**Introduction**

Unlike land use planners, environmental and natural resource regulators typically have a project-specific focus. But the efficacy of this focus is challenged by the linkages between the single projects being reviewed and numerous other projects or activities. There are two types of linkages. One type arises when the project being reviewed has effects that are cumulative in nature with effects from other projects or activities in a given region. The second type arises when the project being reviewed, if approved and developed, spurs other activities that cause adverse effects. In the energy sector, these spinoff activities are typically referred to as activities that are “upstream” and “downstream” of the energy project being reviewed.

The two sets of linkages are overlapping in that sometimes the effects of upstream and downstream activities may operate cumulatively with the primary project’s own effects. But those effects are not always cumulative to those of the primary project, so the two sets of linkages are not identical.

There has been considerable controversy over whether project-specific regulators should account for, and ameliorate, adverse cumulative effects and upstream/downstream effects. Proponents of this approach have justified it on environmental protection grounds, but others have questioned it on grounds of fairness and practicality, and on legal grounds related to the constitutional division of labour among federal and provincial governments.

This paper addresses the second of these two sets of linkages—relating to upstream/downstream effects—in the context of the National Energy Board’s forthcoming review of the proposed “Mackenzie Valley pipeline,” a roughly 1300 km pipeline that would transmit northern natural gas to southern markets by connecting to an Alberta hub in a North American natural gas pipeline system.

The challenge of dealing with upstream/downstream linkages has arguably been particularly problematic for the National Energy Board (NEB), the semi-independent federal agency that regulates inter-jurisdictional pipelines, and international (and some inter-provincial) electricity transmission lines, as well as energy exports, and oil and gas development in the Northwest Territories and in certain offshore regions. The NEB’s strategies with respect to upstream/downstream effects have been challenged by advocates from different sides and in litigation that has gone all the way to the Supreme Court of Canada. The upstream/downstream topic has a long history with the NEB, but it received considerable attention in several recent proceedings. Moreover, the topic appears to be coming to a head in the complex, multi-agency (including NEB) review of the proposed Mackenzie Valley pipeline. Environmental groups have raised the upstream/downstream issue in preliminary, pre-application proceedings. The agencies have responded somewhat to these concerns by lumping several upstream facilities with the pipeline as part of the overall “project” being assessed. Notwithstanding this approach, the groups have been frustrated with the agencies’ apparent lack of response to the groups’ concerns, in the agencies’ written guides to date for conducting future environmental assessments.

This paper starts by conceptualizing upstream/downstream activities as those occurring along spectra emanating from a central source or multiple sources. Next, the paper presents the logic for considering upstream/downstream effects. That logic is rooted in the NEB’s “public interest” project review standard, which inherently requires considerations of...
public costs and benefits at comparable scales. Thus, where upstream/downstream benefits are considered—as is typically the case for pipelines—the corresponding costs must be considered as well. The paper then presents the arguments—based on fairness and practicality—against considering upstream/downstream effects. Finally, the paper critiques, and then offers several alternatives to, the NEB’s general approach for resolving the dilemma posed by the arguments for and against considering upstream/downstream effects.

**Conceptualizing Upstream/Downstream Activities**

In the energy arena, the water-based terms “upstream” and “downstream” are analogies for the flow of energy from production and transmission activities to end-users. In the gas pipeline context, “upstream” activities are those related to the exploration and production of the gas that will be transported by the pipeline and to the processing and transfer of processed gas to the head of the pipeline. However, the scope of “upstream” activities can also extend to the secondary industries that may arise in connection with supplying goods and services for the construction, maintenance, and operation of the pipeline.

“Downstream” activities are those that will use the gas transported by the pipeline as well as other activities that will nevertheless be indirectly generated or spurred by the expenditure or investment of the economic wealth generated by the pipeline.

The above lists of “upstream” and “downstream” activities are useful as a starting point, but they give the misleading impression that these two categories are discrete and readily identifiable. In truth, upstream and downstream activities should be viewed less as discrete or well-defined categories than as spectra emanating in different directions from a central point like ripples in water. This concept is demonstrated, at the upstream end, by current plans for the Mackenzie pipeline to be connected to a gas processing facility that, in turn, is connected through a pipeline gathering system to inter-connected production facilities in each of three “anchor” gas fields that were discovered in the Mackenzie Delta region in the 1970s.7 Collectively, the four corporate sponsors of the pipeline project have the legal rights to produce gas in these three anchor fields,8 so their upstream activities are already reasonably identifiable. However, the sponsors intend to make the pipeline available to other potential future northern gas producers. This opportunity is expected to spur considerable gas production, and related facilities, in the numerous northern gas fields other than the three “anchor” fields.9 As broadly described by one source, the pipeline will “unlock the natural gas potential of the North enabling the development of a vibrant northern oil and gas industry.”10 In fact, even the prospect of the pipeline appears to have spurred new northern oil and gas development.11

Of course, these upstream oil and gas developments themselves spur additional activities. For example, northern oil and gas activities require energy and consume other renewable and non-renewable resources that must be produced either locally or elsewhere. And northern oil and gas activities generate economic wealth that in turn spurs other economic activity. All of these spin-offs have environmental effects that likely occur locally, regionally, and in numerous other regions located far from the northern oil and gas developments that “inspired” them.

A similar ripple effect will likely occur at the downstream end of the pipeline from the wide range of activities that will use the gas that flows through the pipeline. At the local level, these activities include NWT-based resource development projects that will become more viable if there

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**RÉSUMÉ**

Cet article évalue dans quelle mesure l’Office national de l’énergie (ON_) lorsqu’il décide de délivrer un “certificat d’utilité publique” à l’égard du projet gazier MacKenzie, devrait examiner les effets négatifs des activités en amont et en aval du gazoduc. L’ON_ est confronté à un dilemme en décidant s’il doit examiner les effets d’amont et d’aval, et de quelle façon procéder à cet examen. D’une part, une telle option pose des problèmes méthodologiques considérables et à première vue, elle apparaît injuste envers les promoteurs du pipeline, parce qu’elle suggère que l’Office tiendra les promoteurs responsables de nombreux effets qui échappent à leur contrôle. D’autre part, il existe d’excellentes raisons pour examiner les effets négatifs en amont et en aval. En effet, l’Office est requis d’examiner un projet selon le critère de l’ “intérêt public”, ce qui nécessite de tenir compte aussi bien des coûts que des avantages publics du projet. Ainsi, si les avantages en amont et en aval sont examinés—ce qui est normalement le cas pour les pipelines–il convient aussi d’examiner les coûts. Cet article critique la façon dont l’Office se propose d’examiner les effets en amont et en aval et offre plusieurs alternatives de nature essentiellement politique pour résoudre ce dilemme.
is access to the gas provided by the pipeline. There is considerable speculation that the primary consumers of the gas shipped through the Mackenzie pipeline will be Alberta oil sands operations. These operations have been heavily dependent on natural gas inputs to meet their own energy needs, notwithstanding their apparently substantial progress in energy efficiencies. Thus, the Mackenzie Valley pipeline could well boost Alberta’s oilsands industry by providing an alternative source of gas to the waning sources in the Western Canadian Sedimentary Basin. If not all or mostly consumed by Alberta oil sands, the Mackenzie Delta gas could be consumed at several or many points further downstream of the pipeline’s terminus throughout the North American continental gas distribution system.

Wherever Delta gas is consumed, that consumption will generate greenhouse gases and fuel activities that will directly and indirectly cause other environmental impacts in a series of downstream ripples propagated by the initial burst of energy and accompanying economic wealth generated by the pipeline.

This ripple analogy is hardly perfect, because many of these upstream/downstream activities will be spurred by other sources as well as by the Mackenzie pipeline and may occur whether or not the pipeline is constructed. To use the analogy, there may be multiple intersecting ripples of activities emanating from multiple sources. Thus, tracing any one ripple to the pipeline or another particular source may be problematic. After explaining the basic logic for considering upstream/downstream effects, the paper discusses the extent to which such cause-and-effect relationships need to be determined in deciding whether to approve the pipeline.

The Rationale for Considering Upstream/Downstream Effects
The overall legal framework for the multi-government review of the Mackenzie Valley pipeline is complex, but it arguably all boils down to a requirement that government decision-makers—including or especially the NEB—should base their pipeline approval decisions on determinations of whether the pipeline is in the public interest. For the Board, this requirement is implicit in the express provision, in section 52 of NEBA, allowing the Board to issue a pipeline approval—in a legal instrument known as a “certificate”—only if the Board is “satisfied” that the pipeline “is and will be required by the present and future public convenience and necessity.”

While hard to define, and especially to quantify, the “public interest” represents an aggregation of a project’s public costs and benefits or, more broadly, its pros and cons. This meaning is at least implicit in the NEB’s own view of the public interest as a “balance” of “economic, environmental, and social interests,” and in the Board’s view of its role in fulfilling the public interest, by “estimat[ing]” a project’s “overall public good” and its “potential negative aspects,” and by “weigh[ing]” the project’s “various impacts.”

From these conceptual standpoints, what is the “public interest” in pipelines? On the benefits side, the construction, operation, and maintenance of pipelines typically offer direct and indirect economic boosts, particularly through employment. While these project-related benefits may be significant, the project’s raison d’être is arguably to facilitate upstream production of an energy resource and thereby allow downstream uses of the resource, by providing a link between upstream production and downstream users. By definition, this purpose is socially beneficial only when downstream uses of the transported resource, and the accompanying upstream production of the resource, are themselves deemed to provide social benefits. If there were no benefits from upstream and downstream activities, there would be no point building pipelines and similar utilities to link and thereby promote those activities.

In short, considerations of the benefits of upstream and downstream activities are inherent in public interest-type approval decisions for pipelines and other energy transmission facilities and exports. As the NEB itself stated in a pipeline approval proceeding, in response to an argument that upstream/downstream activities were beyond federal jurisdiction, if the Board “did not consider the benefits related to matters within provincial jurisdiction [including the benefits to downstream users and upstream resource suppliers] ... very few pipelines would ever be constructed.”

The case for consideration of upstream/downstream costs flows directly from the above logic. If the Board must consider the public benefits of upstream and downstream activities in deciding whether to approve a pipeline, the cost/benefit nature of the “public interest” test requires consideration of the public costs of those upstream and downstream activities, as well.

The Case Against Considering Upstream/Downstream Effects
The argument against considering upstream/downstream effects is largely a practical one. According to this argument, there are considerable uncertainties and difficulties in both predicting the full, potentially infinite range of upstream and downstream activities, and then in determining the activities’ adverse effects. For practical reasons, if the Board had to identify all upstream/downstream activities within this range, each of the Board’s public interest determinations could result in a series of never-ending factual inquiries—or at least be based on numerous highly speculative cause/effect determinations. Identifying the effects of those upstream/downstream
activities is also a complex exercise that can itself be highly speculative.

Again under this argument, even if all the upstream/downstream activities and their accompanying adverse effects could be identified, there remain the complex tasks of choosing and applying a methodology to weigh those effects against the activities’ benefits, for purposes of deciding whether the pipeline or other energy project will further the public interest. This exercise is arguably well beyond a pipeline regulator’s expertise, because it ultimately involves balancing social values in a myriad of activities that are far removed from the pipeline facilities and that are typically regulated, subsidized, or otherwise addressed, by other agencies, especially regional and local ones. 19

The Mackenzie pipeline exemplifies this problem. The pipeline proponents tout their project as helping to satisfy North American demand for natural gas, including demand from Alberta’s burgeoning oil sands industry.20 To consider the adverse effects or downsides of satisfying that downstream demand, the NEB would in effect be setting broad energy and environmental policy, and would also need to make fundamental policy choices about appropriate material consumption and other aspects of North American life styles. These policy choices are arguably more appropriately vested in cabinet ministers, and informed by experts from numerous departments, than in a quasi-judicial body like the NEB. Considerations of the pros and cons of even the NWT-based upstream/downstream activities raise fundamental land-use, environmental, and social policy issues that are arguably beyond the NEB’s immediate expertise.

The fundamental flaw with this argument is that the Board already delves into broad policy areas beyond its pipeline-related expertise when it considers the gross benefits of upstream/downstream activities, which considerations are inherent in determinations of whether the public interest warrants its approval of energy transmission and export applications.21 Yet, it would be illogical to consider upstream/downstream benefits without weighing those benefits against the corresponding costs.

An additional argument against considering upstream/downstream costs is that it is unfair to in effect hold the project proponent responsible for myriad upstream/downstream effects (and the costs and time necessary to consider them), because those effects are typically caused or influenced by numerous factors, of which the project under review is only one. Thus, for example, even if the gas transmitted by the Mackenzie Valley pipeline spurs growth in Alberta oil sands production, the pipeline can hardly be entirely “blamed” for the public costs of that production growth. This fairness argument has some merit but, like the practicality argument, it is flawed because it fails to acknowledge the need, inherent in the logic of the public interest concept, to consider the costs of upstream/downstream activities when the benefits of those activities have been considered.

The Board’s Approach to Resolving the Dilemma

The above discussion shows that there is merit to the arguments both for and against considering upstream/downstream costs, which poses a dilemma for public interest reviews like that which the NEB will conduct for the Mackenzie pipeline. How can this dilemma be resolved?

The Board’s answer seems to start with its view that it has discretion to consider upstream/downstream effects, but that it does not have a mandatory duty to do so.22 This view has support from the open-ended nature of the “public interest” concept (although the case law is hardly clear as to the extent of discretion the term provides),23 and from the complexities and uncertainties inherent in determining both the scope of relevant upstream/downstream activities and the methodology for factoring the effects of those activities into the overall public interest equation. But that discretion is arguably bounded by the logic of the public interest test. As discussed above, that logic suggests that the Board has an implied duty to address the costs of upstream/downstream activities—i.e. its failure to consider those costs should not withstand judicial scrutiny under even the most deferential standard of judicial review—when it considers the benefits of those activities.

The Board has followed this logic to some extent, but only when the Board deems the upstream/downstream activities to be “directly connected” or “directly linked” to the proposed pipeline or other proposed activity subject to the Board’s review.24 In the Board’s view, the likelihood of the activities must also not be “too speculative or uncertain” to be deemed relevant.25 The Board has also suggested that, to be relevant, the costs must be demonstrated by information of sufficient “probative value … when compared to the exercise necessary to obtain” the information.26

At first blush, these scoping guides sound reasonable from the standpoints of choosing the range of relevant upstream/downstream activities that can be fairly attributable to the project under review and that can be practically identified and assessed.27 However, these guides are deficient in two respects.28 First, the Board does not apply these tests in determining the scope of activities to consider for purposes of counting upstream/downstream benefits. Thus, these guidelines do not ensure that the scope of relevant upstream/downstream activities for purposes of considering upstream/downstream costs is at least as broad as the scope used for counting upstream/downstream benefits.

The second problem is that the Board’s focus on the linkage between the project under review and downstream/
upstream activities does not itself address whether there are likely to be upstream/downstream costs of the project. Bankes has alluded to this problem in a previous Resources paper involving gas exports, but the problem applies with equal force in the pipeline context. For example, there may well be numerous downstream users that are not “directly connected” to the Mackenzie pipeline (unless the gas is shipped directly to particular oil sands operations), but it seems absurd to suggest that there will be no environmental costs (viewed on a gross basis, putting aside net costs or benefits) from downstream users’ consumption of the gas shipped through the pipeline.

In sum, the NEB’s guidelines address the practicality and fairness arguments against considering upstream/downstream costs, but they fail to address the inherent logic for considering those costs when benefits are considered and when costs are likely whether or not they can be attributed to activities that are “directly linked” to the project or activity under the NEB’s review.

An Alternative Approach to the Dilemma
While the Board’s approach is flawed, there is likely no other perfect solution to the upstream/downstream dilemma. The following are several suggestions for at least improving the Board’s strategy for tackling this problem.

First, the Board ought to engage the public in a process for developing a generic policy on when and how the Board should consider upstream/downstream effects in its public interest approval proceedings. The issue arises frequently enough that it warrants the NEB’s consideration at a generic level. Yet, the guidelines discussed in part 5 above were expressed in ad hoc decisions; the Board’s existing generic policy statements do not specifically address the upstream/downstream topic.

Second, in any generic policy on considering upstream/downstream effects, the Board should commit to consider the costs of upstream/downstream activities at least whenever it considers the benefits of those activities. In fulfilling this commitment, the Board’s assessment of benefits and costs should be proportionate from the standpoints of both the scope of activities considered and the level or rigour of analytical review. As for the rigour of review, if the Board computes the benefits of upstream/downstream activities through a broad, ‘back of the envelope’ analysis, the Board cannot decline using that same level of analysis to compute the activities’ costs, if those costs can’t be assessed in any more detail. Thus, for example, if the Board accepts the Mackenzie pipeline proponents’ suggestion that the pipeline is “needed” primarily to help satisfy North American energy demand, the Board cannot reasonably forego considering the downside risks or social costs of fulfilling that need on the ground that the link between the potentially vast array of North American energy end-users and the Mackenzie pipeline is too remote.

These general rules of thumb are fair and logical, but they still raise the practical question of how the Board can consider the costs of upstream/downstream activities, at least, when such considerations require broad scale, crystal ball-type assessments. This is certainly the case for the Mackenzie pipeline, if downstream activities are viewed at the broad level of North American end-users of natural gas.

A focus on policy would seem to provide the best solution to this methodology problem, because the development of policy in effect requires a consideration of costs and benefits at broad scales covering myriad activities and circumstances. Thus, the Board should first ascertain whether any relevant, broad cabinet-level policies exist that might provide a context or, in other words, a rough formula for factoring upstream/downstream effects into the public interest calculation. Where written policies are lacking, the Board should consider using its extensive hearing powers to call key government policy-makers as witnesses to explain unwritten or interim policies, although any such oral evidence of policy is arguably less persuasive than written evidence.

Once the Board identifies relevant policy statements, the Board should consider how to apply them. As with the previous step, this exercise is problematic because policies may be expressed at too general a level to be readily applied, there may be conflicts among multiple policies, and individual policies may even be incoherent. Under these circumstances, the public cannot expect the Board’s application of generic policies in its specific approval proceedings to be perfect or to satisfy everyone. But if the Board clearly explains its methodology and rationale for applying policy, that transparency will at least provide a framework for public debate and political resolution of contentious policy issues. Although the justification for this transparency seems obvious, the Board’s record is hardly perfect in this respect. The same rule of transparency should apply where the Board needs to make up policy if it finds that there are significant policy gaps.

Where and when should the above methodology for identifying and applying policy occur? If nowhere else, it should occur in the Board’s project-specific adjudicatory approval proceedings, pursuant to the procedural rules applicable to other inquiries and analyses conducted by the Board (with the added aspect of transparency as discussed above). But the Board should also consider conducting
generic hearings to establish the policy framework needed for its ad hoc approval decisions. Generic hearings are more advantageous than project-specific approval proceedings, because the former can be run by schedules that aren’t driven primarily by project-specific deadlines and they can more easily take a broad region and multi-project focus than project-specific hearings. Generic hearings for setting policy frameworks can also be held jointly or at least coordinated with generic fact-finding hearings. Bankes has suggested that the Board use this tool to address the cumulative upstream effects of gas exports, but the tool may also be useful for addressing cumulative effects issues arising from pipelines and other activities that the Board regulates.

The above suggestions relate to the methodology for considering upstream/downstream effects and factoring those effects into the public interest equation. An additional question for the Board is how to deal with those effects when the Board considers them to be unacceptable or, more precisely, to tip the public interest balance against the Board’s approval of the project or activity under review. This task is problematic, in large part, because many or most of the adverse upstream/downstream effects may result from activities that the Board lacks jurisdiction to directly regulate and, for those activities in provinces, the direct control of which may well be beyond the constitutional authority of any federal agency.

Under these circumstances, the most obvious solution is for the Board to simply disapprove the project under review. However, it may be more constructive for the Board to grant an approval conditioned on a satisfactory amelioration of the upstream/downstream effects by whatever other governmental entity has direct authority over the activities causing those effects. For example, environmentalists argue that there is an inadequate framework for managing the plethora of NWT-based resource development projects that will be spurred by the Mackenzie Valley pipeline. If the NEB concurs, and believes the resulting costs tip the public interest against the pipeline, the Board could condition its approval of the pipeline on the federal and territorial governments’ fulfillment of their commitment to complete a network of protected areas in the NWT, to provide a sort of bulwark against the biodiversity threats from the proliferation of those resource development projects.

Conclusion
Upstream/downstream effects are inherently relevant to whether energy transmission projects and exports are in the public interest. The NEB’s consideration of those effects currently lacks balance, because the Board applies a more stringent standard for counting relevant costs than it does for benefits. While committing to taking a more even focus on upstream/downstream benefits and costs is easy, the challenge remains to develop a suitable methodology for carrying out that commitment. For this purpose, the Board should consider an increased focus—through generic or at least project-specific proceedings—on identifying, understanding, and implementing, and then clearly articulating in its decisions, the policy contexts for evaluating both positive and negative upstream/downstream effects.

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Notes
1. For the Board’s primary legislative authority with respect to pipelines and oil and gas, see National Energy Board Act (“NEBA”), R.S.C. 1985, c. N-7 and Canada Oil and Gas Operations Act, R.S.C. 1985, c. 0-7.
2. See Quebec (Attorney General) v. Canada (National Energy Board), [1994] 1 S.C.R. 159 (rejecting hydro-power company’s challenge to the NEB’s consideration of the impacts of future hydro-electricity facilities in licencing the export of electricity generated by those facilities), Athabasca Chipewyan First Nation v. B.C. Hydro and Power Authority, [2001] F.C. 412 (F.C.A.) (rejecting the NEB’s issuance of electricity export permits on the ground that the Board failed to consider whether the exports would warrant any changes to the existing upstream generating facilities and the adverse effects of any such changes), and Alberta Wilderness Ass’n v. Express Pipelines Ltd. (1996), 201 N.R. 336 (F.C.A.) (rejecting environmental groups’ challenge to the NEB’s approval of a cross-border oil pipeline without considering the effects of oil production facilities upstream of the pipeline).  
3. One of these proceedings involved the Board’s consideration of a cross-border power transmission line. In the hearing, the Board agreed to consider the environmental effects in Canada of local air pollution, but not of globally relevant greenhouse gases, from an upstream power plant in northern Washington State that would supply electricity for the transmission line. In the Matter of Sumas Energy 2, Inc. (March 2004), No. EH-1-2000 (N.E.B.), leave to appeal granted, Sumas Energy 2, Inc. v. NEB, No. 04-A-20 (F.C.A.). Another proceeding involved the Board’s review of a gas pipeline from the B.C. mainland to Vancouver Island. In that proceeding, the Board agreed to consider the environmental effects of a downstream power plant on Vancouver Island that would burn gas transmitted by the pipeline. However, the Board declined to consider the downstream effects from: a second Vancouver Island power plant whose construction was not dependent on the pipeline; other future power generating plants for which there were no plans yet in place; and the greenhouse gas emissions from all other residential, industrial, commercial, and public users of the gas that would be transmitted by the pipeline. In the Matter of Georgia Strait Crossing Pipeline Limited (31 May 2002), No. GH-4-2001 at 12-13 (N.E.B.), certificate granted, (Nov. 2003), No. GH-4-2001 (N.E.B.).  
5. Northern Pipeline Environmental Impact Assessment and Regulatory Chairs Committee, Cooperation Plan for the Environmental Impact Assessment and Regulatory Review of a Northern Gas Pipeline Project through the Northwest Territories (June 2002), Annex 1 (definition of the “northern gas pipeline project”). Thus, the overall project is now referred to as the “Mackenzie Gas Project” rather than simply the “Mackenzie pipeline.” See e.g. Esso, et al., Preliminary Information Package—Vol. 1: Project Description [PIP Vol. 1] (April 2003) at 1-1.
6. See Monte Hummel, Letter on behalf of World Wildlife Fund Canada to the Canadian Environmental Assessment Agency, et al. (14 July 2004) (noting that “every little of what we have been saying seems to be reflected” in the agencies’ draft guidance documents to date) (copy on file with the author).

7. See e.g. PIP-Vol. 1, supra note 5 at 1-7-1-8. As noted above, these upstream facilities, together with the pipeline, comprise the overall “Mackenzie Gas Project” for environmental review purposes.

8. ibid at 1-3.

9. See e.g. ibid. at 1-8, 2-2, 3-6, and 8-20.

10. The Canadian Institute, “Arctic Logistics for Energy and Mining Project Development–A Critical Road Map for Doing Business in the North” (Brochure for June 3-4 Conference, Calgary, Alberta. See also e.g. Sierra Club of Canada, et al., Media Release, supra note 4 (NGO representative stating that the pipeline is “transforming the landscape of Canada’s Arctic as we speak” and noting that the federal government is seeking proposals “to develop new oil and gas projects in the Mackenzie Valley and Delta and in the Beaufort Sea, which will feed this pipeline for decades.”), and Karen Wristen, “Adding Fuel to Fire? The Mackenzie Gas Project.” The Post (Parkland Institute) (Summer 2004) 1 at 5 (speculating that the pipeline will provide a “huge impetus to develop the 60 or more known gasfields [sic] in the region”.

11. See e.g. Diane Cook, “Northerners looking ahead to Mackenzie pipeline activity,” Oilweek Magazine (7 June 2004) 34 at 36 (noting that drilling activity is “heating up” in the Mackenzie Valley and Fort Liard areas “in anticipation” of the pipeline’s construction).

12. See e.g. PIP-Vol. 1, supra note 5 at 2-3 (pipeline will have access points for regional communities in the NWT to purchase gas); see also e.g. Sierra Club, et al., Background, supra note 4 (noting that the pipeline will likely “accelerate industrial activity in adjacent regions.”).

13. See e.g. NEB, Canada’s Oil Sands: Opportunities and Challenges to 2015 (May 2004), at 85-86; see also e.g. Director, Natural Gas–Hunt on for new sources,” Calgary Herald (27 July 2004) E1: 1.

14. See Wristen, supra note 10, at 1, 5. See also NEB, Canada’s Oil Sands, supra note 13 at 86.

15. See, e.g. Sumas Energy 2, supra note 3 at 9-10 (NEB decision, in the electricity transmission context, stating that “Cour decisions and various legal treaties have generally treated ‘public convenience and necessity’ as being synonymous with the ‘public interest.’”); By focussing on the NEB’s “public interest” mandate under NEBA, this paper does not address the extent to which other federal legislation—e.g. the Canadian Environmental Assessment Act, S.C. 1992, c. 37—requires the Board to consider upstream/downstream activities when the effects of those activities operate cumulatively with the effects of the pipeline.

16. NEB, Public Interest (www.neb-oe.gc.ca/PublicInterestFootnote_e.htm) (updated 26 March 2004). See also, e.g., Nakina (Township) v. Canadian National Railway Co. (1988), 89 N.R. 124 at 125 (F.C.A.) (noting that a public interest determination involves the “weighing and balancing of competing considerations”) and R. v. Morales, [1992] 3 S.C.R. 711 at 717-718 (dissenting opinion noting that the public interest refers to the “special set of values which are best understood from the point of view of the aggregate good and are of relevance to make the weighing and evaluating of a broad range of considerations, beyond those in dispute, in debates between the parties, with a view to determining what is in the best interests of the Canadian public”)

17. See PIP-Vol. 1, supra note 5 at 1-11, and 7-1-7-9 (discussing employment and business opportunities related to pipeline construction, maintenance, and operations).

18. Georgia Strait Crossing, supra note 3 at 11.

19. The multi-jurisdictional interest in upstream and downstream activities also has implications for constitutional federalism, although less for those NWT-based activities which are upstream or downstream of the Mackenzie pipeline than those activities based in Canadian provinces. As far as the for the latter, the NEB’s ability to directly regulate upstream/downstream facilities located in the provinces is problematic. See Canadian Hunter Exploration Ltd. v. Canada (NEB), [1999] F.C.J. No. 460 (F.C.A.) (holding that the NEB lacked constitutional and legislative jurisdiction to regulate a natural gas gathering system in B.C. that was connected to an inter-provincial pipeline that was subject to NEB jurisdiction, because the two facilities were not a single work or undertaking and the upstream facilities were not integral to the inter-provincial pipeline); but see Westcoast Energy Inc. v. Canada (NEB), [1998] 1 S.C.R. 322 (majority holding that, due to likely unique circumstances, the NEB had jurisdiction over certain intra-provincial upstream gas gathering and processing facilities that were connected to an inter-provincial pipeline, because all the facilities were part of a single inter-provincial transportation undertaking for purposes of section 92(10)(a) of the Constitution, and the upstream facilities could be considered part of a single “pipeline” as that term is broadly defined in the NEBA). But the NEB’s authority to at least consider the effects of those facilities is more settled. See Quebec, supra note 2 (SCC holding that the NEB, in licencing the export of electricity generated by future hydro-electric facilities in Quebec, could consider the environmental impacts of those upstream facilities); see also Friends of the Oldman River Society v. Canada (Minister of Transport), [1992] 1 S.C.R. 3 at 66 (“it defies reason to assert that Parliament is constitutionally barred from weighing the broad environmental repercussions, including socio-economic concerns, when legislating with respect to federal approval of projects that are otherwise within federal jurisdiction”.

20. See PIP-Vol. 1, supra note 5 at 2-1.

21. For that matter, the Board’s regulatory expertise extends beyond pipelines, to a wide variety of federal or inter-jurisdictional energy production and transmission areas, and the Board regularly prepares reports that address broad energy policy issues. See e.g. NEB, Canada’s Oil Sands, supra note 13.

22. This position is reflected in the Board’s statement, in the recent Georgia Strait pipeline proceeding, that “[i]t is only logical that with the ability to consider the benefits that may result from a pipeline approval goes the concurrent ability to consider the detriments that could result from such an approval.” Georgia Strait Crossing, supra note 3 at 11.

23. See, e.g. Nakina (Township), supra note 16 (holding that a federal railway commission lacked discretion, in deciding whether the closure of a railway station was in the public interest, to forego considering the impacts of that closure on the town in which the station was located), and Wang Canada Ltd., supra note 16 at 16 (noting that the public interest is a “broad, somewhat undefined and flexible concept, which nevertheless includes considerations pertaining to the public interest”); see also Morales, supra note 16 at 731-732 (majority holding that “the public interest” was too vague to provide a constitutionally acceptable basis for determining a criminal defendant’s eligibility for bail, because the standard is “completely discretionary,” provides “no guidance for legal debate,” and “creates no criteria to define the circumstances that would justify pre-trial detention) and R. v. Zundel, [1992] 2 S.C.R. 731 (majority holding that “harm or injury to the public interest” was too vague to provide a constitutionally acceptable basis for criminalizing false statements).

24. See e.g. Sumas Energy 2, supra note 3 at 146; Georgia Strait Crossing, supra note 3 at 11.

25. Georgia Strait Crossing, supra note 3 at 13.

26. ibid. at 12.

27. Hence, the “anchor” field production facilities that are part of the overall “Mackenzie Gas Project” for environmental assessment purposes, would likely be considered “directly connected” to the pipeline for purposes of the Board’s determination of whether to issue a NEBA certificate for the pipeline.

28. If these guides are intended to limit the Board’s analysis to new upstream/downstream activities, they may be deficient for a third reason, because projects may cause changes to existing upstream/downstream activities that have attendant environmental costs. See Athabasca Chipewyan, supra note 2 (Federal Court of Appeal, in review of the NEB’s issuance of electricity export permits, holding that the Board erred in focusing on the lack of any new electricity generating facilities needed to provide the exported energy, while ignoring whether the exports will require any changes to existing facilities). Even if not changed, upstream/downstream activities may simply be prolonged and have environmental costs associated with that prolonged period that the Board should consider.

33. See NEBA s. 11(3) (providing the Board with hearing powers equivalent to those of a trial court).

34. See e.g. In the Matter of CanStates Gas Marketing, et. al. (Nov. 1994), No. GH-3-94 (N.E.B.) (NEB decision approving licenses to export natural gas to the U.S. without any explanation of why the exports were in the Canadian public interest).

35. The Board has amble legislative authority to conduct such hearings. See NEBA ss. 12(1)(b) and 24(3). This authority is also consistent with the Board’s role, under in Part II (ss. 28-28) of NEBA, of providing energy policy advice to the federal Cabinet.

36. Bankes, supra note 29 at 3-4.

37. But see Westcoast Energy, supra note 19 (SCC majority holding that, under the unique circumstances in that case, the NEB had constitutional and legislative jurisdiction to directly regulate intra-provincial gas gathering and processing facilities that were directly upstream of an inter-provincial gas pipeline).

38. For an intra-provincial example of this regulatory approach, see Application to Construct Recreational and Tourism Facilities in the West Castle Valley (Dec. 1993), No. 9201 (N.R.C.B.), discussed in Steven A. Kennett, Spinning Wheels in the Castle: A Lost Decade for Sustainability in Southwestern Alberta, CIRL Occasional Paper #14 (Calgary: Canadian Institute of Resources Law, 2003); see also Michael M. Wenig, "Cumulative Effects: Oil, Gas, and Biodiversity" (Oct./Nov. 2002) 27 LawNow 27 at 29 (suggesting the Alberta Energy and Utilities Board (EUB) use conditional approval model to address the cumulative effects of oil and gas development regulated by the EUB), and Michael M. Wenig, "Federal Policy and Alberta’s Oil and Gas: The Challenge of Biodiversity Conservation,” in Bruce Doern, ed., How Ottawa Spends 2004-2005: Mandate Change in the Martin Era (McGill-Queens University Press, 2004) Chapter 11 (in press) (suggesting that the federal government approve conditional approvals in a variety of circumstances to satisfy its obligations to conserve biological diversity from threats posed by Alberta oil and gas production).

39. The NEB’s enforcement of these kinds of conditions raises federalism concerns, at least, when the conditions relate to upstream/downstream activities that occur entirely within provincial boundaries and when provincial action is required to fulfill the conditions. Thus far, this approach has passed constitutional muster. See Quebec, supra note 2 (SCC holding that the NEB, in licencing the export of electricity generated by future hydro-electric facilities in Quebec, could condition its licence approval on the successful completion of environmental assessments for the future facilities). However, a thorough constitutional analysis is beyond the scope of this paper.