jurisdictions to meet our needs.

That's why the Ministry continued to move forward with efforts to become electricity self-sufficient by 2016, with half of this need being met by conservation. We are supporting this Energy Plan commitment with significant investments from Balanced Budget 2008 in energy efficiency, including the \$160 million Energy Efficient Buildings Strategy. This strategy provides \$75 million to retrofit existing provincial public sector buildings, \$60 million for LiveSmart BC: Efficiency Incentive Program, \$20 million for Remote Communities, and \$5 million to expand the use of solar energy systems.

BC Hydro plans to invest \$3.4 billion in the Province's generation, transmission and distribution systems, and other facilities to ensure it can meet the electricity needs of the province. Included in these upgrades are improvements to the W.A.C. Bennett Dam and the Revelstoke Generating Station.

The Energy Plan also includes the \$25 million Innovative Clean Energy (ICE) Fund. Fifteen projects valued at approximately \$25 million, leveraging \$78 million in investment, have been approved. Projects that receive support from the ICE Fund will help make the Province a global leader in alternative energy and power technology by showcasing B.C. technologies to the world and fostering solutions to our pressing energy challenges.

Another key initiative of the Energy Plan was the release of the BC Bioenergy Strategy in January 2008. The strategy includes \$25 million in funding for a new bioenergy network to develop clean and alternative energy sources, and up to \$10 million over three years to expand biodiesel production and benefit rural economies.

The mining industry in British Columbia also had a banner year, with exploration expenditures climbing to an all-time high of almost \$416 million.

Through the work of the Ministry we are living up to our responsibility to manage our natural resources to ensure we meet our needs today and the future needs of our children and our grandchildren.

The Ministry of Energy, Mines and Petroleum Resources *2007/08 Annual Service Plan Report* compares the actual results to the expected results identified in the Ministry's *2007/08–2008/09 Service Plan*. I am accountable for those results as reported.



Honourable Richard Neufeld
Minister of Energy, Mines and Petroleum Resources

June 20, 2008



Message from the Minister of State and Accountability Statement

Mining has fuelled economic development throughout British Columbia since the first Gold Rush 150 years ago.

The Ministry of Energy, Mines and Petroleum Resources has worked hard to implement the BC Mining Plan, helping us achieve our vision of a thriving, globally competitive, safe and environmentally responsible exploration and mining industry, focused on the Plan's four cornerstones — communities and First Nations, protecting workers and the environment, global competitiveness and access to land.

We streamlined regulations and reduced regulatory overlap to maintain global competitiveness, and we continue to review existing regulatory requirements for additional streamlining opportunities with other partner agencies, such as the Integrated Land Management Bureau's FrontCounter BC and the Resource Management Coordination Project.

We are supporting education, training and skills development programs like the Reclamation and Prospecting (RAP) Pilot Project and the Aboriginal Minerals Training and Employment Initiatives to address skills shortages in the industry.

We developed and are implementing an Asia Pacific Initiative to encourage countries like China, South Korea and Japan to invest in B.C. exploration and mining projects and do business with the B.C. mining services sector. Successful trade missions to Asia in 2006 and 2007 enabled us to build important relationships and effectively promote B.C. mining on an international level.

Four new mineral finds by the Ministry's Geological Survey in 2007 demonstrate the great potential in British Columbia for discovery of new mineral deposits. Geoscience BC's QUEST programs are encouraging prospectors, geologists and exploration companies to invest their efforts and dollars in B.C. Since QUEST was launched, more than 82,000 hectares of mineral claims have been staked in the central B.C. Mountain Pine Beetle infestation area.

We are world leaders in environmental protection and mine reclamation practices. We do not issue a mining permit until the company shows the mine will be developed in a manner that will protect the environment and minimize its impact, and that the lands will be reclaimed to productive use. To date, thousands of hectares of previously mined land have been reclaimed and is being used mostly for forestry, grazing, recreation and wildlife habitat.

The Ministry is also committed to ensuring the mining sector remains one of the safest heavy industries in British Columbia. That is why recent amendments were made to the *Health Safety and Reclamation Code for Mines*. These include adopting new reporting requirements in the event of an accident or dangerous occurrence and creating consistency with WorkSafeBC standards.

In 2007, the Ministry also put a focus on the aggregate industry with firm compliance and enforcement action, new educational resources for workers, and a co-ordinated loss prevention initiative with the Aggregate Producers' Association of British Columbia.

The Province has provided \$200,000 to industry associations in British Columbia to build stronger relationships with First Nations. B.C. and the Tahltan First Nation have developed a landmark plan for Tahltan territory to identify and address impacts related to existing mining sites. We have also signed a historic accord with the Kamloops and Skeetchestn Indian bands. Both agreements ensure that mining development occurs in an environmentally and culturally sustainable manner.

I am the Minister of State for Mining 2007/08 and, under the *Balanced Budget and Ministerial Accountability Act*, I have been responsible for achieving the following results:

- Develop and implement an Asia Pacific Initiative to encourage Asian countries to:
 - invest in B.C. exploration and mining projects, and
 - do business with the B.C. mining services sector (including engineering, reclamation, health and safety, financial and legal consulting service businesses).
- Improve global competitiveness and investment in B.C. by streamlining regulations and reducing regulatory overlap between various levels of government.
- Increase education, training and skills development to address skills shortages in mineral exploration and mining.
- Improve community and First Nations' awareness of the economic and social benefits from sustainable mineral exploration and mining.

The *2007/08 Annual Service Plan Report* compares the actual results to the expected results identified in the Ministry's 2007/08 Service Plan. I am accountable for those results as reported.



Honourable Kevin Krueger
Minister of State for Mining

June 20, 2008

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Highlights of the Year

- The BC Energy Plan: A Vision for Clean Energy Leadership was released February 27, 2007 and throughout 2007/08 the Ministry led the implementation Energy Plan policy actions, such as the Innovative Clean Energy Fund and the Bioenergy Strategy. The Energy Plan puts British Columbia at the forefront with aggressive targets for zero net greenhouse gas emissions, new investments in innovation, and an ambitious target to acquire 50 per cent of BC Hydro's incremental resource needs through conservation by 2020.
- The \$25 million Innovative Clean Energy (ICE) Fund completed its first Call for Proposals on March 3, 2008. Sixty applications were received representing projects worth almost \$700 million, and seeking ICE Fund contributions of over \$140 million. The Fund is designed to accelerate the commercialization of new, clean and renewable energy technologies, as well as make the Province a world leader in alternative energy and power technology.
- The BC Bioenergy Strategy: Growing Our Natural Energy Advantage, released January 31, 2008, will help British Columbia and other places in North America reduce greenhouse gas emissions and strengthen our long-term competitiveness and electricity self-sufficiency. Bioenergy is critical to achieving B.C.'s climate goals and economic objectives.
- 2007/08 revenues from the sale of petroleum and natural gas rights were \$1.22 billion. This marks the first time in British Columbia history that rights sale values exceeded the billion dollar barrier. The previous record was \$625.7 million in 2003/04.
- BC Geological Survey teams discovered four new mineralized areas in the Chezacut (Cariboo) and Terrace regions of the province. Using information gathered from geoscience field surveys and assessment reports filed by industry, the BC Geological Survey maintains the inventory of the province's mineral, coal and aggregate reserves and resources. This inventory is used to attract industry investment, assist government's stewardship of its rich mineral resource endowment, and manage and protect Crown lands.
- Ensuring the protection of workers' health and safety and the environment continues to be a top priority for the Ministry. 2007/08 saw the release of a new Ministry-commissioned guidebook titled "*Health & Safety: A Practical Guide for Aggregate Operations*", and revisions to the *Health, Safety and Reclamation Code for Mines in British Columbia*, which set new standards to further ensure the protection of workers and the public.
- The Ministry's award winning subsurface title registry, Mineral Titles Online (MTO), continued to process new claim registrations at record levels. Over five million hectares of mineral claims were issued in 2007/08. The MTO model will be implemented for coal title administration in the upcoming year.
- B.C.'s excellent geology and investment climate were centre stage during the 2007 Asia Pacific Investment Mission, which saw a B.C. delegation of industry and Ministry representatives travel to China, Japan and South Korea to promote mineral sector opportunities in B.C. There is no doubt that B.C. mineral exploration and mining has the world's attention.

In January 2008, it was announced that exploration expenditures in British Columbia reached \$415.7 million in 2007. This is a 57 per cent increase from 2006 and an incredible 1,300 per cent over the 2001 investment level of \$29 million.

- Particularly significant this past year has been increased interest by industry in B.C.'s shale gas opportunities, as evidenced by unprecedented sales activity in areas such as the Horn River Basin. This interest has been facilitated by both the new Net Profit Royalty Program to encourage the development of oil and gas resources that have higher costs and technical complexity, and the provision of geological information to conferences, trade shows and companies. Recent technological developments in horizontal drilling and stimulation in hydraulic fracturing have enabled extraction of natural gas from shales. Parcels in B.C.'s shale gas areas will continue to be posted for sale in 2008/09.
- A two-week European trade mission in November 2007, led by Minister Richard Neufeld to Italy, Sweden, Norway and Germany strengthened the international exchange of expertise in alternative energy. Highlights of the tour included B.C.'s Hydrogen Highway receiving a Technical Achievement Award at the World Energy Congress in Rome, a memorandum of understanding on Environment and Sustainable Technology signed with the Province of Trento, Italy, and the signing with Sweden's Ministry of Enterprise, Energy and Communications of a Joint Statement strengthening a partnership of information exchange and best practices for the development and use of bioenergy and biorefining technologies.
- In 2007/08, the Ministry completed the pilot First Nation and Remote Community Clean Energy Program, providing funding to support 10 community-based clean energy and demand side management projects, including community energy planning, energy efficiency programs, contributions to small hydro projects, sustainable housing design and energy efficiency upgrades. This pilot program was continued as the Remote Community Clean Energy Program in Budget 2008, with \$20 million in funding over four years.
- The Ministry signed a Mining and Minerals Accord with the Kamloops Division of the Secwepmec Nation (KDSN) in March 2008. The Accord establishes a collaborative working relationship to ensure that mineral exploration and development in the Kamloops area occurs in an environmentally and culturally sustainable manner that addresses KDSN's interests.
- In November 2007, the Province and the Tahltan Nation developed a restoration plan to assess and address the impacts of past mineral exploration and development activity within Tahltan Territory. The restoration plan is a major accomplishment for the Tahltan-BC Minerals Working Group, which was established to review operational issues related to past and future mining activities in the Tahltan territory in northwest B.C., including the communities of Dease Lake, Telegraph Creek and Iskut.

Purpose of Ministry

The Ministry of Energy, Mines and Petroleum Resources is tasked with managing the responsible development of British Columbia's energy, mining and petroleum resource sectors. Through the promotion of teamwork and positive working relationships with our clients, we facilitate a climate for thriving, safe, environmentally responsible and competitive energy, mining and petroleum resource sectors. It is through these initiatives that the Ministry continues to contribute to the economic growth and development of communities throughout British Columbia.

In pursuit of its mandate, the Ministry is responsible for a wide range of policies and programs both specific to a particular sector and applicable across the energy, mining and petroleum resource sectors. Ministry responsibilities related to the mineral exploration and mining sector include permitting, mine inspections and safety, geoscience, skills training and educational programs. The Ministry undertakes initiatives to promote new energy technologies, energy conservation and alternative energy sources, such as bioenergy and renewables, including wind and solar power generation. It develops and implements British Columbia's policies with regard to electrical power generation and transmission. Regulatory policy for the oil and gas industry is another important part of the Ministry's mandate, and it ensures the orderly and timely extraction of British Columbia's oil and gas resources. Examples of the Ministry's oil and gas related initiatives include participation in job fairs, trade shows and service sector promotion, the provision of geoscience information and the development of royalty policy and incentives.

The Ministry manages the rights to Crown subsurface resources. Monthly oil and gas rights auctions are held and coal, underground gas storage and geothermal applications, mineral claims and mining leases are processed. The Ministry continues to explore potential frameworks for offshore oil and gas development for British Columbia as well as develop strategies and policies in the areas of land use, marketing, and Aboriginal and community relations. In developing its policies, legislation and guidelines, the Ministry consults with its clients in the oil and gas, mining, electricity and alternative energy industries, as well as communities, First Nations, and environmental and industry associations.

The Ministry administers 26 statutes pertaining to the energy, mining and petroleum resource sectors. The Minister of Energy, Mines and Petroleum Resources is responsible for the Assayers Certification Board of Examiners, the Mediation and Arbitration Board, and four Crown corporations which are described briefly below: the Oil and Gas Commission; BC Hydro; the BC Transmission Corporation; and Columbia Power Corporation. See Appendix A for a hyperlink to the list of the agencies, boards and commissions for which the Minister is responsible.

The Ministry is responsible for providing policy direction to the Oil and Gas Commission, which regulates the oil and gas industry in British Columbia. The Oil and Gas Commission is a single-window regulatory agency with responsibilities for overseeing oil and gas operations including exploration, development, pipeline transportation and reclamation.

BC Hydro provides reliable, low cost electricity to 1.7 million customers and serves 93 per cent of the province's population. BC Hydro maintains sufficient energy supply and the capability to ensure safe electricity delivery to customers when it is needed, while balancing environmental and social considerations.

Under the *Transmission Corporation Act*, the BC Transmission Corporation is responsible for planning, operating and maintaining the Province's high-voltage electric transmission system. BC Hydro and BC Transmission Corporation are Government-owned Crown corporations, regulated by the BC Utilities Commission.

Columbia Power Corporation is a Crown corporation wholly-owned and controlled by the Province, existing under the *Business Corporations Act*. Columbia Power Corporation develops and operates power projects in the Columbia Basin on a joint venture basis with the Columbia Basin Trust. Columbia Power Corporation oversees the operations of the Brilliant power plant and Arrow Lakes Generating Station, and reached commercial operation at the Brilliant Project Expansion in September 2007.

The Ministry conducts its business in a manner consistent with Government's core values as identified in the Province of British Columbia's Strategic Plan.

2007 Energy and Mines Ministers' Conference

From September 23–26, 2007, British Columbia was proud to host the annual Council of Energy Ministers' and Mines Ministers' Conference in Whistler, which was attended by approximately 250 delegates from across Canada. Outcomes from the federal, provincial and territorial Ministers' meetings included decisions to take collaborative action on key issues such as engagement with communities and Aboriginal people, improvements to regulatory approval processes, measures to address skills and capacity barriers, and stimulating research and technical innovation in both sectors. Energy Ministers released, "Moving Forward on Energy Efficiency", their first collective publication, which includes a comprehensive list of tools from which governments, industry and other stakeholders can choose to enhance energy efficiency and conservation. In addition to meetings, delegates enjoyed tours of British Columbia energy and mining sites and the attractions of the Whistler area. The cost of the Conference was covered through industry sponsorships and delegate registration fees.

Strategic Context

During 2007/08, British Columbians witnessed high levels of employment, increased business opportunities and higher government revenue generated from the Province's growing energy, mineral and petroleum resources. Last fiscal year was a record year for the sale of petroleum and natural gas rights in British Columbia, with total revenue exceeding \$1.22 billion for the first time ever. While the 2007 level of natural gas production remained virtually the same as that for the previous two years at 1.06 Trillion cubic feet, the number of natural gas and oil wells drilled declined. Weaker natural gas prices, the divergence of natural gas and crude oil prices as well as higher costs for material and labour last year were primarily responsible for the decline in drilling activity. However, with forecasts of rising natural gas prices, it is predicted that drilling activity in British Columbia will increase in 2008.

Electricity prices in British Columbia remained among the lowest in North America, thanks to continued public ownership of British Columbia's heritage assets, such as the Peace and Columbia hydroelectric facilities, the Government's establishment of the Heritage Contract that ensures British Columbia ratepayers continue to benefit from the low cost electricity from these assets, and the BC Utilities Commission's regulation of domestic rates. 85 per cent of total British Columbia electricity capacity is hydroelectric, and, based on estimated historical generation, 94 per cent of the Province's electricity comes from clean and renewable sources.

Mining in B.C. was estimated to be a \$5.67 billion industry during 2007. British Columbia's excellent investment climate and the rapid escalation in mineral commodity prices have combined to drive very high levels of mineral exploration spending in British Columbia over the past few years. The consensus of world analysts attributes these strong mineral prices to extraordinary growth in Asian minerals demand at a time when the world's inventory of advanced mineral properties was particularly low. Stronger mineral prices provide excellent opportunities for mining in B.C., provided the province remains competitive. Government's focus continues to be on streamlining regulations for business in the province, without diminishing the high level of environmental stewardship as well as public and worker safety expected by British Columbians.

During 2007, Asia Pacific countries continued to experience strong economic performance and increasing demand for a wide range of services, technologies and resource commodities. The Ministry, in collaboration with other ministries, is maximizing trade and investment opportunities for B.C. energy and mining services and products.

The strong performance of the B.C. mining sector during 2007 resulted in a growing number of permanent, well paying employment opportunities for British Columbians. Preliminary estimates for 2007 put direct mine employment in B.C. at 10,800 persons, and mining employment has been rising steadily since 2002. One of the challenges facing resource-based industries is attracting young people into their workforces as the supply of older workers declines with the aging population.

There is an increased demand from communities, First Nations and stakeholders for earlier and more comprehensive information about energy and mining proposals. Many First Nations and



Open pit coal mine at Line Creek, B.C.

communities are actively looking at the opportunities open to them to engage in proactive energy and mining planning, ranging from energy conservation programs to economic and resource development.

The public and stakeholders are making increased use of the Internet for doing business and obtaining information. The Ministry's clients have changing information needs and expectations that require alternative methods of service delivery.

Report on Performance

There was a transition in service planning with the 2008/09 service plans; performance measures were streamlined to better accord with the priorities of the Ministry. This year's report is based on the Service Plan developed in 2007/08, and therefore will not reflect these new measures.

A notable change that will be seen in next year's report is that it will include a report on annual investment in each of the three key sectors in the Ministry's mandate. Next year, annual investment in electricity facilities will be reported, in addition to the ongoing reporting of investment in oil and gas exploration and development and mineral exploration and mining, as published in this report. The annual investment in each of the three key sectors can be added together to provide an estimate of the total contribution of these sectors towards the provincial economy and reflects the employment and other business opportunities generated for British Columbians. The total annual investment in electricity generation and transmission facilities will include the capital invested in improvement and replacement of existing infrastructure by the major provincial electrical utilities — BC Hydro, BC Transmission Corporation and FortisBC — and Independent Power Producers, which supply electricity to the utilities.

Next year's report also will include an improved mining safety measure: the short term injury rate at B.C. mines from WorkSafeBC. This calendar year measure is a comprehensive and accurate representation of the accident rate for the mining sector, and includes data for all mines in B.C., including open pit coal and metal mines, quarries and underground mines.

Finally, next year we will be reporting on a new electricity conservation measure: incremental electricity savings achieved each year through utility and provincial conservation policies, programs and regulations. This measure is driven by policy actions one through nine of the



Natural gas drilling at Cutbank Ridge, B.C.

BC Energy Plan. Targets represent electricity savings from BC Hydro's PowerSmart and FortisBC's PowerSense demand side management programs and conservation/stepped rate participants. Both of these utilities design and direct their energy efficiency programs to three main market sectors — residential, commercial and industrial. Savings are also achieved through energy performance codes and standards established for buildings and energy using devices.

Performance Plan Summary Table

Goal 1: Thriving and competitive energy, mineral and petroleum resource sectors For greater detail see pages 17 to 20	2007/08 Target	2007/08 Actual
Natural gas production	1.06 trillion cubic feet	1.06 trillion cubic feet ACHIEVED
Annual mineral exploration expenditure	\$200 million	\$415.7 million EXCEEDED
Capital investment in oil and gas activities	\$4.5 billion	\$4.5 billion ACHIEVED
Capital investment in new or existing mines	\$ 400 million	\$400 million ACHIEVED
Goal 2: Safe and environmentally responsible energy, mineral and petroleum resource development and use For greater detail see pages 20 to 23	2007/08 Target	2007/08 Actual
2.1 Operational practices at work sites that protect the public, workers' safety and the environment		
Flaring at oil and gas production wells	80	Estimate 80 ACHIEVED
Lost time accident frequency at mines	0% INCREASE	DATA AVAILABLE AUGUST 2008
2.2 Increased energy conservation and use of alternative, clean energy and efficient technologies		
Cumulative gigawatt/hours of electricity saved through the PowerSmart and PowerSense conservation programs	3,043	2,981 SUBSTANTIALLY ACHIEVED
Percentage of furnaces installed with Energy Star rating	60%	50% SUBSTANTIALLY ACHIEVED
Goal 3: The Ministry, First Nations, communities and industry working cooperatively for the responsible development and use of B.C.'s energy, mineral and petroleum resources For greater detail see pages 23 to 25	2007/08 Target	2007/08 Actual
3.1 Increased, appropriate and timely engagement of communities, First Nations and stakeholders in resource development, and a strengthened commitment to environmental and social responsibility		
Percentage of significant Ministry initiatives with communities/stakeholders/First Nations engaged	100%	100% ACHIEVED
3.2 Increased opportunity for First Nations to share in the benefits of responsible resource development and use		
Number of First Nations with new or renegotiated working arrangements on energy, mineral and petroleum resource development	55	55 ACHIEVED

Goals, Objectives, Strategies and Performance Results

Goal 1: Thriving and competitive energy, mineral and petroleum resource sectors

Objective 1.1: Increased investment, revenue generation and job creation in energy, mineral and petroleum resource development for the long term benefit of all British Columbians, and an increasingly secure, reliable supply of energy for the long term benefit of all British Columbians

Strategies

Key strategies for this objective include:

- a) Attract investment by working with industry to develop and implement focused marketing and investment programs to showcase British Columbia as a centre of excellence for energy, mining, oil and gas development.
- b) Work with industry, post secondary institutions, the federal government and provincial agency partners to further establish British Columbia as an innovation and high technology research and education centre.
- c) Promote innovative and aggressive conservation and electricity procurement programs.
- d) Work to diversify British Columbia's fuel supply.
- e) Improve British Columbia's competitiveness in energy, mineral and petroleum development, by providing leadership and information, and investing in infrastructure.

Objective 1.2: Efficient and effective fiscal, legislative and regulatory frameworks and services that reflect the public interest, and enhanced social and economic benefits for all British Columbians

Strategies

Key strategies for this objective include:

- a) Review regulatory issues in co-operation with other levels of government to ensure British Columbia remains competitive, and monitor the provincial regulatory environment for global competitiveness.

- b) Continue to identify opportunities for appropriate regulatory reductions while ensuring the integrity of environmental, health and safety standards.
- c) Develop and implement a faster and simplified approach to multi-agency exploration and mining approvals, with the Ministry of Energy, Mines and Petroleum Resources as the single co-ordinating agency.
- d) Expand and improve online service delivery and the use of e-business.
- e) Introduce new, targeted royalty and incentive programs to stimulate development of oil and gas resource opportunities, and review existing programs to ensure that they are still current and relevant.

Objective 1.3: Greater community awareness of the benefits of energy, mineral and petroleum resource opportunities

Strategies

Key strategies for this objective include:

- a) Work with industry to develop and implement focused training and marketing programs to inform British Columbians about opportunities in the energy, mining, and petroleum industries.
- b) Build community and industry relationships by engaging them in discussion about the benefits and opportunities of resource development, and developing an offshore oil and gas benefits sharing model.
- c) Increase provincial awareness of energy opportunities by engaging school students in a discussion of responsible energy, mineral and petroleum resource development.
- d) Pursue financial and co-operative energy partnerships with industry, such as those developed with Independent Power Producers, communities and other levels of government.
- e) Manage Columbia River Treaty and Downstream Benefit Entitlement matters.

Performance Results

Performance Measures	2005/06 Actual	2006/07 Actual	2007/08 Target	2007/08 Actual
Natural gas production ¹	1.02 trillion cubic feet	1.164 trillion cubic feet	1.06 trillion cubic feet	1.06 trillion cubic feet ACHIEVED
Annual mineral exploration expenditure ²	\$220 million	\$265 million	\$200 million	\$415.7 million EXCEEDED
Capital investment in oil and gas activities ³	\$4.9 billion	\$4.7 billion	\$4.5 billion	\$4.5 billion ACHIEVED
Capital investment in new or existing mines ⁴	\$345 million	\$513 million	\$400 million	\$400 million ACHIEVED

Data Sources:

¹ Source: British Columbia Ministry of Energy, Mines and Petroleum Resources. Raw natural gas production by fiscal year.

² Source: British Columbia Ministry of Energy, Mines and Petroleum Resources, based on annual surveys conducted by the Ministry in collaboration with Natural Resources Canada and Statistics Canada (calendar year).

³ Source: Canadian Association of Petroleum Producers. These estimates are provided only by calendar year.

⁴ Source: Based on Ministry of Energy, Mines and Petroleum Resources staff using data from annual surveys by PricewaterhouseCoopers and Natural Resources Canada, adjusted to reflect non-surveyed activities and post-survey developments.

Discussion of Results

Increased production of natural gas not only expands the supply of gas to the consumer, but also generates provincial revenue. The target set in our 2007/08 Service Plan was met, and is slightly lower than the preceding year's output as a result of weaker natural gas prices, the divergence of natural gas and crude oil prices as well as higher costs for material and labour.

Annual mineral exploration expenditures provide jobs for British Columbians throughout the province. If commercially viable deposits are discovered, new mines could be opened, providing more long term employment opportunities for rural communities. The target for mineral exploration expenditure was substantially exceeded and outstripped all previous years' performance. This exceptional result is due to British Columbia's improved policy and regulatory environment that attracted exploration funds being generated by financial markets in response to higher prices and strong demand in world mineral markets.

Capital investment in oil and gas activities not only provides jobs and related business opportunities for British Columbians, but helps to build provincial infrastructure. The Province derives significant revenues from oil and gas activities, helping to fund important social, health and education programs. The capital investment target was met even in the context of softening natural gas demand and prices in North American markets.

Capital investment in new or existing mines also provides jobs and business opportunities, builds provincial infrastructure, and provides revenue to the Crown. The target for mining capital



Run of river hydro power generation at Rutherford Creek, B.C.

investment was met.

Performance was lower than 2006/07 due to the multi-year nature of major mine maintenance cycles and tightening credit conditions.

Goal 2: Safe and environmentally responsible energy, mineral and petroleum resource development and use

Objective 2.1: Operational practices at work sites that protect the public, workers' safety and the environment

Strategies

Key strategies for this objective include:

- a) Develop leading health and safety standards and practices in co-operation with labour and industry groups.
- b) Improve safety compliance through inspections and audits.
- c) Work with individuals, industry, environmental groups, universities, colleges and other government organizations to expand environmentally responsible energy, mining and petroleum development.
- d) Improve environmental compliance through inspections and audits at development sites.
- e) Encourage the development and adoption of "Clean" technology through innovative funding mechanisms.

Performance Results

Performance Measures	2005/06 Actual	2006/07 Actual	2007/08 Target	2007/08 Actual
Flaring at oil and gas production wells ¹	100	90	80	80 ACHIEVED
Lost time accident frequency at mines ²	2.5 days per 100 workers	0% increase	0% increase	DATA AVAILABLE AUGUST 2008

Data Sources:

¹ Source: British Columbia Ministry of Energy, Mines and Petroleum Resources and the Oil and Gas Commission. Fiscal year 2005/06 is used as base for the index (i.e., equals 100).

² Source: Industry Report: "Comparative Statistics for Mines in B.C.", WorkSafeBC data and Ministry staff statistics.

Discussion of Results

When natural gas is removed from the ground, some gas is routinely flared to prevent harm from exposure to unburned fuel. Flaring occurs while industry is drilling and testing wells for economic viability, to prevent damage to tight gas formations, and at oil and gas production facilities for safety purposes. As flaring wastes a valuable combustible resource and produces environmental effects, a flaring reduction strategy is being implemented. These figures represent flaring from oil and gas wells and facilities, converted to index numbers. Index numbers are useful to show trends in variables, and to calculate the expected change in the variable against the base period. For 2007/08, the index is 80, so there has been a 20 per cent reduction in flaring. The target was achieved, and the emerging trend line from previous years shows a steady decrease in flaring.

Lost time accident frequency refers to the time lost at mine sites due to worker injury. Data for this measure will not be available until August 2008. The Ministry has improved the measure used to track performance on mine safety for 2008/09, by using a rolling average of WorkSafeBC data for all B.C. mines.

The BC Bioenergy Strategy: Growing Our Natural Energy Advantage

The BC Bioenergy Strategy: Growing Our Natural Energy Advantage, released January 31, 2008, delivers on the BC Energy Plan commitment to implement a provincial Bioenergy Strategy which will build upon British Columbia's natural bioenergy resource advantages. Achievements for 2007/08 include:

- *Establishment of \$25 million in funding for a provincial Bioenergy Network for greater investment and innovation in B.C. bioenergy projects and technologies.*
- *Establishment of \$10 million in funding to advance provincial biodiesel production.*
- *BC Hydro's issuance of phase one of a two-part Bioenergy Call for Power, focusing on existing biomass inventory in the forest industry.*

Objective 2.2: Increased energy conservation and use of alternative, clean energy and efficient technologies

Strategies

Key strategies for this objective include:

- a) Work with electricity generators, electricity utilities and consumers across British Columbia to ensure an active and co-ordinated focus on energy conservation in the province.
- b) Increase the participation of local governments in the Community Action on Energy Efficiency Program and expand the First Nation and Remote Community Clean Energy Program.
- c) Encourage the procurement of electricity from BC Clean sources.
- d) Pursue strategic alliances with the federal government to further develop the hydrogen fuel cells industry and other technology that supports alternative energy.

Performance Results

Performance Measures	2005/06 Actual	2006/07 Actual	2007/08 Target	2007/08 Actual
Cumulative gigawatt/hours of electricity saved through the PowerSmart and PowerSense conservation programs ¹	2,102	2,624	3,043	2,981 SUBSTANTIALLY ACHIEVED
Percentage of furnaces installed with Energy Star rating ²	35%	45%	60%	50% SUBSTANTIALLY ACHIEVED

Data Sources:

¹ Source: BC Hydro and FortisBC. These figures represent electrical savings through BC Hydro's PowerSmart and FortisBC's PowerSense demand side management programs.

² Source: Heating, Refrigeration and Air Conditioning Institute.

Discussion of Results

The cumulative target reflects the annual savings achieved due to BC Hydro's PowerSmart and Fortis BC's PowerSense demand side management programs that commenced after fiscal year 2001/02. For example, a program that removes an inefficient refrigerator will provide savings for multiple years. FortisBC results are based on a calendar year, beginning January 1, 2001. Both electric utilities offer a broad range of demand side management programs, which are targeted to the three main market sectors: residential, commercial and industrial. The Ministry's target was substantially achieved by reaching 98 per cent of the target. It was a stretch target based on a preliminary target from BC Hydro, which was subsequently lowered by BC Hydro from 2,900 to 2,800 GWh/yr.

ENERGY STAR is the international symbol of energy efficiency. The ENERGY STAR symbol helps consumers quickly and easily identify home appliances and other energy-using equipment that save energy. The ENERGY STAR symbol identifies products as high efficiency performers in their category. The ENERGY STAR symbol, which is placed on the product and/or incorporated in its literature, indicates that the product meets a premium level of energy efficiency making it easy for consumers to choose the most energy-efficient products sold in the Canadian marketplace. The target was substantially achieved as half of all the furnaces installed in B.C. were ENERGY STAR efficient.

LiveSmartBC: Efficiency Incentive Program

On February 19, 2008, Honourable Carole Taylor, Minister of Finance, announced a new three-year, \$60 million LiveSmartBC: Efficiency Incentive Program to help British Columbians reduce both their carbon footprint and their energy costs through incentives to make their homes more energy efficient. The Ministry is implementing the LiveSmartBC: Efficiency Incentive Program which will give homeowners access to rebates for audits and incentives for specific energy efficiency retrofits. The program will also provide support for retrofits for low-income families as well as free energy audits for small businesses across British Columbia.

Goal 3: The Ministry, First Nations, communities and industry working cooperatively for the responsible development and use of British Columbia's energy, mineral and petroleum resources

Objective 3.1: Increased, appropriate and timely engagement of communities, First Nations and stakeholders in resource development, and a strengthened commitment to environmental and social responsibility

Strategies

Key strategies for this objective include:

- a) Improve working relationships between industry and local communities and landowners by clarifying and simplifying processes, enhancing dispute resolution methods, and offering more support and information.
- b) Support First Nations in providing cross cultural training to agencies and industry.
- c) Assist industry with engaging First Nations in development proposals at an early stage.

- d) Provide information about local development activities to local governments, education and health service providers to inform the development of social infrastructure.
- e) Examine tenure policies and develop guidelines to address areas that require special consideration.

Performance Results

Performance Measure	Benchmark	2006/07 Actual	2007/08 Target	2007/08 Actual
Percentage of significant Ministry initiatives with communities/stakeholders/ First Nations engaged ¹	100%	N/A	100%	100% ACHIEVED

Data Source:

¹ Source: Ministry of Energy, Mines and Petroleum Resources staff analysis.

Discussion of Results

A significant Ministry initiative is defined as a multi-divisional corporate initiative that will involve a change in the way that the Ministry does its business, for example the Oil and Gas Regulatory Improvement Initiative. If First Nations, local governments, landowners and non governmental organizations are informed and participate in responsible resource development, they will become more aware of the benefits that such development can provide for a community, and provide appropriate input into major policy initiatives. This was a new measure for 2007/08, so performance from the previous year is not available. The Ministry achieved its target of 100 per cent because engagement was initiated on all significant corporate projects which were sufficiently progressed to enable engagement to occur in 2007/08.

Objective 3.2: Increased opportunity for First Nations to share in the benefits of responsible resource development and use

Strategies

Key strategies for this objective include:

- a) Engage First Nations to identify opportunities to participate in and benefit from energy, mineral and petroleum resource development.
- b) Develop partnerships between First Nations, industry and government to fund skills, employment and business development opportunities.
- c) Negotiate First Nations Agreements which engage First Nations from pre-tenure through to reclamation.
- d) Involve First Nations and coastal communities in the development of an offshore oil and gas regulatory and benefit sharing model, and a remote Community Clean Energy Program.

Performance Results

Performance Measure	2005/06 Actual	2006/07 Actual	2007/08 Target	2007/08 Actual
Number of First Nations with new or renegotiated working arrangements on energy, mineral and petroleum resource development ¹	37	45	55	55 ACHIEVED

Data Source:

¹ Source: Ministry of Energy, Mines and Petroleum Resources staff analysis.

Discussion of Results

The Ministry's new or renegotiated working arrangements include a broad span of initiatives, from on-reserve oil and gas revenue sharing to formalized consultation processes. The benefits to communities from these arrangements include: revenues, formalized information sharing, defined steps for the fulfillment of consultation obligations, ability for communities to prioritize the use of their limited lands and resource staff, opportunities to discuss and participate in policy development, and access to training in the processes and systems used by the Ministry related to mining and oil and gas development. The target was met, and the Ministry is pleased with the steady increase in the number of co-operative arrangements with First Nations.

Geoscience BC QUEST Project

In 2007, the Ministry continued to support a wide variety of initiatives related to exploration and mining in partnership with industry. The Ministry is backing Geoscience BC's QUEST (Quesnellia Exploration Strategy) Project. One component of QUEST involves geophysical and geochemical surveys being conducted in the region affected by mountain pine beetle infestation with the aim of diversifying the economies of communities in this area, which have traditionally depended on forestry.

Resource Summary Table

Core Business Areas	Estimated ¹	Other Authorizations	Total Estimated	Actual	Variance
Operating Expenses (\$000)					
Oil and Gas.....	10,073	2,400	12,473	11,115	(1,358)
Titles and Offshore.....	5,511	0	5,511	5,500	(11)
Mining and Minerals.....	14,082	4,500	18,582	18,674	92
Electricity and Alternative Energy.....	2,389	0	2,389	3,111	722
Innovative Clean Energy Fund Special Account.....	0	123	123	123	0
Marketing, Aboriginal and Community Relations.....	4,968	728	5,696	5,792	96
Executive and Support Services.....	6,876	0	6,876	7,335	459
Contracts and Funding Arrangements.....	33,560	0	33,560	14,008	(19,552)
Subtotal — Operating Expenses ...	77,459	7,751	85,210	65,658	(19,552)
Statutory Appropriation — <i>Mines Act</i>	0	1,305	1,305	1,305	0
Adjustments of Prior Years' Accruals.....	0	0	0	(457)	(457)
Total	77,459	9,056	86,515	66,506	(20,009)
Full-time Equivalents (FTEs)					
Oil and Gas.....	70	0	70	63	7
Titles and Offshore.....	43	0	43	43	0
Mining and Minerals.....	118	0	118	104	14
Electricity and Alternative Energy.....	22	0	22	24	(2)
Marketing, Aboriginal and Community Relations.....	36	0	36	36	0
Executive and Support Services.....	26	0	26	26	0
Total	315	0	315	296	19

Ministry of Energy, Mines and Petroleum Resources

Core Business Areas	Estimated ¹	Other Authorizations	Total Estimated	Actual	Variance
Ministry Capital Expenditures (Consolidated Revenue Fund) (\$000)					
Oil and Gas	383	0	383	3	380
Titles and Offshore	54	0	54	165	(111)
Mining and Minerals	813	0	813	150	663
Electricity and Alternative Energy	7	0	7	0	7
Marketing, Aboriginal and Community Relations	0	0	0	60	(60)
Executive and Support Services	178	0	178	860	(682)
Total	1,435	0	1,435	1,238	197
Other Financing Transactions (\$000)					
<i>Oil and Gas Commission Act</i>					
Receipts	(31,393)	0	(31,393)	(31,319)	74
Disbursements	31,393	0	31,393	31,319	74
Net Cash Source (Requirements)	0	0	0	0	0

¹ "Other Authorizations" include Supplementary Estimates, Statutory Appropriations and Contingencies. The source of the Other Appropriations amounts must be indicated in a footnote. Amounts in this column are not related to the "estimated amount" under sections 5(1) and 6(1) of the *Balanced Budget and Ministerial Accountability Act* for ministerial accountability for operating expenses under the Act.

Adjustment of prior years' accruals. Amounts reflect adjustment of prior year's expense accruals which were credited to Ministry expense and not available for the Ministry to spend.

Appendices

Appendix A: Links to Additional Resources

A List of Legislation Administered by the Ministry can be found at:
www.em.gov.bc.ca/legislation

A List of Crowns, Agencies, Boards and Commissions reporting to the Minister of Energy, Mines and Petroleum Resources can be found at: www.em.gov.bc.ca/crowns

A Link to the BC Energy Plan can be found at: www.energyplan.gov.bc.ca/

A link to the BC Mining Plan can be found at:
www.gov.bc.ca/empr/popt/reports/down/bc_mining_plan_02_2007.pdf

Appendix B: Ministry Contact Information

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