

OIL AND GAS

REGULATORY IMPROVEMENT INITIATIVE

DISCUSSION PAPER

December 1, 2005

Ministry of Energy Mines and Petroleum Resources

Oil and Gas Policy Branch

Table of Contents

A.	PROCESS FOR PROVIDING COMMENT ON THE DISCUSSION PAPER	I
B.	EXECUTIVE SUMMARY	II
C.	THE OIL AND GAS REGULATORY IMPROVEMENT INITIATIVE (OGRII).....	1
D.	RATIONALE FOR REGULATORY CHANGE	3
E.	INTERNATIONAL PRACTICES REVIEW	10
F.	SUMMARY OF INITIAL STAKEHOLDER CONSULTATIONS	12
	1. Single Window Status of the OGC.....	12
	2. Results-Based Regulation	13
	3. Protection of Environmental Values.....	13
	4. Public Consultation	14
	5. Compliance and Enforcement	14
	6. Sour Gas and Public Safety.....	14
	7. Assurance of Government Oversight.....	14
	8. Harmonization with Other British Columbia Results-Based Regulation	15
	9. Risk Management in Oil and Gas Regulation	16
	10. Adoption of Industry Best Management Practices (BMPs)	16
	11. Responsibility of Impacts of Other Industries.....	17
	12. Effective and Efficient Permitting	17
	13. Non-OGRII Issues	17
G.	PROPOSED GENERAL REGULATORY CHANGES	18
	Proposal 1. Results-Based Regulation	18
	Proposal 2. Results Relate to Key Values	19
	Proposal 3. Graduated Compliance, Enforcement and Penalty System.....	20
	Proposal 4. Single Activity Permit: One Approval for Each Activity	20
	Proposal 5. Development Permit: One Approval for Multiple Activities.....	20
	Proposal 6. Reliance on Qualified Professionals	21
	Proposal 7. A Single Consolidated Statute	21
H.	SPECIFIC PROPOSALS FOR REGULATORY CHANGE	21
	Proposal 8. Public Consultation.....	22
	Proposal 9. Regulatory Roles in Environmental Protection	23
	Proposal 10. Reclamation of Well Sites.....	24
	Proposal 11. Watercourse Crossings	24
	Proposal 12. Impacts to Agricultural Lands	25
	Proposal 13. Linear Disturbances.....	26
	Proposal 14. Roads	27
	Proposal 15. Flaring	29
	Proposal 16. Oil and Gas Waste Management	30
I.	SUMMARY	31
J.	ABBREVIATIONS	31
K.	APPENDICES.....	33

A. PROCESS FOR PROVIDING COMMENT ON THE DISCUSSION PAPER

This paper has been prepared to outline the range of changes to oil and gas regulation being contemplated by the Government of British Columbia. It is intended to inform, illustrate and provide a basis for a second phase of discussion to be conducted during December 5, 2005 and February 24, 2006.

An initial phase of consultations was undertaken during summer 2004, to exchange information and identify issues. In this Discussion Paper, the Ministry of Energy, Mines and Petroleum Resources and the Oil and Gas Commission have addressed these issues within a results-based regulatory context. The Discussion Paper also includes some additional background information in response to questions raised by stakeholders during the 2004 stakeholder meetings.

As well, the Discussion Paper mentions examples of results-based regulation from Alberta and South Australia where considerable regulatory change is currently underway or has already been completed. Successful approaches to oil and gas regulation in such other jurisdictions are instructive as British Columbia considers its options for regulatory change.

This Discussion Paper proposes a new regulatory system for oil and gas development in British Columbia consistent with other provincial regulatory initiatives. The proposed new regulatory system resolves existing confusion among regulatory requirements, ensures protection of public health and safety, and environmental values. The proposed new regulatory system holds industry accountable for achieving specified regulatory results, but provides them with some operational flexibility to achieve those results. The proposed new regulatory system also includes a comprehensive compliance and enforcement component.

The Ministry of Energy, Mines and Petroleum Resources invites interested parties to provide their constructive comments to this regulatory review process. Industry stakeholders may wish to provide individual written submissions, or participate in joint responses by their respective industry associations.

Written submissions should specifically reference the content of this Discussion Paper, particularly the Proposals in Sections G and H. Submissions will be received until: February 24, 2006

Submissions may be sent electronically to the following email address:

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B. EXECUTIVE SUMMARY

The Oil and Gas Regulatory Improvement Initiative (**OGRII**) is a collaborative effort between the Ministry of Energy, Mines and Petroleum Resources (**MEMPR**) and the Oil and Gas Commission (**OGC**) to fulfill government's goal to increase the effectiveness and efficiency of government regulation. The OGRII will also enable the OGC and the oil and gas industry to synchronize and harmonize operations with other parts of government, which have already adopted a results-based approach to forestry regulation and environmental management. The new legislation developed by the OGC and MEMPR will further support single window processes for all oil and gas permitting, compliance and enforcement.

The need for change to British Columbia's upstream oil and gas regulatory regime resulted from:

- increased exploration and development activity, placing pressure on the Oil and Gas Commission's (**OGC**) regulatory processes, staffing levels and timelines;
- government direction to adopt results-based regulatory principles;
- a need to clarify and coordinate a confusing mix of multiple legislation and regulations that govern oil and gas activities, administered by various British Columbia government ministries and Crown agencies;
- a desire to harmonize British Columbia rules, where appropriate, with those in Alberta; and
- the desire to improve British Columbia's regulatory regime so British Columbia can maintain or enhance its attractiveness for oil and gas investment.

The goal of OGRII is to:

Recommend legislation that will position British Columbia as a world class regulatory environment that supports greater industry activity levels while meeting provincial health, safety and environmental objectives.

The five objectives of the OGRII are to:

- *consolidate* existing statutory provisions and regulations that govern or relate to the OGC or upstream oil and gas activities;
- *integrate* legislative provisions for permitting, compliance and enforcement to *streamline* OGC processes;
- *harmonize* the OGC regulatory framework for oil and gas with other results-based legislative initiatives within British Columbia, and with Alberta's regulatory regime where appropriate;
- *enhance* the OGC's operations as a *single-window agency* for regulation of British Columbia's upstream oil and gas activities; and
- focus on a *results-based regulatory framework* across OGC permitting, compliance and enforcement to improve efficiency.

This paper invites public comment on a number of general and specific suggestions for changes to British Columbia legislation and regulations. These proposed options for change were generated from a broad-based consultation process, research conducted into regulatory practices in other jurisdictions comparable to British Columbia and internal government policy review.

Highlights of suggested proposals for change are provided below.

- Adopt "results-based" regulatory principles to govern some upstream oil and gas activities, predominantly those for which greater industry and professional accountability is appropriate, and for which industry innovation and technological change is most apparent.
- Consolidate regulatory responsibilities for oil and gas activities in new legislation, to fully integrate and internalize the functions of the OGC improving its function as the "single-window" regulator for oil and gas. This will involve better definition and clarification of OGC regulatory responsibilities and those of other ministries and Crown agencies.
- Introduce a new statute to consolidate the various pieces of legislation that currently empower the OGC, and incorporate defined regulatory roles. The new legislative framework will be more transparent, comprehensive, relevant and effective in terms of guiding industry behaviour towards achieving results specified by government. The new legislation will resolve confusion relating to the interpretation and application of regulatory requirements of multiple statutes and regulations.
- Consolidate all required approvals for a single industry activity into one permit that may cover a broad geographic area enabling a comprehensive approach to development and OGC permit approval. Allow for notification of some allowable deviation from the development approach described in the application to accommodate field operations without additional OGC approvals.
- Consolidate all required approvals for multiple wells, pipelines and facilities attached to a single development project into one permit. This concept is similar to the OGC's existing "general development permit" process, but would further eliminate the need for supplementary authorizations that are still required under the general development permit.
- Ensure that new legislation allows for development of "best management" practices to encourage regulatory compliance in terms of meeting results.
- Reduce the number of OGC steps required for permit approval and issuance, especially for "routine" applications, by utilizing qualified professionals to prepare parts of applications related to achieving specified results (e.g. forestry or environmental results).
- Support the new legislation with a comprehensive compliance and enforcement strategy, focussed on achievement of defined results. Allow for audits by both the OGC and other government ministries. Establish accurate and complete statistics to provide a record of corporate compliance as a basis for continuous evaluation of companies' performance, and to determine OGC's application of penalties and level of scrutiny applied to applications and enforcement.

C. THE OIL AND GAS REGULATORY IMPROVEMENT INITIATIVE (OGRII)

The Oil and Gas Regulatory Improvement Initiative (**OGRII**) is a collaborative effort between the Ministry of Energy, Mines and Petroleum Resources (**MEMPR**) and the Oil and Gas Commission (**OGC**) to fulfill government's goal to increase the effectiveness and efficiency of government regulation. The OGRII will also enable the OGC and the oil and gas industry to synchronize and harmonize operations with other parts of government, which have already adopted a results-based approach to forestry regulation and environmental management. The new legislation developed by the OGC and MEMPR will further support single window processes for all oil and gas activity.

MEMPR initiated a shift to results-based regulation first in the mining sector and then in the oil and gas sector commencing in 2004 with the OGRII. The broader rationale for government's change in regulatory approach is outlined in Section D below.

The **goal** of OGRII is to:

Recommend legislation that will position British Columbia as a world class regulatory environment that supports greater industry activity levels while meeting provincial health, safety and environmental objectives.

The five **objectives** of the OGRII project are to:

- *consolidate* existing statutory provisions and regulations that govern or relate to the OGC or upstream oil and gas activities;
- *integrate* legislative provisions for permitting, compliance and enforcement to *streamline* OGC processes;
- *harmonize* the OGC regulatory framework for oil and gas with other results-based legislative initiatives within British Columbia, and with Alberta's regulatory regime where appropriate;
- *enhance* the OGC's operations as a *single-window agency* for regulation of British Columbia's upstream oil and gas activities; and
- focus on a *results-based regulatory framework* across OGC permitting, compliance and enforcement to improve efficiency.

The OGRII project will culminate in a new statute governing the oil and gas industry with new supporting regulations for all aspects of operations that are now currently regulated by the OGC.

The development of the new legislation was originally guided by three key principles:

- no reduction in health and safety or environmental outcomes;
- improved regulatory efficiency and effectiveness through focus on a results-based regulatory approach; and
- development of an improved business climate to encourage industry investment.

However, through stakeholder consultations during 2004, it was suggested that these principles be revisited and expanded to more fully explain and guide the conduct of OGRII and the development

of the new legislation. Accordingly, new principles will be developed based on stakeholder feedback received for this Discussion Paper.

The focus of the OGRII project is very specific, and the following matters are not included:

- fiscal and royalty features of British Columbia's oil and gas regime;
- petroleum and natural gas tenure;
- offshore oil and gas;
- federally regulated pipeline issues (although pipelines regulated under the provincial *Pipeline Act* are included);
- other federal regulatory issues; and
- current funding and organization of the OGC.¹

This Discussion Paper builds on work completed for OGRII during 2004 and 2005 including:

- consultation with stakeholders;
- detailed analysis by the OGC, MEMPR, other ministries and the consulting team on specific policy questions that have arisen as a result of stakeholder consultation and an examination of the existing legislation;
- completion of an international practice review examining oil & gas regulatory practices in other jurisdictions comparable to British Columbia, with a view to identifying lessons learned and concepts that could be adapted for use in British Columbia; and
- discussions with industry regarding current operational practices.

¹ The adoption of new legislation will necessarily result in changes to the organization and management of the OGC. Such changes will be examined in future work on implementation planning.

D. RATIONALE FOR REGULATORY CHANGE

The oil and gas industry is a key driver of the British Columbia economy, and provincial revenues attributable to oil and gas activity contribute to a range of provincial programs. The following statistics provide some indication of industry activity levels (most recent statistics available):

- There were 11,400 people directly employed by oil and gas extraction activities in 2003 (up 45 per cent since 2001)
- Industry investment more than doubled since 2001, and is expected to be over \$4.5 billion in 2004/2005.
- Natural gas production has increased to 1.123 bcf in 2004/05 as compared to 1.106 bcf in 2001/02, resulting in more jobs in the service sector and increased year round employment.
- Oil and gas Crown royalty revenues were \$1.889 billion in 2004/05 as compared to \$1.3 billion in 2001/02.

In the last several years, the oil and gas industry in British Columbia has benefited both from higher prices, which stimulates exploration and development, as well as targeted government policies and programs to encourage oil and gas development in the province. As a result, industry activity has reached unprecedented levels and is growing at a rate faster than in other Canadian jurisdictions. This has resulted in a significant improvement in the local economy of the northeast region of British Columbia, and increased provincial revenues.

The provincial government, across many agencies and statutes, regulates activities conducted by the oil and gas industry (e.g. roads, wells, facilities, pipelines, geophysical activity). Not only is the industry regulated comprehensively across numerous statutes, there is also a full range of supporting documentation provided by the Oil and Gas Commission to guide and direct industry activities. The industry also meets standards and directives provided by numerous technical and safety organizations (e.g. CSA standards). In recent years, government ministries and Crown agencies, industry and stakeholders have discussed possible improvements to the British Columbia regulatory framework. The OGRII builds on these discussions and examines policy choices to significantly improve the efficiency and effectiveness of the regulatory system.

During 2004 and 2005, the OGC has engaged in a concurrent review of internal operational processes for application review and compliance and enforcement. As part of this review, a number of industry best practices have been developed or adopted to streamline these processes within the confines of the existing legislation. The OGRII was designed to examine regulation at a higher level, by examining fundamental changes to the overarching legislative structure to remove unnecessary regulatory provisions, clarify regulatory requirements for both industry and the OGC, and create greater flexibility for industry to conduct activities while achieving the government's environmental, safety and economic objectives.

The Need to Improve Regulatory Efficiency and Effectiveness

The oil and gas industry has the potential to significantly increase its contribution to British Columbia's economic future. However, the oil and gas industry is a global industry, and British Columbia must compete with other regions of the world for investment capital. British Columbia, like much of the rest of Canada, is one of the higher cost places in the world to find and produce oil and gas compared to other regions of the world. Capital is easily moved around the globe by industry to projects that offer the best returns on investment with the least geological, fiscal, political and regulatory risk. One aspect of attracting and retaining industry activity and capital is the competitiveness of British Columbia's regulatory regime as compared to other jurisdictions around the world with significant oil and gas opportunities.

Improving regulatory efficiency and effectiveness are desirable goals, but they need to be fulfilled in the context of the British Columbia oil and gas business and operating environment (e.g. planning and investment time frames, exploration periods and infrastructure requirements). Regulatory effectiveness also recognizes the different operational characteristics of the oil and gas industry as compared to other industries in the province, and among the different sectors within the oil and gas industry.

For example, most drilling rigs and other heavy equipment are moved during winter months when roads and drilling sites are frozen. This short winter drilling season demands short timelines for obtaining regulatory approvals and completing drilling operations compared to other jurisdictions and other industries that can conduct year-round operations. As another example, the operations of the seismic and geophysical industry are far more influenced by forest practices regulation than other types of oil and gas activity, and must be harmonized with other government forestry initiatives.

Improving the regulatory environment is a key requirement for attracting new investment. In particular, industry has noted an interest in:

- streamlining regulatory processes and other modifications to provide certainty, clarity and efficiency relating to permitting, compliance and enforcement activities, and
- providing flexibility, where appropriate, to deal with specific operational issues that prescriptive regulations might not address, thus enabling industry to meet or exceed regulatory requirements in a cost effective and/or more efficient manner (e.g. through the application of ever-improving technologies).

Smart Regulation

Smart Regulation is to a large degree reliant on achieving regulatory improvements by focussing on results or outcomes rather than processes.² Many governments have adopted forms of Smart Regulation. In British Columbia, a separate Deregulation and Regulatory Reform Office was established to provide central direction and monitoring of the adoption of Smart Regulation principles in the provincial government.

The British Columbia Deregulation and Regulatory Reform Office endorses the following definitions and principles of the federal government's External Advisory Committee on Smart Regulation.

“Smart Regulation is both protecting and enabling. It involves using the regulatory system to generate social and environmental benefits while enhancing the conditions for a competitive and innovative economy that will attract investment and skilled workers and sustain a high quality of life for Canadians. It is about making regulation as effective as possible — and making sure it is never more complicated or costly than it has to be.

Smart Regulation is more responsive regulation. An effective regulatory system must be self-renewing and keep up with developments in science, technology and global markets. Smart Regulation is acting quickly and deliberately to contain or prevent risks and enable innovation and opportunity so that Canadians receive the benefits of new knowledge. This also means giving regulatees more flexibility in terms of how results are achieved, as long as high standards are upheld and accountability measures are in place.

² Source: <http://www.pco-bcp.gc.ca/smartreg-regint/en/08/sum.html>

Smart Regulation is governing cooperatively for the public interest. In a modern regulatory system, regulation is a shared responsibility in which governments, citizens and industry all have an active role to play in making the system more effective. Smart Regulation is taking into account the views of citizens and also being attentive to firms and the challenges they face in an international economy. It is realizing that the regulatory system is part of a complex global system which requires governments and government departments and agencies to work better together towards common goals.”

Principles of Smart Regulation

“Effectiveness. Regulation must achieve its intended policy objectives and must advance national priorities. It should be based primarily on standards and performance targets, rather than on how those targets are achieved, in order to provide flexibility while serving the public interest. Regulation should be supported by evidence and should reflect the latest knowledge. Regulatory measures must be regularly and systematically reviewed and, where necessary, eliminated or modified; and new measures must be created to take into account changing consumer preferences and expectations, scientific and technological advances and changing business environments.

Cost-efficiency. Regulatory analytical requirements, measures and enforcement should be commensurate with the risks and problems involved. The appropriate instrument mix should be designed and implemented in the least costly manner possible to achieve the desired policy objectives. Single windows between departments and between jurisdictions should be offered. Regulators must understand the cumulative impact of regulation and seek to avoid overlap, duplication, inconsistency and unintended consequences.

Timeliness. Regulatory decisions and government services must be provided in a manner that reflects the pace at which new knowledge develops, consumer needs evolve and business now operates. Timeframes and standards for decision making should be developed and enforced.

Transparency. The accessibility and transparency of the regulatory system must be maximized to promote learning and information sharing and to build public trust at home and abroad in the quality of Canadian regulation and the integrity of the process. Policy objectives should be clearly defined. Regulators must explain their priorities and decisions, show why and how these decisions are in the public interest, and be subject to public scrutiny. Information on regulatory programs and compliance requirements should be readily available in print and electronic formats. The regulatory system should be more predictable to provide certainty to those being regulated. Citizens and business should participate through active consultation and engagement.

Accountability and Performance. Regulators must account for their performance. They need to announce their intended results and demonstrate their progress in achieving them. Performance should be monitored, measured and reported on publicly. Results should be used to modify regulatory programs and should be systematically reported to the public. Regulatory systems must be fair and consistent. Complaints and appeals procedures should also be established, well publicized, accessible, fair and effective.”

The Multiple Legislative Sources of OGC Authority

The responsibilities and authorities of the OGC are established in the *Oil and Gas Commission Act (OGC Act)*, the *Petroleum and Natural Gas Act* and the *Pipeline Act*. Through “specified enactments” defined in the OGC Act, the OGC is also authorized to issue specific permits and approvals and to undertake related compliance and enforcement activities under six other statutes³ for oil and gas activities and pipelines. These six other statutes that contain the “specified enactments” are designed for other industries or for general application. Accordingly, the application, compliance and enforcement processes required by these statutes may be inappropriate, not relevant to oil and gas activities or otherwise may impose unnecessary constraints on industry and the OGC.

The application of the specified enactments under the current legislation is at times confusing for industry, in terms of identifying, interpreting and understanding regulatory requirements, and for government in terms of regulating the industry and applying compliance and enforcement programs. The system is also confusing for the public who is not certain which part of government has (or should have) ultimate authority because each OGC decision process, compliance and enforcement procedure, and penalty and appeal process ties back to individual specified enactments. At the field staff level, OGC and the ministries responsible for the specified enactments have in some cases found some workable solutions through specific inter-agency agreements, but *ad hoc* internal agreements at times lack the transparency, clarity and authority of a statute or regulation.

For example, forestry legislation (*Forest Act*, and the *Forest Practices Code Act*) is designed to regulate activities undertaken to harvest trees for commercial purposes from generally large blocks of land. In the absence of alternative legislation, it also regulates tree harvesting and related environmental impacts for the oil and gas industry. However, commercial timber harvesting operations are significantly different from the operations of the oil and gas industry, which typically removes trees on a site-specific linear basis to facilitate access to land for oil and gas wells, facilities, pipelines or geophysical activities. While the new results-based *Forest and Range Practices Act (FRPA)* (which has replaced the *Forest Practices Code Act*), will simplify the forestry regulatory system, it is still not well suited for direct application to the oil and gas industry.⁴

Consistency Among Ministries' Approach to Regulation Affecting Oil and Gas Development

The involvement of other ministries in regulating industry already exists to varying degrees as part of their statutory responsibilities and existing administrative processes. The organizational structure and function of some of these other ministries have undergone significant change in recent years. Most notably, the Ministry of Forests and Range (**MOFR**) and the Ministry of Environment (**MOE**) have adopted a results-based regulatory approach and are supporting these regulatory changes with new organizational structures.

Both ministries focus on setting strategic direction and policy, monitoring of activities on the land, and undertaking compliance and enforcement of standards related to a results-based regulatory regime. A consequence of legislative, policy and organizational changes is that MOFR and MOE advisory functions to the OGC will in future be less available. Under the proposed new regulatory system, government ministries such as MOFR and MOE will continue to exercise strategic and policy decisions primarily through the definition of results to be achieved under a new oil and gas regulatory system, and through the joint development of standards (with MEMPR and the OGC) to

³ *Forest Act, Forest Practices Code of British Columbia Act, Heritage Conservation Act, Land Act, Environmental Management Act, and Water Act*. The "specified enactments" also include prescribed regulations under any of these acts.

⁴ The oil and gas sector, as holders of Master Licences to Cut under the *Forest Act* are currently exempt from the provisions of FRPA. The *Forest Practices Code* continues to apply to the oil and gas sector until OGR II is completed and new legislation is in place to regulate the forestry aspects of oil and gas activities.

assess industry performance. Joint and coordinated efforts in compliance and enforcement will also reinforce the effectiveness of the new legislation.

The proposed new regulatory system must recognize the mandates and operational realities of other ministries and Crown agencies, and enable new and effective inter-ministry and inter-agency processes to be established. As well, new oil and gas legislation will need to be harmonized with legislation adopted by MOE and MOFR to ensure that regulatory outcomes are consistent across the land base. A key challenge for OGRII is to accomplish this task through the creation of legislation that also allows for operational flexibility and industry cost-efficiency.

A key area for collaboration relates to the possible creation of a new type of permit which authorizes multiple types of industry activities on one geographical area, building on the successes of the existing "general development permits" (GDPs). GDPs offer oil and gas operators the opportunity to apply for project level review, consultation and approval-in-principle for multiple activities in a given area. GDPs are best suited to Crown land where multiple wells and pipelines are anticipated during a given drilling season and a high likelihood of drilling success exists. The Province believes that the GDP process creates efficiencies in project design, enhances First Nations and stakeholder consultation and provides improved opportunity to manage cumulative impacts related to oil and gas activities and pipelines.

A strong advantage of the Development Permit concept is that it enables the OGC to review the environmental and socio-economic impact of oil and gas development in terms of the whole project rather than individual reviews of a number of separate activities, which may not accurately portray the benefits that a comprehensive project analysis could convey. It also maintains the existing benefits of general development permits cited by stakeholders and First Nations in terms of conveying a "big picture" approach to development.

The OGC as a "Single Window" Permitting Agency for Upstream Oil and Gas Activities

The OGC was established as the lead permitting agency for oil and gas activities in 1998. In 2002, the government of British Columbia began internal discussions related to improving oil and gas sectoral permitting to better manage approvals and other regulatory and administrative processes on behalf of industry proponents.

At its simplest, a "single-window" approval brings together the regulatory approval processes required under different statutes into an integrated process under a single regulatory agency in order to maximize procedural effectiveness and efficiency. The extent of the "single-window" agency concept as applied to the OGC through the specified enactments is actually quite limited, and serves mainly to reduce the number of interfaces that an industry proponent has with government.

The internal processes underlying the application of the specified enactments is complicated by the fact that the other statutes are designed for other industries or for general application, requiring OGC staff to develop and apply their own rules to interpret and apply the specified enactments. The industry does experience delays in processing applications, and occasionally conflicting advice as a result. Consequently, the specified enactments may not actually achieve desired regulatory outcomes. Further, the level of assistance that can be offered to the OGC from other ministries in conducting this interpretive exercise, or in assisting in conducting formal reviews of applications through a "referral" process is very limited.

A range of alternatives to a fully "single-window" process are possible. Currently, the OGC responsibilities are limited to "core" regulatory approvals, but not including those approvals only occasionally required by industry. Establishing all the required regulatory expertise within an agency such as the OGC to issue, administer and monitor seldom-sought approvals is not administratively

efficient or effective. However, further empowering the OGC as a single window agency for core approvals under a results-based regime can maximise the effective use of government resources while ensuring that public safety and environmental protection will not be compromised.

While MEMPR and other provincial ministries would provide the policy foundation for oil and gas regulatory results, the OGC could better centralize and streamline single-window operations under a results-based regime that offered changes to permitting structures, compliance and enforcement processes and other OGC operations.

For example, a new single activity permit could be developed that would enable one type of activity to be repeated in several areas, provided that regulatory results are achieved. The design and implementation of a single permit will result in new complexities and issues, and must be done carefully. For example, every regulatory approval requires a certain amount of work. Consideration must be given as to whether the time and administrative effort required by industry to prepare and by the OGC to process a single comprehensive application is more or less than the collective time and effort to issue numerous individual approvals.

Single activity permits could be used for each type of oil and gas activity (seismic, wells, pipelines, facilities). There are numerous potential advantages to be gained from consolidating certain regulatory permits, including:

- enabling the OGC to develop a more efficient and cost-effective application assessment process by reviewing one as opposed to several applications;
- providing a “big picture” so that stakeholders have a better sense of what is being contemplated;
- reducing the amount of time that may be incurred by industry to prepare and submit individual applications (and any subsequent amendments) for a proposed activity;
- reducing duplication of information and resources by industry in the preparation of multiple applications;
- allowing the entire history of an activity to be taken into consideration when conducting compliance and enforcement.

Results-Based Regulation

The Province has instructed its ministries to focus to the greatest degree possible on developing smart regulation. The terms “results-based”, “performance-based” and “outcome-based” have all been used in different jurisdictions to refer to similar regulatory frameworks that focus on outcomes rather than prescriptive requirements. “Results-based regulation” (**RBR**) is the term used by the MEMPR for OGR II.

In a RBR system, government’s role is one of defining regulatory outcomes and verifying companies’ performance in terms of achieving the defined result; the role of companies is to ensure that the outcomes are achieved. Assessing whether or not a result has been achieved requires that a comparison of post-activity conditions be made against either pre-activity conditions or a set of pre-established standards. (Refer to the Appendices for further discussion of results-based regulation.)

RBR can be compared with “prescriptive” regulation, which is currently in place in much of Canada. The “prescriptive” approach to regulation is where rules are established for conducting

activities. Compliance with the rules will result in the regulatory result being achieved. Any prescriptive regulatory system can:

- become quickly outdated, requiring ongoing efforts by industry and government in perennial updating, and
- be misapplied or applied inconsistently due to the need to interpret increasingly complex rules intended to cover every aspect of a prescribed activity.

A prescriptive regulation leaves little room to develop and implement innovative approaches or investigate less costly or more appropriate alternatives to achieve desired outcomes. When more efficient or effective technology becomes available, regulated entities may become frustrated with regulations that continued to require the use of older technology. Prescriptive regulations have been criticized for being costly, bureaucratic, stifling to innovation, slow to be changed, and nurturing an adversarial relationship between government and regulated entities.

RBR can be described as a regulatory system under which compliance is determined or measured in terms of regulated outcomes rather than in terms of compliance with prescribed processes. An RBR with clearly defined expected outcomes and strong enforcement measures provides greater assurance that specific regulatory outcomes will actually be achieved, provides greater flexibility for regulators, requires fewer regulations, speeds up the approval process, and encourages greater dialogue among stakeholders. RBR also encourages greater professionalism and sense of responsibility on the part of those regulated to avoid or mitigate potential impacts on a site-specific basis.

Within an RBR regime, government's focus should be on establishing appropriate and meaningful results, standards for measuring the degree to which results have been achieved and on developing a comprehensive and coordinated compliance and enforcement process. An RBR system also could involve the development and sharing by industry of internal business management or integrity management systems that define and explain internal practices and procedures (e.g. risk assessment and response). By providing the OGC with the ability to formally recognize such systems as part of an application, it may be possible to further streamline some approvals processes.

RBR forces regulators to be clearer about the actual results and goals to be achieved in regulating an entity or activity, while allowing the regulated entity to determine how to best achieve them. RBR also holds industries accountable for the achievement of regulatory outcomes beyond following a defined set of rules. RBR can allow for greater precision in decision making, encourage economic efficiency and innovation, and eliminate unintended consequences associated with some prescriptive regulations. However, care must be taken in the design and implementation of an RBR system to ensure that achievement of the results can be measured and that regulatory costs and disadvantages do not outweigh advantages and benefits.

Harmonization

While the oil and gas industry in Western Canada is generally headquartered in Alberta, the province with the largest and most-developed resource base, the industry also has significant operations in British Columbia and Saskatchewan.

Recently, the governments of British Columbia and Alberta have undertaken Joint Cabinet meetings to co-operate and work together to improve their purchasing power, public service delivery and

international marketing opportunities. Joint initiatives are underway to expand provincial trade and investment opportunities, increase regulatory efficiency, identify best practices and innovations, and share expertise. To date, the governments have signed a Protocol of Co-operation, and a Memorandum of Understanding on Oil and Gas.

To the degree practicable, OGRII will consider increased regulatory harmonization with Alberta, recognizing that there may be areas where complete harmonization is not feasible.

Competitive Advantage

Further growth of the oil and gas industry is a stated objective of the British Columbia government and is successfully being achieved through a number of actions and initiatives. However, the increasing level of oil and gas activity requires a relevant and cohesive regulatory framework that appropriately guides industry activity on Crown land and recognizes stakeholder concerns.

For British Columbia to continue to successfully attract investment dollars in this global industry, the province needs to examine and improve its regulatory system. The current drive to explore for and produce British Columbia oil and gas is highly dependent on both the fiscal regime that has been put in place, on oil and gas prices, and on the likelihood of discovering significant new reserves. By adopting a RBR regulatory system, British Columbia can enable industry to better and more cost-effectively find and produce oil and gas while still ensuring that public safety and environmental protection is not compromised. Industry's ability to adopt flexible and innovative approaches to achieve regulatory outcomes, and government's ability to significantly and positively reform its regulatory operations under new policy and legislation will improve British Columbia's attractiveness compared to other jurisdictions in the world.

E. INTERNATIONAL PRACTICES REVIEW

Oil and gas proponents investing in British Columbia assess the attractiveness of British Columbia in comparison with other jurisdictions that are competing for oil and gas investment. This includes not only other Canadian jurisdictions, but jurisdictions around the world. The assessment that investors perform generally has three aspects: geological attractiveness, fiscal attractiveness, and attractiveness of the legal and regulatory regime. The focus of the OGRII project is to make British Columbia's regulatory regime as efficient and effective as it can be, while ensuring that provincial health, safety and environment outcomes are fully protected.

In light of the need for British Columbia to improve the efficiency and effectiveness of its regulatory regime in a highly competitive business climate for oil and gas investment, it would be sensible to examine practices in other oil and gas producing jurisdictions. Therefore, part of the OGRII project includes the review of selected oil and gas regulatory regimes in other comparable jurisdictions. The regulatory regimes of Alberta, Oklahoma, Argentina and South Australia were selected and reviewed to identify best oil and gas regulatory practices. This review concluded that a single "best" regulatory approach cannot always be identified, and what works well for one jurisdiction is not necessarily appropriate for another. Accordingly, it was determined that no single international regime can be imported wholly into British Columbia. However, certain aspects of each of the regimes reviewed are instructive in developing a new regime for British Columbia, and have informed some of the proposals for regulatory change in this paper.

For example, particular attention was paid to Alberta given the common geology, geography and industry. Certain features of Alberta's regulatory regime could be applicable to British Columbia, for example, rules regulating flaring. Two noteworthy aspects of the Oklahoma regime are its orphan well program and compliance, enforcement and dispute resolution mechanisms. Argentina also has

a comprehensive process where most activities an operator needs to undertake are included in one broad regulatory approval (a single permit concept).

South Australia, which recently adopted a new oil and gas regulatory regime, has moved from "prescriptive" to "performance-based" regulation and strived to achieve a "single-window" regulatory body for the industry. South Australia also has adopted a comprehensive permit approval process where operators obtain one permit for each of seismic, pipelines, wells and facilities. These permits in turn enable the operator to conduct all necessary activities associated with the particular seismic program, well, pipeline or facility, such as building roads, installing camps and timber harvesting.

The International practices review looked specifically at issues concerning compliance and enforcement, as that is a topic of considerable interest to industry, the OGC, stakeholders and, government ministries.

Currently, where instances of non-compliance are found, the OGC can issue stop work orders, rescind approvals and impose fines and imprisonment upon summary conviction. However, British Columbia's current regime does not have formal incentives to encourage appropriate behaviour.

In Oklahoma, inspectors promote compliance by issuing warning letters, prescribing fines without formal legal action, shutting down operations, and referring matters to prosecution. Operators may be in contempt for failure to comply with an order or requirement. Contempt proceedings can be instituted by any citizen of the state. A specific process to deal with citizen's environmental complaints exists. Where the Oklahoma Corporation Commission (**OCC**) receives a pollution complaint, the OCC must immediately review and resolve the complaint.

In South Australia, a single compliance and enforcement regime applies to all oil and gas activities. Regulators are encouraged to seek remedial action in the event of non-compliance through persuasive enforcement tools, such as informal and formal notices and warnings of non-compliance. If this fails, regulators can use compulsive enforcement tools, such as directions to carry out obligations and restrictions of activities or punitive enforcement tools such as publication of offences, administrative and other penalties, prosecution and licence cancellation.

In South Australia, oil and gas operators are classified as either high or low-supervision operators. The key difference is the extent of regulatory scrutiny in the approval process and the surveillance level of the activities undertaken by the licensee. All licensees are automatically classified as high-supervision operators unless specifically classified as low-supervision by the Minister for Mineral Resources Development after considering the licensee's work practices, procedures, systems and resources for achieving compliance, demonstrated past performance, and whether the operator is a new entrant in the industry with no proven track record. Regulatory scrutiny is higher for high-supervision licensees and focuses in greater detail on the operator's management processes and practices. High-supervision licensees are required to provide greater notice for activities and must have work-programs formally approved. High-supervision licensees need more time to get their operations approved and face greater scrutiny of their operations which may increase the time required to complete an operation.

Another incentive used in South Australia is the publication in the regulator's annual report of the names of licensees who have demonstrated outstanding motivation and performance to comply during the year. Public recognition of good operators may assist industry operators in attaining their "social licence" to operate.

Alberta presently provides and is expanding its system of incentives for voluntary self-disclosure of non-compliance in that it may result in no enforcement action where certain pre-conditions are met. At certain levels in Alberta's enforcement ladder system, the AEUB will consider a licensee's non-

compliance record when deciding to approve or deny any pending or future applications to the AEUB involving the licensee. Initial enforcement is determined by the severity of the non-compliance and is escalated for repeated non-compliance or failure to respond. Companies continuously failing to meet requirements or follow AEUB direction are subject to escalating enforcement consequences.

The enforcement ladder concept has been found to be very effective in Alberta, and is currently under review to further improve its effectiveness. Recent initiatives to improve the existing system by Alberta include:

- recognizing the likelihood of non-compliance,
- providing a single compliance process,
- simplifying the process so it is better understood, and
- supporting pro-active compliance by increasing the focus on voluntary self-disclosure.

F. SUMMARY OF INITIAL STAKEHOLDER CONSULTATIONS

An initial phase of stakeholder consultation was held in 2004 to introduce the OGRII, exchange information and seek initial comment on issues related to oil and gas regulation. Meetings were chaired by MEMPR and OGC staff with representatives from various stakeholder groups. Meetings were held in Victoria, Vancouver, Calgary, and throughout the Northeast region of British Columbia (Ft. St. John, Ft. Nelson, Dawson Creek, Pouce Coupe, Hudson's Hope and Tumbler Ridge among others). Over 65 meetings were held in total; the organizations and individuals consulted are listed in the Appendices. Treaty 8 Chiefs were also briefed on OGRII during the summer of 2004.

This section of the Discussion Paper highlights the key points that were raised in these stakeholder meetings by members of: industry, staff from provincial ministries and Crown agencies, environmental groups, landowner groups and other interested parties.

1. Single Window Status of the OGC

Initial stakeholder consultations clearly identified the need for improvement in the coordination between the OGC and other provincial government ministries and Crown agencies. Some feel that certain regulatory problems have arisen as a result of regulatory requirements and processes designed for other industries continuing to be applied to the oil and gas industry, suggesting that improvements to create a coordinated legislative regime are needed. Other stakeholders emphasize that regulatory responsibilities must be clearly defined particularly where agency overlap seems to cause inconsistencies and confusion. Well abandonment and waste disposal were specifically mentioned as areas of perceived overlapping responsibility and potentially confusion of authority. In other cases, for example pertaining to air emissions standards, industry indicated that it was possible to be in compliance with one aspect of regulation at the same time that it was non-compliant with another.

Not all stakeholders approve of a single window process because of a possible risk of inappropriately reducing government checks and balances that currently exist by having different ministries and agencies responsible for various reviews and approvals associated with a particular activity or operation. Others feel there are certain areas where the OGC should not be given exclusive powers of compliance and enforcement.

Some stakeholders feel that the agency regulating the industry must be able to develop its own policies and procedures (within the ambit of its jurisdiction) and undertake its own compliance,

monitoring and enforcement activities. However, concern was also expressed that an enhanced single-window system could increase the costs to industry of the OGC through the transfer to the OGC of responsibilities of other provincial ministries whose costs are currently funded by the province.⁵

2. Results-Based Regulation

Industry is interested in RBR concepts provided appropriate standards are put into place to enable clear understanding of how their performance will be measured against results defined in the legislation. Industry is also concerned that RBR could increase costs of compliance. Because an RBR regime focuses on outcomes rather than on the achievement of prescribed practices, compliance costs imposed on both the regulator and the oil and gas operator should decrease once the transition period has been completed. Industry has raised some concerns that their costs could rise if extraordinary effort is required to achieve results or to pay for the development of extensive surveys and data acquisition, particularly with respect to environmental results. Industry requested that government recognize and address increased costs of compliance as part of implementation planning.

Industry and other stakeholders want clear rules and expectations across government. Generally speaking, the oil and gas industry operates with considerable technical expertise, high worker safety and environmental standards, and comprehensive management structures. Stakeholders acknowledge that several industry members have very good environmental and other practices, but that performance is not uniform across the industry. An RBR regime would allow the OGC as regulator to focus its resources on those specific activities and companies that require the most scrutiny.

Both government and industry recognize that industry standards and guidelines, "best management practices" and greater reliance on professionals can be utilized in an RBR regime. There is agreement that guidelines should be developed by joint committees of regulators, industry and other stakeholders to appropriately inform and guide industry activities under the new regulatory system.

All stakeholders agree that development and implementation of an RBR regime is a long-term process to be phased in over time, involving collaboration of all stakeholders. Timely and appropriate monitoring, compliance and enforcement are essential to effective implementation and operation of an RBR regime. This is particularly valid during the early transition stages to assist the regulator and industry adapt to new responsibilities and to gather and record information necessary to build public confidence in the new system.

3. Protection of Environmental Values

Stakeholders recognized that a RBR system places an emphasis on timely, effective and appropriate compliance and enforcement. In the area of environmental issues in particular, some stakeholders expressed the view that only prescriptive regulatory methods should apply to ensure protection of environmental values. Some stakeholders felt that high-impact activities with potential for significant environmental consequences require a "precautionary principle" and are better addressed through prescriptive rules.

Several specific topics related to environmental management were raised during stakeholder discussions and these are described in detail in the following section of this Paper.

⁵ Industry pays 100% of the costs of the OGC through a system of fees and levies authorized under the *Oil and Gas Commission Act*.

4. Public Consultation

Stakeholders commented that some oil and gas companies do a good job of stakeholder consultation while others do not. There was stakeholder consensus that processes need to be developed to ensure that all companies adequately consult with landowners, First Nations and other stakeholders before and during field operations.

5. Compliance and Enforcement

All stakeholders agreed that a strong compliance and enforcement system is central to the success of a results-based regulatory regime. Some industry stakeholders are open to the idea of enforcement ladders similar to that which currently exists in Alberta, where a system of escalated enforcement is applied based on an assessment of risk and company response.

For example, regulators could seek remedial action in the event of initial non-severe instances of non-compliance through request or formal warning without the need to impose significant penalty. For more serious events or repeat offences, regulators would have the authority to use more compulsive or punitive enforcement tools such as prosecution, security forfeiture or licence cancellation.

Industry noted that they could be strongly motivated by incentives that improve the time required to process and approve permits. Industry stakeholders also noted that an enforcement ladder can be unfair to large companies with extensive operations. Others feel that large companies are not at any particular disadvantage and enforcement ladders are appropriate for all operators.

6. Sour Gas and Public Safety

Regional stakeholders are concerned about the development and production of sour gas in their area. Concerns are most notably around flaring, setback distances and emergency planning zones.⁶ Municipalities, regional districts and industry are concerned about the encroachment of public dwellings or areas of occupation on lands with existing known oil and gas facilities and pipelines.

Although setbacks exist defining how close a well, facility or pipeline may be constructed to areas proximal to human habitation or occupation, there are no reciprocal requirements to prohibit or constrain third parties from constructing dwellings or other facilities near an existing pipeline, facility or well. Stakeholders urged that the OGC should be given the power to deal with encroachment on pipelines.

7. Assurance of Government Oversight

There is a perception among some stakeholders that overlapping jurisdiction and monitoring by various provincial ministries in the area of upstream oil and gas activities ensures that regulatory goals are better attained.

Industry pointed out that much of what industry does is routine and repetitive, and does not require a system that focuses on up-front effort, especially by multiple agencies, except in cases of large and complex applications.

⁶ Setback distances are intended to regulate the location of wells and related infrastructure to limit visual, noise and other disturbances of oil and gas activities near buildings and facilities used by the public. Emergency Planning Zones (EPZs) define areas within which specific measures must be taken to protect human health and safety in the event of some type of accident (e.g. a well blow-out).

Industry, government and other stakeholders agree that an effective regulatory system, particularly an RBR system, needs to focus attention on what industry is actually doing through on-the-ground inspection, audits and other methods.

Stakeholders recognized that a RBR regime requires that OGC inspectors be better trained and informed of the standards, results, and intent of regulation. Compliance and enforcement could be conducted by OGC staff, or through coordination with other provincial ministries who conduct inspection activities. The latter may be particularly appropriate for specific activities where specialized expertise or qualifications may be necessary.

Government and industry agree that in an effective RBR regime the compliance and enforcement component must encompass a wide-range of enforcement mechanisms. All stakeholders agree the OGC needs authority to penalize non-compliant operators. Suggestions include:

- significant and relevant penalties to influence industry behaviour;
- the ability to "remove profits" (i.e., not allow a company to profit from poor behaviour);
- general powers to shut down a well site (which currently exist);
- administrative penalties (i.e., the power to issue fines without the need to proceed to a court hearing and obtain a conviction); and
- publication of violations.

Some stakeholders also mentioned that there is a perception that the OGC, as a government agency that is totally industry-funded, is to some extent a "captured" regulator, and not suited to be the vehicle for compliance and enforcement. Some stakeholders mentioned interest in some form of third-party oversight function or even third-party compliance and enforcement (e.g. as a contracted service). Other stakeholders suggested that the Forest Practices Board's oversight and audit role be examined to determine if a similar mechanism is appropriate for the OGC. Others question whether the costs of such an enforcement mechanism would be prohibitive. Some stakeholders feel that fines and penalties paid by the oil and gas industry could be directed to an environmental trust fund instead of provincial revenues.

8. Harmonization with Other British Columbia Results-Based Regulation

The *Forest and Range Practices Act (FRPA)* and related regulations is a recent initiative of the provincial government that will in future regulate both the forestry and environmental operations of the forest industry based on achieving specific regulatory results. *FRPA* does not apply to the oil and gas industry at this time apart from construction of road access^{7,8}. However, some stakeholders, government and the forestry industry believe that the oil and gas industry should observe the regulatory principles underlying *FRPA* to ensure that a common environmental and forestry ethic applies to the oil and gas industry.

The Ministry of Forests and Range (MOFR) and Ministry of Environment (MOE) have already moved toward a results-based regulatory RBR framework, and will continue to redesign their organizational structure and processes around new RBR legislation. For example, MOE no longer provides referral

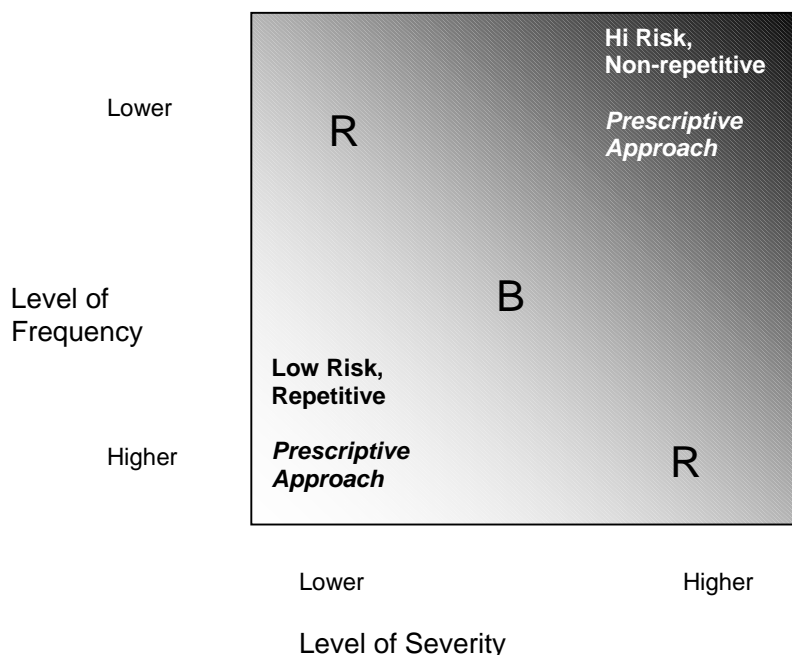
⁷ The oil and gas industry's tree harvesting activities are currently regulated under the some provisions of the Forest Practices Code. The Code has been repealed, although sections are being retained in use until an alternative regulatory system can be developed. The Code was never been intended to apply to the oil and gas industry on a permanent basis after the introduction of the *Forest and Range Practices Act*.

⁸ Roads constructed and maintained under the *Petroleum and Natural Gas Act* are subject to *FRPA*.

services for expert advice on various types of resource applications. MOE is structuring its regulatory responsibilities around the development of environmental results, and compliance and enforcement activities related to these results. Industry stakeholders understand the need for regulatory consistency within government. Other stakeholders were concerned about adequate resources and a regulatory role for MOE within the new oil and gas regulatory system.

9. Risk Management in Oil and Gas Regulation

Some stakeholders have suggested that there will be specific instances where the risk of adverse impact is so significant that industry and the public may prefer to regulate some activities based on tried and tested prescriptive methods (these may be set out in regulation or in guidelines). Industry has suggested that activities that are very routine and repetitive might also be candidates for more standardized regulatory approaches (e.g. through recognizing industry best practices). The discussion is summarized below. Government staff questioned whether prescriptive methods alone could guarantee that regulatory outcomes would be achieved.



Another area of risk identified by stakeholders involves the financial soundness of companies operating in British Columbia. Weak financial and management capacity of proponents should be a significant factor in a regulatory decision. The OGC recently initiated a program of examining the financial strength of new applicants for well authorizations and well transfers, and thus have already started down a path of differentiating among companies based on their corporate capabilities and financial strengths.

10. Adoption of Industry Best Management Practices (BMPs)

Industry described applicable engineering and other global standards that have been developed by the oil and gas industry for the safe performance of its activities. Individual companies also described their internal structures requiring compliance with "best management practices". Other stakeholders seemed not aware of the extensive work that industry undertakes to develop best practices for safety, operational, environmental and other practices.

Government stakeholders indicated interest in participating in OGC and MEMPR forums with industry for developing BMPs. Some industry stakeholders felt that applying BMPs could be a more effective regulatory method than current practices and more relevant and useful than having government perform that role by defining industry practices in a prescriptive system.

11. Responsibility of Impacts of Other Industries

Some industry members expressed concern that new legislation could hold them accountable for environmental stewardship that involved exercising some degree of control over other resource sectors and land users.⁹ Many stakeholders indicated that government needs to recognize and address issues regarding multiple industries' use of Crown lands (see below).

12. Effective and Efficient Permitting

Many stakeholders are indifferent to the type of regime implemented, as long as it enables an efficient and effective permitting process. The restriction of many oil and gas activities to the winter season places a high premium on operational efficiency for both regulators and the industry

The rules must be clear and easily understood by regulators and regulated entities, with enough flexibility to deal with a constantly evolving industry technologies and operational changes while recognizing environmental, social and economic norms. There is also a need for a degree of regulatory consistency between the different industrial sectors operating on the same land base.

13. Non-OGRII Issues

During the OGRII consultation process, some issues were raised by stakeholders that related to broader issues than the development of new legislation for the OGC. For example, concerns were expressed regarding:

- The role of the Mediation and Arbitration Board.
- The funding model for the OGC, particularly the complete reliance on industry funding. Some stakeholders proposed a model in which industry and the Province would share funding. However, at this time, no changes to the current funding arrangements are contemplated by the Province.
- Management of cumulative impacts of multiple industry activities on the land base. While the new legislation will, by virtue of being results-based, be better able to direct industry operations in a manner that will minimize the impact of oil and gas operations on the landscape, it is not possible to address the full range of cumulative impacts under OGRII. At a provincial level, the mandate for management of cumulative impacts rests with the Ministry of Agriculture and Lands (**MAL**)¹⁰, and MEMPR and other resource ministries will continue to work with MAL to address cumulative impacts.
- Retaining responsibility for occupational health and safety within the Workers' Compensation Board. Government has committed that the *Occupational Health and Safety Regulation* as it applies to oil and gas operations remains the responsibility of WCB.

⁹ For purposes of clarification, new oil and gas legislation would establish objectives that are relevant to oil and gas. The larger questions of addressing overall cumulative impacts of multiple industries on the land base is the responsibility of the Ministry of Sustainable Resource Management.

¹⁰ Through Land and Resource Management Plans and Sustainable Resource Management Plans.

- Orphan wells were mentioned by some stakeholders as being an existing or potential future concern. MEMPR already has work underway to address this issue, and for that reason orphan well policy and regulation are not part of OGR11.

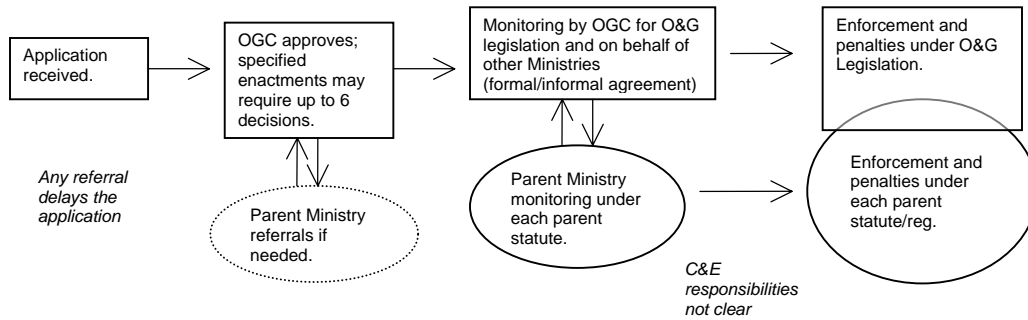
G. PROPOSED GENERAL REGULATORY CHANGES

Proposal 1. Results-Based Regulation

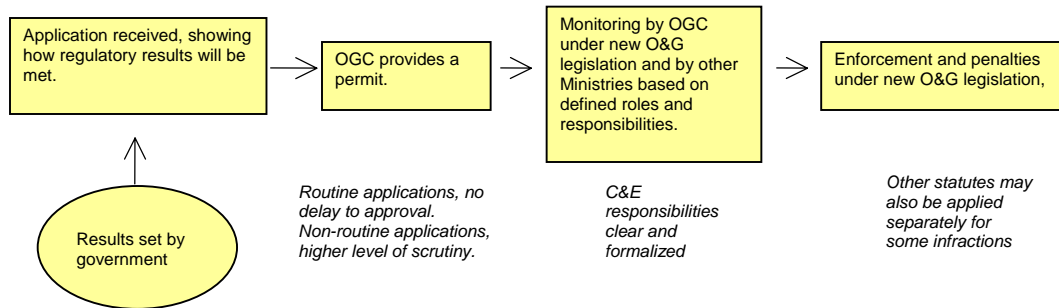
MEMPR and OGC adopt an RBR system for regulating oil and gas activities that will encompass the following specific changes:

- define regulatory results that industry will be accountable to achieve;
- establish joint responsibility for the development of regulatory results and standards for the oil and gas industry by MEMPR and the OGC with the involvement of other provincial ministries and Crown agencies having relevant statutory authority;
- tie regulatory results to measurable standards;
- provide for greater reliance, where appropriate, on industry use of qualified professionals in preparing and submitting parts of applications describing how regulatory results will be achieved;
- ensure compliance with the results and standards through a new compliance and enforcement process, utilizing a timely and effective graduated hierarchy of enforcement scrutiny and penalties (i.e. similar to Alberta's "enforcement ladder");
- employ a broad spectrum of enforcement penalties and tools to address varying severity and frequency of offences.
- allow compliance and enforcement to be done jointly with other provincial ministries and Crown agencies to provide appropriate government oversight, facilitate the inclusion of expertise from other ministries in evaluating compliance, and for situations in which complete reliance on the OGC may give rise to unacceptable costs or risks ;
- allow arm's length auditing processes where appropriate;
- reduce the number of separate applications and/or permits wherever possible.
- ensure that a results-based regulatory change conveys reduced or acceptable costs, administrative benefits or a regulatory improvement.
- encourage increased industry consultation with affected stakeholders as part of the application process.
- alternative dispute resolution process to address stakeholder and industry disagreement.
- encourage higher levels of compliance through greater industry adoption of best practices.

EXISTING REGULATORY SYSTEM: OGC and Other Ministries



PROPOSED REGULATORY SYSTEM: OGC and Other Ministries



Proposal 2. Results Relate to Key Values

Several key values have been derived from the OGR11 mandate to protect public health and safety, and the environment. These values are consistent with those expressed in *FRPA*, and results to be achieved under the new regulatory regime will be linked to these values. The values are consistent with (although not identical to) those in the *FRPA* because the regulatory language must be specific and relevant to the oil and gas industry as the regulated entity. Proposed values are:

- oil and gas development (including resource conservation and optimal development)
- public safety (including EPZs, and management of gas flaring among other things)
- soils
- visual quality
- timber
- water
- fish
- wildlife
- biodiversity
- recreation resources
- cultural heritage resources.

Proposal 3. Graduated Compliance, Enforcement and Penalty System

Design and implement an appropriate and effective hierarchical compliance and enforcement system where initial enforcement is determined by both the severity and likelihood of the non-compliance and is escalated for repeated non-compliance or failure to respond. Failure to achieve required regulatory results, and/or abide by prescriptive aspects of the new regulatory system would be recorded under the graduated enforcement hierarchy, to enable a complete history of corporate performance to be developed, and an accurate placement on the enforcement hierarchy to be determined.

Provide the OGC with primary but not necessarily exclusive authority to undertake compliance and enforcement activities with respect to the upstream oil and gas industry. Clearly define the roles and responsibilities of any other government ministries involved in compliance and enforcement.

Ensure that the OGC's compliance and enforcement powers include the ability to levy fines of sufficient magnitude as to influence oil and gas operators, remove profits, and issue administrative penalties.

Strengthen the OGC's ability to apply increasingly severe consequences to situations and companies exhibiting repeated non-compliance. Maintain the OGC's special emphasis on timeliness and efficiency where non-compliance poses an immediate or severe threat to public safety or environmental protection

Adopt the use of incentives such as voluntary self-disclosure and the publication of operators with exceptional compliant operations, adding attractive new tools to British Columbia's regulatory toolbox.

The OGC would also continue proactive initiatives, such as discussing audit results with industry, publishing information letters and advisory letters outlining non-compliance issues, and conducting forestry training courses and interagency workshops. The OGC may also issue letters to operators commending them where good practices are exhibited.

Proposal 4. Single Activity Permit: One Approval for Each Activity

Empower the OGC under the new act to issue all regulatory approvals in one permit for each distinct industry activity. The single activity permit would require that specific technical, environmental and other regulatory results be achieved.

For example, one permit could be issued for a 2-D or 3-D seismic program that would regulate the location of the seismic line, cutting and clearing of the lines, the handling of explosives for seismic shots, and the location of camps etc.

In addition, following this same example, where seismic work was to be conducted in several places within a defined geographic area, the single permit could apply to operations within that defined area. A similar single permit concept would also be applied to wells, facilities and pipelines.

Proposal 5. Development Permit: One Approval for Multiple Activities

Expand the current GDP process so that the issuance of a "Development Permit" would eliminate the need for the individual approvals for all activities related to a particular project under the permit. All activities related to one operation (e.g. roads, wells, facilities) would be incorporated into the Development Permit. All such approved activities would be required to achieve defined environmental and forestry results for the area in question. Technical and engineering results would

be defined explicitly for each activity. In effect, the Development Permit consolidates a number of single-activity permits.

Proposal 6. Reliance on Qualified Professionals

Given that some developments could be quite large, it is possible to enable portions of applications to be prepared by qualified professionals. For example, a complex proposal for a Development Permit could include some form of documentation describing how a company will undertake its operations to achieve defined regulatory results and would be submitted as part of the application process. Such a document if prepared by a qualified professional would be subject to less scrutiny by the OGC, thus simplifying the approval procedure and saving time in the approval process.

The use of qualified professionals is a feature of the oil and gas industry currently and is formally recognized under *FRPA*. A qualified professional is a person authorized under an Act to practice as a professional in relation to the subject governed by that Act. Legislated professionals are required to act in the public interest and are subject to disciplinary action if they fail to do so.

The use of qualified professionals by industry need not be implemented on a mandatory basis; proponents that are not able or willing to hire qualified professionals would continue to submit their applications to the OGC for review, assessment and approval.

Proposal 7. A Single Consolidated Statute

A new comprehensive statute that would consolidate the OGC authorities currently found in the *Pipeline Act*, the *Oil and Gas Commission Act*, and the *Petroleum and Natural Gas Act*, and incorporate the specified enactments¹¹ insofar as they are relevant to upstream permitting and compliance and enforcement for oil and gas activities.

The new statute would maintain the existing responsibilities conveyed under the specified enactments for permitting, compliance and enforcement functions. However, the performance of these functions would not relate back to the original statutes. These functions would be reconstructed so that they are fully incorporated into to the new results-based regulatory framework, and the new graduated enforcement hierarchy.

Other ministries would retain strategic and policy responsibilities, setting government's overall direction related to environmental management, forest management and other aspects of resource development that impinge on oil and gas field operations. Such other ministries would work with MEMPR and the OGC to define regulatory results and standards for measuring industry performance, thus ensuring that appropriate checks and balances are in place.

H. SPECIFIC PROPOSALS FOR REGULATORY CHANGE

The previous section of this paper set out, at a high level, proposals for changes to the way the industry is regulated in British Columbia. This section sets out specific proposals for regulatory change related to topics raised by stakeholders including:

- surface land impacts, which includes reclamation of well sites, watercourse crossings, impacts to agricultural lands, linear disturbances and right-of-way widths, and roads;
- environmental protection;

¹¹ *Forest Act, Forest Practices Code of British Columbia Act, Heritage Conservation Act, Land Act, Environmental Management Act, and Water Act.*

- flaring;
- oil and gas waste management, and
- public consultation.

For each of these proposals, the current regulatory regime is described, and some background information (e.g. comparison of regulatory practices in other jurisdictions) is provided.

Proposal 8. Public Consultation

Encourage a greater and earlier level of industry consultation with parties that may be directly and adversely affected by a proposed activity. Consider applications without such consultation, or where no effort has been made to resolve potential conflicts as higher risk, requiring greater OGC scrutiny.

Undertake a thorough review of the reconsideration process.¹²

Background

The OGC has developed *Public Involvement Guidelines* to assist operators and the public. However, at present, industry consultation with stakeholders is not compulsory. Current OGC policy that directs oil and gas operators to engage in a public consultation process prior to making a formal application flows from the OGC's responsibility in the *OGC Act* to encourage the use of consensual alternative dispute resolution methods for the purpose of resolving disputes.

Some stakeholders feel the OGC should require operators to consult with stakeholders before filing an application. Further, it was suggested that municipal governments, who act as stewards for the lands surrounding their communities, should be provided timely and accurate information by industry and the regulator with regard to oil and gas developments. Many stakeholders also feel the current reconsideration process needs significant improvements. It was suggested that the source of disputes between industry and the public submitted to the reconsideration process or that are otherwise raised with the Advisory Committee to the OGC are due to inadequate consultation by industry. It was suggested that the Advisory Committee be given the power to require the OGC to reconsider a decision rather than simply request that it do so. The Advisory Committee to the OGC has provided government with their advice.

In Alberta, the AEUB has a long history of requiring operators to consult with the public in planning and undertaking operations. This duty to conduct public consultation extends to all persons who may be "directly and adversely affected" by an activity. The obligation is on the applicant to identify all such persons and include them in a participant involvement program. Prior to filing an application, the applicant must address and attempt to resolve all concerns regarding the proposed development. If there are no outstanding concerns, the applicant may then file a "routine" application. If there are outstanding concerns, the applicant must file a "non routine" application. Non-routine applications commonly require more documentation and take longer to process. In practice this means that applicants usually strive to resolve all concerns before the application is filed. If objections remain unresolved, the AEUB then encourages use of its Appropriate Dispute Resolution process. If concerns remain, the AEUB decides the best course of action, which may include denying the application, dismissing the objection or holding a public hearing.

¹² A full proposal for a revised reconsideration process is not presented in this Discussion Paper, as options for change are still being developed.

Proposal 9. Regulatory Roles in Environmental Protection

Environmental results be clearly stipulated to provide certainty to industry and stakeholders of government's expectations, and the criteria to be used to measure and assess industry's performance. Failure to achieve environmental results would result in sanctions against the company under a hierarchical enforcement and penalty system.

Uniform, coordinated standards based on release rates be determined for air and water emissions from upstream oil and gas activities under the new oil and gas legislation.

Consistent definitions for sour gas be created.

Background

MOE is the primary ministry in British Columbia responsible for environmental protection and it administers a number of statutes and regulations that impact upstream oil and gas activities including the *Environmental Management Act*, and components of the *Forest Practices Code* (now *FRPA*). Some of MOE's legislative responsibilities have been delegated to the OGC with respect to upstream oil and gas operations through the specified enactments.

Releases of substances by the upstream oil and gas industry to air, land and water are regulated by both the OGC and MOE. For instance, surface and groundwater monitoring may be a condition of an OGC or MOE approval or permit in site specific cases and the *Water Act* requires approval holders to protect water quality. Approval holders under the *Environmental Management Act* may also be required to monitor surface and groundwater to ensure that discharges meet established standards. Section 71 and 72 of the *Drilling and Production Regulation* generally prohibit impacts to surface and groundwater quality from oil and gas operations.

Air quality protection is similarly regulated by more than one regulator. For instance, air quality monitoring may be required under the *Oil and Gas Waste Regulation* (under the *Environmental Management Act*). Both the OGC and MOE have authority to order air quality monitoring.

An additional problem is the multiple definitions of "sour gas". The *Sour Pipeline Regulation* (under the *Pipeline Act*), the *Oil and Gas Waste Regulation* (under the *Environmental Management Act*), the *Drilling and Production Regulation* (under the *Petroleum and Natural Gas Act*) and the *Occupational Health and Safety Regulation* (under the *Workers Compensation Act*) contain definitions of "sour gas", "sour wells", "sour pipeline", or "sour production liquids". These definitions are not always consistent. Some regulate H₂S by setting a limit on the gram molecular weight, while others set limits based on a percent or by measurement of the total amount of gas present (e.g. parts per million). An operator may be in compliance with one regulatory requirement but not another.

Operators are required to report any amount of hydrocarbon vapour or liquid that escapes into the environment by several regulations but the thresholds for reporting may be different in each regulation. Industry suggested a threshold should be set for reporting, such as where the emission creates an unsafe situation for workers or the public. Industry suggested that the Alberta model of having a one-time testing/estimation of emissions would be possible; however, industry would need time to comply with such a regime in British Columbia. Industry suggested that the *Drilling and Production Regulation* be clarified with respect to the venting, gathering and burning of sour gas and be based on appropriate release rates.

In addition to these more technical environmental issues, many stakeholders also expressed concerns generally with respect to environmental protection. Stakeholders were concerned with the

maintenance of provincial ecosystems and wildlife, the conservation of environmental resources, the management of protected areas and generally the manner in which environmental standards would be maintained in any new oil and gas regulatory regime.

Proposal 10. Reclamation of Well Sites

The regulatory system allow for professional certification that site restoration standards have been met. The findings of the qualified professionals would be made available to both the OGC and MOE. Where the primary tool of enforcement would continue to be MOE's Contaminated Sites Regulation, additional penalties could be applied under the new graduated enforcement hierarchy.

Background:

Upstream oil and gas activities may cause a variety of disturbances to the surface of the land at the well site that must be rectified before companies are released from liability. The *Drilling and Production Regulation* requires OGC approval of well abandonment programs and outlines requirements to abandon a well. The *Petroleum and Natural Gas Act* provides that a well is not considered abandoned until a Certificate of Restoration (**COR**) has been issued. To obtain a COR, two reclamation programs must be satisfied. The first is the reclamation requirements of the OGC's Oil and Gas Handbook, and the second is the requirements under the *Environmental Management Act's Contaminated Sites Regulation*.

Currently, the Contaminated Sites program has three levels in its investigation, and each can trigger the next level. The first is the site profile, the second is the preliminary site investigation (**PSI**) and the third is the detailed sited investigation (**DSI**). The site profile is merely a checklist. If any requirements are not met, a PSI is triggered. A PSI involves a full review of the site and a site visit. If a DSI is triggered by the PSI, then detailed investigations are required, the site is registered and a mitigation plan is developed.

The two processes are dovetailed. Under the *Contaminated Sites Regulation*, MOE has delegated authorities for the assessment of "site profiles" to local levels of government, and for oil and gas operations to the OGC. The OGC currently requests a site profile to be submitted with the application for a COR. If there are no PSI triggers, the OGC will do an inspection and (provided requirements described in the Handbook are met) issue the COR. If a PSI is triggered, the file is then forwarded to MOE.

In Alberta, changes are underway to allow professionals retained by the operators to certify that a site has been restored to standards set by Alberta Environment. The professional acknowledges responsibility for the decision as to whether a site is reclaimed according to the standards. Errors may result in personal and professional consequences. It is believed this new system will allow operators to restore more sites more quickly and free-up Alberta Environment staff for other compliance and enforcement responsibilities.

Proposal 11. Watercourse Crossings

The OGC be given greater provincial authority to regulate watercourse crossings undertaken by the upstream oil and gas industry.

Individual regulatory approvals not be required for crossings, but that the legislation require all crossings to meet defined standards.

Background

The OGC, MOFR and MOE all have some involvement in regulating watercourse crossings. Furthermore, the federal government is involved through the federal *Fisheries Act*, which is meant to protect fish and fish habitat, and the *Navigable Water Protection Act*, which prohibits construction through or across a navigable waterway without the prior approval of the federal Minister of Transportation.

British Columbia's *Water Act* requires an approval for activities in or near a stream, such as pipeline crossings and road crossings on private lands. The OGC has authority to issue approvals under the *Water Act* for oil and gas-related activities.

A *Fish-Stream Crossing Guidebook (Guidebook)* was developed under the *Forest Practices Code* by a number of provincial ministries, the OGC, Department of Fisheries and Oceans Canada and the forestry industry to help operators plan, prescribe and implement sound forest practices for fish-watercourse crossings. Although the *Guidebook* does not have the force of law, it is widely recognized and respected.

All stakeholders recognize the need to preserve and protect water courses and fish and fish habitat. Industry feels problems have arisen because the present regulations are designed for forestry and not the oil and gas industry (where the linear nature of the activities may involve a large number of crossings). Geophysical contractors, who annually may deal with thousands of watercourse crossings, are especially concerned with the stream-crossing rules. Regulations designed to address the environmental and other ramifications of large cutblocks may not be appropriate when the width of a seismic line is a few metres. Industry also notes that while directional drilling technology allows the installation of a pipeline under a stream without impact, this method is unnecessary for every crossing.

Industry suggests that RBR may be ideal for watercourse crossings and would provide opportunities to use site-appropriate practices to cross streams with minimal environmental impact. Industry also would like the development and consistent application of clear rules and policies.

Alberta has also chosen to regulate watercourse crossings primarily through the use of codes of practice under Alberta's *Water Act*. These codes regulate construction, operation, maintenance and removal of works, monitoring of watercourse crossings and reclamation of stream crossing structures and the stream itself.

In South Australia, a separate approval is not required for watercourse crossings. A licensee under South Australia's *Petroleum Act* has the right to conduct all operations, including watercourse crossings, anywhere on the landbase. The regulator reviews the licence application to ensure the environmental objectives outlined in the applicant's Statement of Environmental Objectives are met. Thus, while there are no guidelines or codes of practice requiring measures be taken for watercourse crossings, operators must prove to the regulator that their crossings will be conducted properly having due regard to established environmental results and standards.

Proposal 12. Impacts to Agricultural Lands

The RBR regime identify specific results and standards for erosion control on agricultural and forested land.

The OGC be given sole authority to order the removal of weeds from oil and gas sites, similar to the powers under the *Weed Act*. Operators would be able to choose the method of removing the weeds. However, use of chemicals would necessarily be conducted according to the requirements of the *Integrated Pest Management Act*, which would not be administered by the OGC.

Existing practices and procedures for timely abandonment of wells and facilities be reviewed to ensure they are consistent with a results-based approach to regulation of these activities.

Background

The OGC has entered into a Delegation Agreement with the Agricultural Land Commission (**ALC**) for administration of oil and gas activities in the Agricultural Land Reserve in northeastern British Columbia (i.e. Peace River and Northern Rockies regional districts). In some cases, separate approvals from the ALC may still be required for oil and gas activities.

Erosion control related to forested lands is regulated under *FRPA*, while agricultural erosion control has its own unique regulatory requirements.

Industry, the Province and landowners are concerned with impacts of the oil and gas industry, such as erosion, weeds, alienation of lands from agricultural uses, and timely abandonment and restoration of wells and facilities on agricultural lands. All of these situations have potential to result in increased conflict over oil and gas development on agricultural land. Industry feels a more effective, more independent dispute resolution mechanism is required to resolve disputes between farmers and operators. Landowners feel that greater care and attention on the part of industry is required to minimize impacts.

Present regulation of noxious weeds has two components: obligations on the occupier of land under the *Weed Control Act* to control noxious weeds, and regulation for using pesticides as a control method under the *Integrated Pest Management Act*.

The *Pipeline Act* requires that operators root out and destroy, before plants are matured to seed, any noxious weeds growing on land adjacent to pipelines. CSA standards for pipelines also address weed control. The *Drilling and Production Regulation* provides that evidence of weed control must be presented to the OGC for all suspended wells. The OGC ensures that the operator prevents the spread of weeds by cleaning equipment and re-vegetating leases quickly with clean seed.

Proposal 13. Linear Disturbances

The OGC, MEMPR and other provincial ministries and Crown agencies define regulatory goals and results for reducing proliferation of linear disturbances by industry activities (seismic, road, pipelines and facilities).

The OGC be given authority to determine appropriate right-of-way locations and widths based on RBR principles and consultation with the WCB.

Background

The width and number of rights-of-ways can impact wildlife, forestry and cause visual problems. Industry feels the environmental "footprint" of seismic lines is much smaller than it was years ago. However, stakeholders are concerned with the proliferation of linear corridors which

- impact visual quality and wildlife habitat;
- increase wildlife vulnerability to hunting; and
- generally increase public access to land.

Currently, the OGC encourages but does not require the use of existing power lines, roads and cut lines for access. However, there may be environmental management advantages if operators were required to use one corridor for roads, pipelines etc. in certain circumstances, such as in a wildlife habitat area. However, a "corridor concept" may be difficult to regulate as some companies do not want to allow competitors on their rights-of-way due to liability concerns.

Alberta also has a stated preference for "corridors". The AEUB has a policy requiring pipeline companies to consider joint use of rights-of-way where feasible to significantly reduce impacts to the landbase.

Industry notes that Alberta has incentives to promote decreased seismic line widths. For example, low impact seismic was subject to a 50% reduction of Crown levy on timber. Industry is discussing similar incentives with the government of British Columbia. Incentives as well as regulatory flexibility can help industry develop new, innovative technology. It should be noted that in terms of setting line widths, industry would be required to maintaining adequate space for evacuating an injured worker.

Proposal 14. Roads

MOFR, MEMPR, the OGC and other relevant government ministries and Crown agencies address cross-sectoral inequities in public policy for resource road development and multiple uses of such roads as a precursor to the development of future comprehensive legislation outside of the OGR II. Such legislation should authorize the OGC to control access where necessary to resource roads used primarily for oil and gas development for purposes of protecting public safety and the environment. The legislation should also ensure that every resource road has an operator responsible for its costs of maintenance to a defined standard.

Background

(a) Multiple Use

An OGC approval under the *Petroleum and Natural Gas Act* is required for a temporary well site and for the access road to the well site on Crown land. The holder of a petroleum and natural gas permit, licence or lease may request the OGC designate portions of Crown land as a development road for oil and gas activities.¹³

The petroleum road operator may enter into road use agreements with third party industrial users regarding terms and conditions for the use of that road. The *Forest Act* requires that in order to use an existing forest service road or a forest road, a road use permit must be obtained from the OGC and a road use agreement with the prime road permit holder is required. This road use agreement must include a mechanism for sharing the operational costs of the road.

Some stakeholders expressed the opinion that the appropriate provincial ministries and Crown agencies should investigate the potential for joint legislation surrounding industrial road tenures. It was also suggested that there was a need to streamline and remove duplication in the existing regulation of road tenures, possibly by authorizing multiple types of industrial use roads under a single consistent regime and prescribing relevant and consistent standards for road construction. However, it was also noted that the forestry and oil and gas industries have different needs with respect to roads that affect standards and therefore construction costs.

Both the forestry industry and the oil and gas industry build and use temporary seasonal roads as well as long-term permanent roads. Road design needs may also be similar. The differences occur

¹³ The authority under the *Petroleum Development Road (PDR) Regulation* only authorizes the holder of a PDR authorization to enter into road use agreements with other industrial road users.

in the planning and operational timeframes for developments, certainty of the long-term need for a road and relative value of the road investment compared to the value of the main project. Current provincial policies may also affect recovery of road capital costs. It was suggested that there could be a consistent regime for environmental and safety purposes but not necessarily technical standards.

(b) Road maintenance and repair during road bans

The Province has implemented a pilot project in north-east British Columbia where companies operating during the period of seasonal road restrictions ("road bans") can apply for a variance allowing them to operate heavier equipment provided an agreement is signed by the operator agreeing to remedy any damage caused. However, such agreements are rare, as costs can be expensive.

(c) Road closures

Forestry and petroleum roads typically allow for public access, but in practice, government may restrict access (e.g. by gating the road) in situations where it is necessary to protect public health and safety, and environmental values. Access for roads constructed under Ministry of Transportation (MOT) jurisdiction cannot preclude public use. While there is considerable benefit to the public from increasing access to Crown lands for recreational use, this benefit may have to be balanced against negative pressures on critical habitat, wildlife populations and risk of forest fires. If public access on resource roads is allowed, there is also a question of operators being required to finance costs of repair and maintenance in order to ensure it meets standards for public use.

(d) Road construction

It should be noted that forestry companies are allowed to deduct all road construction costs from forestry royalties (i.e. "stumpage"), and receive an additional maintenance deduction, whereas oil and gas companies receive no such deductions against oil and gas royalties for their road capital or maintenance costs. Forestry companies do not pay royalty for any gravel or fill, whereas oil companies have to pay royalty for all of their gravel, and in many cases, fill. Where an oil company road is also utilized by the forestry industry, the oil company may seek to extract user fees from forestry operators through the PDR regulations to offset the costs of the road. The different treatment of costs under existing policies is confusing to operators in both industries.

In Alberta, Sustainable Resource Development may grant Provisional Roadway Reservations to allow entry to Crown land for road development and Licences of Occupation (**LOC**). When an LOC is issued for a commercial road, the LOC holder must let other commercial interests use the road. If agreement cannot be reached, the commercial user may apply for an order under the *Public Lands Act (Dispositions and Fees Regulation)*. The public can use these roads without charge. Approvals from Alberta Transportation or applicable municipalities may also be required.

In South Australia individual licences grant the holder the right to conduct all operations and activities reasonably necessary for that activity including the construction of roads. A permit is also not required for an oil and gas operator to use a public road; however, the Ministry of Transportation may require that the operator agree to upgrade the road and pay for any damages to the road.

In South Australia, all "private" roads become public roads once built and the oil and gas operator cannot restrict travel on the road. A maintenance fee can be charged to other commercial users, but this usually only occurs where it is another oil and gas company who requires the use of the road. Where the two companies cannot agree on a reasonable fee, the petroleum regulator has authority to make a determination.

Proposal 15. Flaring

MEMPR has engaged consultants to develop a proposal for a flaring reduction strategy for British Columbia as part of OGR11. The following proposals, which are endorsed in this Discussion Paper, stem from that work:

- All regulations related to flaring from upstream oil and gas activities should be consolidated into the single new act, administered by the OGC.
- Approval of flaring activities should be within OGC's responsibilities, enhancing its single-window status. OGC should coordinate its role with MOE.
- Regulation should focus on reducing flaring and venting and improving flaring efficiency where flaring cannot be avoided. The focus should be on solution gas, well testing and gas processing as these are the largest sources of upstream flaring and venting.
- Approval of flaring activities should be based on principles similar to Alberta's rules on gas flaring limits and economic tests that establish conservation requirements, and other similar matters. Where flaring is permitted, RBR principles are more difficult to establish, so regulation should focus on prescriptive details, flare stack design and operations, reporting and similar matters.
- Flaring during well testing (with encouragement of in-line testing where reasonable) and solution gas flaring limits should be incorporated into the consolidated, single-window, results-based, proposed "single-permit" for low risk applications.

Background

Flaring is a necessary part of upstream oil and gas operations. Flaring, setback distances and Emergency Planning Zones were cited by regional stakeholders as being a key concern of upstream oil and gas development. MEMPR and the OGC plan to conduct further research on setback distances and Emergency Planning Zones before preparing future proposals for regulatory change. The following information from Environment Canada describes where and why flaring most often occurs.

"Flaring is used to consume waste gases in a safe and reliable manner through combustion in an open flame. In the petroleum industry, flaring occurs during well testing and production operations. It is routinely used to dispose of flammable gases that are either unusable or uneconomical to recover. Flaring can also be used to depressurize gas processing equipment during routine maintenance and emergencies. Venting is the release of gases directly to the atmosphere either intentionally to get rid of unwanted waste gases or unintentionally through equipment leaks and failures. Gas flaring can take place during various petroleum industry operations.

In the upstream petroleum sector, waste gases are flared at gas plants, natural gas batteries, pipelines, and during well tests.

- Gas processing plants produce market ready natural gas by removing water, sands, hydrogen sulphide, carbon dioxide, and natural gas liquids from the natural gas mixture produced at the wellhead. Waste gases, including hydrogen sulphide-rich gases, and gases burned during emergencies are flared at these facilities.
- Natural gas batteries collect and process gas collected from one or more wells. Flaring at these facilities and pipelines can occur during emergencies, equipment upsets or

failures, and maintenance operations. Flares are located at wells, dehydrators, compressors, and gathering pipelines.

- Well tests are used to determine the economic value, pressure, flow, and composition of the petroleum products within a reservoir. The waste gas that is produced during well testing is disposed of in flares, unless the testing occurs "in line", where the test gas is directed to a processing plant through nearby pipelines. ¹⁴

In British Columbia, OGC approval is required for flaring. Depending on the percentage of H₂S and the height of the flare stack, MOE may also need to be notified and may require studies and assessments.

Industry feels there are contradictory regulations with respect to flaring and minimum requirements for flare stacks. Industry recommends that harmonization with Alberta's flaring rules should be investigated despite the fact such rules are highly prescriptive. For example, Alberta's flaring rules include notification requirements, conflict resolution, flaring limits per month, non-routine flaring requirements, reporting requirements, limits on flaring gaseous hydrocarbons among other things. If a flaring permit is not required then the rules require other things such as flare stack design and operation requirements, on-site analysis of H₂S, equipment spacing requirements and warning signs.

Industry supports the flexibility shown by British Columbia in reviewing and approving well test flaring applications. Different opinions were expressed by stakeholders relating to which provincial entity (OGC or MOE) should review flare dispersion modeling.

Proposal 16. Oil and Gas Waste Management

Waste discharges to air, land and water from upstream oil and gas activities be regulated by the OGC and MOE such that infractions are recorded under the graduated enforcement hierarchy. The legislation should provide for explicit definition of agency roles and responsibilities.

Background

Authorization may be required under the *Environmental Management Act* for waste discharges from upstream oil and gas activities to air, land or water. A permit or approval also is required under the *Environmental Management Act* where an establishment engaged in exploring for, producing, transporting, storing or processing crude oil or natural gas, discharges more than a specified amount of sulphur or volatile organic carbon compounds in any 15 day period.

During well drilling operations, *Environmental Management Act* permits and approvals are required for large camps, for sour well tests, and for discharge of oil-based cuttings that do not fall within the requirements of the *Oil and Gas Waste Regulation*. The Regulation is not a prescribed regulation under the specified enactments, so penalties are applied by MOE. However, the OGC does conduct some inspections and reports infractions to MOE under an inter-agency Memorandum of Understanding.

Special (hazardous) waste storage must comply with the *Special Waste Regulation*, including, if appropriate, obtaining a permit from the OGC.

¹⁴ Environment Canada. Source: http://www.ec.gc.ca/energ/oilgas/flaring/flaring_general2_e.htm#petroleum

I. SUMMARY

This Discussion Paper has been prepared for the purposes of soliciting public feedback on regulatory concepts. It represents the combined efforts of numerous government ministries and Crown agencies to come together and develop a new strategic approach to the regulation of oil and gas development activities. The development of new legislation is a complex task. It requires government to focus and define its regulatory intentions and purpose within the range of interests expressed by industry, stakeholders, First Nations. It must consider the statutory mandates and responsibilities of other government ministries and Crown agencies. New legislation must also be rational, practical and implementable within the current and future construct of government operations. Stakeholder input is a welcome and valuable component of this process.

J. ABBREVIATIONS

ADR	Alternative dispute resolution
ALC	Agricultural Land Commission
BCA	British Columbia Assessment Authority
BMPs	Best management practices
CAGC	Canadian Association of Geophysical Contractors
CAODC	Canadian Association of Oilwell Drilling Contractors
CAPP	Canadian Association of Petroleum Producers
CAWS	Community, Aboriginal and Women's Services
CBM	Coal bed methane
COR	Certificate of Restoration
DFO	Department of Fisheries and Oceans
<i>FRPA</i>	<i>Forest and Range Practices Act</i>
<i>FPC</i>	<i>Forest Practices Code</i>
<i>FPCA</i>	<i>Forest Practices Code of British Columbia Act</i>
FSR	Forestry services road
GDP	General Development Permit
H ₂ S	Hydrogen sulphide
IAMC	Inter-Agency Management Committee
ILMB	Integrated Land Management Bureau
IRP	Industry recommended practice
MAB	Mediation and Arbitration Board
MAL	Ministry of Agriculture and Lands

MEMPR	Ministry of Energy, Mines and Petroleum Resources
MKMB	Muskwa-Kechika Management Board
MLCS	Ministry of Labour and Citizens' Services
MOE	Ministry of Environment
MOFR	Ministry of Forests and Range
MOT	Ministry of Transportation
MOU	Memorandum of Understanding
NEBC	Northeast British Columbia
NSOCFS	Northern Society of Oilfield Contractors and Service Firms
OGC	Oil and Gas Commission
OGC Act	<i>Oil and Gas Commission Act</i>
OGRII	Oil and Gas Regulatory Improvement Initiative
PAG	Petroleum Advisory Committee
PDR	Petroleum development road
PSAC	Petroleum Services Association of Canada
RBR	Results-based regulation
SAGD	Steam-assisted gravity drainage
SEPAC	Small Exploration and Producers Association of Canada
UBCM	Union of British Columbia Municipalities
VQO	Visual quality objectives
WCB	Workers' Compensation Board

K. APPENDICES

APPENDIX A: The Theory of Results-Based Regulation

Although it can be helpful to compare the advantages and disadvantages between RBR and prescriptive regulations as if the two regulatory regimes were dichotomous, in practice the two approaches are more appropriately thought of as end points along a continuum of regulatory approaches. Take the following example regarding worker protection¹⁵:

Position on the Continuum	Results-Based Standards	_____	Hybrid Prescriptive and Results-Based Standards	_____	Prescriptive Based Standards
Example Regulation	Provide medical monitoring of workers to detect health problems at a correctable stage.	Allow regulated entities to choose personal protection devices or personnel rotation in lieu of strict emission controls.	Require maximum allowable air concentrations but do not specify a compliance technique or do not require that all sources be controlled.	Establish a rate of emission standard, achieved through engineering control on each source, but do not specify the technique used.	Require engineering standards to be achieved through design-specific mandatory controls (e.g., vented sheet-metal enclosures).

Each of these regulations is a reflection of the overriding policy objective of ensuring that worker health is maintained.

On the "results-based" end of the continuum, regulated entities are given a wide discretion as to how to accomplish this objective. They are given the opportunity to determine the most cost effective and efficient method of maintaining worker health and are encouraged to investigate innovative ways of monitoring worker health. However, a significant amount of discretion is also granted to the regulator to determine whether the regulated entity is in compliance with the regulation.

On the "prescriptive" end of the continuum, regulated entities are given very little, if any, discretion as to how to meet the objective. The requirements are clearly defined and the regulated entity knows exactly what steps are necessary to achieve compliance with the regulation. However, the technology specified may be out of date and more costly or may not achieve the objective of worker health in a particular circumstance. Finally, the hybrid standards combine a mixture of the two regulatory types, and consequently contain a mixture of advantages and disadvantages.

In order to function effectively, RBR must contain certain critical features. These include:

- establishment of clear goals;
- clear, precise and succinct identification of results to be achieved under each goal that can easily be assessed by measurable standards;
- a comprehensive system of monitoring to accurately identify the impacts of industry activity on stated goals; and

¹⁵ Adapted from Coglianese, Cary, Jennifer Nash, and Todd Olmstead, "Performance and Regulation: A Conceptual Overview" (regulatory Policy Program Workshop, Washington, D.C.: May 13, 2002), at 4.

- a clear identification of a set of procedures that industry must follow when it has not achieved defined results.¹⁶

The distance between performance targets and the ultimate objective that motivated the decision to develop a regulation can also affect the effectiveness of RBR. For example, standards that focus on the ultimate regulatory objective, such as air quality, rather than more narrow objectives, such as emission limits, allow both the regulator and the regulated entity more discretion. This may be seen as an advantage as greater discretion allows the regulated entity to determine the most cost effective method of achieving stated goals. However it can also be seen as a disadvantage, for the regulated entity may not be entirely certain what degree of air quality is required.

“Benchmarking” is the process of establishing pre-activity conditions and is necessary to set standards and to measure the degree to which a result is achieved. Generally, the responsibility for defining the pre-activity condition against which performance could be measured lies with government. Where government believes the need justifies the costs, some responsibilities may be transferred to industry in a results-based framework. However, lack of information and excessive costs for pre and post performance assessments, may be valid reasons for not applying a benchmarking approach in certain areas. It is also possible to measure industry performance against a set of standards or indicators in a results-based system. This approach is also used in a prescriptive regulatory regime.

The types of problems that RBR is designed to solve can also have an impact on the effectiveness of RBR. This includes differences in the severity, likelihood and frequency of problems. For example, standards that deal with high-consequence, low-probability events (e.g. a pipeline explosion) are likely to differ fundamentally from standards that deal with low-consequence, low-probability events (e.g. failing to keep the proper documentation on site). Proponents of a more prescriptive regulatory approach argue that RBR is not appropriate in situations where the consequence of the failure to achieve defined regulatory results is catastrophic or where the likelihood of failing to achieve the regulated result is high (e.g. lack of data for use in corporate planning and government compliance measurement). Others argue that prescriptive methods of regulatory control do not in fact lessen the risks involved and RBR is equally as appropriate as a more prescriptive method.

Some regulatees and regulators can find the high levels of discretion inherent in RBR troublesome. For example, RBR might provide that liquid waste from a well must be stored in such a manner so as not to adversely effect the environment. Each regulated entity would then need to determine, based on each specific site, the best methods of storing liquid waste. If a review were initiated to determine whether the regulated entity was complying with the regulation, an investigator would need to take into account all the circumstances surrounding the storage of waste and analyse what measures were taken, the reasons behind such measures and determine exactly what constituted an "adverse effect" as per that specific site. Such a review may take more time and effort than simply determining whether a list of prescriptive type regulations had been followed.

While the principle way of incorporating a RBR philosophy into a regulatory regime - namely using "results" as the basis for the legal commands found in regulatory standards - there are also other ways in which results can be integrated into the mission and operation of regulatory agencies. "Results" or "performance" can also be used as a condition for different approval processes to be applied. For example, regulated entities that demonstrate consistently that they meet or exceed required standards may be permitted greater flexibility or given exemptions from otherwise applicable procedural steps.

¹⁶ Adapted from Dr. Ben Cashore, "Analysis of British Columbia Government's Results-Based Code *Discussion Paper* (Yale School of Forestry and Environmental Studies).

APPENDIX B: Proposed Terminology for Results-based Oil and Gas Regulation

This terminology has not been approved and is included for illustrative purposes only.

Results-based regulatory requirements specify government's expectations. Industry performance will be measured against achievement of results specified in the statute and regulations.

Compliance Guides provide information, advice and recommendations to guide operations. They include such things as guidebooks, best management practices, industry recommended practices, and other documentation that will help guide industry to conduct operations appropriately to achieve results.

APPENDIX C: Summary of OGRII Consultation, 2004

Initial consultations were held with the following industry organizations and individual companies:

- Canadian Association of Petroleum Producers
- Canadian Association of Oilwell Drilling Contractors
- Canadian Association of Geophysical Contractors
- Petroleum Services Association of Canada
- Pacific Northern Gas Limited
- Pembina Pipelines
- Duke Energy Gas Transmission
- Terasen Pipelines
- Northern Society of Oilfield Contractors and Service Firms
- Petroleum Advisory Committee

MEMPR contacted various provincial government ministries and Crown agencies. Meetings were held with representatives from the following:

- MEMPR
- OGC
- Ministry of Sustainable Resource Management
- Land and Water British Columbia
- Ministry of Transportation
- Ministry of Water, Land and Air Protection
- Ministry of Forests and Range
- Workers' Compensation Board
- Agricultural Land Commission
- Ministry of Agriculture, Food and Fisheries
- Ministry of Labour and Citizens' Services
- Forests Practices Board
- Joint Steering Committee of MOFR and MOE
- Ministry of Attorney General
- Mediation and Arbitration Board
- Environmental Assessment Office
- Community, Aboriginal and Women's Services, Archaeology Branch and Safety Standards Branch
- Inter-Agency Management Committee

Invitations to meet and discuss the project have been extended to the following First Nations groups:

- Treaty 8 Chiefs
- Macleod Lake Indian Band
- Kaska Dene

Other stakeholders who were consulted as part of the initial round of stakeholder consultation included:

Abiti-Consolidated (MacKenzie)	British Columbia-Yukon Chamber of Mines
Muskwa-Kechika Management Board	Union of British Columbia Municipalities
Chetwynd Environmental Society	Council of Forest Industries
NEBC Columbia Guide Outfitters	CANFOR

Association

David Suzuki Foundation
Sierra Club of British Columbia
Canadian Parks and Wilderness Society
Wilderness Tourism Association
West Coast Environmental Law
Sierra Legal Defence Fund
Western Canada Wilderness Committee
Mayor and Town Council of Elkford
British Columbia Wildlife Federation
West Fraser Timber Co.
Fort St. John Chamber of Commerce
Mediation and Arbitration Board
Old Hope Residents Association
Forage and Forage Seed Association
B.C. Cattlemen's Association
B.C. Grain Producers Association
Hudson Hope Landowners' Association
Concerned Citizens about Coal Bed Methane
Mayors of Fernie, Fort Nelson, Ft. St. John, Hudson's Hope and MacKenzie
Fort Nelson Town Council and Northern Rockies Regional District

West Fraser Timber Co.
Slocan Forest Products
Louisiana Pacific Corp.
Peace River Regional District
Peace River Woodlot Association
Northeast Aboriginal Business Centre
British Columbia Trappers Association
City of Fort St. John
District of Taylor
City of Dawson Creek
Town of Pouce Coupe
District of Tumbler Ridge
District of Hudson's Hope
Northern Rockies Regional District
Town of Fort Nelson
Fort Nelson Chamber of Commerce
Peace River Landowners' Association
Department of Fisheries and Oceans Canada
Council of Forest Industries

The consultations occurred in Fort St. John, Fort Nelson, Victoria, Vancouver, Hudson's Hope, Dawson Creek, Prince George, Chetwynd, Charlie Lake, MacLeod Lake, Taylor, Pouce Coupe, Tumbler Ridge and Calgary from late April to late July, 2004. Representatives from MEMPR and the OGC attended Victoria, Vancouver and Calgary meetings. Regional meetings were conducted by MEMPR staff.

Others contacted during 2004, but who did not attend briefings: the Small Exploration and Producers Association of Canada, the Pembina Institute for Appropriate Development, and the Dogwood Initiative.