# Negotiated Settlements and the National Energy Board in Canada<sup>a</sup>

# Preliminary: not for distribution – do not quote or cite

Joseph Doucet<sup>b</sup> Stephen Littlechild<sup>c</sup>

13 August 2006

JEL Classification: L51 Economics of regulation, L97 Utilities general, L95 Gas utilities, pipelines, water utilities.

Key words: negotiated settlements, regulation, innovation.

Corresponding author:

Professor Joseph Doucet, CABREE, School of Business, University of Alberta, Edmonton, Alberta, Canada, T6G 2R6; email: <a href="mailto:joseph.doucet@ualberta.ca">joseph.doucet@ualberta.ca</a>.

<sup>&</sup>lt;sup>a</sup> This research was supported by the Centre for Applied Business Research in Energy and the Environment (CABREE), University of Alberta. Doucet thanks the CREDEN, Université Montpellier 1, for its gracious hospitality during which part of this research was completed. The authors would like to thank Céline Bélanger, Glenn Booth, Barry Branston, Sonya Buys, Gaétan Caron, Dana Cornea, Shelley Milutinovic, Peter Nettleton, Roland Priddle, Robert Reid, Nick Schultz and James Wilson for helpful comments on earlier drafts. Doug Leong provided excellent research support. The National Energy Board kindly provided data on applications and hearings. All opinions and conclusions are the sole responsibility of the authors.

<sup>&</sup>lt;sup>b</sup> Enbridge Professor of Energy Policy, CABREE, University of Alberta School of Business.

<sup>&</sup>lt;sup>c</sup> Emeritus Professor, University of Birmingham, and Senior Research Associate, Judge Business School, University of Cambridge

# **Negotiated Settlements and the National Energy Board in Canada**

#### Abstract

Recent research suggests the widespread use and innovative nature of negotiated settlements in public utility regulation, particularly at FERC and in Florida. Such settlements began to emerge in the Canadian oil and gas pipeline sector in 1985, but did not flourish until the National Energy Board revised its guidelines for settlements in 1994. They have been used to determine prices, operating and capital cost projections, return on equity, service quality improvements, and information requirements. Settlements were the vehicle by which multi-year incentive agreements developed rapidly for all pipelines. They have also been used to introduce light-handed regulation for gas gathering and processing in BC, and an associated regime for reducing barriers to new entry. With the temporary exception of one gas pipeline, settlements had completely superseded the litigation of major pipeline toll cases by 1997. On average, oil pipeline settlements are about half as long again as a litigated outcome and gas pipeline settlements about 2 to 2 ½ times as long. Settlements have cut NEB processing times by about a quarter for gas pipeline applications and by about two thirds for oil pipeline applications. Settlements have streamlined the regulatory process, provided a mechanism for fruitful collaboration between pipelines and their customers and changed attitudes in the industry. The key actions of the Board in facilitating settlements seem to have been twofold: its willingness to judge a settlement by the reasonableness of the process leading up to it instead of imposing its own values on the outcome, and its generic cost of capital decision that removes the market power of the pipeline and enables fruitful negotiation with users.

#### 1. Introduction

Negotiated settlements are a form of regulation of public utilities that is alternative or complementary to the conventional process of litigation. In the US, the Federal Power Commission (FPC) pioneered the use of settlements in the early 1960s as a means of coping with an increased workload and backlog. Conventionally, legal scholars and practitioners have emphasized the importance of settlements in coping with the regulatory load and avoiding delay, and in saving time and money. There has been some concern about transparency and the treatment of non-unanimous settlements. More recently, it is suggested that settlements better serve the needs of the parties, allow greater flexibility and innovation, and can achieve results that lie beyond traditional regulatory authority.<sup>1</sup>

Economic research is now confirming this recent perception. (Wang (2004), Littlechild (2003, 2006a,b)) The US Federal Energy Regulatory Commission (FERC) and the Florida Public Services Commission have dealt with a high proportion of regulatory cases by means of settlements. These settlements are not simply a more efficient way of doing the same thing as traditional regulation. Rather, they involve considerable innovation, notably the introduction of price caps, revenue sharing schemes and other incentive mechanisms that would not otherwise have been possible or likely.

This paper extends the research on negotiated settlements to Canada. The current chairman and the previous chairman of the National Energy Board have spoken enthusiastically of the role of negotiated settlements in introducing incentive regulation of Canadian oil and gas pipelines. (Vollman (1996), Priddle (1997, 1999)). Others have compared traditional and incentive regulation, discussed the emphasis on the market at NEB, and the evolution of light-handed regulation. (Mansell and Church (1995), Miller (1999), Schultz (1999)) The present paper seeks to document, update and extend these ideas. Our aim is to understand how and why negotiated settlements were first used at the federal level, how far and in what ways the regulatory framework encouraged or discouraged the development of settlements, what the nature of these settlements has been, and how far the results of the settlements have been different from what a litigated outcome might otherwise have been. A forthcoming companion paper examines experience with settlements in the province of Alberta. (Doucet and Littlechild (2006b))

The paper is organised as follows.

Section 2 provides some institutional context by describing the National Energy Board and the trend over time of Board hearings. We then briefly describe the Canadian oil and gas pipelines that are subject to Board jurisdiction and the introduction of pipeline toll regulation in Canada.

<sup>1</sup> See for example Morgan (1978) on avoiding delay, Petrulis (1985) on saving time and money, Krieger (1995) on non-unanimity and Buchmann and Tongeren (1996) on innovation. These and other contributions to the economic and legal literature are summarized in Doucet and Littlechild (2006a).

- Section 3 describes the initial period of negotiated settlements beginning with the two first settlements presented to the Board in the mid-1980's and describes the drivers for change following these initial settlements. We then outline the first Board settlement guidelines of 1988 and describe the joint industry task forces that evolved separately from but contributed to settlement activity. We describe the first settlement that followed the 1988 guidelines. Finally we summarise the Board initiatives to improve the regulatory process which, among other things, led to the modified Board guidelines issued in 1994.
- Section 4 describes and analyses the bulk of the settlement activity beginning with the multi-year incentive agreements in place by 1996, the development of lighthanded regulation by one of the pipelines, the development of non-unanimous and contested settlements and modifications to the guidelines to accommodate these. We then note the current status of negotiated settlements.
- Finally, section 5 reviews the record to date, the average durations and processing time of litigated outcomes and settlements, the impact on number and duration of hearings, the scope and achievements of settlements and identifies the critical actions of the Board in bringing about this significant and beneficial change in approach to regulation.

#### 2. Institutional Context

# 2.1 Constitution, mandate and work of the National Energy Board

The National Energy Board (NEB or the Board) is an independent federal regulatory agency established under the National Energy Board Act in 1959.2 It was initially located in Ottawa, Ontario, and in 1991 relocated to Calgary, Alberta. Up to nine Board Members may be appointed by the Governor in Council, initially for a seven-year term. The Board has a staff of approximately three hundred and an annual budget of 33 million Canadian dollars.3

The Board regulates the following aspects of the energy industry:

- the construction and operation of interprovincial and international oil and natural gas pipelines and designated interprovincial power lines (though none designated at present):
- pipeline traffic, tolls and tariffs<sup>4</sup>;
- the export and import of natural gas, and the export of oil and electricity;
- and (since 1994) Frontier oil and gas activities.

<sup>2</sup> For more information on the NEB and the Act, and for other NEB references, see the National Energy Board web site http://www.neb-one.gc.ca. The NEB in Canada is roughly equivalent to the Federal Energy Regulatory Commission (FERC) in the US.

<sup>&</sup>lt;sup>3</sup> NEB 2004 Annual Report.

<sup>&</sup>lt;sup>4</sup> A toll is the price charged by a pipeline for use of its facilities, the tariff refers more generally to the terms and conditions under which a pipeline offers or provides service.

<sup>&</sup>lt;sup>5</sup> Frontier lands are those parts of Canada, situated in the Northwest Territories or offshore, where the federal government has jurisdiction over the control of hydrocarbon resources. Frontier oil and gas activities were regulated by the Canada Oil and Gas Lands Administration (COGLA) prior to 1994.

Within the mandate set by Parliament in the regulation of pipelines, energy development and trade, the Board's corporate purpose is to promote safety, environmental protection and economic efficiency in the Canadian public interest.<sup>6</sup>

For the most part, the Board does not initiate cases but responds to "applications" by regulated entities and other parties – for example, for permission to build pipelines and power lines, for changes to pipeline tolls and tariffs, for energy export licences and for oil and gas development in Frontier areas. In the most important cases, the Board will hold oral public hearings in which applicants and interested parties can participate. This is the traditional litigated process. In other cases where there is sufficient public interest, the Board will instigate a public consultation process and invite written comments before making its decision. In yet other cases, applications and routine filings are dealt with administratively by letter or simply by acknowledgement.

In the case of pipeline tolls and tariffs, which are the focus of the present paper, there would traditionally be a periodic toll hearing for each pipeline where several contentious issues were considered at one time. This was often annually or biannually for the major gas pipelines although tolls for some of the major oil pipelines sometimes ran for several years. Later, a negotiated settlement could preclude the need for a public hearing or substantially reduce its duration by reducing the number or scope of issues to be dealt with at a hearing. Applications for approval of such settlements would be put out for public comment. Applications for tariff amendments and approval of interim tolls and tolls task force resolutions may or may not be put out for comment.

Table 1 summarizes applications dealt with by the Board over the period 1985-2005 in the four broad categories corresponding to the Board's responsibilities.

-

<sup>&</sup>lt;sup>6</sup> "The public interest is inclusive of all Canadians and refers to a balance of economic, environmental, and social interests that changes as society's values and preferences evolve over time. As a regulator, the Board must estimate the overall public good a project may create and its potential negative aspects, weigh its various impacts, and make a decision." NEB website.

<sup>&</sup>lt;sup>7</sup> The Board can and does initiate on safety or accident matters and can initiate at the request of Federal government.

Normally, a panel consisting of three Board Members is assigned to hear applications. The Board operates as a court of record, similar to a civil court. Before a hearing, individuals, interest groups, companies and other organizations are given an opportunity to register as intervenors or interested parties and thereafter to participate in the process.

Table 1: Applications to the NEB, 1985-2005

Category / year	Construction of Pipelines and Power	Pipeline Tolls and Tariffs <sup>9</sup>	Energy Exports	Frontier Activities	Total applications
	Lines				
1985	62	5	207	n/a	274
1986	65	4	339	n/a	408
1987	64	6	356	n/a	426
1988	79	4	371	n/a	454
1989	60	5	495	n/a	560
1990	72	8	470	n/a	550
1991	70	6	457	n/a	533
1992	89	4	440	4	533
1993	111	7	520	4	642
1994	115	3	516	3	637
1995	78	9	584	66	737
1996	82	7	*217	15	*321
1997	94	4	*236	92	*426
1998	111	2	*239	**	**352
1999	151	1	*245	93	*490
2000	129	3	571	142	845
2001	92	11	335	63	501
2002	181	15	548	96	840
2003	184	18	411	100	713
2004	100	27	363	49	539
2005	104	33	423	53	613
Total	2,093	182	*8,343	**780	**11,398
Average	100	9	*397	**60	**543

Source: NEB Annual Reports supplemented by information from NEB staff \* incomplete with respect to short term exports of oil, natural gas, butane and propane \*\* incomplete – missing information n/a not applicable

<sup>&</sup>lt;sup>9</sup> Until 2000 the figures for pipeline toll and tariff applications refer only to applications that were considered in a hearing or other public consultation process. They exclude the more routine filings that are included in the data for the other three categories. The NEB created a public on-line electronic Regulatory Document Repository in February 2002. (Relevant documents are filed electronically on this website by the applicants, not by Board staff.) The increased ease of access to filed data largely explains the increase in pipeline toll and tariff application numbers recorded from 2001 onwards. (Note that applications filed in one year may be dealt with over the course of two or more years, so although the electronic Repository was not activated until 2002 some applicants submitted documents on their on-going cases, including documents previously filed in hard copy in 2001.)

Although slightly incomplete, Table 1 presents a clear picture in important respects. The Board deals with over 500 applications annually, slightly more nowadays than in the earlier years. Around three quarters of the recorded applications are for energy exports (mostly short-term natural gas export orders). Applications relating to pipeline tolls and tariffs account for only about 3 per cent of all applications, even allowing for data omissions in the Table. <sup>10</sup>

In practice, the vast majority of applications to the Board are handled without a hearing. However, there is a significant difference by category of application. Table 2 shows the number of public hearings in each year and the number of days devoted to them, divided between pipeline toll and tariff applications and other categories. In total, only about 2 per cent of all applications (242/11,398) have gone to hearing. In the toll category, in contrast, the proportion was about one third of those applications recorded in Table 1 (65/182). Taking account of unrecorded applications in earlier years, the proportion of all toll applications going to hearing might be perhaps half that proportion, say one sixth, but this is still much higher than for non-toll categories. In consequence, toll hearings accounted for over one quarter (65/242=26.9%) of all hearings during this period.

Hearings are time-consuming. During the period as a whole, the average duration over all categories was 8.2 days. (This is in addition, of course, to the time required by all parties to request, provide and query information and to prepare the case, and the time subsequently taken by the Board to compile and issue its report.) Toll hearings have typically lasted about twice as long as non-toll hearings: an average of 13.1 days compared to 6.4 days. Taken with the higher proportion of toll applications that go to hearing, this means that toll applications accounted for over forty percent (849/1981 = 42.9%) of all hearing days during this period.

All this suggests that, although pipeline toll applications constitute only a very small fraction of the total number of applications to the Board, they are much more significant than other categories in terms of the attention they require, at least in terms of the number of hearings and the time these hearings take.

<sup>&</sup>lt;sup>10</sup> The previous footnote explains that pipeline toll and tariff applications not part of a public consultation process are not included in Table 1 before about 2001. It has been suggested to us that the number of such applications might be of the order of 10 to 15 per year. Including these might double the recorded number of pipeline toll and tariff applications, but this is offset by the more than 1000 missing applications for energy exports and Frontier activities.

Table 2: Number of hearings and hearing days at the NEB, 1985-2005<sup>11</sup>

	Pipelir	e tolls	Non-toll ca	tegories	All categories		
Year	Number of Public	Total Hearing	Number of Public	Total Hearing	Number of Public	Total Hearing	
	Hearings Initiated	Days	Hearings Initiated	Days	Hearings Initiated	Days	
1985	4	38	14	128	18	166	
1986	5	96	6	82	11	178	
1987	5	162	10	51	15	213	
1988	3	68	10	57	13	125	
1989	4	91	9	60	13	151	
1990	4	26	20	143	24	169	
1991	5	29	7	21	12	50	
1992	5	83	10	34	15	117	
1993	3	29	5	14	8	43	
1994	2	41	7	47	9	88	
1995	7	21	8	40	15	61	
1996	3	9	13	61	16	70	
1997	3	11	14	128	17	139	
1998	0	0	12	121	12	121	
1999	1	5	7	26	8	31	
2000	2	19	4	10	6	29	
2001	3	24	5	16	8	40	
2002	1	19	6	35	7	54	
2003	1	34	6	41	7	75	
2004	2	39	0	0	2	39	
2005	2	5	4	17	6	22	
Total	65	849	177	1132	242	1001	
10tai	03	049	1//	1132	242	1981	
Average per year	3.1	40.4	8.4	53.9	11.5	94.3	
Average hearing duration		13.1 days		6.4 days		8.2 days	

Source: NEB as per Table 1

-

<sup>&</sup>lt;sup>11</sup> The data for number of hearings refers to the number of hearings initiated in a given year, although hearings sometimes extend over two calendar years. The data for the number of hearing days refer to the number of days of hearings in a given year. There is no double counting in either case, but the hearing days for a given year do not necessarily correspond precisely to the hearings initiated in that year.

## 2.2 Trends in hearings over time

With respect to the number of applications, Table 1 suggests that there has been some increase over time in the construction category but not (after allowing for the missing data and electronic filing) in the other categories. <sup>12</sup> In contrast, Table 2 shows that there has been a significant reduction in the numbers of hearings and in the time devoted to them. For example, in the first six years there were 94 hearings and 1002 hearing days, but in the last five years only 30 hearings and 230 hearing days. On average this represents a reduction from 15 to 6 hearings per year and from 167 to 46 hearing days per year. But there was still great variation in number of hearings and in hearing time from year to year, for both toll and non-toll categories. <sup>13</sup>

Table 3 shows that there was nonetheless a significant change about the middle of this period, at least as applied to toll hearings. From the first half of this period to the second, the number of toll hearings nearly halved, and the average duration of a hearing more than halved. In consequence, the average number of toll hearing days per year fell to one quarter of the previous level. For non-toll categories there was only a small reduction in both number and duration, the total effect of which was to reduce average number of non-toll hearing days to about three quarters of the previous level.

-

<sup>&</sup>lt;sup>12</sup> Allowing for pipeline tolls and tariff applications not put out to public consultation might raise the pre-2002 numbers to around 15 to 25 as explained in footnotes 9 and 10.

<sup>&</sup>lt;sup>13</sup> For non-toll hearings see for example the longer average times of nearly 14 days in 1986 and around 10 days in 1997 and 1998 compared to 3 days or less in 1991, 1993 and 2000. For toll hearings there have been exceptionally long hearings recently as well as in earlier days – for example, 5 pipeline toll hearings averaging over 32 days in 1987 and one taking 34 days in 2003 – compared to an average of 3 days or less in 1995, 1996 and 2005.

Table 3: Data on hearings at the NEB, 1985-2005: annual averages

Period		Pipeline tol	ls	Nor	1-toll catego	ories	A	All categorio	es
	Avg annual numbe	Avg duration (days)	Avg hearing days/yr	Avg annual number	Avg duration (days)	Avg hearing days/yr	Avg annual number	Avg duration (days)	Avg hearing days/yr
1985- 1994	r 4.0	16.6	66.3	9.8	6.5	63.7	13.8	9.4	130.0
1995- 2005	2.3	7.4	16.9	7.2	6.3	45.0	9.5	6.5	61.9
1985- 2005	3.1	13.1	40.4	8.4	6.4	53.9	11.5	8.2	94.3

Source: NEB as per Table 1

The explanations for such changes in the non-toll categories lie beyond the scope of this paper. In the pipeline toll and tariff category these changes were highly associated with the development of negotiated settlements. We now describe briefly the pipeline companies that have been making toll applications, then turn to the process by which negotiated settlements were introduced.

# 2.3 Oil and gas pipelines

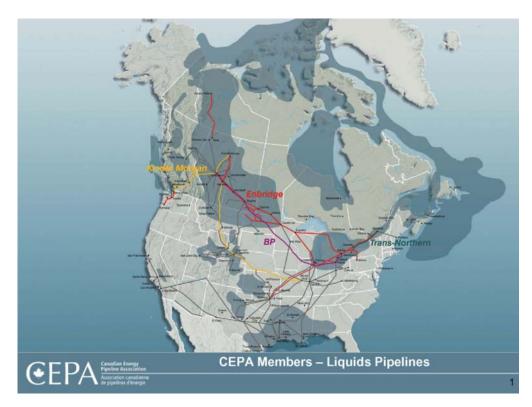
For regulatory purposes, Canadian oil and natural gas pipelines are divided into what are referred to as "Group 1" and "Group 2" pipelines. Group 1 are the larger pipelines subject to more active and involved regulation by the Board. The tolls and tariffs of Group 1 pipelines have traditionally been determined through a litigated process involving hearings. In contrast, Group 2 pipelines have been regulated on a "complaint basis" since at least 1985. <sup>14</sup> At the present time three Group 1 oil pipelines and five Group 1 gas pipelines are subject to active regulation (as opposed to complaint-based regulation).

The three major oil pipelines, all of which originally began operation in the 1950s, ship crude and refined products from Alberta. Two of them - Enbridge (formerly Interprovincial or IPL, one of the largest oil pipelines in the Western hemisphere) and Trans-Northern - ship to eastern Canada and the Midwest of the U.S. The third, Trans Mountain, ships to British Columbia and the western U.S. Figure 1 shows the routes of these and other major liquids pipelines in Canada. <sup>15</sup>

<sup>&</sup>lt;sup>14</sup> These pipelines submit tolls and tariffs to the Board, which are automatically accepted unless an objection is filed by a shipper or stakeholder in which case a hearing may take place. On rare occasions a Group 2 company will be subjected to a hearing and have its tolls set by the Board, as was the case with the Milk River Pipeline in August 2001 (though this was not the first such case). Two Group 1 gas pipelines (TransCanada PipeLine's B.C. system and Foothills Pipe Lines) and two Group 1 oil pipelines (Cochin and Enbridge N.W.) are also regulated on a complaint basis.

<sup>&</sup>lt;sup>15</sup> Note that Trans Mountain is identified as Kinder Morgan, its owner, in the Figure 1.

Figure 1: Canada's major oil pipelines.



Source: CEPA at http://www.cepa.com (used with permission).

Figure 2 shows the routes of the main gas pipelines in Canada. 16 Two of the main pipelines have been in existence and subject to NEB regulation since the 1950s. TransCanada PipeLines (TCPL) transports gas from British Columbia, Alberta and Saskatchewan (the so-called 'energy producing provinces') to Eastern Canada and to the U.S. Westcoast Energy (identified on the map as Duke, its parent company) ships gas from the same area but in the southwest direction, to southern British Columbia and the western U.S. Gazoduc Trans Québec & Maritimes (TQM), which is 50 per cent owned by TCPL, began operation in 1982 and transports gas from the end of the TCPL pipeline near Montréal to Ouébec City and to Vermont. Two newer pipelines were built in the late 1990s. Maritimes & Northeast Pipeline (MNP) began commercial operation in January 2000 and ships natural gas from the Sable Island project off the coast of Nova Scotia to the Northeastern U.S. The Alliance Pipeline began operation in December 2000. This is the longest pipeline ever built in North America: it significantly increased export capacity from British Columbia and Alberta to the U.S. Midwest and provided new shipping opportunities in competition with the existing transcontinental pipelines (including TCPL).

-

<sup>&</sup>lt;sup>16</sup> Note that Figure 2 also includes some large provincial gas pipelines not regulated by the Board, such as ATCO, TransCanada PipeLines' Alberta System and TransGas.

Figure 2: Canada's major gas pipelines.



Source: CEPA at http://www.cepa.com (used with permission).

In addition to the pipelines there are other interested parties in regulatory issues. These include producers, shippers and consumers.

Though the majority of Canadian oil and gas reserves are owned by provincial governments, production is almost exclusively undertaken by the private sector. There are a large number of producers of oil and gas in Canada. Industry associations, such as the Canadian Association of Petroleum Producers (CAPP), often play an important role in regulatory proceedings and industry representation. Producers have a direct interest in access to transportation for their product, in quality of service and of course in tolls and other terms of access. The price of transportation has an impact on producer netbacks (the price received by the producer net of shipping costs), whether or not producers themselves actually hold shipping (transportation) contracts. Because of the heterogeneity in size and scope of firms, individual producers sometimes intervene in regulatory proceedings apart from industry associations, generally on distributional issues.

Shippers are entities who contract with pipelines for transportation of the oil and natural gas. Though many shippers are also producers, others are commercial operators who market or aggregate oil and gas from producers for shipping. Shipper interest is focused on tolls and tariff issues related to quality of service.

Consumers include large industrial consumers, local distribution companies (LDCs) in Ontario and Québec in the case of natural gas, and refineries in Ontario in the case of crude oil. Provincial governments, sometimes give evidence as intervenors in the NEB's regulatory proceedings. Consumers' interests are largely focused on tolls, quality and terms of access since the price that they pay for the delivered commodity includes the toll.

It is worth pointing out that the regulatory arrangements examined in this paper, notably the practice of negotiated settlements, are associated with a successful rather than unsuccessful system of hydrocarbon transportation. A recent and comprehensive review by the NEB concludes that there is adequate capacity on existing gas pipelines; capacity is tight on the oil pipeline system but there are a significant number of proposals to build or expand these pipelines; shippers continue to indicate that they are reasonably satisfied with the service provided; and NEB-regulated pipelines are financially sound. <sup>17</sup>

#### 2.4 The introduction of pipeline toll regulation

It is conventionally assumed that pipelines are natural monopolies, regulated so that their tolls and tariffs entitle the pipelines to recover their cost of service and earn a reasonable return on equity. Although the NEB was set up in 1959, active economic regulation of pipeline tolls was initially not a priority. <sup>18</sup>

The Board's eventual entry into the field of active pipeline regulation, after years of hesitation, was precipitated by, of all people, TCPL. In 1969 the company asked the Board to bring it under regulated tolls. The process was a long one. ... It ended in 1973 with TCPL being awarded a substantial increase in tolls. ... After TransCanada, the other major pipelines were successively brought under formal NEB rate regulation. <sup>19</sup>

TCPL needed higher revenues to cover its costs incurred in building the Great Lakes Gas Transmission (GLGT) Company pipeline extension to the TCPL pipeline. In general, it seems likely that the pipelines applied for regulation in order to renegotiate their contracts so as to increase their toll revenues.<sup>20</sup> They needed higher revenues to invest in order to meet the rapidly growing market demand at that time.<sup>21</sup> Federal and provincial

<sup>&</sup>lt;sup>17</sup> National Energy Board (2006), p. 37.

<sup>&</sup>lt;sup>18</sup> "One certainly gets the sense from the Board's reporting during the decade that it wanted nothing to do with actively setting pipeline tolls." Priddle (1999) p. 529. The original conference version reads "When I arrived at the Board in 1965, I was told that the objective of the Rates Branch was not to have a rate hearing". By 1968 the Board reported that "it appears likely that rate hearings will be necessary in the near future". Priddle (1999) p. 530.

<sup>&</sup>lt;sup>19</sup> Priddle (1999) pp. 536, 538. He notes that Phase I (principles of regulation) took 78 sitting days and phase II (application to TransCanada) took 80 days.

<sup>&</sup>lt;sup>20</sup> The Borden Commission that recommended setting up the NEB also recommended that regulating the rates of gas pipeline companies should "require, if necessary, any such gas pipe line company to renegotiate the terms of any existing contracts for the sale or delivery of gas". The Borden Commission's recommendations on regulation of pipeline companies, October 27 1958.

<sup>&</sup>lt;sup>21</sup> "The 1960s and early 1970s had been a period of remarkable growth in Canadian oil and gas supplies and markets. This led to steady development of pipelines and exports." Priddle (1999) p. 541.

Governments encouraged various projects, not always economic.<sup>22</sup> Regulation is said to have held pipeline rates a little lower than they otherwise might have been, offsetting the reduced incentive to efficiency.<sup>23</sup> Regulation also gave reassurance to the pipelines.<sup>24</sup> Some would say that the latter role was the main raison d'être of regulation.<sup>25</sup>

Through the 1970s the Canadian government sought to manage a situation of perceived shortage of oil and gas supply, including by means of price controls on these fuels. By the 1980s the energy climate had changed, with the early 1980s economic recession, the oil and gas recession induced by the National Energy Program and the effects of falling energy markets. <sup>26</sup> National energy policies in Canada and the US also shifted towards competition, as discussed shortly. Conventional pipeline regulation nonetheless continued through this period, with applications and hearings every year or two, at least for each gas pipeline company.

## 3. Initial settlement activity and Board policy: 1985-1994

## 3.1 The first negotiated settlement: TQM 1985

On 9 August 1984, the Board set tolls for TQM gas pipeline with effect from 1 August 1984. On 31 January 1985 the Board ordered that these should be on an interim basis as from 1 February 1985, which required TQM to apply for new tariffs. TQM made its application on 22 February 1985. In its decision on this case the Board began by remarking on a notable feature of TQM's application.

\_\_

<sup>&</sup>lt;sup>22</sup> Priddle (1998) p. 542, instances several examples where "Real projects were also replaced by chimeras that, in some cases, were oriented more towards the perceived needs of governments than towards the needs of the market."

<sup>&</sup>lt;sup>23</sup> "The TCPL tolls hearing launched the Board into more than two decades of detailed pipeline-rate regulation, more often than not by means of adversarial public hearings.... From a producer standpoint, NEB rate regulation probably resulted, over the period as a whole, in lower-than-otherwise tolls. ... On the one hand, and directionally rather than quantitatively, the pipelines' revenue requirements were constrained by regulation. ... On the other hand, regulation did very little to effectively discipline the pipes to efficiency in terms of their investments and operations, both in engineering and economic efficiency. ... In the 'cost-plus' atmosphere fostered by regulation, there probably was considerable 'gold plating' of facilities by the engineers. ... On balance, I would judge that, in overall economic terms, the Board's rather parsimonious financial awards had a greater effect in lowering rates than the lack of efficiency incentive had on raising them." Priddle (1999) pp. 536-7.

<sup>&</sup>lt;sup>24</sup> "Another effect of regulation was that it created an environment in which the energy community, or at least the governmental members of that community, felt something of an obligation to see to it that the pipelines were looked after. Priddle (1999) p. 537.

<sup>&</sup>lt;sup>25</sup> One commentator remarks to us that "This was never more true than during the mid- to late-1970s when the NEB in its 'project champion' mode was trying to get the Northern Pipeline off the ground. ... In contrast to most other regulators, the NEB is not a consumer-oriented regulator. This reflects a simple reality – the economics of getting Canadian production to market have historically been tough given the long distances, and this is seen in the government involvement with TCPL Northern Ontario and IPL Line 9."

<sup>&</sup>lt;sup>26</sup> See (e.g.) Priddle (1999) p. 542.

The application was notable in that it had the support of several interested parties who had opposed TQM's requests in previous toll applications. TQM had meetings with these parties before the presentation of the application; consequently, an agreement was reached between them on certain matters which would influence the calculation of a just and reasonable toll, and on what would be a just and reasonable toll for TQM's transportation service. These parties placed on record that they considered the agreement to be an entity comprised of mutually dependent and inseverable matters and that neither the agreement itself nor any specific term thereof should be considered to be a precedent for any future application. <sup>27</sup>

Against what the Board described as "the somewhat unusual background of an agreement having been reached between the Applicant and some of the intervenors", the Board decided to conduct the proceedings by way of written submissions rather than hold a hearing. Despite the fact that the applicant and signatories to the agreement viewed it as "an entity comprised of mutually dependent and inseverable matters", the Board performed a point by point analysis of the various issues of the application, which was of course the norm in litigated proceedings. With some minor qualifications the Board's decision in September 1985 was broadly consistent with TQM's application, except that the Board adjusted downwards TQM's applied-for and agreed rate of return on common equity from 15.5% to 14.75%.

From the signatories' perspective, the Board had 'cherry picked' the agreement, in violation of their explicit provision on rate of return. In the light of the Board's later enthusiasm for negotiated settlements, it seems surprising that it should treat in this way the first agreement put to it. It seems unlikely that the Board was swayed by the fact that the agreement was not unanimous<sup>28</sup> since we shall see that the Board shortly rejected another settlement that was unanimous. The Board's main concern seems to have been one of principle: it felt the need to determine independently that the proposed terms were each just and reasonable. <sup>29</sup> What the Board seems to have found particularly

<sup>&</sup>lt;sup>27</sup> Decision RH-4-85, p. 1. NEB decisions are available electronically on the Board web site under the heading "Regulatory Documents" and then under the name of the company involved, classified by oil or gas pipeline.

<sup>&</sup>lt;sup>28</sup> Although certain major gas producers and shippers associations supported the agreement the Minister of Energy for Ontario opposed it. The supporters included two producer groups, namely the Canadian Petroleum Association (CPA) and the Independent Petroleum Association of Canada (IPAC), and the Alberta Petroleum Marketing Commission (APMC). (The CPA and the IPAC merged to create the Canadian Association of Petroleum Producers (CAPP) in 1992. The APMC is a provincial government entity charged with the sale of the Alberta Government's royalty stream from crude oil production, which is received in kind.)

<sup>&</sup>lt;sup>29</sup> "The fact that an agreement on just and reasonable tolls was reached between the Applicant and some major interested parties has some relevance to the Board's determination of a just and reasonable toll. However, the existence of such an agreement cannot fetter the Board's discretion. The Board cannot abandon its mandate; the agreement cannot, per se, be the vehicle for determining the justness and reasonableness of the tolls applied for." RH-4-85 p. 1

unacceptable was that TQM should receive an increase in its return on equity at a time when the cost of equity capital had declined.<sup>30</sup>

It is certainly plausible that TQM would agree to a settlement with higher equity return than before. TQM also benefited because "the majority of the intervenors supported TQM's position" on its application for authorization to recover project costs totalling \$7.639m related to facilities not built east of Québec City (an extension of its pipeline to the Maritime Provinces). Whether TQM welcomed or regretted the cancellation of this project is not indicated in the Board's determination.

The concept of cooperation between producers, shippers and pipelines was not unknown at this time. <sup>31</sup> But why would the producers and shippers agree to an increased return for TQM, having reportedly opposed TQM's toll applications in the past? It is possible that the application would lead to lower tolls despite the increase in equity return. <sup>32</sup> It is also likely that the signatories would gain from TQM's undertaking to cancel the extension of its pipeline east of Québec City, since the project was basically uneconomic and a significant part of the costs of this would have fallen on them. <sup>33</sup> It is just conceivable that some of these signatories feared that the Maritimes line could represent a competitive threat in future. <sup>34</sup> Another conjecture is that the western producers were willing to "bury the hatchet" of the disputed TQM venture with a view to facilitating impending oil and gas deregulation. Whether there were also particular distributional features of this settlement that advantaged the signatories is unknown.

These signatories were willing to accept the write-off of TQM's initial project costs. The province of Ontario, in contrast, took the view that if any other person had incurred such

<sup>&</sup>lt;sup>30</sup> "TQM applied for a rate of return on equity of 15.5 per cent as compared to the presently allowed rate of 15 per cent. ... [t]he expert witnesses for Ontario and TQM stated that the cost of equity capital had declined since 1984 and that their respective recommended rates of return on equity capital were lower for the current test year than was recommended in TQM's 1984 toll proceeding." RH-4-85, pp. 9 – 12.

<sup>31</sup> See the reference to "an unwritten compact mainly between the producers and the pipelines, under which the former proposed and the latter accepted those low equity ratios in return for regulatory provisions that

the former proposed and the latter accepted those low equity ratios in return for regulatory provisions that reduced the pipelines' risks.".Priddle (1999) p. 537.

<sup>&</sup>lt;sup>32</sup> The approved monthly toll from February 1985 was \$7.216m against \$7.539m from August 1984. This was about a 4 per cent reduction in toll revenues, a decrease that might not have occurred or could not have been assured in the event of litigation.

<sup>&</sup>lt;sup>33</sup> Priddle (1999) p. 542 includes as one example of a chimera (see footnote above) "the 'M' of TQM, which would have seen Alberta gas reaching Halifax". One correspondent explains as follows. "The NEB had denied the line to the Maritimes [that is, east of Québec City] when it approved an extension by TCPL to Québec City, but the National Energy Program (NEP) said it must be built and provided subsidies. Some of those subsidies came out of producer pockets to help develop the new markets. Also the TQM pipe was to be rolled into TCPL cost of service and the Eastern Zone extended to cover all of TQM. This created an internal cross-subsidy. Of course producers and lots of others would jump at the cancellation of a project to the Maritimes that never made sense and could only be built with subsidization from existing users."

<sup>&</sup>lt;sup>34</sup> The producers and shippers, mainly located in the energy-producing provinces of the west, might derive some benefit from a pipeline extension eastwards from Québec City to Halifax, Nova Scotia, if there was a prospect of an additional market there to offset the cost. But the extension could eventually be used to pipe gas westwards from new fields in Nova Scotia (as happened about a decade later, when the MNP pipeline began to ship natural gas from Nova Scotia to the Northeastern U.S) and thereby threaten the profitability of their business in Québec.

costs, they would have been at its own risk. (Ontario, at that time, was less committed to the policy of energy sector deregulation than either shippers or pipelines.) With a minor exception, the Board allowed the project costs into the rate base, to be amortised over three years and to earn the allowed rate of return on the amortised balance.<sup>35</sup>

Interestingly, the parties got much of what they wanted from this decision: TQM got the full recovery of project costs that was worth more than the lower return on equity, the producers got both the cancellation of the project and lower return on equity, and Ontario got the lower return on equity. However, as noted shortly, the decision undoubtedly discouraged the development of negotiated settlements. And in retrospect, the Board's decision failed to acknowledge the willingness of shippers and others to accept a slightly higher return for a pipeline in return for provision of services tailored to the wishes of its customers.

#### 3.2 The second negotiated settlement: Westcoast 1986

Westcoast gathers, processes and transports natural gas from Alberta and North-east British Columbia (BC) to distributors and other customers in southern BC and the northwestern US. Since 1973 it assigned to British Columbia Petroleum Corporation (BCPC) its contracts from producers in BC. In 1979 the Board established the Variable Cost of Service Method (VCSM) by which the company would be regulated, which also allocated costs between BCPC and other producers. In 1983, in response to pressure from shippers, the Board agreed to a separate review of Westcoast's method of regulation. In its Methodology Decision of April 1985 the Board agreed that there had been significant changes in circumstances in BC, following the adoption of a more competitive gas pricing policy by that province. It ordered Westcoast to file new tariffs as from January 1986 based on a Fixed Toll Method (FTM) using a forward test year instead of the previous Variable Cost of Service Method. In December 1985 Westcoast applied for orders approving tolls based on this method. The Board issued its decision in August 1986.

In its decision document on Westcoast's application, the Board emphasised and described at some length "the profound changes in many aspects of its [Westcoast's] business brought about primarily by fundamental policy modifications by governments in both Canada and the US and by an unprecedented and unexpected decline in the price of crude

<sup>&</sup>lt;sup>35</sup> This was nearly another stumbling block for the Board and for the agreement. One of the three Board members dissented on the grounds that the investment was not "used and useful", and argued that TQM's shareholders should bear at least 50 per cent of the costs referred to. RH-4-85 pp. 5-6, 20.

<sup>&</sup>lt;sup>36</sup> "[The Canadian Petroleum Association] CPA and the Independent Petroleum Association of Canada (IPAC) ... opposed the existing method of regulation and advocated regulating Westcoast under a fixed toll regime based on a forward test year." RH-6-85 p. 5.

<sup>&</sup>lt;sup>37</sup> VCM had previously been convenient for BCPC and Westcoast, but with price deregulation there was no reason not to put Westcoast on the normal FTM that was used for other pipelines since 1970. Incentive regulation was a consideration but not a major one. "The advantage of the FTM is that ... there is an incentive for the company to strive for greater efficiency. ... The VCSM has the disadvantage of lacking incentives to improve efficiency and effectiveness. ... Although the FTM in theory has inherent incentives to greater effectiveness and efficiency, the use of deferral accounts has tended, in other circumstances, to reduce those incentives to some extent." Para 2.2.2 page 7.

oil". <sup>38</sup> In Canada, federal and provincial governments withdrew completely from natural gas pricing by November 1986, "resulting in what is generally termed market-oriented pricing, and the complementary need for open access transportation including a range of transportation services must be kept in mind." <sup>39</sup> The BC government had also taken a series of far-reaching deregulation initiatives, as had the US.

The Westcoast case covers many issues, including toll design, tariff matters including priority of service, treatment of previous overruns in expenditure, determination of the rate base and rate of return, revenue requirement and so on. At one point, when the discussion turns to return on equity, the Board explains that Westcoast initially applied for a rate of 15.25 per cent, an increase on the previously obtaining rate of 14.75 per cent. During the course of cross-examination Westcoast indicated that changing circumstances led it to think that 15 per cent would be more appropriate. This opened up the possibility of an agreement.

Westcoast then commenced a series of meetings with senior representatives of CPA in an attempt to negotiate a settlement .... These negotiations resulted in an agreement between the two parties that Westcoast would apply for, and CPA would support, a rate of return on equity of 14 per cent.... The same agreement was reached with IPAC and BC Petroleum Corporation (BCPC). All other intervenors who actively participated in the toll proceedings were then approached. Such parties either agreed to or did not oppose the negotiated settlement. 40

The Board noted that the CPA's financial adviser initially took the position that 13.75 – 14.00 per cent would be an appropriate rate, and its updated advice during the course of the proceedings would have implied 13.25 – 13.50 per cent. When questioned about the negotiations on these matters, Westcoast indicated that they had not focused on such details. The Board noted that the parties had agreed to 14 per cent. However, it decided that 13.75 per cent would be a fair and reasonable rate.

This case raises two questions: Why did the parties settle the return on equity issue and what was the nature of the settlement? And why did the NEB not accept it?

<sup>&</sup>lt;sup>38</sup> RH-6-85, August 1986, p. 7.

<sup>&</sup>lt;sup>39</sup> The main Canadian measures were the Western Accord, the Natural Gas Agreement, and the Pipeline Review Panel. The Western Accord of March 1985, a broad energy agreement concluded between the Government of Canada and the Governments of energy producing provinces, aimed to liberalize oil and natural gas pricing in Canada. The Natural Gas Agreement of October 1985 removed administered gas prices beginning in November of 1986. The Pipeline Review Panel was formed in December 1985 to "review the role and operation of interprovincial and international pipelines engaged in the buying, selling and transmission of gas." (See RH-6-85, page 8).)

<sup>&</sup>lt;sup>40</sup> RH-6-85 p. 85. Discussion also covered the assumed debt-equity ratio, but for the most part this was agreed to be 35 per cent.

<sup>&</sup>lt;sup>41</sup>"... the negotiations took place at very senior levels and ... the merits of specific numbers were not looked into to a great extent. Rather, the overall package proposed by the Company seemed to be acceptable to all parties." And again "... there was not a great deal of discussion about the technical merits of the evidence prepared by their respective expert witnesses. ... it was apparent, given these prenegotiation positions, that a compromise had to be reached that seemed acceptable to both parties." p. 87.

On the first question, should the negotiated proposal of 14 per cent be seen as a concession to the other parties, compared to Westcoast's opening position of 15.25 per cent? Or as a concession to Westcoast given that the CPA came to the view that something under 13.5 per cent was appropriate and the Board eventually settled on 13.75 per cent? Or was the agreement on 14 per cent simply an attempt to save time and effort for all concerned by splitting the difference between two parties?

Since the settlement was initiated and completed late into the hearing process it presumably was not as deep and far-reaching as it otherwise might have been. But it surely covered matters beyond cost of capital. If the 'very senior' executives were not looking to a great extent at 'the merits of specific numbers', what else were they looking at in the 'overall package' proposed by Westcoast? The return on equity would be relatively important to Westcoast whereas other issues where it could concede something would be relatively important to the other parties. It seems plausible that the intervenors had secured some quid pro quo that justified conceding a slightly higher return to Westcoast.

What was this quid pro quo? In the absence of sight of the negotiated settlement (if indeed such a document existed) it is difficult to tell. So many issues are involved, on many of which the parties took different views from each other, often critical of Westcoast, that nothing immediately stands out. <sup>42</sup> It seems possible that the transition to competition and open access was relevant, the theme that the Board emphasised at the beginning of its decision document. At certain points the Board overrules Westcoast's proposals as inconsistent with open access and in some cases tending to favour particular (perhaps existing) customers. <sup>43</sup> However, it seems more likely that there was no single theme, but rather a set of individual interests that Westcoast accommodated in the substantial and complex transition to a new methodology of pricing, instigated largely at the request of the shippers. <sup>44</sup>

Why did the Board not accept the settlement provision on the rate of return on equity? Lack of unanimity was evidently not the issue, since this case was different from the previous one in that no party objected to this settlement. The Board had some concerns on other particular issues, as noted, but they are not presented as a reason for not accepting the settlement. The explanation seems to be that the Board still felt, as it had in the TQM case, that it had to determine for itself that each parameter of the settlement, taken separately, was just and reasonable. It necessarily had to do this for all the other

<sup>-</sup>

<sup>&</sup>lt;sup>42</sup> One of the few issues where the Board notes unanimous approval is the company's accounting and toll-making treatment of the Grizzly Valley pipeline and its replacement project. However, it is not clear how this helps the parties and in any case they are not convinced about the tax treatment of it. (p. 70)

<sup>&</sup>lt;sup>43</sup> See for example the discussion of authorised overrun and interruptible (pp. 17-18) and export and domestic displacement tolls (pp. 19-24).

<sup>&</sup>lt;sup>44</sup> One commentator has suggested to us that "During negotiations specific items were adjusted in return for other adjustments in order to obtain an overall settlement. Individual adjustments were not driven by a specific rationale. It was the overall result that was of paramount importance."

issues that were not the subject of the settlement, and evidently felt that it had to do the same for the return on equity too. <sup>45</sup>

## 3.3 Drivers of change at the NEB

The Board's treatment of these two cases (TQM 1985 and Westcoast 1986) is generally accepted to have discouraged settlements. <sup>46</sup> The Board did not dispute this. <sup>47</sup> Yet within a couple of years the Board was actively facilitating settlements, market participants appeared keen to explore the possibility further, and within a decade the Board had reversed its position. What led to this change of direction?

One influence on the Board at this time was undoubtedly the change in federal Government policy. <sup>48</sup> This was a development that the Board could not ignore. <sup>49</sup> The nature of the market also changed. Government policy went beyond the freeing up of commodity markets. Perhaps indirectly, it brought about pipeline open access and impacted on the manner of pipeline regulation. <sup>50</sup>

. .

<sup>&</sup>lt;sup>45</sup> The Board acknowledged that the settlement should be given weight. "However, given the Board's mandate, the existence of such a settlement cannot be the sole basis for determining the justness and reasonableness of the rate of return on equity component of the tolls applied for." RH-6-85, p. 87.

<sup>46</sup> Those closely involved with negotiation settlements for much of the NEB history have expressed themselves forcefully to the authors. "The proponents viewed the agreement as 'an entity comprised of mutually dependent and inseverable matters' and felt strongly that it was a package deal which could be accepted or denied as a whole. When the Board cherry-picked the first TQM settlement, the strong message received by the pipelines was that there is absolutely no merit in pursueing further settlements, since there is only downside and no upside." "Cherry picking of this deal absolutely discouraged further attempts at horsetrading." "Pipelines and interested parties were the instigators of negotiated settlements, unfortunately for them ahead of the Board having considered the role of settlements and its approach to them, and enunciated a settlement policy. The language in the decisions, to the effect that a settlement cannot be the "vehicle" (RH-4-85) or the "sole basis" (RH-6-85) for determining tolls, discouraged parties from putting time and effort into settling issues. … These cases were two buckets of cold water on the nascent settlement movement."

<sup>&</sup>lt;sup>47</sup> . "Not surprisingly, parties concluded that it was not worthwhile to undertake further settlement discussions until there was some clarity and commitment to the settlement process." Vollman (1996) p. 2. <sup>48</sup> "... the Mulroney governments ... must be assessed as having been profoundly and positively important in terms of energy policy, including regulatory policy... The PC's [Progressive Conservative party's] energy intentions were set out in the Prince Albert declaration of Spring 1984. The fourteen months from their September 1984 landslide election win to the Halloween Agreement of 1985 wrought the most profound and longest-lasting changes in the federal governmental framework for Canadian energy." Priddle (1999) p. 543

<sup>(1999)</sup> p. 543
<sup>49</sup> "Tribunals like the NEB have to take account of the policy environment created by the government of the day, while observing strict independence and objectivity in regard to treatment of specific applications. To do otherwise would be to thwart the operation of the democratic process. The Western Accord and the Halloween Agreement were needed for the Board to clear away the regulatory debris accumulated over the previous dozen years and set the industry on a course towards deregulation of commodity markets and eventual light-handed regulation of facilities owned by entities which retain market power, generally because of the natural monopoly characteristics of those facilities." Priddle (1999) p. 543.

<sup>&</sup>lt;sup>50</sup> "The evolution of deregulation caused a highly regulated market to transform into one which fostered direct sales among willing sellers and buyers, based upon freely negotiated pricing, with transportation being available on an open-access basis. Gone were the days when merchant pipelines, such as TransCanadaPipelines Limited bought gas directly from producers and sold it to eastern Canadian gas distributors." Miller (1999) pp. 420-1.

Of prime importance were certain critical appointments at the NEB shortly after this policy change (or as part of it). Roland Priddle was made chairman of the NEB in January 1986, a position he held to 1997. He had previously worked at the Board as a senior staff member between 1965 and 1974 before spending twelve years in the federal Department of Energy, Mines and Resources, the last years as Assistant Deputy Minister, Petroleum. As a senior public servant he had been instrumental in deregulating Canada's oil and gas pricing. In subsequent reflections on regulation of the industry he has said "that there was again a desire by the Board to lead the industry, which it did in the area of permitting negotiated settlements and describing the circumstances in which such settlements would commend themselves to the Board". 51

Others at the NEB were also influential. Ken Vollman was the senior staff member responsible for defining the first Guidelines on negotiated settlements in 1988. In July 1998 he succeeded Priddle as Chairman of the NEB, and is still in office at the time of writing. Gaétan Caron, the executive director at the time of Vollman's appointment as chairman, was "a persistent advocate of imaginative and novel approaches to regulation". He was largely responsible for the generic cost of capital proceeding (discussed below) that was "an important as a building block for the subsequent gas pipeline settlements" 52

The Board also seems to have been influenced by more practical considerations. Unlike the situation at the FPC and FERC in the U.S., reform does not seem to have been driven by a backlog of cases. But the Board's thoughts were moving in the direction of regulatory reform in the early 1980s, especially on the need for expeditious treatment of applications (Priddle (1999) p. 18), and this reform bore fruit. <sup>53</sup> The frequency and length of hearings was a particular concern. <sup>54</sup> Table 1 above shows that hearings took up 1000 days in the six years 1985 - 1990. One case alone took 73 days in 1986-87. <sup>55</sup> In 1987 the Board decided to take positive steps to improve the public hearing process, initially by consultation. In the event, the outcome included facilitating appropriate negotiated settlements. <sup>56</sup>

Mention should also be made of the contributions from industry executives. They had brought about the first two settlements before the Board had begun to address this issue, and they returned to it despite the Board's initial lack of sympathy. Their initiatives may have been more apparent and fruitful from the mid- 1990s onwards. <sup>57</sup>

\_\_\_

<sup>&</sup>lt;sup>51</sup> Priddle (1999) p. 546.

<sup>&</sup>lt;sup>52</sup> Priddle (1999) pp. 546-7.

<sup>&</sup>lt;sup>53</sup> "The Board commonly processes gas export orders within 48 hours and has reduced the processing time for electricity permits to approximately 36 days." NEB Annual Report 1999 p. 1.

<sup>&</sup>lt;sup>54</sup> "[B]y the time I got to the Board, the tedium of annual or biennial rate hearings for the major pipelines was getting to members. It quickly got to me." Priddle (1999) p. 545.

<sup>&</sup>lt;sup>55</sup> TransCanada PipeLines Limited (TCPL), 30 September 1986 to 27 February 1987. RH-3-86, May 1987, p. xv.

p. xv. <sup>56</sup> "During 1987 and 1988 the NEB engaged the regulatory community in a major consultative effort aimed at improving its public hearing process. Among the more than 30 initiatives examined was the role of negotiated settlements." Vollman (1986) p. 3.

<sup>&</sup>lt;sup>57</sup> Priddle (1999) p. 546, says that after the updated guidelines in 1994 "a new industry dynamic took hold as a result of a personal initiative by the senior members of the producing and pipeline sectors".

## 3.4 Facilitating settlements: the 1988 Guidelines

In 1987, as noted, the Board instigated a consultation on improving the regulatory process and actively sought stakeholder input. In 1988 it reported back with "a review of 20 regulatory areas which were targeted for improvement by interested parties". <sup>58</sup> Negotiated settlements were the first item discussed. The Board noted that "Strong support appears to exist among submitters for the Board to adopt procedures which would allow for settlement (or partial settlement) of issues by agreement between parties in toll proceedings."

There were diverse views on how settlement should be applied in practice. "These views range from one extreme of having settlements result from confidential negotiations between parties with the Board's role confined to only accepting or denying them and always accompanied by reasons for its decision, to the other extreme of having the Board conduct a public settlement proceeding." The Board also noted that "In addition, some parties suggested that the National Energy Board Act be changed to expressly allow for negotiated settlements as a cost saving device."

The respondents' stated rationale for the introduction of settlements was that "Board acceptance of negotiated settlements in toll matters would shorten public hearing time or even eliminate the need for a public hearing, thereby reducing the cost of regulation." Because the Board allowed for recovery of regulatory costs by pipelines, and these costs ultimately were added to the tolls paid by shippers, shippers may have been more interested than pipelines in reducing explicit regulatory costs. However, both parties had an interest in improving the regulatory process and thereby reducing the use of company resources in the regulatory and hearing process. Better mutual understanding was also hoped for, <sup>59</sup> and no doubt better customer relationships. In addition, though they did not say so, industry parties could hope to secure certain ends more surely and effectively by settlement than through the litigated process (provided the settlements were accepted by the Board). However, no one has suggested that industry parties or the Board yet saw the scope for incentive regulation or other innovations via settlements that subsequently materialised.

In response to the various private interests, the Board explained that it had a duty to ensure that all tolls were just and reasonable, which required a careful balancing of the interests of the various parties concerned, which was why it conducted its hearings in an open forum. In the light of these principles, the Board considered that an acceptable settlement process would need to address the following five concerns:

i) "parties affected by a settlement should have a fair opportunity to participate and have their interests recognized and appropriately weighed;

-

<sup>&</sup>lt;sup>58</sup> NEB (1988) p. 1.

One correspondent notes "There was also a thought that a greater degree of alignment within the industry might be achieved by avoiding the adversarial hearing process. In the end, this proved to be true, particularly by facilitating discussions between the producing and consuming ends of the pipelines."

- a negotiated settlement process should not fetter the Board's ability and ii) discretion to take into account the full public interest which often extends beyond the immediate concerns of the negotiating parties;
- iii) the settlement process must produce adequate information on the public record for the Board to satisfy itself that the negotiated settlement would result in tolls which are just and reasonable;
- the Board's role as an independent adjudicator must not be impinged by being iv) a party to the negotiations; and
- the Board cannot accept "package deal" negotiated settlements consisting of v) various elements, not all of which might, in the Boards' judgment, result in tolls which are just and reasonable."60

The Board was "prepared to consider settlement procedures that take the foregoing concerns into account". It did not believe that the existing wording of the Act precluded settlements, and it did not intend to recommend an amendment to the Act "which would cause fundamental changes to its responsibility to determine just and reasonable tolls".

The Board noted that parties were generally pleased that it was prepared to consider settlement procedures, "but some saw the five caveats as serious impediments to putting a procedure into practice" while others were more positive.

Having indicated that it was receptive to the settlement process but having also identified some concerns, "the Board believes it is now up to applicants to attempt to devise settlements compatible with the Board's criteria." This in effect put the onus on an applicant, the pipeline company, to propose a settlement, although "the Board will itself be examining issues as they come before it to determine if they might be candidates for a negotiated settlement, and invites potential applicants to do likewise".

## 3.5 Joint Industry Task Forces and TCPL's potential 1991 settlement

A parallel and helpful development was that of joint industry task forces (JITFs) established by companies. <sup>61</sup> In about 1987 the Board began to encourage their creation, in the context of a Westcoast determination. <sup>62</sup> JITFs soon began to complement the settlement process.

<sup>&</sup>lt;sup>60</sup> NEB (1988) p. 3. In addition, the Board noted a problem of process. Since an applicant would need notice if the Board did not accept a negotiated settlement, the Board would need to issue an interim decision. This was not an insuperable problem, "but it points out the difficulties involved in reaching a decision on elements of a case without a full hearing record".

<sup>&</sup>lt;sup>61</sup> "Task forces were initially established by pipeline companies and their shippers primarily to resolve matters dealing with operating practices, and terms and conditions of service, outside of the public hearing process." Vollman (1996) p. 3.

62 The Board had directed Westcoast to "conduct a joint industry study ... with a view to ensuring that the

gathering and processing tolls are appropriately based" (RH-2-87 p. 64). This proved fruitful. "An Industry Task Force composed of representatives of Westcoast and its shippers was established after the last Westcoast hearing to resolve operating and other toll and tariff matters outside of the hearing process. Of the 34 issues dealt with by the task force, only five were brought before the Board for resolution in this proceeding; one of these, downstream diversions, was resolved to the satisfaction of the parties during the hearing. The Board strongly encourages the task force to continue its work. Recommendations that are

After the Board's determination of its 1990 tolls, TransCanada PipeLines Limited (TCPL) initiated the formation of a JITF composed of various shippers, producers, industry associations, distributors, government representatives and other interested parties, which first met in October 1990. <sup>63</sup> In December 1990 TCPL filed an application for new tolls for 1991. As part of its application, TCPL filed a JITF report containing various recommendations to the Board. In the event, other parties objected because the JITF had not included them. TCPL therefore presented the report as part of its evidence rather than as a negotiated settlement. <sup>64</sup> The Board nonetheless encouraged the settlement process "as a means of streamlining proceedings". <sup>65</sup>

TCPL was, and still is, the largest of the Group 1 pipelines regulated by the Board, although it is not generally regarded as a leader in the settlement field. Most other pipelines have since created JITFs, which have played a role in settlement negotiations.

# 3.6 The third negotiated settlement: Westcoast 1993

In July 1992 Westcoast Energy applied for new tolls effective January 1993. In October 1992 Westcoast informed the Board that it had reached settlement with four major users. <sup>66</sup> A week later Westcoast identified further parties who supported or did not oppose the settlement.

The settlement negotiated by Westcoast embodied two types of changes to the pipeline's toll application. First, Westcoast reduced its operating and maintenance expenses and created a deferral account for unfunded debt (protecting toll payers from unexpected changes in the cost of unfunded debt). These changes led to tolls lower than had been applied for. Second, Westcoast agreed to accept the rate of return on equity that the

brought forward to the Board for consideration and approval reduce the length of public hearings." (RH-1-89 p. xi)

<sup>&</sup>lt;sup>63</sup> Its terms of reference were "To identify and attempt to resolve issues raised by individual Task Force members, including issues brought forward by the National Energy Board from prior decisions, which relate to the tolls, tariffs and operations of the Applicant's pipeline system within the context of its Tolls Application." Decision RH-1-91, ch. 1, page 14.

<sup>&</sup>lt;sup>64</sup> "Prior to the Pre-hearing Conference and at the Conference itself, various parties, most notably the American pipeline companies, objected to the Board receiving the Task Force report as a form of negotiated settlement because they had been excluded from the process. In their view, the process was flawed because they were prevented from participating in the Task Force deliberation and preparation of the report. As a result, TCPL abandoned its intention to present the Task Force report as a negotiated settlement and proffered it instead as part of its own evidence in support of its tolls application. This view was generally acceptable to other parties for the purposes of this proceeding on the condition that membership in future task force meetings would not be restricted." (RH-1-91 p. 14)

<sup>&</sup>lt;sup>65</sup> "The Board, however, would first like to comment on the Task Force process as this was the first occasion that TCPL has attempted to incorporate such a process into the preparation of a tolls application. The Board recognizes that this process is in its infancy in proceedings before the Board and is encouraged by the initial efforts of interested parties to develop a pre-hearing settlement process. The Board expects that, if interested parties find it beneficial and cost effective, this process will continue to evolve as a means of streamlining proceedings before the Board." (RH-1-91 p. 15)

<sup>&</sup>lt;sup>66</sup> Canadian Association of Petroleum Producers (CAPP), the Council of Forest Industries of British Columbia, BC Gas and Canwest Gas Supply.

Board would choose to allow for TCPL in the latter's toll case being heard in parallel to the Westcoast case, and to have certain queuing and access issues heard by written submission. These changes reduced the scope of the hearing and shortened the proceedings, reducing the hearing and participation costs for all participants.

The above adjustments to Westcoast's application therefore benefited shippers and consumers by reducing tolls and shortening proceedings. The cost to Westcoast of these concessions appears to have been low. The O&M expenses were reduced by \$500,000 which was just 0.135% of the approved revenue requirement of over \$370 million. The creation of a deferral account for unfunded debt basically meant that Westcoast would neither profit nor gain from changes in the interest rate, compared to the projected rate of interest, on unfunded debt. Given the Board's policy on return on equity, Westcoast likely believed that it would have been awarded a rate of return on equity very similar to TCPL's, if not identical. Reducing the length and scope of the hearing therefore represented a net gain for the utility.

This time the Board accepted Westcoast's settlement. Nonetheless its decision still contained an item-by-item examination and commentary on the main components of the conventional rate base calculation. The Board also required Westcoast to file sufficient evidence to support the decision. <sup>67</sup>

Some intervenors, even though they supported the settlement in question, expressed some concerns regarding the settlement process. These concerns related to the openness and transparency of negotiations and the ability of interested interveners to participate. The Board addressed these concerns in its evaluation of the settlement. Although the Board would have preferred that more parties were involved in the negotiations, it accepted that there was a limited timeframe and that other parties had had an opportunity to participate in the Board's hearings. The Board was also satisfied that the settlement contained no unacceptable provisions.

#### 3.7 Additional Board initiatives for reform

The Board now took a more active role in exploring reforms to regulatory procedures. In March 1992 it initiated a public discussion of the possible and practical alternatives to or modifications of the traditional cost of service (COS) method of regulating pipelines under the Board's jurisdiction. In January 1993 it held an Incentive Regulation workshop. Pipelines expressed a range of rather lukewarm views on incentive schemes in general. Shippers stressed the importance of establishing performance measures and monitoring for pipelines in the short-term, which would establish a solid base for incentive regulation

<sup>&</sup>lt;sup>67</sup> "[T]he Board stated that it was prepared to recognize the settlement in the upcoming hearing but that it expected Westcoast to discharge its burden of proof by filing sufficient evidence to support the various elements of the settlement. The Board added that, while the Act does not prescribe a method for determining just and reasonable tolls, the chosen method must nevertheless adhere to the principles of natural justice and the Board's decision must be supported by relevant evidence on the record." Board Decision RH-3-92 p. 2.

in the longer term. <sup>68</sup> In view of this response, the Board did not take forward incentive schemes at that time. However, the workshop facilitated several other important initiatives. <sup>69</sup>

One of these was a requirement that each pipeline annually file a set of Performance Indicators, so as to make its success in improving its efficiency more transparent.

In 1993 the Board questioned the appropriateness of the traditional examination of hundreds of 'line items'. It concluded that an overall approach to O&M expenses – specifying a cost envelope – "would give the pipeline company more flexibility to respond to changing market conditions while providing an incentive to strive for more efficient operations." <sup>70</sup>

Another initiative was the Generic Cost of Capital Hearing in March 1994. The Board was concerned about the duplication of evidence in different hearings, and also about the consequences of setting allowed returns at different times. The Board's aim was to avoid annual hearings on the cost of capital by developing an automatic mechanism to adjust the return on common equity. It established an annual basis for doing this, applicable to all pipelines. This pipelines were given deemed common equity ratios varying from 30% to 45% depending on their risk. This decision was intended to streamline the regulatory process by removing a contentious issue from individual hearings and to reduce the uncertainty in terms of a major cost item. This seems to have struck a chord with many industry participants, who were increasingly skeptical about this aspect of regulatory proceedings.

۷۵

<sup>&</sup>lt;sup>68</sup> NEB (1993) pp. 7-8.

<sup>&</sup>lt;sup>69</sup> "Although the Workshop demonstrated the Board's willingness to look at incentive schemes as a means of revitalizing the regulatory process, it produced no tangible results in terms of agreement on a prototype incentive scheme. It did, however, set the stage for a number of shorter term initiatives to improve the existing cost of service procedures."

<sup>&</sup>lt;sup>70</sup> "This was another important cultural change because it contributed to more global thinking; a condition which would become even more important under incentive regulation." Vollman (1996) p. 4.

<sup>&</sup>lt;sup>71</sup> RH-2-94. On the basis of such a mechanism the Board approved a return on equity of 12.25 per cent for 1995, determined by adding a risk premium of 3 per cent to a forecast long-term bond rate of 9.25 per cent. It also specified a mechanism for updating the bond rate forecast on the basis of which it approved a rate of 11.25 per cent for 1996. Vollman (1996) pp. 5-6.

<sup>&</sup>lt;sup>72</sup> TNPI and IPL submitted negotiated settlements in May 1994 and on 3 March 1995, respectively, and were discharged from the Generic Cost of Capital hearing before the decision was published. Although the decision did not publish common equity ratios for these two pipelines, other calculations applied equally to them.

<sup>&</sup>lt;sup>73</sup> Caron (1995) p. 9.

<sup>&</sup>lt;sup>74</sup> One correspondent writes "The rate of return portions of toll hearings were a circus with experts retained on both sides. However, the process was flawed because the cost of these experts for the pipelines was included in their cost of service whereas the interveners had to pay their own costs. The NEB does not provide for intervener funding. Oil and gas producers became frustrated with the process because their participation bore no fruit in the NEB reasons for decision. When in doubt, the Board opted in favor of the utility to ensure the pipeline remained profitable."

The Generic Cost of Capital decision is generally considered "important as a building block for the subsequent gas pipeline settlements". To One correspondent suggests that it works in two ways. First, it takes off the table the issue of cost of equity, on which parties find it difficult to agree and which constitutes a 'zero-sum game'. Second, it sets a floor to the negotiation since no utility will accept less, so that discussions focus on the potential 'positive-sum game' of what additional value the utility can offer to merit additional revenue. To

#### 3.8 Revised settlement procedures

Another measure discussed at the Board's 1993 Workshop was increased reliance on negotiated settlements. Some accounts seem to suggest that the 1988 Guidelines had essentially resolved the outstanding uncertainties and reservations, and thereby enabled settlements to flourish. In fact, the process was a rather slower one. The Board's 1988 guidelines led to only two further settlements, as indicated above, one of which was not ultimately presented as such. Subsequent accounts identify two main concerns. One was the Board's rejection of 'package deals'. (And what else is a negotiated settlement if not a package deal, what the 1985 TQM settlement described as "an entity comprised of mutually dependent and inseverable matters"?) The other concern was the Board's inclination to hold hearings even where settlements existed. Revisions to the Guidelines therefore seemed necessary.

Workshop participants were generally supportive of settlements, but with different emphases. Shippers said they were committed to the process but their experience had been uneven, they were not convinced that the pipelines were committed to it and they felt they had less negotiating power.<sup>79</sup> Pipelines for their part said they were strongly

<sup>&</sup>lt;sup>75</sup> Priddle (1999) p. 547. Another correspondent ranks the Generic Cost of Capital decision as 'a watershed' comparable to the 'no cherry picking' promise in the revised guidelines (see below) in terms of facilitating settlements.

<sup>&</sup>lt;sup>76</sup> It is an interesting question why two of the oil pipelines should have agreed settlements that effectively avoided the immediate application of the generic cost of capital decision. One suggestion put to us is that oil pipelines had more value to play with than gas pipelines, and in the absence of this decision could justify a higher return on capital (see below). A related suggestion is that previous arrangements involved the oil pipelines taking greater cost and forecasting risk over a period of several years, for which they were rewarded in a higher cost of capital. This could henceforth disappear if the NEB gas regulation model were applied to them, since the latter involved annual rate setting with deferral accounts for variances and a true-up the next year, hence little revenue risk. It has been suggested to us that the US FERC model is more similar to the NEB's previous oil pipeline approach and stands in contrast to the NEB gas pipeline approach. It involves infrequent rate setting, with the timing thereof largely at the discretion of the pipeline, and rates based on forecasts with no annual trueing up, hence offers a much wider range of areas of risk and negotiable items.

<sup>&</sup>lt;sup>77</sup> "In September 1988 the Board provided the clarity and commitment that the regulatory community required to continue down the path of negotiated settlements. Settlements re-emerged in 1989 and grew in number as parties and the Board became more comfortable with their acceptability and effectiveness.... By the late 1980s the use of negotiated settlements and task forces had become commonplace." Vollman (1996) pp. 3, 4.

<sup>&</sup>lt;sup>78</sup> Vollman (1996), Priddle (1997).

<sup>&</sup>lt;sup>79</sup> "Shippers stated that they are committed to working with pipelines through the task force settlement process, but noted that their experience with the process has been very uneven. While the process has

supportive on grounds of cost, confidentiality and control over outcome, and had every reason to negotiate in good faith. 80 There was some concern that the Board had not always accepted negotiated settlements, which created uncertainty about the process. There was also concern about the Board's requiring detailed explanations for each of the settled issues.

In August 1994 the Board published revised and slightly more detailed guidelines for negotiated settlements. (NEB 1994). It repeated with some modification its previous five criteria for acceptable negotiated settlements. The two main modifications to address the two concerns mentioned above were as follows.

- After expanding the third criterion on the requirement to produce adequate information on the public record<sup>81</sup>, the Board added a further procedural step and an assurance. "Upon filing of this information, the Board would invite interested parties to comment on the settlement. Should the settlement not be opposed by any party, the Board would normally be able to conclude that the resultant tolls are just and reasonable and a public hearing would not be required." There was no reference to the possibility of contested settlements.
- In the fifth criterion, the Board now removed the prohibition on package settlements if they included some elements that might not be just and reasonable. The new provision was simply that "the Board will not accept a settlement which contains provisions that are illegal, or contrary to the *National Energy Board Act*."

These amendments did not actually preclude cherry picking of the kind that had previously caused problems. Significantly, within eighteen months the Board was adding the additional provision: "When presented with a settlement package, the Board will either accept or reject the package in its entirety." 82

The net effect was not simply to reinforce the Board's support for negotiated settlements. In effect, the new guidelines reversed the Board's previous position that "the agreement cannot, per se, be the vehicle for determining the justness and reasonableness of the tolls applied for". Henceforth, the Board would judge the reasonableness of a settlement by the reasonableness of the process rather than by the reasonableness of the outcome. 83

beneficially enabled shippers and pipeline companies to resolve a number of issues through negotiation, shippers felt that pipeline companies were not committed to the process. They expressed the view that the process at times becomes extremely acrimonious and that little progress is made. Shippers also argue that there is currently an imbalance in negotiating power in the settlement process." NEB (1993) p. 15 
<sup>80</sup> "Pipelines indicated strong support for the settlement process. It was noted that hearings are expensive and, given that all aspects of a company's operations are exposed, negotiation is preferable to a public hearing. In addition, pipelines stated that a company feels more in control of its destiny when it can negotiate parameters which affect its business, as opposed to having the decisions made by the regulator. Thus, they argued that pipelines have a strong incentive to negotiate in good faith and avoid unnecessary public discussion of pipeline management issues." NEB (1993) p. 15

It now specified that the applicant should provide a tabulation of the components of the agreed revenue requirement, the resulting tolls, an explanation of their derivation, and any tariff changes, accompanied by a concise description, explanation and rationale for the resolution of each issue.

<sup>82</sup> NEB 1996-03-01 Reasons for decision Trans Mountain RHW-2-96, p. 5. NEB 1996-06-01 Reasons for decision RHW-3-96 Trans-Northern Pipelines, p. 3. This phrase was not used in the Board's earlier decisions on IPL's settlements for 1994 and 1995-9, but has been used since 1996.

<sup>83</sup> As the then-chairman Robert Priddle has recently put it to the authors: "The Board then simplified the guidelines essentially to say: if you the regulated entity advise your whole community that you are going

One commentator puts it this way.

[T]he acceptance of negotiated settlements is a critical breakthrough in the evolution of light-handed regulation. The breakthrough was the recognition that the consensus of the affected parties as to what was fair and reasonable did not need to be subjected to further scrutiny in accordance with some higher ideal of the public interest that existed in the eye of the regulator. In other words, the consensus of the affected parties was a good measure of the public interest.<sup>84</sup>

## 4. The blossoming of settlements: 1994 to the present

## 4.1 Multi-year incentive agreements

At about this time there was also a change in economic conditions and attitudes in the industry.

"Pipeline companies, which for decades had identified management of the regulatory process as a core competence, were now more concerned about competition and keeping their costs as low as possible to retain business. Users of the pipelines had grown disenchanted with a regulatory process that was costly, time-consuming, and at which they felt they could not win."85

Producers wanted to move to a price-setting system where pipeline owners would face greater incentives to reduce costs – that is, incentive regulation. 86 Perhaps the industry had not initially been enthusiastic about various reforms urged by the Board. <sup>87</sup> But by the time the Guidelines were updated, the industry had taken the leadership in these matters.<sup>88</sup> At any rate, there was a general feeling that hearings represented "inefficiency

for an NS, if you subsequently allow into the negotiations any party that has a demonstrable interest, and if there is broad agreement among parties, then we will consider that the public interest has been upheld and satisfied."

<sup>86</sup> See for example the arguments of the gas producers (and shippers) at the NEB's 1993 workshop on incentive regulation discussed above. Incentive regulation was developing elsewhere, not least in the UK. (In 1983 RPI-X incentive regulation was proposed for the privatization of British Telecommunications. It was adopted for that company and for the privatized British gas and electricity industries in 1984, 1986 and 1989, respectively.)

<sup>87</sup> "One of the themes of Canadian gas deregulation history has been one of policy and regulatory initiatives being initially opposed sectorally and then being overtaken by private sector initiatives when corporations recognized both the inevitability of what was happening together with the commercial opportunities which it was creating. ... The pipelines have shown a history of initial reluctance at gas market deregulation. ... the pipes were rather slow in exploiting the possibilities opened up by the Board's 1988 Guidelines for Negotiated Settlements, and there was limited enthusiasm in the industry at large for NEB's incentive regulation initiative of 1993 and for the generic cost of capital proceeding two years later." Priddle (1998)

p. 21.

88 It is not clear what kind of previous experience had most effect. Vollman (1996), p. 6, suggests that "The people who emerged as leaders were for the most part executives who were relatively unscarred by regulatory battles. In the case of some companies, veteran regulatory staff would sometimes have to be overruled in order to achieve the compromises required to bring about agreement." Others have remarked that the executives who did the first deals (from IPL, TMPL and even TCPL) were indeed scarred from previous regulation.

27

<sup>84</sup> Schultz (1999) p. 388.

<sup>85</sup> Vollman (1996) p. 6.

without reward", a zero-sum game to no mutual benefit, and were not conducive to a good relationship between customers and service provider, whereas settlements offered the promise of something better.

The combination of revised Board policy, evolving economic conditions and active industry leadership led to significant new developments. The first manifestation was a settlement with IPL (later Enbridge), the largest oil pipeline in Canada. In November 1993 it achieved a fully negotiated one year settlement for 1994 tolls. <sup>89</sup> This first settlement was negotiated "in an effort to minimize the time and cost involved in examining IPL's toll application". <sup>90</sup> It defined the "standard" parameters used in the toll making methodology, including rate base, rate of return on different elements and toll design. It contained no explicit incentive mechanism, but IPL was rewarded for focusing on issues important to the other parties."

Thereafter, the Board approved a succession of multi-year negotiated settlements. These agreements generally include incentives to reduce costs, and provisions to share savings between the pipeline and its shippers.

- On the oil side, in March 1995 IPL signed a five-year incentive settlement covering tolls for 1995-1999. The two other major oil pipelines soon followed suite. After an initial settlement for 1995, TransMountain reached a five-year incentive settlement for 1996-2000 with provision for renewal thereafter. Trans-Northern also reached a five year incentive toll settlement for 1996-2000, continuing thereafter until notice was given.
- On the gas side, TCPL, the largest gas pipeline, settled all revenue requirement issues for 1995 except the cost of capital being dealt with by the Generic Cost of Capital hearing. The parties then agreed a four year Incentive Cost Recovery and Revenue Sharing Settlement for 1996-2000. Westcoast agreed a settlement for 1996 then a five-year incentive-based settlement for 1997-2001. TQM also agreed a five-year incentive-based settlement for 1997-2001.

Thus, by 1997 all six of the Group 1 pipelines had entered four or five-year negotiated incentive-based settlements. In 1996, over 90% of revenue requirements of Group 1 pipelines were based on these settlements. <sup>93</sup>

The introduction to TCPL's 1996-2000 settlement, while not necessarily the most advanced example, gives some indication of the scope of these settlements, and how far

<sup>&</sup>lt;sup>89</sup> Importantly, this "proved to the parties that they *could* reach agreement". Vollman (1996) p. 8.

<sup>&</sup>lt;sup>90</sup> IPL letter to NEB dated November 22, 1993, submitting the negotiated settlement for 1994 tolls.

<sup>&</sup>lt;sup>91</sup> The settlement provided for a payment to IPL of \$1,000,000 over the applied for 1994 revenue requirement, with the justification that IPL was not expected to attain its 1993 allowed rate of return of 11.5 percent, and this increase in the revenue requirement would save the cost of a regulatory review and "permit the Board, IPL and the industry to focus on a timely expansion of ex-Alberta crude pipeline capacity and the pressing matter of crude oil apportionment". IPL letter to NEB dated November 19, 1993, detailing negotiated settlement for 1994 tolls.

<sup>&</sup>lt;sup>92</sup> Decision RH-4-94.

<sup>93</sup> NEB 1996-1997 Performance report, page 1.

the aim of the parties had evolved beyond shortening hearing times and streamlining regulation.

"The primary objectives of this settlement are the following:

- to more closely align the interests of the Parties by providing a framework which encourages efficiency gains, cost minimization and maximization of system utilization;
- to provide for the lower possible costs and the highest possible throughput without compromising pipeline efficiency and reliability or adversely impacting safety or the environment;
- to result in tolls to shippers that will be lower than they otherwise would have been if determined under traditional cost of service regulation;
- to maintain or improve the historic high level of service quality of the TCPL;
- to maintain or improve the financial integrity of TCPL;
- to preserve firm shippers' flexibility and ability to fully utilize their transportation contracts ...; and
- to provide for the active management by TCPL of its foreign exchange and debt management programs in order to minimize costs."<sup>94</sup>

The Board, while favouring incentive regulation, was quite explicit that it had not designed the form of these developments. "Incentive regulation has developed mainly through multiyear toll agreements negotiated between pipelines and interested parties." The Board then gives some indication of the way in which these agreements operate, and how they reduce regulation.

Such agreements provide for a sharing of the benefits that may result from improved performance by the pipeline. Typically, parties agree to a baseline level for costs which may be lower than what the pipeline applied for under cost of service regulation. Some protection is afforded to the pipeline for uncontrollable cost escalation along with a share of the rewards for keeping costs below the target level. Similar incentives can apply to efforts by the pipeline to increase throughput and revenue. (NEB 1997, p. 2)

It would be interesting to compare these multi-year settlements with the typical regulated incentive price caps determined by regulators in (e.g.) the UK. In both cases, the agreed baseline for costs and revenues is typically below what the pipeline initially argued for. The negotiated cost projections appear to be less aggressive in terms of future cost reductions, and there seem to be more adjustment factors, risk sharing arrangements and escape clauses. On the other hand there is also more revenue-sharing, typically on a 50-50 basis rather than 100 per cent to the utility. It is beyond the scope of the present paper to explore these issues.

#### **4.2** Competition and flexibility: Westcoast 1997 – 2001

With the advent of these multi	year settlements, the form of	t regulation began to	change.
--------------------------------	-------------------------------	-----------------------	---------

-

<sup>&</sup>lt;sup>94</sup> RH-2-95.

Once approved by the Board, multi-year agreements allow for a more relaxed form of regulation. Each year of the agreement, the pipeline makes a tariff filing containing new tolls based upon the agreement. After parties have had an opportunity to provide comments on the filing, new tolls come into effect, unless there is cause to examine them further. (NEB 1997, p. 2)

The new approach went beyond approving the updating of tolls within the term of an existing agreement. Even new agreements occasioned little or no concern, allowing the Board to accept them within a month or two, including a period for public comment. In effect, settlements transferred the major pipelines from an active to a more passive form of regulation.

In one case a pair of settlements quite explicitly designed and achieved a transition to "a new scheme of light-handed regulation". This covered about half of Westcoast's regulated business.

The Board had dealt with Westcoast's application for 1995 tolls in the traditional way, identifying and approving separately each element of the conventional calculation and allowing a 5.6% rate increase on a typical service rather than the requested increase of about 8%. (RH-5-94) In December 1995 Westcoast applied for 1996 tolls and in January 1996 the Board granted an interim typical increase of 9 per cent. Later in January Westcoast reached a one-year settlement with major users that involved a lower typical increase of 7.8%. Presumably Westcoast assumed that it would not get the whole of its requested increase, and subsequent events suggest that it saw advantage in a good relationship with its shippers.

In November 1996 Westcoast applied for 1997 tolls embodying a 25% increase, and also requested approval of an incentive-based methodology for fixing revenue requirements for the five year period 1997-2001. In December the Board allowed a 10% interim increase. In February 1997 Westcoast announced that the Canadian Association of Petroleum Producers (CAPP) had agreed in principle to a settlement for that five year period. The actual settlement was filed in May 1997 and was approved in August 1997. 96

The stated motivation for the 1997-2001 settlement was the changing economic and commercial environment. This included

- significant development of gas resources in the higher cost Northeast BC area while the industry was often faced with low gas prices;

<sup>96</sup> National Energy Board, Reasons for Decision, Westcoast Energy Inc., Tolls for 1997 to 2001, RH-2-97 Part I, August 1997.

30

<sup>&</sup>lt;sup>95</sup> RH-1-96. Amongst other things, the settlement provided for the 1996 revenue requirement to reduce from \$552.7m to \$509.7m, the O&M budget to reduce by about \$4m and the capital program by about \$26m (with associated reduction in rate base). The capital structure and rate of return on equity were as provided for in the Generic Cost of Capital decision RH-2-94. In addition, Westcoast agreed not to seek amendments to its renewal provisions in 1996, which it had previously indicated it would do. Presumably this was a reassurance to some existing users.

- more competitors and Westcoast's market share reduced from nearly 100 per cent to 79 per cent over the last ten years, resulting in higher tolls as costs have to be spread over a smaller demand;
- shipper dissatisfaction with the rigidity of the existing toll structure and uncertainty as to its future level;
- the inability of Westcoast, under the current regulatory environment, to quickly develop new capacity and respond to customers (Westcoast's competitors, subject to provincial rather than federal jurisdiction, could design a plant and put it in service in about nine months); and
- the recognised need to change the regulatory structure pertaining to the gas business in BC.

The settlement embodied typical toll increases ranging from 4 to 15%, excluding certain adjustments. More importantly, the settlement distinguished between Westcoast's gas gathering and processing activities (called Zones 1 and 2), which represented about half Westcoast's assets, and its transmission activities (called Zones 3 and 4). The key provisions of the settlement for gas gathering and processing (Zones 1 and 2) were

- fixed tolls for 1, 3 or 5 year contract terms (with lower prices for longer terms);
- an adjustment component tied to the price of natural gas;
- a bidding process (if feasible) for interruptible tolls;
- a revenue deferral account for differences between actual and base level of toll revenues, to be disposed according to a new scheme of light-handed regulation yet to be negotiated; and
- tolls for available and incremental capacity to be determined through individual negotiations.

For transmission tolls (called Zones 3 and 4) there were simpler but nonetheless innovative provisions. <sup>97</sup> In addition, for all zones there were agreed changes to accounting policies and procedures (e.g. on depreciation) and agreed principles with respect to service reliability. The Board was able to satisfy itself on certain legal issues that could in earlier times have been obstacles. <sup>98</sup> In order to enable the provisions on depreciation, it also agreed to exempt Westcoast from the application of relevant sections of the Accounting Regulations. The Board's stance was thus much more positive than a decade earlier.

The settlement foreshadowed a new development going beyond the concept of multi-year incentive regulation.

<sup>&</sup>lt;sup>97</sup> Key provisions in Zones 3 and 4 included 1) shippers had the option of a fixed toll for a 5 year period or a toll calculated annually according to a prescribed methodology, 2) the revenue requirement for the latter would be based on the previous year's actual costs and a fixed escalation factor, adjusted to share any variance from base revenue requirement, and c) a bidding process for allocating interruptible service.
Westcoast's original proposal to create these Zones is discussed in RH-6-85 at section 3.3.2.
<sup>98</sup> As to whether negotiated tolls could lead to two or more different tolls in substantially similar

As to whether negotiated tolls could lead to two or more different tolls in substantially similar circumstances (which might appear to be contrary to the non-discrimination provisions of the National Energy Board Act), Westcoast said it could not anticipate what the specific circumstances would be in future. As to whether the Board had authority to allow negotiated tolls, Westcoast said that it was simply asking the Board to approve the concept and that it would file any negotiated toll with the Board.

The parties to the Settlement contemplate that by the end of the term of the Settlement, Westcoast and shippers will be freely negotiating market-based arrangements in a manner consistent with the provision of service by Westcoast on a competitive basis such that light-handed, complaint-based regulation would be appropriate. The principles of this new regulatory approach will be the subject of further negotiations, which the parties intend to complete by 31 December 1997 and will be subject to Board Approval; and the parties have also agreed to negotiate the terms of a policy governing the interconnection of the gathering or treatment facilities of third parties with Westcoast's facilities.

The next section sets out this new regulatory approach.

## 4.3 Light-handed regulation: Westcoast 1998

In 1995 a report to the British Columbia government found no unambiguous evidence of economies of scale in gas gathering and processing in the Westcoast system, and identified earlier government policy as a major factor in the concentration of the industry there. "In short the report suggested Westcoast was an unnatural monopoly with the consequence that a different approach to regulation was appropriate." <sup>99</sup>

Schultz identifies a number of factors suggesting that Westcoast would not be able to exercise market power. These include absence of economies of scale, new technologies and new construction techniques reducing barrier to entry, opportunities to enter based on different customer service needs, increasing actual rivalry, Westcoast competing for new business (and with itself) via a new subsidiary, new processing capacity built outside Westcoast, knowledgeable customers with buying power, limited scope to extract profits and customer pressure to be cost efficient, alternative opportunities in Alberta, and competition from an actual new entrant.

On 5 March 1998 Westcoast filed its Framework for Light-handed Regulation document which amends the above settlement by providing the mechanism by which Westcoast's tolls for gas gathering and processing services will be based on (individually) negotiated arrangements. A workshop was organised to present and discuss it. Written comments were invited and received; none opposed it. The Board approved it on 25 June 1998.

The Framework comprises seven sections. The Introduction sets out the goals of the framework, which in summary are

- to provide shippers and Westcoast the opportunity to negotiate service requirements as in a competitive market
- where possible to rely on commercial arrangements instead of regulatory oversight
- to ensure no unjust discrimination in terms of access
- to provide Westcoast with the flexibility to compete without the ability to exercise significant market power

<sup>99</sup> Schultz (1999), who also describes the origins and nature of the Westcoast pipeline system.

<sup>&</sup>lt;sup>100</sup> Key Documents Related to the Board's Decision on the Framework for Light-Handed Regulation, National Energy Board, June 1998

- to provide Westcoast with the incentive to increase its competitiveness
- to reduce barriers to entry in gas gathering and processing in BC
- to enhance the viability and competitiveness of the BC bas basin by aligning more closely the interests of shippers and Westcoast by placing the responsibility for recovering existing investment costs on Westcoast and the responsibility for the cost of new facilities on the parties deciding to proceed (including Westcoast).

# The Introduction then explains certain underlying principles, that

- the change recognises that shippers are knowledgeable and have information and other options, and "the Framework contemplates an increase in competition through, among other things, the introduction of an interconnection policy";
- "special consideration has been given to ensure that all shippers, regardless of size, resources, location, or the existence of a competitive alternative will be treated fairly";
- "the parties intend that the Framework not be applied in a manner that would permit tolls for service provided by Westcoast to rise to a level that would simply reflect the revaluation of Westcoast's rate base for existing facilities to Westcoast's replacement cost";
- "Notwithstanding that tolls for service may vary to reflect market-based considerations, new toll arrangements entered into under the Framework, in particular for small volume captive shippers, will be priced consistent with service provided to shippers who have greater bargaining power." It is not intended to apply the Framework "in a manner that would result in the premature shutting in of reserves currently connected to Westcoast."

## The Fair-Dealing Policy provides that Westcoast will

- apply tariffs in a similar manner to all persons, give them similar opportunities to negotiate for available capacity
- make information about capacity available to all on a monthly basis, and general expansion plans
- not provide customer-specific confidential information to others
- not give preferential treatment to users of other Westcoast services, and separate its subsidiary company within six months.

The Contracting Practice provides that terms will be governed by contracts negotiated with individual shippers. "The goal is to permit negotiations to include any item of value that could be the subject of bargaining in a competitive market. The parameters may allow for recognition of different circumstances and hence different pricing and terms and conditions between contracts." The service parameters to which value might be ascribed include term of contracts, volume, land and reserve dedication, drilling commitments, existence of economic alternative, renewal rights, conditions obtaining at date of execution, compensation for non-performance, credit-worthiness, gas composition, location of facilities, receipt and delivery points, length of haul, and extent

of new facilities required. Westcoast will offer a range of standard contracts up to five years, and negotiated contracts. <sup>101</sup>

With respect to Market Information, the parties recognise the need for commercial confidentiality, but also "the need for a reasonable degree of price discovery to assist in the operation of a functioning market". To that end they propose that Westcoast would either file all contracts with the Board or indicate the maximum and minimum range for the tolls in each tariff; allow the Board access to contracts for mediation or complaint purposes; and make available quarterly summary data on contract terms.

The parties provide for a detailed Complaint Process, including optional mediation, arbitration and adjudication by the Board.

Westcoast accepts the responsibility for the Utilization of its gathering and processing assets and for the stranding of any of those assets, and for the gain or loss on any disposal. If it is considering disposal it will make the assets available to other potential acquirers. Disposition of assets to its affiliates must be done by competitive bidding. <sup>102</sup>

As regards Interconnection, it is intended that Westcoast offer unbundled gathering and processing service "and that parties who wish to interconnect to Westcoast for the purpose of providing a portion of current or future gathering and processing services, either in competition or cooperation with Westcoast, will be permitted to do so", subject to availability and an interconnection agreement. "This policy is intended to reduce barriers to competition and assist in the orderly and economic development" of the gas basin. The principles of interconnection are spelled out, including that the connecting parties must bear all incremental costs and it is not intended that the provisions restrict competition for gas supply.

'Light-handed regulation' means "market regulation" rather than "deregulation" because the Board still has a role in terms of complaints, and can intervene if needed. But it means that certain services are henceforth to be provided by negotiated settlements between a pipeline and *individual* shippers. As Schultz (1999, p. 389) observes, "The consequence of such a regulatory model is the potential, and the probability, for greater differences in service arrangements than would be contemplated by traditional

<sup>&</sup>lt;sup>101</sup> The existing tariff under the previous negotiated settlement remains in place until 2001. Shippers may negotiate immediately or continue on that tariff. "As such, there is a transition period of several years for shippers to adjust to the new world." Schultz (1999) p. 414.

<sup>&</sup>lt;sup>102</sup> "This contrasts sharply with the traditional cost of service approach in which under-utilization typically falls on the shoulders of the remaining shippers. The Framework thus establishes a new point of reference for risk and reward issues." Schultz (1999) p. 41. A correspondent explains "Since Westcoast must negotiate for the rate with each individual shipper, it depends on its negotiating success for cost recovery, with no guarantee that the market will enable it to pass cost shortfalls of an exiting customer on to others as those customers renegotiate their contracts. This is far removed from the annual rate setting and virtually automatic true-up of costs to remaining contracts that it had previously enjoyed."

approaches to cost of service regulation."  $^{103}$  This settlement therefore constitutes what he refers to (in correspondence) as "the most innovative of all deals".

# 4.4 Non-unanimous and contested settlements: TCPL's experience from 2000

In welcoming the succession of multi-year statements, the Board anticipated that, in future, litigation to determine tolls would be used more selectively. <sup>104</sup> In fact, the Board was soon called upon to act again.

For each of the ten years from 1985 to 1994 TCPL's tolls were determined by litigation, generally on an annual basis. For nine of these years the total number of hearing days was 288, an average of 32 days per hearing. In contrast, for one year (1992) the company achieved a partial settlement and the number of hearing days reduced to 4. <sup>105</sup> For 1995 the company and the Tolls Task Force (TTF) were able to settle all outstanding revenue requirement issues. (The cost of capital was being dealt with by the Generic Cost of Capital hearing.) For 1996-1999 the parties agreed (via TTF resolutions) on toll design issues (Phase 1) and on a four year Incentive Cost Recovery and Revenue Sharing Settlement (Phase 2) that incorporated the generic cost of capital formula. <sup>106</sup>

Then the mood seems to have changed. When the Incentive Settlement expired at the end of 1999 the parties considered but were not able to agree a one year extension for 2000. They did eventually agree a new settlement for that year (subject to only one objection) that the Board accepted. For the two-year period 2001 and 2002 TCPL and 13 signatories achieved a Services and Prices Settlement of all issues except the rate of return on equity (including capital structure), but the settlement was contested. <sup>107</sup>The Board decided to hold an oral hearing and felt that it had a responsibility to examine each individual component of the settlement separately to determine whether it was acceptable and appropriate, while bearing in mind that it was negotiated as a package. <sup>108</sup> In its decision

\_\_\_

<sup>&</sup>lt;sup>103</sup> He continues, "This leads to the questions of reasonableness and fairness that lie at the heart of economic regulation ..." The first half of his paper explores these concepts and argues that individual negotiated settlements within an appropriate approved framework are consistent with the traditional values and principles of economic regulation.

<sup>&</sup>lt;sup>104</sup> NEB 1997.

<sup>&</sup>lt;sup>105</sup> Recall that for 1991 a JITF agreement had not included all interested parties so was not presented as a settlement. The precise coverage of that agreement is unclear but the hearing revealed substantial remaining differences between the parties, not least on cost of capital issues. For 1992 the JITF agreed to defer most toll design and tariff issues to 1993 but did settle the return on equity and operating expenses issues. The parties agreed that TCPL would reduce its original request from 14.25 to 13.25 per cent return on equity. The Board's succinct decision on this issue illustrates its changed attitude to settlements compared to its 1985/6 decisions. It noted that this was the result of a negotiated settlement, and that no interested party opposed it or adduced evidence on the record to counter it, and "in view of the foregoing" found the proposed rate to be reasonable and approved it. RH-4-91 section 4.2.

<sup>106</sup> RH-2-95, June 1996. Most of the parties also reached a settlement on Firm Service Tendered (FST)

arrangements as part of Phase 1. The Board approved this settlement after hearing from dissenting parties. 
TCPL said that only 5 stakeholders accounting for under 7 per cent of TCPL's Mainline revenues initially opposed it. Others said that, weighting volume by remaining term of contract, only 56 per cent of the system supported it, and that it failed to attract support from the group of contractually-captive shippers. 
While it examined each component of the S&P Settlement on its own merit, the Board also took into account the fact that the individual components of the settlement were negotiated as a package, thereby

to approve TCPL's application and settlement, the hearing panel noted that the Board's 1994 Guidelines did not address the situation of a contested settlement, and recommended that the Board review the guidelines to examine contested settlements and the potential for the use of Alternative Dispute Resolution (ADR) mechanisms. <sup>109</sup>

The Board responded, anticipating a possible lack of agreement between parties in the new competitive environment. In 2002 the Board updated its guidelines "with the explicit goal of providing flexibility to effectively address contested settlements". It has revised Guidelines provided for the Board to hear the applicant's arguments in favour of the settlement, the views of parties opposed to the settlement, and the applicant's response to the opposition. The Board would then decide whether to approve or deny the settlement or allow it on an interim basis and hold a hearing to deal with the issues raised by the dissenting parties.

This approach is less cumbersome and costly than going to litigation, which some would advocate, while still allowing all parties to participate in the decision process. It encourages the applicant to continue to seek a settlement even where not all parties can agree. <sup>112</sup>

The Board also made a few small modifications to reduce the prescriptive nature of the 1994 Guidelines. On the other hand, after the previous presumption that a non-opposed settlement would normally be approved, the Board introduced the qualification that "in unusual circumstances" the public interest might necessitate further investigation. 114

representing both compromises and an alignment of interests. As such, the Board is reluctant to disturb individual components without clear evidence that the S&P Settlement, taken as a whole, would lead t results which are inconsistent with the Act. In this proceeding, the Board does not consider that it has received such evidence." RH-1-2001, pp. 25-6.

<sup>&</sup>lt;sup>109</sup> RH-1-2001, p. 26.

<sup>&</sup>lt;sup>110</sup> "After several years during which most tolling matters were settled between shippers and pipeline companies, a number of issues have recently been brought before the Board for resolution. The Board recognizes that it will be difficult for pipeline companies and shippers to reach unanimous agreement on all matters among themselves in the new competitive environment. Accordingly, the Board is exploring alternatives to traditional public hearings to assist parties in arriving at outcomes in the public interest." NEB 2001 annual report, page 3.

<sup>&</sup>lt;sup>111</sup> NEB (2002).

<sup>&</sup>lt;sup>112</sup> The issue had also been debated in the US. For contrasting views see, (e.g.) Krieger (1995) and Buchmann and Tongeren (1996).

<sup>&</sup>lt;sup>113</sup> In particular, the Board "recognizes that the requirement to provide a detailed breakdown of the revenue requirement may constrain the flexibility of parties in reaching a negotiated settlement and has therefore adopted more flexible wording for the requirement". The applicant now had to provide "an explanation of how the agreed-upon revenue is determined" instead of "a tabulation of the components of the agreed revenue requirement". This is consistent with the Board's commitment to either accept or reject a settlement in its entirety and not cherry-pick.

The Board also raised at this time the possibility of Board staff taking an expanded role in the settlement process. In addition it suggested "that a pipeline company, in submitting its negotiated settlement for approval, should provide reasons as to why agreement could not be reached with all parties on all issues". However, it withdrew both proposals in the light of widespread opposition.

Whether the lack of agreement between TCPL and other parties was entirely the result of the new competitive environment is an interesting question. The construction of Alliance pipeline no doubt represented a challenge to TCPL. However, TCPL appears to have been more demanding than other pipelines, which antagonised the other parties. <sup>115</sup> It did not accept the Board's generic cost of capital decision, and in June 2001 applied for a higher return for 2001-2 than the formula would imply. <sup>116</sup> In June 2002 the Board rejected TCPL's argument and upheld the generic formula on ROE, though it accepted that TCPL's business risk had increased and should be reflected in a slightly higher deemed equity ratio (33 per cent rather than 30 per cent). <sup>117</sup> In September TCPL applied to the Board to review and vary this decision. In February 2003 the Board dismissed this application. TCPL appealed to the Federal Court of Appeal, which in April 2004 denied that appeal. TCPL accepted the formula ROE for 2004 but again applied for 40 per cent equity ratio; the Board allowed 36 per cent. <sup>118</sup>

Meanwhile, apart from cost of capital, TCPL and other parties did not settle other tariff issues either. The Board convened hearings for TCPL's 2003 tolls and again for 2004, and the traditional method of litigation once more applied. 119

Thus, for about four years (2001 to 2004) TCPL was largely at odds with its stakeholders and with the Board. Once the cost of capital issues had been resolved, however, the parties seem to have worked to improve relations. TCPL's 2005 toll revenues were settled by agreement, and incorporated the generic cost of capital formula. TCPL's 2006 toll revenues were also settled on the same basis. These were not multi-year incentive settlements but the second one included some one-year incentives to efficient fuel consumption and to achieve a variety of specified performance targets. <sup>120</sup>

## 4.5 Current status of Negotiated Settlements

All the major pipelines continue to negotiate with their users and all are presently on terms determined by settlements rather than litigation.

In the oil sector:

1

<sup>&</sup>lt;sup>115</sup> One commentator remarks that "the settlements for TCPL in 2000 and 2001-2 were just tactical holding actions while everyone positioned for the fight."

<sup>&</sup>lt;sup>116</sup> The generic formula implied ROE of 9.61% for 2001 and 9.53% for 2002 with 30% deemed equity ratio. TPCL applied for the equivalent of 12.5% ROE with 40% deemed equity ratio.

<sup>&</sup>lt;sup>117</sup> RH-4-2001. This decision was consistent with the generic decision which stated that "any risk differentials between the pipelines can best be accounted for through adjustments to the common equity ratios rather than by making company-specific adjustments to the benchmark pipeline's rate of return on common equity." RH-2-94 note 1 at p. 6, cited in RH-2-2004 p. 3.

<sup>&</sup>lt;sup>118</sup> RH-2-2004 Phase II, April 2005

The Board chairman had earlier remarked that "We will also need to maintain the expertise to provide the desirable 'fall back' to some other form of regulation should settlements not prove to be the 'wave of the future' which they currently appear to represent." Priddle (1997) p. 3.

<sup>&</sup>lt;sup>120</sup> These targets relate to accuracy and timeliness of information about shippers' fuel requirements, long term and short term release of spare transmission capacity, leak detection and repair, and minimization of municipal and capital taxes. A0T6K9 Application for approval of a negotiated settlement of 2006 Mainline tolls, 15 March 2006.

- Trans-Northern continues to file annual toll revisions consistent with an Incentive Toll Settlement originally made in 1996 for a minimum period of five years.
- Enbridge has begun a third 5-year settlement, for tolls for 2005-2009. <sup>121</sup>
- Trans Mountain has reached agreement in principle for a third 5-year settlement, for 2006-2010. 122

## In the gas sector:

- TCPL has reached one-year settlements in each of the last two years, the second being of an incentive nature.
- Westcoast achieved a series of mainly 2-year settlements, not without opposition but the road seems to be smoother now. 123
- Maritimes and Northeast Pipelines agreed settlements for 2001-2002, 2003, 2004-2006. The 2004-6 settlement included a unique feature, a levelized toll over the 3 year period although its revenue requirements were falling. 124
- TQM is coming to the end of a 5-year settlement for 2002-2006, which was an extension of its previous 5-year settlement for 1997-2001.
- Alliance continues to file tariffs annually consistent with an agreement on the toll methodology reached with shippers in 1997 at the time of contracting for capacity on this new pipeline.

Negotiated settlements are also spreading beyond the actively regulated Group 1 pipelines to those pipelines regulated on a complaint basis. In early 2003 the Board approved a settlement between Foothills Pipeline and the Canadian Association of Petroleum Producers (CAPP). This suggests a broader scope for and potential benefit of negotiated settlements, which again suggests that the impact of settlements goes beyond reproducing what regulation would otherwise achieve.

## 5. Overview and appraisal

### 5.1 The record to date

Figure 3 shows the extent to which each pipeline has negotiated settlements over the last two decades, including a handful of cases where the settlement did not cover all the issues or where the Board did not fully accept the settlement. It brings out clearly the dramatic change around the mid-1990s – essentially, before and after the Board's revised

122 Trans Mountain applied for 2006 interim tolls on 20 December 2005, noting that a tentative agreement had been reached on a Memorandum of Understanding for a 5-year incentive toll settlement for 2006-2010. A settlement had not yet been submitted to the Board at the time of writing [5 August 2006].

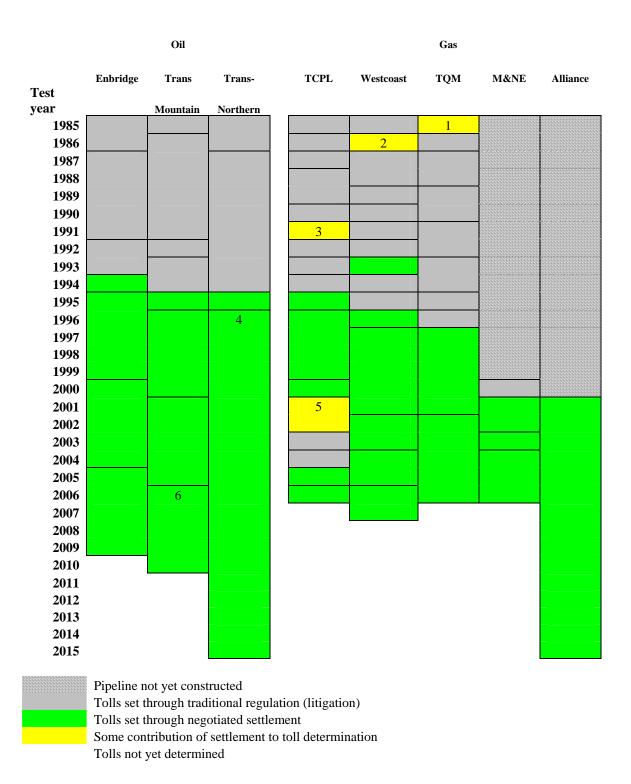
<sup>&</sup>lt;sup>121</sup> See Board order TO-01-2006 that approved the application.

Westcoast's partial settlement for 2002 and 2003 transmission tolls was initially opposed by the Natural Gas Steering Committee, though opposition was later withdrawn. Westcoast's application for 2003 final tolls was opposed by three parties although the Board eventually approved the tolls. (TG-7-2003) Westcoast reached a unanimous settlement for 2004-2005 tolls (TG-3-2004) and later for 2006-2007 tolls. Westcoast applied for 2006-2007 tolls on 21 June 2006 and on 27 July reported that only two comments had been received, both in support. At the time of writing [5 August 2006] the Board had not yet issued its approval.

<sup>&</sup>lt;sup>4</sup> See Board order TG-4-2003 that approved the application.

settlement Guidelines of August 1994. Before then, all tariff applications were litigated; since then, all applications by oil pipelines have been settled by negotiation, and most applications by gas pipelines. Figure 3 also shows that the duration of settlements is typically longer than the duration of litigated outcomes, and in both cases typically longer for oil pipelines than for gas.

Figure 3: Settlement activity since 1985



Legend for numbered notes in Figure 3

- 1 TQM 1985 settlement was not wholly accepted [see section 3.1]
- 2 Westcoast 1986 settlement was not wholly accepted [see section 3.2]
- 3 TCPL 1991 TTTF agreement did not include all parties [see section 3.5]
- 4 Trans-Northern 1996 2000 toll agreement is renewed unless there are objections.
- 5 TCPL 2001-2002 settlement excluded ROE [see section 4.6]
- 6 TransMountain 2006-10 settlement announced but not yet submitted to Board

These points may be quantified in terms of 'pipeline-years'. In the decade 1985 to 1994 only 1 in 30 pipeline-years (3%) were covered by a settlement, both for oil and for gas. In contrast, in the twelve years 1995 to 2006 all 36 oil pipeline-years (100%) were covered by a settlement, as were 41 out of 49 gas pipeline-years (84%). The latter proportion rises to 33/39 = 89% if TCPL is excluded.

# **5.2** Durations of litigated outcomes and settlements

In the first decade, the 30 oil pipeline-years were spanned by 9 litigations and 1 settlement; excluding the 1-year settlement this is an average term of 3.2 years. The 30 gas pipeline-years were spanned by 23 determinations and 1 settlement; again excluding the 1-year settlement this is an average term of 1.26 years. In contrast, from 1995 onwards, and including the full duration of the negotiated settlements (extending beyond 2006 where appropriate but terminating the open-ended Trans-Northern settlement at 2006), a total of 43 oil pipeline-years is spanned by 9 settlements, an average term of 4.8 years. In the case of gas pipelines, 7 litigated cases spanned 8 years, an average term of 1.1 years; 15 settlements excluding Alliance spanned 36 years, an average term of 2.4 years; and 16 settlements including Alliance spanned 51 years, an average term of 3.2 years.

Roughly speaking, the average term of an oil pipeline settlement is about half as long again as a litigated outcome used to be. For a gas pipelines, in contrast, the average settlement term is now about 2 to 2 ½ times as long as litigated outcomes. This means that the difference between average durations has narrowed. Litigated outcomes used to last about 2 ½ times longer for oil pipelines than for gas pipelines, but now oil settlements last only about 1 ½ to 2 times as long as gas settlements.

Table 4: Average term of tolls for litigated and settled cases

	Oil	Gas excl Alliance	Alliance	Gas incl Alliance	All
First period (1985 – 1994)					
# Litigated cases	9	23	-	23	32
Total pipeline-years	29	29	-	29	29
Average term (years)	3.2	1.3	-	1.3	0.9
# Settlements	1	1	-	1	1

Total pipeline-years	1	1	-	1	1
Average term (years)	1	1	-	1	1
<b>Second period (1995 – 2006+)</b>					
# Litigated cases	0	7	0	7	7
Total pipeline-years	0	8	0	8	8
Average term (years)	-	1.1	-	1.1	1.1
# Settlements	9	15	1	16	24
Total pipeline-years	43	36	15	51	94
Average term (years)	4.8	2.4	15	3.2	3.9

Source: Figure 3

Why should settlements apparently have proved easier for oil pipelines to negotiate than for gas pipelines, and be of longer terms, when the shippers often include the same associations? It does not seem to be simply a matter of personalities or company histories. It has been suggested to us that there is more scope for mutually advantageous negotiations with oil pipelines than with gas pipelines. This is because the product is less homogeneous (there are different types and qualities of oil) and because oil pipelines typically provide the fuel for pumping whereas gas shippers generally provide the fuel for gas pipelines. This means there is more scope for creating value in the management of an oil pipeline.

However, there were systematic differences between litigated outcomes for oil and gas pipelines even before settlements. Gas litigation generally took place annually, whereas oil litigations generally endured for several years. Is this because oil is a longer-established and more stable market, less closely related to the retail customer than gas? Or because even the litigated framework recognised the above differences between the oil and gas pipeline services? These questions lie beyond the scope of this paper.

### 5.3 Hearings and processing time

Examination of the NEB database shows that settlements, as expected, require few hearings. While 77 percent of litigated cases went to hearing only 25 percent of settlements did so. Further, the proportion of settlements going to hearings fell over time, with only 3 of 19 settlements requiring hearings in the last 10 years of the sample. Finally, save for one long hearing in the 1985-1988 timeframe, the settlement hearings are shorter than hearings for litigated cases. [To expand this para shortly.]

Now consider how long it takes the Board to process a pipeline tariff application – that is, the number of months between a pipeline's application and the Board's decision. For this purpose we may aggregate the two periods to concentrate on the differences between the

litigated approach and a settlement, and also between oil and gas pipelines. <sup>125</sup> Table 5 shows that for oil pipelines, it took on average 8.1 months to process an application under litigation, and it now takes 2.8 months with a settlement. For gas pipelines, the average time is 7.6 months with litigation, 5.7 months with a settlement. <sup>126</sup> Thus, settlements have cut processing times by about a quarter for gas pipeline applications and by about two thirds for oil pipeline applications. <sup>127</sup>

Since settlements typically are of longer term than litigated cases, the application processing time or delay is incurred less frequently than with litigated outcomes. With litigation, the oil pipeline applications in this sample typically covered 2.7 years, an average of 8.1/2.7 = 3.0 processing months per effective tariff-year. With settlements the average is 0.5 months per tariff-year. Similarly, for gas pipelines with litigation, the average is 5.8 months/tariff-year, whereas with settlements the average is 1.8 processing months per tariff-year. (In both cases the figures are slightly less if TCPL is excluded.) Thus, compared to litigation, settlements have cut average processing time per tariff-year to one third for gas pipelines and to one sixth for oil pipelines. 128

Table 5 Average NEB processing time for tolls set through traditional litigation and tolls set through negotiated settlements

	Oil	Gas excluding TCPL	TCPL	Gas including TCPL	All pipelines
Litigated outcomes					
Number of cases	10	18	15	33	43
Average processing time (months)	8.1	6.3	9.1	7.6	7.7
Average duration (years)	2.7	1.3	1.3	1.3	1.6
Average processing time (months per tariff-year)	3.0	4.8	7	5.8	4.8
Settlements					
Number of cases	9	11	5	16	25
Average processing time (months)	2.8	5.6	5.8	5.7	4.7
Average duration (years)	6.0	3.8	1.6	3.1	4.1
Average processing time	0.5	1.5	3.6	1.8	1.1

1.

<sup>&</sup>lt;sup>125</sup> Note these data are slightly different from those in the previous calculation, and extend only to 2005, for example.

<sup>&</sup>lt;sup>126</sup> Under litigation, the average processing time for TCPL was 9.1 months compared to 6.3 months for other gas pipelines. With a settlement, the average time was the same for TCPL as for other gas pipelines. <sup>127</sup> And whereas under litigation oil pipeline applications took very slightly longer to process than gas

pipelines, with settlements oil applications now they take only half as long as gas applications. <sup>128</sup> These figures do not include time required to process applications for annual updates of tariffs associated with multi-year settlements, but this has become a rather nominal process. Such applications are typically put to the Board each year, which invites comments that invariably draw no adverse response, and the Board approves the tariff revisions within a month or so.

(months per tariff-year)			

## **5.4** Achievements of Negotiated Settlements

There has thus been a dramatic change in the method of regulating oil and gas pipelines over the last two decades. Until the mid-1990s almost every application for a rate increase, or for any other development, went through a litigated regulatory process that was costly and could take many months, and in the case of gas pipelines took place annually. In contrast, since the mid-1990s, with the exception of one company during a few years of dispute, all applications are dealt with by negotiated settlement between the parties involved. Negotiated settlements are now taken for granted as the most suitable mechanism for arriving at toll proposals to be submitted to the Board. 129

Why did the change take place? Not because the Board could not cope with the workload. And not simply because the litigated process was costly and tedious, and the Board came to prefer less onerous regulation, though these were true. Certainly the Board was prompted to encourage and remove obstacles to the evolution of negotiated settlements. But the real driver of change, and why settlements seem to have survived, is that they have delivered a better deal for the pipelines and their users than did the process of litigation.

With some of the early settlements it may be tempting to look for a motive in terms of delivering a policy outcome that the Board would not or may not have accepted. But this does not apply to the later settlements. The Board has been keen to encourage them. It soon became apparent that multi-year incentive settlements provided a way for all to benefit from the potential for increased efficiency compared to what the previous regime of rate of return regulation could have delivered. But incentive settlements are themselves only part of the whole picture. Throughout the evolution of settlements, and still continuing today even when the major efficiency improvements may have been secured, is the recognition that settlements provide a more sensible way for the parties to do business. They are more sensible because they enable the wishes of customers to be more clearly identified and more closely aligned with the abilities of pipelines to deliver the services required.

The ever-increasing range and content of negotiated settlements are remarkable. They cover the normal components of regulatory price controls, but much more, including

- tariffs and other terms of existing services
- projections of operating and capital costs
- rate of return on equity and deemed common equity ratio
- agreements to expand or discontinue services

\_

<sup>&</sup>lt;sup>129</sup> For example, the summary of a two-day workshop in 2003 to discuss regulatory process issues makes no mention of negotiated settlements or of incentive regulation. See NEB *2003 Workshop Proceedings* at the Board web site.

- investments in new pipeline facilities based on contractually agreed-to sharing of risks between shippers and pipeline proponents (Miller 1999)
- multi-year incentive arrangements
- provisions for maintaining and improving service quality, including the development of detailed metrics associated with quality, predictability and reliability, and associated bonuses and penalties <sup>130</sup>
- improved ability of the pipeline to focus on non-tariff issues, including identification, monitoring and remedying of a variety of user concerns in a way normally associated with a regulatory body <sup>131</sup>
- greater communication and ongoing liaison, for example through Toll and Tariff Subcommittees
- development of information and publication requirements that are less burdensome to the pipelines and more appropriate to the needs of their users than standardised regulatory requirements<sup>132</sup>
- design, specification and implementation of a new scheme of regulation by the Board for about half one major pipeline's activities that effectively transferred those activities to complaint-based regulation
- enabling (under that light-handed framework) the pipeline to conclude negotiated settlements with *individual* shippers
- designing (under that same framework) provisions to interconnect with potential competitors, to reduce barriers to entry, to provide sufficient market information to enable "a reasonable degree of price discovery to assist in the operation of a functioning market"
- provision (there and elsewhere) of a complaint-handling procedure, and

<sup>130</sup> Cf settlements with Westcoast 1997-2001 and particularly Enbridge 1995-1999, 2000-2004 and 2005-2009. This last settlement indicates both the thoroughness and imagination embodied in settlements, and the extent to which the regulatory role can be minimized. The Principles of Settlement between Enbridge and CAPP comprise 76 pages. The total documentation supplied by Enbridge as part of its application runs to some 250 pages. The service metrics comprise 31 of these, plus a further 38 pages specifying service levels. NEB's response comprises only 2 pages plus a Schedule, relating that it acknowledged the application on 19 December 2005, invited comments on 23 December, received no comments or opposition, considered that the revenue requirements and tolls were just and reasonable, and approved them on 27 January 2006.

<sup>131</sup> "The NGSC [Natural Gas Steering Committee] has agreed to settle with Westcoast on the 2002 and 2003 tolls in large part so that Westcoast's efforts can be directed from the toll hearing to resolving important issues". These included resolving issues with BC Gas (another pipeline) related to cost efficient expansion of transmission service; code of conduct for Westcoast affiliate dealings; Operating, Maintenance and Cost Control measures ("The NGSC does not see adequate cost control in Westcoast's operations."); and overhaul and improvement of Toll and Tariff Task Force Operations (particularly the inability to address customer issues in a timely manner).

<sup>132</sup> Many settlements provide for the NEB to exempt the pipelines from requirement to file annual financial forecasts, quarterly and monthly surveillance reports, and monthly throughput forecasts. In one case TransMountain argued that an industry-wide NEB reporting provision was inconsistent with this term of the settlement. The pipeline argued that the latter relieved them from the strictures of a former toll methodology, avoided significant cost and provided freedom to manage its affairs within the bounds established by its Incentive Toll Settlement (ITS) without compromising its competitive position. (TransMountain Pipe Line Co 2002).

- ability to address a wide variety of customer-specific and sometimes less tangible concerns that enable the customer to operate more effectively and may therefore justify a higher return to the pipeline for accommodating these concerns. 133

The general opinion seems to be that there have been significant improvements in productivity and in service design. Attitudes, relationships, communication and understanding in the industry have changed for the better. A previous Board chairman is in no doubt that settlements were responsible for these improvements. <sup>134</sup>

Nothing is ever perfect, of course, and not surprisingly toll competitiveness is the area where shippers have most concern. They also have some concerns about the pipelines' attitudes to continuous improvement and innovation, and about the collaborative processes such as negotiations and task force meetings. But, importantly, shippers do not challenge the principle of negotiated settlements. "Approximately two thirds of shippers are either satisfied or very satisfied with the Board's performance in creating an appropriate regulatory framework." Shippers' suggestions for improving the Board's performance are for streamlining its processes and actively engaging stakeholders. They do not argue for a return to regulation by litigation. And although the process of negotiating, implementing and monitoring settlements can be time-consuming, there is no suggestion that this is not time well spent.

#### 5.5 The role of the NEB

The National Energy Board in Canada has presided over – indeed, actively facilitated - this dramatic change. It has nearly, but not quite, worked itself out of a job. The Board has a minimal but critical role as backstop if required, but in practice tariff and other decisions are made by the pipelines and their users, not by the Board.

What role did the Board play in bringing about the benefits of negotiated settlements? It made two key contributions, both aimed at removing obstacles to such settlements. The first was to assure the participants that it was worth negotiating and that, subject to certain conditions, the Board would not overturn the settlement they reached. The commitment that the Board would normally accept an unopposed settlement and would not cherry-pick it was the simplest manifestation of this. But the underlying philosophy was more fundamental. The Board came to the view that it did not need to judge whether a settlement was just and reasonable by examining and evaluating each item separately.

\_

<sup>&</sup>lt;sup>133</sup> A correspondent writes: "The payoff for accepting a higher return can be many things: some element of higher value like energy or other cost savings; a place at the table in a collaborative way in addressing additions to oil pipeline facilities or management of the transportation of the various lines/batches/types of crude or quality issues; service improvements that the pipe might otherwise have little incentive to provide; and simply avoiding a hearing that might happen at a bad time and perhaps have some potential for a downside/negative outcome. Distributional factors are always in play and they show up in the trade-offs." <sup>134</sup> "From our experience with settlements to date, I can say that settlements have achieved results that are more imaginative, with less overall costs, than if the Board were called on to process and decide on the issues in dispute. From my perspective as a Board Member, I believe that settlements have been successful due to a change in attitude among the parties. Parties are now motivated to seek, within the framework set by the Board, commercial solutions to disputes that previously were litigated in more formal, structure and sometimes adversarial proceedings." Priddle 1997, p. 3.

<sup>135</sup> NEB(2006) p. 22.

Rather, if the process by which the settlement is reached is reasonable, then so is the settlement. Provided the parties allow into the negotiations any party that has a demonstrable interest and reach broad agreement, then the public interest is satisfied. The Board will not overrule the market decisions of the parties reflecting their own interests by superimposing its own view of the public interest.

This means that the prime role of the Board is to enable well-informed market participants with a demonstrable interest to negotiate satisfactorily on something like equal terms with the pipeline. This is where the Board's second contribution comes in. Where there is insufficient competition for the pipeline's services, the need is to protect its users against market power, not to prevent them negotiating to secure the services they needed. This was achieved by the generic cost of capital decision that, at a stroke, removed the ability of the pipeline to hold the users to ransom. Once it becomes clear that a pipeline cannot impose or expect an excessive return on its investment, there is no obstacle to sensible and productive discussions on all aspects of its operations, including the level of return itself. The institutional arrangements thus have some similarities with those pertaining to the financing, investment and pricing of lighthouses, as described by Coase (1974).

Experience at the federal level in Canada is thus largely consistent with that at FERC and the Florida PSC in the US. Negotiated settlements have been adopted in a very significant proportion of cases and have been used to implement more satisfactory and innovative arrangements than might have been expected with regulation by litigation. Research in progress suggests that the policy of the provincial regulatory body in Alberta (the Energy and Utilities Board) has been more cautious in encouraging settlements and more restrictive and 'hands on' in its guidelines, but that similar innovative outcomes have been achieved there. <sup>136</sup>

Further research could usefully explore whether there is similar experience in yet other jurisdictions, and what factors seem to be similar or different. But already the possibility of extending the use of negotiated settlements to jurisdictions, sectors and countries where it is not yet known seems worth active consideration.

\_

<sup>&</sup>lt;sup>136</sup> Doucet and Littlechild (2006b).

<sup>&</sup>lt;sup>137</sup> We have been told, for example, that the 1994 cost of capital decision is also being used by regulatory boards in other parts of Canada, notably Alberta, BC and Manitoba.

#### References

Buchmann, A P, and R S Tongeren (1996). "Nonunanimous Settlement of Public Utility Rate Cases: A Response." *Yale Journal of Regulation*, 13: 337-345.

Caron, G (1995). "Mandate and current issues", Midwest Gas Association, Inc. Legal Affairs Roundtable, Banff Springs Hotel, Banff, Alberta, April 27-8. (available at NEB website)

Coase, R (1974) "The Lighthouse in Economics." *Journal of Law and Economics*, 17(2):357-76.

Doucet, J and S C Littlechild (2006a). "Negotiated settlements: The Development of Economic and Legal Thinking", Electricity Policy Research Group working paper EPRG 06/04, Cambridge University, available at <a href="http://www.electricitypolicy.org.uk/pubs/wp.html">http://www.electricitypolicy.org.uk/pubs/wp.html</a>.

Doucet, J and S C Littlechild (2006b). "Negotiated settlements: The Alberta Energy and Utilities Board" (research in process).

Krieger, S H (1995). "Problems for Captive Ratepayers in Nonunanimous Settlement of Public Utility Rate Cases." *Yale Journal on Regulation*, 12: 257-343.

Littlechild, S C (2003). "Consumer participation in regulation: stipulated settlements, the consumer advocate and utility regulation in Florida", *Proceedings* of Market Design 2003 Conference, Stockholm, 17 June, available at www.elforsk-marketdesign.net.

Littlechild, S C (2006a). Stipulations, the consumer advocate and utility regulation in Florida, EPRG Working Paper 06/15, Cambridge University, 25 February 2006.

Littlechild, S C (2006b). "The bird in hand: stipulations and settlements in public utility regulation in Florida", revision of unpublished manuscript from 28 March 2003 (forthcoming).

Mansell, R L and J R Church (1995). *Traditional and Incentive Regulation: Applications to natural gas pipelines in Canada*, Calgary: Van Horne Institute.

Morgan, T D (1978). "Toward a Revised Strategy for Ratemaking". *Law Forum*, University of Illinois 1, 21-78

Miller, K F (1999). "Energy Regulation and the Role of the Market", *Alberta Law Review*, 37 (2) 419-438.

National Energy Board (1988). *Improving the regulatory process*, September.

National Energy Board (1993). "Incentive Regulation Workshop: A Summary of Discussion" (Calgary, Alberta, 19-21 January 1993) March.

National Energy Board (1994). *Guidelines for negotiated settlements of traffic, tolls and tariffs*, File No. 4600-A000-3, 23 August.

National Energy Board (1997). Traffic, Tolls and Tariffs, Information Bulletin 6, June.

National Energy Board (2002). *Revised Guidelines for Negotiated Settlements of Traffic, Tolls and Tariffs*, Attachment to Board Letter dated 12 June 2002, File 4600-A000-3.

National Energy Board (2006). Canadian Hydrocarbon Transportation System, transportation assessment, June.

Petrulis, R C (1985). "NRRI Report: Commissions Use Negotiated Settlements to Expedite Regulatory Process", NRRI Quarterly Bulletin, 6: 379-390.

Priddle, R (1997). "Negotiated settlements", 11th Annual CAMPUT educational conference, Technical Session, Whistler, BC, 4 May. (available at NEB website)

Priddle, R (1999). "Reflections on National Energy Board regulation 1959 – 1998: From persuasion to prescription and on to partnership". *Alberta Law Review*, 37 (2) 524-548. (available at NEB website as Canadian Petroleum Law Foundation's Thirty-seventh annual research seminar on oil and gas law, Jasper, Alberta, June 5 1998).

Schultz, N K (1999). "Light-handed Regulation", Alberta Law Review, 37 (2) 387-418.

Vollman, K W (1996). "Toward incentive regulation of Canadian pipelines", Fifth Annual DOE-NARUC Natural Gas Conference, St Louis, Missouri, April 28 – May 1. (available at NEB website)

Walker, M A (1986). "Settlement Practice at FERC: Boom or Bane." *Energy Law Journal*, 7: 343-359.

Wang, Z (2004). "Settling Utility Rate Cases: An Alternative Ratemaking Procedure", *Journal of Regulatory Economics*, 26(2), September: 141-164.