36. Eliminate all routine flaring at oil and gas producing wells and production facilities by 2016 with an interim goal to reduce flaring by half (50 per cent) by 2011.

Reducing flaring is an issue for many jurisdictions and the World Bank is leading a Global Gas Flaring Reduction Partnership.

The province has set a goal of reducing routine flaring at producing wells and production facilities by 50 per cent in five years and eliminating all routine associated gas flaring in 10 years. Routine associated gas flaring is considered gas that meets an economic threshold for conservation. Operators will be required to perform an economic analysis of all sources of continuous solution gas flaring and subsequently tie in any gas that shows a net present value greater than zero.

Currently, the Province does not receive a royalty for gas that is flared, consequently incentives designed to reduce flaring will be considered.

Reduce routine flaring at producing wells and production facilities.

The primary purpose of flaring is to act as a safety device to protect vessels or pipes from over-pressuring due to unplanned upsets and maintenance. This acts just like the spout on a tea-kettle when it starts whistling as the water in it starts boiling. A small amount of gas is continuously burned, like a pilot light, so that in the event of over-pressure, it is always ready to flare gas.

In British Columbia, the total amount of flared gas for 2004 was approximately 250 million cubic metres (m^3) broken down by the following categories:

Source	Amount of Gas Flared, million m^3
Gas Plant	35.0
Well Testing	72.4
Under-balanced Drilling	89.0
Associated Gas	37.9
Gas Gathering	14.0
Total	248.3

Of the associated gas, about two thirds is continuous (i.e. not upset or emergency) flaring. Although well test flaring is necessary, there is some work that can be done to help standardize allowed flare volumes and durations which may result in some improvements. There may be limited opportunities to reduce flaring during under-balanced drilling. Flaring at gas plants occurs as a result of process upsets, emergencies and plant maintenance. In Alberta, the regulator has implemented some requirements for planned shut downs and identification of causes of recurring upset flaring. There may also be scope to reduce flaring at gas plants in British Columbia, working with operators and the federal regulator, the National Energy Board, which regulates many of the gas plants in British Columbia.

Reduce the flaring and venting of natural gas at test sites, well sites and on pipelines, and eliminate the growth of fugitive gases.

The Ministry will work with industry to develop policies and strategies to reduce the flaring of natural gas at test sites, well sites and on pipelines, and eliminate the growth of fugitive gases and venting. Similar tools as those to reduce routine flaring will be pursued.

37. Establish policies and measures to reduce air emissions in coordination with the Ministry of Environment.

Fossil fuel industries in British Columbia account for approximately 18 per cent of greenhouse gas air emissions in the province. Environment Canada data suggests that the main sources of air emissions from the oil and gas sector are: flaring, fugitive gases, gas processing and compressor stations. In the late 1990's, the amount of gas flared declined as a result of new practices. With increased drilling activity, the amount of gas flared has stabilized. There are also limited unexploited cogeneration opportunities at compressor stations to capture waste heat and generate electricity or use the heat in other applications. Actions to reduce flaring, fugitive gases, increase compressor station efficiency and acid gas reinjection and sequestration are expected to reduce emissions to below 2000 levels.

Development of policies and measures to augment anticipated federal government policies will be part of this initiative.

Develop policy guidelines and identify regions in British Columbia which are suitable for the underground disposal of acid gas.

Disposal of acid gas to underground formations is sometimes a cost effective alternative to sulphur recovery and reduces flaring and emissions.

The Ministry will develop a policy for acid gas disposal based on the underground storage legislation, which has provisions for assigning long-term responsibility through tenuring and licensing arrangements. Currently, acid gas (primarily hydrogen sulphide and carbon dioxide) is being disposed of in depleted gas reservoirs without clearly assigning long term responsibility through tenuring and licensing arrangements.

The Ministry will conduct an assessment of suitable regions in BC for acid gas injection and identify opportunities to facilitate industry activities. Legislation and regulations from other jurisdictions will be reviewed and an appropriate framework will be proposed by 2008/09 or sooner.

Explore opportunities and new technologies to develop underground disposal of carbon dioxide (sequestration or carbon capture and storage).

Geological carbon sequestration involves disposing of carbon dioxide safely and permanently in carefully selected underground locations. There are opportunities to dispose of carbon dioxide into depleted gas reservoirs or specific formations with saline water, or to use the carbon dioxide to enhance oil recovery.

Currently there are more than 50 sites in western Canada for reinjection and permanent storage. For example, the Weyburn project takes carbon dioxide from the US and transports it for use in enhanced oil recovery in Saskatchewan. There may be opportunities for enhanced oil and gas recovery in BC, albeit somewhat limited.

The Ministry will explore with industry the opportunity to dispose of carbon dioxide from major facilities such as processing plants. Geological and hydrogeological mapping and monitoring will be conducted in key areas of interest for acid gas injection through 2009/2010.

Working with International Partners on Carbon Capture

British Columbia is a member of the Plains CO_2 Reduction (PCOR) Partnership composed of nearly 50 private and public sector groups from nine states and three Canadian provinces that is assessing the technical and economic feasibility of capturing and storing carbon dioxide emissions from stationary sources. The province is also a member of the West Coast Carbon Sequestration Partnership, consisting of west coast state and provincial government ministries and agencies that were formed to pursue carbon sequestration opportunities and technologies on the west coast.

As part of The BC Energy Plan the provincial government supports involvement in these partnerships and calls for the development of market oriented requirements with a graduated schedule to foster innovation in sequestration. In consultation with stakeholders, a timetable will be developed along with increasing requirements for sequestration.

Please visit: http://www.em.gov.bc.ca/subwebs/oilandgas/petroleum_geology/carbon.htm for more information.

Create policy to help improve compressor station efficiency and reduce emissions.

The Ministry will develop policies to reduce emissions at compressor stations, improve their efficiency and where possible, capture otherwise wasted heat and transform it into useable energy. In addition, results-based regulations will encourage innovation, new technologies and best practices that are key to an expanding and sustainable oil and gas industry.

The Ministry will work with industry and regulators to pursue the possibility of accelerated introduction of more efficient compressor in BC. One of the tools to be explored is linking the Motor Fuel Tax levied on compressor stations to their efficiency.

38. Best coalbed gas practices in North America. Companies will not be allowed to surface discharge produced water. Any re-injected produced water must be injected well below any domestic water aquifer.

BC will require proponents to follow Best Practices in all stages of coalbed gas development, including:

- Fully engaging communities and First Nations;
- Using the most advanced technology and practices that are commercially viable;
- No surface discharge of CBG produced water; and
- Any re-injected coalbed gas produced water must be well below aquifers.

As a result, the Code of Practice for the Discharge of Produced Water from Coalbed Gas Operations will be reviewed and updated where appropriate.

For more information on the Code of Practices: http://www.env.gov.bc.ca/epd/coalbed_code/pdfs/coalbed_reg.pdf

Conduct scientific and geological research and provide results to potential investors, communities and First Nations to further the exploration and development of coalbed gas.

The Ministry in coordination with the Ministry of Environment will undertake a program to gather scientific and geological data in areas of interest for CBG development. Specifically, numerous issues relating to groundwater have arisen in CBG developments in other jurisdictions and have become a public concern in BC. The existing surface water sampling program will be expanded to include work on groundwater and to conduct hydrogeological studies in coal basins. Research findings will be shared with industry, well owners and local communities including First Nations. Baseline surface hydrology and subsurface hydrogeological studies and monitoring will be conducted in key areas of interest for CBG development, when and where appropriate, including Hudson Hope, Telkwa and other sites, through 2009/2010.

Study and monitoring results will be made available publicly to all interested parties including local communities, First Nations, well owners and industry through 2009/10.

For additional information on coalbed gas see:
http://www.em.gov.bc.ca/dl/Coalbedgas/CoalbedGas_Doc_web.pdf

39. Enhance the Oil and Gas Environmental Stewardship Program, ensuring sound environmental, land and resource management.

A comprehensive review of the oil and gas environmental stewardship program will enhance programs including waste management, habitat enhancement, baseline data collection, planning initiatives such as land use planning and general development plans, programs for environmentally sensitive areas, infrastructure corridors, and remediation and progressive reclamation.

In 2004, the Ministry initiated the Oil and Gas Environmental Stewardship Program having two components: the Environmental Policy Program and the Environmental Resource Information Project. The Environmental Policy Program identifies and mitigates environmental issues in the petroleum sector focusing on policy development in areas such as environmental waste management, habitat enhancement, planning initiatives, wildlife studies for oil and gas priority areas and government best management practices. Some key program achievements include the completion of guidelines for regulatory dispersion modeling, research leading to the development of soil quality guidelines for soluble barium, a key to northern grasses and their restorative properties for remediated well sites, and moose and caribou inventories in Northeast British Columbia.

The Environmental Resource Information Project is dedicated to increasing opportunities for oil and gas development, through the collection of necessary environmental baseline information. These projects are delivered in partnership with other agencies, industry, communities and First Nations.

40. Continue to work to lift the federal moratorium on offshore exploration and development and reiterate the intention to simultaneously lift the provincial moratorium.

In response to provincial requests to lift the federal moratorium, Natural Resource Canada (NRCan) launched a three-part review in 2003. The science component concluded there was no scientific reason to maintain the moratorium (a similar conclusion was reached by the Province's Science Panel in 2002). To date, Canada has not formally responded to the review reports.

The Province re-affirms its commitment to offshore oil and gas exploration and development, its request to Canada to lift the federal moratorium and reiterates that the provincial moratorium will be lifted at the same time.

41. Work with the federal government to ensure that offshore oil and gas resources are developed in a scientifically sound and environmentally responsible way.

While many coastal residents have expressed concern about the prospect of offshore oil and gas activity, some are supportive, provided development is undertaken in an environmentally sound manner, and their communities share in the benefits. A number of First Nations have indicated they might consider offshore activity if they have a role in the management and regulation of activity.

The major tenure holders have stated that before investing in exploration activities, key issues must be addressed: clarification of the fiscal and regulatory regime, identification of "go" and "no go" areas, confirmation of existing tenures, and resolution of First Nation issues.

As a result, the Ministry has focused on the following key areas:

- Engaging First Nations, coastal communities and other key stakeholders who have an interest in how offshore oil and gas development might affect them;
- Developing options for BC's position on management/regulatory and fiscal regimes; and
- Co-ordinating a federal-provincial approach to science.

Considerable progress has been achieved. The Ministry has provided some coastal communities, First Nations and stakeholders with funding for educational activities, and involved First Nation and local government leaders in offshore fact finding tours. The Ministry has also entered into an MOU with the Union of BC Municipalities (UBCM) that establishes an Offshore Oil and Gas Working Group.

The BC Energy Plan reflects government's support for the lifting of the offshore exploration moratorium if it can be done in an environmentally safe and scientifically sound manner. If the moratorium were lifted, before any exploration took place, a framework would be developed through public consultation which would guide all offshore oil and gas activities. Specific issues that would need to be addressed include:

- Comprehensive assessment of offshore developments;
- Adoption of best practices, including "zero discharge" to the marine waters; and
- Negotiation of a collective First Nations representation for all management or regulatory processes.

42. Participate in marine and environmental planning to effectively manage marine areas and offshore oil and gas basins.

British Columbia will continue to participate in oceans strategy and marine planning initiatives including Oceans Strategy, Marine Planning, Marine Protected Areas Strategy and National Marine Conservation Area planning to promote environmental management and economic development objectives in marine areas and offshore oil and gas basins.

43. Develop and implement a comprehensive community engagement program to establish a framework for a benefits sharing agreement resulting from offshore oil and gas development for communities, including First Nations.

Offshore, as a "greenfield" project, represents a unique opportunity to demonstrate the province's commitment to coastal communities, the New Relationship and economic opportunities for First Nations. An early commitment to benefit sharing provides coastal communities and coastal First Nations with a clear interest in future exploration and development, while representation of First Nations in the regulatory processes would be a step in addressing concerns about environmental risks.

44. Pursue regulatory and fiscal competitiveness in support of being among the most competitive oil and gas jurisdiction in North America.

To be the most competitive jurisdiction in North America, new policies and reporting accountabilities will be created, building on the Oil and Gas Development Strategies (OGDS). The Ministry will identify and implement opportunities to reduce costs and increase efficiencies.

Monitor British Columbia's competitive ranking as an oil and gas jurisdiction and publish results.

Every three years the Progress Board or another independent agency will publish a report on the competitiveness of the oil and gas sector in BC. The Progress Board has developed the "North Star" index for the province. A similar index with performance indicators for the oil and gas sector will be created. A first report is expected by the end of 2008/09.

- The BC Progress Board issues an annual benchmarking report comparing British Columbia with other provinces on measures of economy, innovation, education, environment, health and society. Twenty additional performance indicators shed further light on BC's economic and social performance, along with recommendations to reach the Progress Board's 2010 North Star leadership benchmarks.

Further information on the BC Progress board can be found at: http://www.bcprogressboard.com/index.php

Implement a net profit royalty program to stimulate development of natural gas and oil resources.

The Ministry is currently developing a net profit royalty program to stimulate development of natural gas and oil resources by sharing the capital risk of successful developments, recognizing the long-lead times associated with these developments, while maintaining the province's royalty share. The net profit royalty program will be an important tool for government to create incentives for industry activity in under-explored areas of the province such as the Nechako Basin.

- In 2007/08, a net profit royalty program will be available for approved proposals. Projects that qualify for the net profit program are not eligible for any other royalty credit programs. Royalty rates begin at a nominal rate at the beginning of the undertaking and escalate during the project ending at a rate significantly higher than the current rate. The average royalty rate over the life of the project is similar to other programs.

Efficient regulations and cross-ministry harmonization.

The Best Practices Working Group—an industry and inter-agency working group—is a key interface to identify and implement initiatives to reduce costs and improve efficiencies. The Ministry and the Best Practices Working Group will create an annual work plan for initiatives aimed at reducing government and industry costs and improving efficiencies.

Work with industry, the federal government and other provinces to improve regulatory efficiency and reduce federal/provincial overlap.

The Province will work with industry, other provinces and the federal government to improve regulatory efficiency and reduce overlap. There are already harmonization agreements with the federal government, for example under the *Environmental Assessment Act* and *Species at Risk Act* that could serve as a model.

Pursue the development of a Petroleum Registry in coordination with the Ministry of Small Business and Revenue.

The Ministry will evaluate and develop a business case for setting up a BC-specific registry, including negotiating with stakeholders, industry, the Ministry of Small Business and Revenue, the Oil and Gas Commission and other users on the appropriate cost allocation.

A Petroleum Registry that functions as a central database will improve the quality and management of key volumetric, royalty and infrastructure information associated with British Columbia's oil and gas industry. A Registry would make regulatory compliance easier, reduce costs, reduce the amount of paper generated, and provide users with online access to information. It makes it possible for data to be uploaded directly from industry systems and allows stakeholders to submit and edit their data online. This data can be used for a variety of purposes and would be linked with well spacing since it provides information on pools, fields and pipelines. The registry would provide one reporting format to be integrated with other agencies, allowing for quicker delivery of detailed information. .

- In Alberta, the Petroleum Registry has provided the following benefits to industry, the regulator and the Department of Energy:
    - A more accurate royalty administration system;
    - Fewer amendments, reworks, and reconciliation;
    - Better, more reliable, more accessible information,;
    - Standardization and improved effectiveness of input, reporting, and analytic processes.

More information can be found at: http://www.petroleumregistry.gov.ab.ca/

45. Enhance infrastructure to support the development of oil and gas in British Columbia and address impediments to economic development such as transportation and labour shortages.

Under the OGDS III and IV, the Ministry contributes, through a royalty credit-based funding arrangement, to the construction of more and better resource roads, and on a more limited basis, to small-scale natural gas pipelines. The Ministry will identify new infrastructure opportunities for both resource and public road infrastructure. The Province would continue to partner in these infrastructure opportunities through innovative business arrangements such as public private partnerships (P3s) and differential royalty arrangements.

There are areas in northeast British Columbia that have not been explored and developed (sometimes referred to as "white spaces"). Industry has noted two primary impediments: lack of geoscience knowledge and lack of access.

The Ministry will develop actions to address these impediments, such as building on the Pipeline Pilot Program to encourage companies to drill in new or under-drilled areas so as to ensure good stewardship of evaluate the full resource potential.

Northeast British Columbia offers a number of under-explored and under-drilled areas that may be capable of producing oil or gas. However, these potential operating areas lack the necessary infrastructure, in the form of pipelines and processing facilities, to economically extract and transport product to market.

A number of oil and gas producers and pipeline mid-streamers operating in BC have indicated that limited or non-existent pipeline infrastructure is a key barrier to their investment in under-developed oil and gas areas in northeast BC.

Develop a multi-year infrastructure-based royalty program that introduces an integrated approach to the development of resource roads, pipelines and processing facilities. This approach to oil and gas infrastructure will further stimulate development in emerging and under-explored areas of northeast British Columbia.

The existing royalty credit program for resource roads was launched in 2004 and has since been renewed, through new instalments of road-based royalty credits, in each successive year thereafter. The pipeline royalty credit program was implemented on a pilot basis late in 2005 and yield successful results through 2006.

A multi-year infrastructure royalty program, that integrates roads, pipelines and facilities as an infrastructure bundle, will be developed so as to offer oil and gas partners longer term partnership arrangements with the Province, an improved operating chance on measures of risk and return and therefore, even greater confidence to push out the Province's oil and gas frontier. This integrated (resource roads, pipelines and facilities) infrastructure program will revolve a finite pool of infrastructure-based royalty credits through the best candidate oil and gas infrastructure projects. Royalty credits would be advanced into a completed project as it meets requirements to receive the Province's contribution, as credits are subsequently recovered by the Province, through new oil and gas royalties these same royalty credits would be re-advanced to support new infrastructure partnerships. On this basis the Province would invest and re-invest, through a capped but revolving infrastructure fund, in high quality oil and gas infrastructure projects.

A pipeline and facilities royalty credit could incent entry into under-developed areas, both by large companies who traditionally have been reluctant to absorb the full risk of pioneering under-developed areas, and by small producers whose capital resources are typically insufficient to finance large-scale resource development. There may also be cases to stimulate development in under-developed areas through partnerships involving producers, pipeline operators (mid-streamers) and the Province through the royalty credit that is transferable, on a one-time basis, between a mid-stream operator and an oil and gas producer.

Invest in resource-based and public road infrastructure and explore new infrastructure opportunities in northeast British Columbia.

Over the past three years, significant new investment in oil and gas infrastructure has proven to be an important lever in further developing the Province's oil and gas resource and establishing a competitive presence in North American natural gas markets. Building and maintaining high grade, all-season resource roads has demonstrably lengthened the drilling season, opened up new areas to development, and aligned operating costs in BC with other competing jurisdictions. Increased investment in high-grade resource roads, with connections to connecting public roads and highways has also created safer working and living places for industry, contractors and communities.

The Province will continue to invest in the public road infrastructure throughout northeast BC. The Ministry will explore new infrastructure opportunities for public road infrastructure, and continue to partner in the construction of producer built roads, pipeline and facilities infrastructure.

46. Encourage the development of conventional and unconventional resources.

The northeast region of the Province (194,000 square kilometres) has been a focus of petroleum exploration and development since 1952. About 17,000 wells have been drilled to date.

The table below shows the estimated undiscovered resource potential for all of the province, in trillion cubic feet (Tcf) for natural gas, and billion barrels of oil (Bbbl) and the known reserves for northeast BC. BC is primarily a gas producing jurisdiction with raw gas production of about 1.1 Tcf in 2005, has produced about 17.5 Tcf, with remaining reserves of 12.9 Tcf.

	Natural Gas Tcf	Tight Gas Tcf	Shale Gas Tcf	Coalbed Gas, Tcf	Oil Bbbl
RESOURCE POTENTIAL • Conventional	98.0				17.6
• Unconventional		300	250	84	
• Offshore	41.8				9.8
RESERVES • Northeast BC Reserves (Dec 31, 2005)	12.9				0.131
• Northeast BC Produced (up to Dec 31, 2005)	17.5				0.67

Declining conventional resources in North America has lead to a shift in some of the focus of oil and gas producers to unconventional gas—tight gas, shale gas and coalbed gas (CBG). The Western Canada Sedimentary Basin is rich with these emerging resources. The distribution of these unconventional resources, and the total amounts of economically producible or marketable resources are critical to attracting investment, planning for sustainable development and community involvement.

Tight gas is likely to hold the highest potential for remaining technically recoverable natural gas resources in the northeast. Tight gas is now being specifically targeted in pervasive, regional resource play developments, like those focused on the Greater Sierra near Fort Nelson and at Cutbank Ridge, west of Dawson Creek. In 2003 the Ministry of Energy and Mines released an Exploration Assessment of Tight Gas Plays in northeast BC and determined that the in-place tight gas resource base could be about 300 Tcf.

About 25 per cent of BC's 2005 production is estimated to come from tight gas formations. Further research is needed to identify areas of potential growth. Shale gas is just starting to be evaluated and developed in British Columbia.

With commercial success of several shale gas plays in the United States, British Columbia's shales are now being recognized as potential reservoirs estimated to have the capacity to hold about 250 Tcf gas-in-place. Though recoverable volumes will be considerably less, shale gas remains a significant untapped resource. Recent studies by the Ministry on Devonian and Triassic formations in northeast British Columbia, show shale gas potential throughout very large areas.

Undertake assessments and support geoscience evaluations to further the development of shale and tight gas.

While the amount of in-place shale and tight gas in BC is substantial, there are a number of obstacles that may impede development such as technology gaps to extract natural gas, the need for more geoscience, and a lack of knowledge amongst communities, landowners and First Nations on the impacts of developing these unconventional resources.

The Ministry will work with the Petroleum Technology Alliance of Canada (PTAC) and other agencies to address specific technical and community issues to identify areas of potential growth.

Develop policies and new technologies for Enhanced Resource Recovery.

Even with the increased price of crude oil, British Columbia has seen little interest from industry in increasing oil production from existing facilities or exploring and developing oil reserves. The Ministry will identify barriers to enhanced resource recovery.

By partnering with PTAC and other agencies, the Ministry will work with industry to support and develop policies to promote enhanced resource recovery (ERR). In addition, results-based regulations will be introduced in 2008 encouraging industry to implement new leading edge technologies. Results-based regulations will eliminate prescriptive methods that create disincentives to technical development. Through new compliance tools, the Oil and Gas Commission will be able to regulate industry without limiting the introduction of innovation, new technologies and best practices that are key to an expanding and sustainable oil and gas industry.

Enhance marketing efforts with major oil and gas companies in conjunction with the Ministry of Economic Development to increase knowledge of and investment in British Columbia's oil and gas sector.

While there is substantial investment in the oil and gas sector, many oil and gas companies do not have holdings and are not active in BC. To encourage investment, the Ministry will work with the Ministry of Economic Development's market representatives in Calgary, Houston, Asia Pacific and London and federal counterparts (e.g. Canadian consulates) to promote BC's potential resources and the advantages of investing in BC.

A comprehensive marketing plan will be implemented to encourage investment from companies that do not currently have holdings in BC.

47. Support the growth of British Columbia's oil and gas service sector.

The British Columbia based service sector has grown over the past four years and exhibits the

potential for further growth. In 2003, the Minister of Energy, Mines and Petroleum Resources established a Service Sector Strategy Committee with representation from the Northern Society of Oilfield Contractors and Service Firms, the Northeast Aboriginal Business Centre, the Canadian Association of Petroleum Producers and member firms, Treaty 8, the Fort Nelson Chamber of Commerce, the Oil and Gas Commission and the Ministry.

Increased activity in the traditional winter drilling season, together with the emergence summer drilling, has created a more stable, secure, near to year-round operating platform for oil and gas producers enabling them to make multi-year commitments to the service industry and promote local companies.

The Ministry will participate in trade shows and work with the Service Sector Committee to introduce and market BC service sector companies to the oil and gas industry. Companies will both sponsor and participate in these marketing initiatives. The Ministry will continue to actively support the development of the Oil and Gas Centre of Excellence.

Continue to promote awareness of British Columbia-based service sector companies in the interest of the BC sector securing a representative market share of oil and gas activity in the province.

The Ministry will undertake a study in 2007 that updates previous analysis that describes the market share of BC service sector companies. This study will establish a benchmark and identify specific business segments where BC companies can play a larger role. Thereafter, this study will be updated every two years with new data, benchmarks and trend analysis.

In addition, the Ministry and the Service Sector Committee will work to promote BC service sector companies through informing, educating and connecting the business community to expanding and emerging oil and gas both within and outside British Columbia.

Continue to support initiatives that enhance the competitiveness of British Columbia's oil and gas service sector and support the drive toward companies in the service sector capturing representative market share of activity within the province.

The Ministry of Small Business and Revenue is developing a small business strategy and intends to implement this strategy starting in 2007. The Ministry of Energy, Mines and Petroleum Resources will work with the Ministries of Small Business and Revenue and Finance to improve small business competitiveness and specifically pursue a greater share of the oil and gas service sector for BC based businesses.

48. Promote exploration and development of the Interior basins with a priority focus on the Nechako Basin.

The Whitehorse, Bowser and Nechako Basins of north central and interior British Columbia remain largely unexplored as a result of insufficient infrastructure and lack of geological information.

In relation to the Whitehorse and Bowser Basins, the Nechako is less remote; has more favourable geography and infrastructure; more is known about the potential for oil and gas; and is the geographic area most affected by the Mountain Pine Beetle.

While recognizing the potential for oil and gas development throughout the other Interior Basins in the longer term, the Nechako Basin has the most immediate potential to engage industry, First Nations and the local communities.

The Nechako Initiative aspires to provide multiple benefits including:

- Expansion of B.C.'s oil and gas activities;
- Economic diversification and job creation in areas severely affected by the Mountain Pine Beetle; and
- Innovative economic opportunities for First Nations and local communities.

Strategic components of the Initiative include:

- Geoscience information collection and analysis;
- Fostering First Nations relationships and opportunities;
- Community and stakeholder engagement;
- Environmental management;
- Industry promotion;
- Infrastructure development; and
- Policy considerations such as tenure and royalties.

GeoScience BC has received $5 million from the Province specifically targeted for the Nechako Basin. Collaborative programs will leverage additional funds and enhance the knowledge base to stimulate industry investment.

The "New Relationship" has created an opportunity for the Ministry to work with First Nations early in the planning process. Oil and gas exploration is a new industry to local communities and there is a need to communicate basic information about the industry well in advance of any proposed development, for First Nations to meaningfully engage in the process. An early, broad-based capacity development plan is needed to enable effective First Nations engagement by both the Ministry and industry.

Undertake geoscience activity in the Nechako Basin to establish new data of the

resource potential for oil and gas development.

The Ministry, in collaboration with the federal government, other agencies, and industry, will expand its geoscience work to stimulate industry exploration and development of oil and gas resources in the Nechako Basin.

The Nechako Basin is a 70,000 square kilometre area in the central interior of the province. The boundaries of the Nechako Basin are generally considered to be the Skeena Arch in the north, Highway 97 to the east, and the Chilcotin and Camelsfoot Ranges to the south.

The Nechako Basin has promising geologic formations including up to 4,000 meters of sedimentary rocks in smaller sub-basins and the presence of rocks that suggest the potential for oil and gas. There are minor hydrocarbon shows.

To date the area is largely unexplored. Seismic testing was undertaken in the 1980s and only twelve exploration wells have been drilled over the past 75 years with no resulting discoveries.

In conjunction with work being conducted elsewhere in the Interior Basins, geoscience work is being conducted in the Nechako Basin including:

- A review of known data and interpretation of subsurface data;
- A pilot project to re-process old seismic data; and
- Completion of a second field season of geoscience work including source bed analysis of subsurface rocks; a regional heat flow study and a detailed description of subsurface samples. The results will refine the search for hydrocarbons.

The Ministry will continue to develop partnerships, including the federal government, to undertake an extensive seismic program in the Nechako Basin to provide industry with data on the potential resource.

More information on GeoScience BC can be found at:

http://www.geosciencebc.com/

Develop tenures and royalties specific to the Nechako Basin to encourage development and investment.

The traditional means of awarding tenure may not be appropriate for exploration and development in the Interior Basins. More innovative tenure mechanisms and royalty regimes appropriate for these unexplored basins may be considered.

Develop and implement a comprehensive First Nations pre-tenure engagement

program in the Nechako Basin to develop First Nations capacity and knowledge of the oil and gas industry.

Focussing on First Nation's rights and interests, the Ministry will undertake a comprehensive information sharing program with local First Nations to gather their interests and exchange information on the oil and gas industry and the area's potential for development.

Develop and implement a comprehensive First Nations engagement process in the Nechako Basin to develop options for implementing the New Relationship.

The Ministry will undertake a comprehensive engagement process that includes information sharing and pre-tenure consultation with First Nations in the Nechako Basin area. This process will establish a forum to share information on the oil and gas industry and the areas potential for development, while exploring First Nations interests in this region. This process will include developing a potential benefit sharing model that includes economic opportunities.

Develop and implement a comprehensive community engagement program in the Nechako Basin to establish a framework for a benefits sharing agreement.

The Ministry will initiate a community engagement program on oil and gas development in the Nechako Basin. Also, the Ministry will develop, in cooperation with local communities, a benefits sharing framework and an environmental stewardship program.

Develop a comprehensive Environmental Information Program to identify baseline information needs in the Nechako Basin through consultations with government, industry, communities and First Nations.

The need for an environmental information program will be assessed by 2007/08. Data gap analysis will be completed by 2008/09 including a searchable, web accessible database.

49. Encourage the development of new technologies.

British Columbia has the opportunity for technological advancements and commercialization, particularly in environmental management, flaring, carbon sequestration and hydrogeology. The service sector has noted that it can play an important role in developing and commercializing new technologies, however, access to funds is an issue. Royalty credits is one option that is currently not available to the service sector and under this objective, the Ministry will assess the possibility of providing a company with transferability of royalty credits as a funding mechanism.

Establish a technology transfer incentive program.

The province will establish a technology transfer incentive program similar to the Saskatchewan Petroleum Research Incentive model but focusing on different technologies. This program, possibly funded by royalty credits, will encourage the research, development and use of innovative technologies to increase recoveries from existing reserves and encourage responsible development of new oil and gas reserves. The program should be designed to fully recover program costs, over time, through increased royalties generated by expanded development and production of BC's petroleum resources. An additional objective is to transfer the technology developed so there is a greater awareness and use of new technology in BC, particularly technology that leads to the reduction of environmental impacts of oil and gas production.

The BC Scientific Research and Experimental Development Program provides financial support to corporations for research and development that leads to new or improved products and processes. The Ministry, in consultation with the Ministry of Small Business and Revenue, will explore the expansion of the program to cover an individual's project costs directly related to commercially applicable research, development or demonstration for new or improved technologies conducted in British Columbia that facilitate expanded oil and gas production through credits or refunds. Work will also proceed in collaboration with PTAC.

Explore and establish other research and development programs for the oil and gas industry.

The Province will develop a program targeting specific areas where BC has demonstrated strengths.

The Province will work with the Fort St. John Centre of Excellence and other partners to establish an oil and gas technology incubator, encouraging entrepreneurs to develop and commercialize new and innovative technologies and processes. Workshops, information provision and expansion of existing events (e.g., tradeshows and oil and gas conferences) will be held to assist innovators.

The Province will develop a program to encourage oil and gas innovation and research in British Columbia's post-secondary institutions.

The Province will promote investment in research and development opportunities with the PTAC and the new MOU between BC and Alberta on Energy Research, Technology Development and Innovation.

50. Add value to British Columbia's oil and gas industry by assessing and promoting the development of additional gas processing facilities in the province.

The goal is to develop a strategy promoting gas processing facilities in British Columbia. With a number of proposals for new pipelines carrying crude to the coast, landing condensate, and liquefied natural gas regassification terminals, there may be an opportunity to create an integrated petroleum refining and petrochemical industry, providing jobs and investment on the north coast.

Conduct an analysis into the potential for processing facilities to be located in British Columbia.

The Ministry will identify and analyze constraints, in the form of scale or nature of oil and gas processing facilities, that limit development and enhanced stewardship of BC's oil and gas resource.

Determine the viability of establishing a new petroleum refinery and petrochemical industry in British Columbia.

British Columbia is a small crude oil producer in Canada. With approximately 17 million barrels of crude oil production per year (2.8 billion litres), BC provides 1.8 per cent of total Canadian crude oil production. About half of BC's crude oil production is processed at the two refineries—Chevron in North Burnaby and Husky in Prince George, and the rest is processed in Alberta. Small quantities are exported to the US.

There are numerous proposals for condensate and crude oil pipelines, and importing liquefied natural gas for regasification. The Province will establish an industry/government working group to develop business cases and promote opportunities for new refining and petrochemical investment in BC. The working group will report to the Minister within six months with recommendations on the viability of a new petroleum refinery and petrochemical industry and measures, if any, to encourage investment.

51. Provide information about local oil and gas activities to local governments, education and health service providers to inform and support the development of necessary social infrastructure.

Provide local communities and service providers with regular reports of trends and industry activities so that they can more effectively plan for growth in required services and infrastructure.

Work with local communities, ministries and industry to address housing demands.

Ministry of Energy, Mines and Petroleum Resources, in partnership with the Ministry of Forest and Range's Housing Policy Branch, will actively work with and assist communities wishing to implement recommendations of the 2006 Housing Report.

52. Work with First Nations to identify opportunities to participate in and benefit from oil and gas development.

Access to land to explore and develop oil and gas resources is a fundamental requirement as noted by the Progress Board and the Competition Council. First Nations have been increasingly concerned about the incremental approach to resource development, particularly gas well authorizations used by the Oil and Gas Commission. They want to participate in the new wealth being generated by industry within their asserted Traditional Territories.

The "New Relationship" is an opportunity for First Nations to participate in, and benefit from, the development of resources surrounding their communities.

Increase First Nations capacity to participate in, and benefit from oil and gas development.

The Ministry and the Oil and Gas Commission will continue to facilitate and assist in developing First Nations' capacity to engage in the oil and gas sector and work to improve relationships between industry, First Nations, the Oil and Gas Commission and the Ministry.

The Ministry will also facilitate and support opportunities for First Nations training, education (see also The BC Energy Plan Labour Strategy) and private-First Nations' partnerships.

53. Support First Nations in providing cross-cultural training to agencies and industry.

The Ministry will work with First Nations to develop and provide cross-cultural training to agencies and industry.

54. Improve working relationships among industry and local communities and landowners by clarifying and simplifying processes, enhancing dispute resolution methods, and offering more support and information.

In oil and gas development on private land, landowners negotiate land leases with industry. The acts governing oil and gas, minerals, coal and geothermal resources all have provisions for entry on private land by the subsurface resource title holder. These provisions provide rights to the surface landowners beyond those which would be afforded by Common Law.

Improve landowner notification and awareness of sales of oil and gas rights on private land.

The Ministry, in partnership with its established consultation mechanisms, will develop a process to better inform landowners in advance of sales of oil and gas rights on private land.

The Ministry has established several consultation mechanism (i.e., the Northeast Energy Mines Advisory Committee, the Provincial Forum, etc.) to provide advice on oil and gas policy issues. These processes involve participants from First Nations, local government, rural landowners, business and community groups, ranchers, agriculture and wildlife interests among others.

Enhanced web design and information improving landowner's access to online information about existing and proposed oil and gas tenures to better inform landowners of sales of oil and gas rights on private land will be in place in 2007/08.

Improve private landowners' knowledge of subsurface resource titles and lease

arrangements for land used for oil and gas development.

The Ministry will develop an educational package to assist landowners in dealing with subsurface resource titles The Ministry will consult with stakeholders, local landowners, organizations and industry to re-assess the current guidelines and methodologies to determine lease payments to landowners for land used for oil and gas development. Other actions include: development of standardized lease arrangements including an amount (up to $5,000) as assistance to develop a lease arrangement with an oil and gas company, and a publicly accessible registry of lease arrangements to improve transparency.

Assess and improve the process of dispute resolution between landowners and the industry.

The Ministry, in partnership with industry, the Oil and Gas Commission and the Mediation and Arbitration Board will assess processes to resolve disputes between landowners and the industry. Depending on the results of this assessment, landowner organizations will be engaged to develop new processes.

Review current setback regulations.

The Ministry will engage with local communities, landowners, First Nations, industry and the Oil and Gas Commission in reviewing requirements for setback distances between wells and occupied building structures based upon scientific studies, public health and safety, and economic and social considerations.

55. Examine oil and gas tenure policies and develop guidelines to determine areas that require special consideration prior to tenure approval.

Develop clear and consistent guidelines to determine areas which are off-limits for oil and gas tenures or where special management practices are required.

The Ministry will work with local governments, communities, landowners, stakeholders and First Nations to develop guidelines to determine which areas require special consideration for oil and gas tenures.

Notice of special areas will be posted on line and identified on the Petroleum Titles Online maps.