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John Bishop Ballem Q.C.

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John Bishop Ballem, Q.C.* Energy from Canada's Frontier: A Fading Dream?

1. Introduction

By the end of the present century, oil and gas from Canada's frontier *should* comprise a substantial proportion of our total energy supply. The economic activity generated by the huge capital investments required to utilize these resources *should* have done much to improve Canada's economy. However, whether these desirable goals will, in fact, be achieved is still very much an open question. Ordinarily, the fundamental uncertainty in dealing with oil and gas concerns whether or not these elusive substances actually exist in the area being searched. In the case of frontier oil and gas, however, the real question is not so much whether the hydrocarbons themselves exist, but whether there is a national will to harness these resources.

There has been sufficient exploration in the frontier areas such that it is now possible to predict, with a fair measure of confidence, that threshhold reserves of either oil or natural gas will be established in the following areas: the Scotian Shelf, offshore Newfoundland, the Mackenzie Delta-Beaufort Sea, and the Arctic Islands. Threshhold reserves are those reserves which will support a level of daily production great enough to justify the multi-billion dollar investments that are required in order to bring the reserves to market. The Scotian Shelf is gas prone, and will require initial daily volumes of approximately 500 million cubic feet ($14.6 \times 10^6 \text{m}^3$) to make development feasible. The existence of reserves of the magnitude necessary to provide this level of production has already been established. The Hibernia oil field, off the coast of Newfoundland, will require minimum daily volumes of 250,000 barrels (39,683 m³) per day, and again, the necessary reserves have been proved to exist. Sufficient natural gas has been found in the Arctic Islands to support a proposal to liquify natural gas and move it to market with icebreaking tankers. If the Arctic Island reserves were to be combined with those in the Mackenzie Delta — Beaufort Sea area, the total would be sufficient to justify a gas pipeline

^{*}Of Ballem, McDill and MacInnes, Calgary.

system. Oil from the Arctic is still problematic. It has been discovered in both the Arctic Islands and the Beaufort Sea, but to date the results have fallen well short of the necessary threshhold volumes.

From a purely physical and technological viewpoint, these frontier resources are now ready to be tapped. However, the actual timing of their development will ultimately depend on economic considerations and on the national objectives mandated by government. The economic aspects are related directly to the fundamental economic principle of supply and demand. The supply is available, but the demand must be present before the source of supply can be developed.

The demand for frontier oil and gas is a complex matter, involving such considerations as worldwide supply, pricing policies, conservation, and the fortunes of OPEC. This demand is also in a state of constant flux. During the early seventies, it was popularly supposed that Canada was facing a shortage of natural gas, and that there was a critical need for frontier sources to meet the deficiency. As a result, several projects were proposed to bring Mackenzie Delta gas to market. None of the proposed projects have materialized, due primarily to the fact that the apprehended shortage never did occur. In this particular instance, the situation worked out for the best. However, the experience is a very good illustration of the short time-span in which energy-related situations can reverse themselves. It is also a reminder that we should not allow ourselves to be lulled into a false sense of security as a result of today's energy glut.

As is often the case, the economic viability of developing our frontier resources will depend on external factors over which Canada has no control. If oil remains in a state of oversupply throughout the world and the price fails to regain its upward momentum, it simply will not be economic to bring some of the frontier areas into production. Hibernia, and possibly the Scotian Shelf project, will probably proceed in any event, since they can become operational fairly soon and because their economics allow for some flexibility. However, the more costly arctic projects would probably fall by the wayside, and would continue only on a pilot basis in order to refine the necessary technology. On the other hand, if the world oil situation improves in the next two to three years, as seems probable, all of these projects could be put into operation. Nevertheless, important as the economic aspects are, national

objectives, as perceived by government, will play the decisive role in determining when the resources of the frontiers will be utilized. It hardly seems necessary to point out that economic reality and government-mandated objectives are not always consistent with each other.

The first thing to be noted about frontier resources is that, without exception, they are located in areas where the federal government is the dominant force. In the Mackenzie Delta, the Beaufort Sea, and the Arctic Islands, the federal government has virtually exclusive legislative jurisdiction. This jurisdiction may be diluted in the future as the Yukon and the Northwest Territories achieve greater political status, but the federal government can still be expected to maintain a very considerable presence. With respect to the east coast's offshore resources, the opposition expressed by the provinces has been very much a factor. The jurisdictional dispute between the province of Nova Scotia and the federal government has been settled politically, if not legally, with an agreement between the two governments that they will share administration. The dispute between the Newfoundland government and the federal government has, so far, resisted a political solution, and the legal question is currently before the courts. The federal government has asked the Supreme Court of Canada to consider the question by way of a constitutional reference. A similar reference, made by the Newfoundland government to the Newfoundland courts, resulted in a unanimous decision to uphold the federal government's claim to ownership of the resources that lie seaward of the territorial sea. The Newfoundland government has appealed this decision to the Supreme Court of Canada. Regardless of the final outcome, federal legislation and regulation will continue to play a significant role in the development of Newfoundland's offshore resources.

In the past few years, the federal government has intervened extensively in the resource field, and has done so principally through the National Energy Program. The government's overall plan involves the following major components:

- (a) a substantial degree of direct government ownership and participation;
- (b) the establishment of a system to direct and administer operations on the frontiers;
- (c) energy self-sufficiency;
- (d) "Canadianization" of the industry;
- (e) increased frontier activity.

It is difficult to disagree with any of the stated objectives when they are viewed in isolation. For example, no one can seriously argue that the foreign ownership of the industry should remain at its 1980 level of seventy-two percent, or that energy self-sufficiency is not an enviable position to be in when so much of the world's supply is controlled by capricious and unpredictable host countries. The trouble is that it is impossible to view each of these objectives in isolation; they are unavoidably interrelated. Moreover, it simply may not be possible to achieve all of them simultaneously, and conditions may dictate that different emphasis be placed on the various objectives in order to not jeopardize their ultimate attainment.

For the purposes of this discussion, I have assigned the highest priority to the objective of developing the frontier resources. There are grounds for concern that existing legislation and the regulatory processes in this country may be hindering, rather than helping, this development. The importance of frontier energy demands that an examination of the situation be made to see if this concern is justified.

II. Legislation

The Canada Oil and Gas Act, which took more than a decade to be completed, is clearly designed to be a comprehensive code, covering virtually every aspect of exploration and development on frontier lands. The act applies to "Canada lands", which are defined as federal lands in the Yukon Territory, in the Northwest Territories, on Sable Island, and offshore. The offshore areas extend to the greater of either the outer edge of the continental margin or a distance of two hundred nautical miles. The act has retroactive operation, as, subject to certain transitional provisions, it affects existing rights.

The act sets up the regime which all operators in the frontier areas must operate under. However, it is much more extensive than that, as it is also the instrument under which the federal government's ownership role is created and it is characterized by an almost unlimited discretion, conferred upon the officials responsible for its administration. The discretionary powers of the minister (who is the Minister of Energy, Mines & Resources or the Minister of Indian Affairs and Northern Development, depending on which depart-

^{1.} S.C. 1980-81-82, c. 81.

ment has administrative responsibility for the lands in question) commence at the earliest stage of development — the initial disposition of the Canada lands. Under the act, this initial disposition is carried out by way of an exploration agreement which grants a non-exclusive right to explore and an exclusive right to drill, develop, and obtain a production licence. Before entering into an exploration agreement, the minister will publish a notice calling for the submission of proposals. In the normal course of events, he may then select any proposal and may take into account whatever factors he considers to be appropriate and in the "public interest". There are no guidelines whereby the industry can ascertain what factors will be decisive in securing the approval of the minister, that is, whether proposals will be favored which include large cash bonuses, long-term work programs, acceptable Canadian ownership rates, or Petro-Canada as a party, or whether other factors will be taken into consideration. In addition, the act does not make it clear whether the call for proposals is similar to the traditional system of posting lands for public auction, or whether the minister is free to negotiate an arrangement with one party to an advanced stage, and then search for more attractive offers.

Although calling for proposals is the standard procedure under the act, the minister may enter into an exploration agreement without going through that formality. The only check on his power to dispose of mineral rights by private arrangement is the requirement to publish a notice of the exploration agreement, along with a summary of its terms and conditions. The authority to enter into exploration agreements without calling for public proposals or tenders is a marked departure from what has been the norm in conventional oil and gas development in this country.

The government defends this ability to deal privately, on the ground that it will expedite frontier development. However, as there is no way of knowing what other parties might have been prepared to offer, there can be no assurance that frontier development will, in fact, be expedited or that it is taking place on the best possible terms. That the government intends to make use of this wide discretion was demonstrated by one of the first dispositions of Canada lands under the act. In July, 1982, the Minister of Energy, Mines and Resources awarded four exploration agreements which cover some 4.2 million acres (1.2 million hectares), approximately 30 kilometers north of Sable Island. The exploration agreements were entered into with Petro-Canada Exploration Inc. (which held a

50 percent interest), Bow Valley Industries Ltd. (with a 25 percent interest), and Husky Oil Operations Ltd. (also with a 25 percent interest), without calling for any other proposals.

When an exploration agreement is in force, the minister has the power to unilaterally increase and accelerate the financial obligations of the holder. If he declares that there has been a "significant discovery", he is then able to order the drilling of additional wells and is limited only by the fact that no drilling order can require an interest owner to drill more than three wells at one time. Since the cost of a single frontier well can amount to hundreds of millions of dollars, the risk of being faced with such a declaration could be prohibitive to a potential participant. Under an exploration agreement, the minister also has the right to declare that there has been a "commercial discovery", whereupon he can issue further drilling orders with no limitation on the number of wells, and can even specify the time and the location of the drilling. With powers such as these, the government has taken a seat at the corporate boardroom table, and seems also to fancy itself in the role of geologist.

Other important areas in which ministerial discretion can be exercised are:

- a) the negotiation of the terms under which an expiring exploration agreement may be extended;
- b) the issuing of orders that Petro-Canada will be the operator of any interest;
- c) the issuing of orders to commence, continue, or increase production;
- d) veto power over any transfer, assignment, or other disposition of an interest;
- e) decisions regarding what portion of the lands held under existing permits may be retained by the holder.

The act does provide for a limited review of the minister's exercise of some of his discretionary powers. However, there are substantial discretionary powers that are not subject to such a review procedure. Some of the more important exceptions include his decisions to issue production licences, to issue drilling orders, and not to call for exploration agreement proposals. Furthermore, even in those cases where it does exist, the protection offered by the review procedure is extremely limited. The review process consists of notice of the proposed order being given prior to the order being made, a hearing being conducted by the minister, and, if requested,

reasons being given for the order. Thus, the minister is the sole judge of his own exercise of discretionary power. This unfortunate aspect could have been avoided by the designation of some independent board or tribunal as the reviewing agency, either on an ad hoc basis, or in a continuing capacity such as that of the National Energy Board. The act does provide a right to appeal the result of the minister's review of his own order to the federal Court of Appeal under section 28 of The Federal Court Act.² This appeal is restricted to cases which involve abuse of the rules of natural justice, errors in law, or erroneous findings of fact which were made in a perverse or capricious manner or without regard to the evidence. The broad discretionary power of the minister would make it exceedingly difficult to establish any error of law or violation of natural justice.

The discretionary powers embodied in the act are compounded by what appear to be deliberate ambiguities and vagueness in the wording of many important sections. Many terms which one would normally expect to have been defined are left open. There is, for example, no definition of "related" or "adjacent" lands, terms which are relevant to the extent of the lands to be included in any renegotiation of an exploration agreement and to the determination of lands subject to drilling obligations which result from the declaration of a significant or commercial discovery. Lawyers grow accustomed to coping with ambiguities and vague wording in statutes, English being the imprecise and flexible language that it is. Nonetheless, it is fair to say that the act has more than its share of such problems. It may be that some of the uncertainties will be removed by regulations passed under the wide regulatory powers conferred on cabinet by the act. On the other hand, the vagueness is so closely allied to the broad discretionary power of the minister that it would appear to be a deliberate attempt to leave as much as possible to future and arbitrary determination. This may be desirable from the government's point of view, but it seems to require considerable courage, or blind trust, on the part of oil companies to proceed in the face of such unknowns.

An exploration agreement does not confer the right to produce on those involved in the agreement. Production can only occur when a production licence has been obtained and the holder has succeeded in satisfying the minister that a commercial discovery has been

^{2.} R.S.C. 1970 (2nd Supp.), c. 10.

made. It is only at this stage that the act concerns itself with the matter of Canadian ownership. If the holders of a production licence do not collectively have a Canadian Ownership Rating of at least fifty percent, the shortfall will revert to the Crown.³ Although the act only introduces Canadian ownership considerations at the production stage, the effect of these considerations may be felt much earlier. For example, if a multi-national company knows that it can only obtain a very restricted right to produce, it will not be inclined to spend the enormous sums required to explore the potential of the frontiers. While frontier exploration is an enormously expensive proposition, the development phase which leads up to production can be ten times as costly. In addition, the attachment of frontier resources requires multi-billion dollar facilities, such as liquifaction plants, icebreaking tankers, and arctic pipelines. The roster of corporations with enough financial clout to even contemplate such enormous investments is extremely limited. If the participation of multi-nationals is discouraged, there are very few Canadian companies that can replace them in financing these mega-projects.

There are those who believe that the government can and will replace the multi-nationals as the source of financing. While the government has given financial support to the exploration stage through the use of petroleum incentive grants, as will be discussed later, it has so far shown little interest in financing the actual development projects. Moreover, there is considerable doubt that the government could finance the vast sums required, even if it were inclined to do so. The current annual deficits of thirty billion dollars will seem almost trifling when compared to the mind-boggling expenditures necessary to harness frontier energy.

Another major thrust of the act is that it reserves for the federal Crown a twenty-five percent share in all interests. This crown share is carved out of the interests held by the various parties, with virtually no compensation offered. The minister may offer the crown share by public tender or he may transfer it to a designated crown corporation, such as Petro-Canada, at any time prior to authorizing a "system" for producing oil or gas. Until this authorization, the crown share is a carried interest, and the crown

^{3.} The process by which the Canadian Ownership Rating (COR) is determined does not form part of the act. It is dealt with under the Canadian Ownership and Control Determination Act, S.C. 1980-81-82, c. 107 (Part II).

corporation is allowed to participate and vote in decisions respecting operations on the lands, even though it bears none of the costs. In addition, the minister may direct that the corporation shall be the operator, although it must, upon this direction, convert the carried interest into a normal working interest.

The reservation of the twenty-five percent share for the Crown applies not only to newly acquired rights, but also to existing rights. This confiscatory aspect of the act has had a serious, negative impact on investor confidence in foreign capital markets. It is, of course, difficult to quantify the impact that this will have on the future financing of frontier development, but there is no doubt that it will be reflected in both the availability and the cost of capital.

Traditionally, the oil industry seems to work best, particularly in the exploration phase, when a large number of participants is actively involved in the search. The resultant competition leads to active and aggressive exploration and to the development of new exploration techniques. While reserves at or near threshhold levels have already been established in a number of frontier areas, the greatest benefit to Canada will occur only when substantial volumes in excess of the bare economic minimums are discovered and developed.

An overall assessment of the act seems to indicate that the government may have made some serious miscaculations with regard to the timing of several of its measures, and this may have the untoward effect of eliminating some of the essential players. The thinning of the ranks will, almost inevitably, be brought about by the following aspects and effects of the act:

- (a) Canadianization of the industry;
- (b) the undermining of industry and investor confidence by the reservation of sweeping discretionary powers;
- (c) the reluctance of companies to accept the uncertainties and risks inherent in the discretionary powers and vagueness of the act;
- (d) the minister's ability to discriminate among potential participants.

The Petroleum Incentives Program Act⁴ will offset some of the negative aspects of the Canada Oil and Gas Act, while aggravating others. The incentive program is designed to increase the level of Canadian participation and to encourage exploration on federal

^{4.} S.C. 1980-81-82, c. 107 (Part I).

lands. It seeks to achieve this twofold purpose through a system of incentive, or PIP, grants, which were intended to be funded by additional revenue generated by new taxes enacted under the National Energy Program, and primarily by the tax to be collected under the Petroleum and Gas Revenue Tax Act.⁵ Except for those who are philosophically in favor of complete state intervention, the spectacle of a government gathering revenues from the private sector and then doling them out again to meet its own objectives cannot help but be disquieting — and is even more so when one thinks of how this same approach could be applied in other areas of economic activity.

The PIP grants are slanted in favor of exploration on federal lands, since they can then be for as much as eighty percent of the exploration expenses, while the maximum amount allotted for exploration on provincial lands is only thirty-five percent. The Canadianization aspect is achieved by adjusting the level of the grants according to the applicant's Canadian Ownership Rate. The grants can range from a minimum of twenty-five percent for an applicant with a Canadian Ownership Rate of less than fifty percent to a maximum of eighty percent for those with a rating of seventy-five percent or higher.6

The Petroleum Incentives Program will have the positive effect of making it possible for a number of the smaller Canadian companies to participate in frontier exploration, and will thus encourage the Canadianization of frontier exploration. However, the grants are only available for the exploratory phase of frontier development: the program does nothing to facilitate the development phase. And, by discriminating so severely against foreign companies, it aggravates one of the more negative aspects of the Canada Oil and Gas Act.

III. The Regulatory Process

Any large oil and gas project brings with it an assortment of technical, economic, environmental, and socio-economic concerns. The frontiers, however, involve more numerous and more delicate environmental concerns, as well as unique social structures. The

^{5.} S.C. 1980-81-81, c. 68 (Part IV).

^{6.} The seventy-five percent requirement will not be fully effective until 1986. The requirement in 1981 is sixty-five percent, with annual increases until the seventy-five percent level is reached in 1986.

harsh physical environment also means that novel technology must be employed, and the magnitude of the necessary investment will entail unique financing concepts. All of these factors indicate that frontier projects must be scrutinized very carefully before construction is authorized. Yet, while caution is clearly called for, it should not be exercised to the point of becoming counter-productive and, in effect, eliminating worthwhile projects that are truly in the national interest. Frontier projects are highly vulnerable to over-regulation, since they are at the economic margin and are critically sensitive to the increased costs and loss of revenue caused by undue delay.

Today, any applicant seeking approval for a project faces a daunting array of regulatory hurdles. The regulatory structure that is presently in place appears to have grown haphazardly and exponentially. It comes in many guises, including the traditional quasi-judicial tribunals, such as the National Energy Board (NEB); specially appointed commissions, the most famous of which is the Mackenzie Valley Pipeline Inquiry, which was conducted by Mr. Justice Berger; and the increasing number of review and approval processes that are being developed within the bureaucracy, such as the Canadian Oil and Gas Lands Administration (COGLA). The NEB is unquestionably the most conspicuous and important of these review agencies. It has original jurisdiction over three major elements that are essential to the success of any frontier development. First, the export of oil or gas from Canada cannot occur without a licence from the NEB. It is almost certain that the frontier projects will require a substantial export component, at least initially, in order to be economically viable. Second, the NEB has complete jurisdiction over the construction of the necessary facilities, such as pipelines to transport the resource. Finally, and almost as important, it has complete jurisdiction over the tolls to be collected by the project. In the past, tolls were not fixed until after a project was in operation, but the huge investments involved in the frontiers require the chosen form of tariff to be in place before a project can be financed. In addition to the three areas of original jurisdiction, the minister may request the NEB to inquire into and advise him on any energy matter, and the cabinet may direct the board to assume supervision and control over the movement of oil and gas out of the producing province or an offshore area.

The most obvious form of over-regulation today lies in the duplication of the approval process. For example, a new project

must face a detailed review of all its aspects by the NEB, a review of the environmental and social aspects by an ad hoc panel which is established by the government, a possible review by a specially appointed commission of inquiry, and a variety of specialized reviews by one or more government departments and agencies. A multi-layered structure such as this makes it impossible to avoid costly and unnecessary duplication. Undoubtedly, the most glaring example of duplication occurred in connection with the proposed Mackenzie Valley Pipeline. The Inquiry Commissioner presided over some twenty months of hearings on the environmental and socio-economic impact of the competing projects, while the NEB was simultaneously reviewing the selfsame aspects of those projects. The result was that an unfair and unjustified burden was placed on the applicants to prove their cases not once, but twice.

Duplication continues to be a problem, as was evidenced by the Norman Wells Pipeline application in 1980. An Environmental Assessment Review Process (EARP) has been established by the Government Organization Act, 1979,⁷ and is intended to assess at an early stage any adverse environmental effects of projects on federal lands, and to hold further reviews of those activities that are found to have probable and significant adverse effects. Insofar as an assessment is made at an early stage in the development of a project and it is done when there are no other applicable reviews, the process is undoubtedly beneficial. If, however, as happened in the Norman Wells case, the process takes place contemporaneously with the NEB hearings, the result is a totally unjustified duplication.

The worst aspect of regulatory duplication is that it is unnecessary; the best is that it should be easy to eliminate. The problem of duplication can be remedied in one of two ways: by the "one-window" approach, whereby one tribunal is given sole responsibility for evaluating an application, or by compartmentalizing the jurisdiction among a number of tribunals in such a way as to ensure that there is no jurisdictional overlap. The second approach is not recommended, as it would appear to be difficult to implement in practice because frontier projects do not lend themselves to piecemeal examination. However, the first alternative — the one-window approach — seems to be a workable and readily attainable solution. In large measure, it has already been successful in Alberta, where the Energy Resources Conservation Board

^{7.} S.C., 1978-79, c. 13, s. 15.

(ERCB) functions as the public review agency for provincial energy projects. The one-window approach is enhanced by the attitude of the Alberta government, which normally relies on the findings of the ERCB, rather than requiring additional bureaucratic reviews. COGLA is frequently cited as a federal example of the one-window approach, and since it is designed to combine the concerns of two federal departments, it is clearly a step in the right direction. Nonetheless, there still remains a multiplicity of other federal agencies and tribunals which must be dealt with by any applicant.

If a one-window approach were to be instituted, the obvious vehicle would appear to be the NEB. It has been in existence since 1959, and has accumulated a body of experience and expertise in areas that are relevant to frontier projects. The selection of the NEB as the one-window agency would also ensure that applications were dealt with by a quasi-judicial, rather than a purely administrative, body. A quasi-judicial tribunal has, at least in theory, an element of independence, and its procedures are subject to the full array of the rules of natural justice.

Apart from duplication, the application process itself is another element of the regulatory process that is in serious need of revision. At present, detailed requirements must be met before the applicant walks through the hearing room door, and the applicant must undertake numerous studies, containing minutely detailed information, in order to meet these requirements. Applications are no longer measured by the number of pages they contain, but by the number of meters of shelf space they occupy. These requirements not only place what may, in some instances, be a prohibitive burden on an applicant, but are frequently of limited value in assessing an application. In many cases, there are so many variables that it is literally impossible to determine the exact form the projects will ultimately take, a degree of uncertainty which makes many of the studies almost completely hypothetical. Furthermore, the lengthy lead time required to bring the projects to completion increases the number of variables that have to be taken into consideration. In the result, many of the intensive studies which an applicant is required to provide at an early stage turn out to be of very limited assistance.

Better quality information could be obtained and some applicants might come forward if a step-wise approval procedure were to be instituted. An applicant should be able to find out at an early stage whether or not his proposal is acceptable in principle, and this "go or no go" decision could be arrived at without involving the mass of

supporting detail that is presently required. At this initial stage, the tribunal could also deal with issues of broad public interest and matters of principle, with detailed studies to follow at a second stage. The first stage could result in outright rejection on public policy grounds, approval with a lengthy list of conditions to be satisfied, or the information that there were no fundamental deficiencies in the application, which would remove at least some of the risk of proceeding with a full-scale application.

Undoubtedly, there will be those who would criticize this step-wise approach on the ground that it may give unfair momentum to a project. While this may be a valid cause for concern, it is, on balance, an acceptable risk that is preferable to the present situation, which seems designed to inhibit frontier development.

Additional reforms could also improve the hearing process itself and expedite the procedure, without jeopardizing the rights of the participants. There could, for example, be much more extensive use of prehearing conferences to collect facts and isolate the issues that are truly contentious. The same objective would be served by an increased use of information requests, on the part of both the tribunal and the participants, in order to obtain data and information which does not need to be tested by cross-examination or which is necessary for the preparation of effective cross-examination. Discovery procedures could also be used to get factual information on the record without taking up valuable hearing time. These information gathering recommendations could be implemented by the respective tribunals, under their own rules of practice.

IV. Conclusion

The combined effect of the legislation embodied in the Canada Oil and Gas Act and the existing regulatory structure is clearly working against the realization of the resource potential of our frontiers. No doubt many would argue that this is an acceptable price to pay for the attainment of some of the other governmentmandated national objectives described earlier. The frontiers, however, represent our best, and perhaps only, hope of achieving energy self-sufficiency. In view of the fact that the major producing countries in the western world include such volatile and unpredictable states as Iran, Libya, and Nigeria, and that even currently reliable sources, such as Saudi Arabia, are susceptible to "de-stabilization", it seems obvious that Canada should pursue the attachment of frontier energy as one of its most pressing national goals. It would be a tragic mistake to leave unnecessary obstacles in place when they can be removed without sacrificing the effectiveness of the regulatory review process or the ultimate attainment of other desirable social goals. If these obstacles are not removed or moderated, the effect may be to eliminate some of the larger projects, or, at the very least, to delay them until the next century.