MJ Ervin & Associates

# Project Report

*An Analysis of the New Brunswick Review of Regulated Fuel Margins, Costs and Full Service Charges*

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# Project Report

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### Introduction

On July 1, 2006, the New Brunswick Government implemented its pricing regulations (Regulation 2006-41) for Motor Fuels and Heating Fuels (principally furnace oil, propane, gasoline and diesel fuel), under the Petroleum Products Pricing Act (PPPA). Authority for regulating these prices rests with the New Brunswick Energy and Utilities Board. Under Section 14 of the PPPA, the Board had the authority to conduct a review of the maximum margins, maximum delivery costs and maximum full-service charges allowed in order to "ensure that they are justified". Matters covered in the review would include:

- The maximum allowable wholesale margin, heating and motor fuels;
- The maximum allowable margin for retailers, heating and motor fuels;
- The maximum delivery cost that may be charged by a wholesaler and/or a retailer, heating and motor fuels; and
- The maximum full service charge that may be charged by a retailer, motor fuels only.

The purpose of the review was to allow the Board to determine if the current amount for each of these items was justified and, if not, to establish an amount for each item that is justified. The Board engaged a consultant (Gardner Pinfold) to conduct the appropriate research and file a report that addressed the above-noted matters. The Gardner Pinfold report was published on August 22nd.

Inherent in this review process is a means by which interested parties can submit questions, evidence, comments, and participate in a public hearing on the report recommendations. The New Brunswick Department of Energy is one such stakeholder, and has requested the assistance of MJ Ervin & Associates to prepare an independent assessment and analysis of the Gardner Pinfold report.

MJ Ervin & Associates Inc. has considerable industry and project experience in the downstream (refining and marketing) petroleum industry. Our entire consulting focus is on this industry, and our project résumé (see Annexes A and B) includes several specifically related engagements, particularly in the area of petroleum prices and regulatory structures and analysis.

In conducting this analysis, we have been requested to examine the report's accuracy and validity in the full context of current trends in gasoline and fuels marketing in Canada, and in terms of:

- Overall assumptions and descriptions of industry structure that may have a bearing on the report's findings and recommendations;
- Descriptions of market and pricing behaviors, as to their validity relative to our own experience and observations;
- Findings as to costs and revenues, as the basis for the report's margin recommendations; and
- Any other areas of the Gardner Pinfold report that may be relevant to its findings and recommendations.

It is important to stress that it is not within the scope of our report to "fix" any apparent deficiencies found in the Gardner Pinfold report (i.e. by proposing other data or methodologies). Any data that we provide from our own or other outside sources serve mainly to illustrate our perspective, although we have provided sources and short descriptions of any data we have used, in the interests of clarity.

## Analysis

### General Observations

Twenty-four of the 34 page Gardner Pinfold report is devoted to educating the reader about the regulatory process, industry and market forces, as well as providing some historical price/margin data, rather than addressing the actual mandate of reviewing and adjusting the margins and costs. This background material was found to be generally accurate in terms of quantitative values, as well as descriptively; any variances to our own views or values were either relatively minor (with one major exception, as described later), or had no particular bearing on the report's deliverables.

With respect to actual adjustment recommendations, many of the report's costs, prices, and other associated factors appear to be based on anecdotally derived estimates, rather than objective and reliable industry and/or dealer data. For a report of this nature (which could have a direct impact on fuel prices and dealer/marketer viability in New Brunswick), one might have expected a more complete reference to the methodologies, sources, and actual source data, appended to the report, but in many cases, values have not been referenced to their source in any manner that an outside observer could verify. The absence of these references and a data appendix is not simply a matter of preserving the confidentiality of industry participants: it would not be difficult to present data in such a way as to preserve confidentiality, if the data in fact exists. Furthermore, much of the un-sourced information would not have been sensitive in nature at all.

## Non-Petroleum Revenues

On page 11 of the Gardner Pinfold report, it is stated that:

> *"The marketing margin has to cover the entire cost of doing business (wholesale and retail) including ….outlet operations and maintenance, wages and salaries, profit, etc."*

This is a serious error of fact, in that net revenue from petroleum sales (the marketing margin), *combined with revenue from non-petroleum sources*, constitutes the revenues from which a petroleum marketer and dealer operating costs and profits are met.

In the case of dealers, non-petroleum revenues include those from the operation of the convenience store, as well as other offerings that may be present, such as car wash, fast food, service bays, etc. In the case of the product supplier who may have ownership or control of retail sites, non-petroleum revenues may include lease rents (either actual or de facto).

Non-petroleum revenues form a significant and increasing portion of the revenue base of combined marketer/dealer operations, and in many cases that we are aware, may even (on a net basis) regularly exceed the net revenues derived from the sale of petroleum products at some outlets, and at certain times such as when marketing margins are depressed.

Virtually every single retail gas station in Canada relies on non-petroleum revenues as an essential element of their financial sustainability[1]. If by some circumstance marketers and dealers were denied these revenues, it is a certainty that marketing margins would have to increase significantly, by as much as 100% or more.

Under Section 9 (1) of the PPPA,

> *"Where an application has been made to the Board under section 12 of the Act for a change in the maximum margin that may be charged by a wholesaler or retailer, the Board shall consider ….*
>
> *(a) whether, since the maximum margin was last set, an adjustment would be justified as a result of a change to*
>
> > *(i) the costs of …*
>
> *….(b) any other factors that the Board considers relevant.*

For the Gardner Pinfold report to omit non-petroleum revenues as a "relevant other factor" is in our view a fundamental oversight, in that it is a significant factor, and in that its significance has unquestionably become greater over time as a mitigating factor against gasoline margin growth in all Canadian markets.

[1] It is likely that in the case of heating fuel operations, non-petroleum revenues (for example, furnace maintenance and repair services) may also be an important element of those operations' net income, although with much less direct impact on the heating fuel margin itself compared to retail gasoline.

### Volume of Sales

The Gardner Pinfold report (as does the PPPA) correctly cites sales volume as a relevant factor in considering margin requirements. Average throughput in a given market is a function of total sales (demand) divided by the total number of outlets. The Gardner Pinfold report recognizes that a decline in the number of outlets (which they could not quantify) may contribute to an increase in average throughput, and consequently, an improvement in profitability if margins and costs remained unaffected.

Similarly, an increase in overall demand (sales) may also improve average throughputs. The Gardner Pinfold report (caption to figure 2.1) suggests that demand in New Brunswick has been declining since 2004, but a more accurate description would be that demand declined in 2005 and has neither grown nor declined (to any significant degree) in the years 2006 and 2007.

Using the same source of Gardner Pinfold's data for May 2008 (year to date) however, reveals an increase in retail motor gasoline demand: 393,400 cubic meters, versus 379,700 for the same period in 2007. This represents a 3.6% increase in demand, and therefore a 3.6% increase in throughput, assuming no stations closed or opened in that period. Curiously, the Gardner Pinfold report did not cite this 2008 volume statistic despite its availability, and despite Gardner Pinfold using other 2008 (year to date) values in a number of its margin and cost justifications.

If some retail gas stations did close between 2006 and 2008 (and we believe this to be the case), then the actual increase in average station throughputs was even greater than 3.6%. Any increase in average throughput would tend to mitigate the need for an upward adjustment in margins, and the Gardner Pinfold report erred in not using its own methodology to factor in a 3.6% growth, at the very least.

### Storage Costs

The Gardner Pinfold report proposes an increase of 0.30 cents per litre (cpl) to reflect a supposed increase in the "carrying charges" related to the heating oil margin (relatively minor supposed increases in gasoline and diesel carrying charges are also stated).

The methodology and assumptions that Gardner Pinfold uses to justify the carrying cost elements raises some important questions. Although Gardner Pinfold likely posed many of these same questions in the course of its study (and it is assumed did not manage to have them answered), the answers to these questions can have such significant impact on the Gardner Pinfold assumptions as to render the resultant calculations unsuitable as a basis for effecting any adjustments.

- In the case of independent heating fuel dealers, what are their payment terms (to their suppliers) that may either add to or offset the carrying costs they incur as the product is sold to the end-use customer?

- Are seven-day terms in fact the norm in the case of wholesale sales of gasoline and diesel, or (as we believe) do a large number of retail dealer accounts have COD terms?

- In the case of heating oil, is it reasonable to assume 30 days as the actual average aging of receivables, given that some customers are likely on COD terms, others will pay COD (or less than 30 days) of their own volition, and given the possibility that customers who exceed their terms may be charged interest fees?

- Is the price charged to dealers for their supplies of gasoline and diesel the full retail price (as Gardner Pinfold seems to assume), or some lesser value, such as a dealer wholesale price? Does the wholesaler collect all retail taxes from the dealer at the time of sale, or is the wholesale price charged to the dealer exclusive of some or all of the taxes (HST, Excise, and provincial fuel tax)? The Gardner Pinfold calculation appears to assume that all taxes are collected at the time of the wholesale sale, but we are certain that this is not the case.

Additionally, Gardner Pinfold uses price assumptions whose validity (in addition to the tax matter as described above) we would question. The price comparisons are for July 2006 and July 2008. Gardner Pinfold does not indicate whether this is for the month of July, for July YTD for each year, or for 12 months up to July of each year. Similarly, Gardner Pinfold does not indicate the market or markets that these prices represent, or if they (if several markets) are averaged on a simple or population-weighted basis. Using price data from Natural Resources Canada (which we provide to NRCan) as the authoritative source of retail price data, we could not re-produce the same prices that Gardner Pinfold uses, despite having attempted most of the above scenarios.

If the Gardner Pinfold price data used are in fact monthly prices (as they appear to be according to our best guess), these figures would produce interest cost differences (2006 vs 2008 cpl) that would differ from the same calculations done using a more appropriate YTD or 12-month price average.

### Credit Card Costs

Fees paid by marketers and dealers for the use of credit cards in retail gasoline diesel transactions, are unquestionably a matter of concern to this industry, given that credit card processing fees are charged on the basis of the pump price, which has increased significantly, particularly up to July 2008. It is therefore relevant that Gardner Pinfold has treated this particular cost as a separate "relevant other factor" as provided for in the PPPA. Gardner Pinfold proposes 0.58 cpl be included as a factor (in fact the largest factor) in its overall 1.28 cpl margin increase proposal for motor fuel.

An examination of the elements that Gardner Pinfold uses to arrive at this value reveals some important concerns, with a material effect on the calculated margin recommendation:

- **Gasoline Price**: as discussed in our examination of storage costs there is a lack of transparency as to how the prices (2006 vs May 2008) were arrived at, making it difficult to validate these very important inputs. The Gardner Pinfold figures suggest a 36.9 cpl increase in price in that timeframe. Our own data however is remarkably different, showing only a 14.7 cpl increase on a month basis[2] and only a 8.9 cpl increase using May YTD averages for each year[3] (of the two approaches, the YTD would be the more appropriate).

- **Credit Card Usage**: Gardner Pinfold's Table 4.2 assumes that credit card usage increased from 30 percent to 45 percent from 2006 to 2008, and yet provides no explanation for this dramatic increase in usage rates – an increase of 50% in credit card usage in the two-year timeframe. One could reasonably assume that a 50% increase in the frequency of credit card usage on the part of consumers would be reflected across a broad range of retail sectors (it would be an extraordinary gain for the issuers of credit cards), but we are not aware of any such trend. The usage rates provided by Gardner Pinfold appear to be drawn solely from anecdotal sources, and the supposed increase in usage is simply not credible.

- **Credit Card Fee**: Table 4.2 of the Gardner Pinfold report presents the credit card fee as a cpl, although we believe their intent was to indicate this as a percentage. The table uses an assumed fee rate of 1.65 percent in 2006, and a 1.75 fee rate in May 2008, but provides no explanation for the change.

In short, the 0.58 cpl recommendation appears to be premised on very flawed assumptions, particularly with respect to the price and usage rates.

### Minimum Wage

The Gardner Pinfold report states "…the wages of all workers tend to rise with each adjustment in the minimum wage." It then notes that the minimum wage has risen by 19% since July 2006, and proceeds to use that increase as the basis for calculating the cpl impact.

If the wages of all New Brunswick workers actually did rise (on a percentage basis) with an increase in the minimum wage, one would expect to have seen a 19% increase in reported salary costs having occurred from 2006 to 2008 in New Brunswick. This of course is highly improbable, yet this is the very basis for the Gardner Pinfold calculation. A more suitable approach would have been to determine the actual change in wages and salaries across New Brunswick, for which figures are available from Statistics Canada. The actual rate of overall wage increases in New Brunswick from 2006 to 2008 is likely to be more in the order of 10 percent, at most.

Although many employees of dealers and distributors are likely paid at minimum wage (and therefore benefited from a 19 percent increase), it is unreasonable to project this trend on more skilled staff (such as clerical staff at heating fuel distributors, and managers/owners at all types of facilities), whose salaries are above the minimum wage rate.

The use of 50% (40% for heating fuel) as the assumed portion of operating costs attributable to wages is clearly anecdotal, yet they are important values used in arriving at a 0.5 cpl proposal for motor fuels, and a 1.0 cpl proposal for heating fuels.

[2] Using a New Brunswick nine-city average of regular gasoline (113.0 in May 06 to 127.8 in May 08)
[3] Using a New Brunswick six-city average of regular gasoline (105.7 to May 06 to 114.6 to May 08). We commenced collecting data on three additional NB markets in April 2006

### Distribution Expense

Gardner Pinfold proposes an increase in the maximum delivery cost, for both motive fuel and heating fuel, of 1.0 cents per litre. Their finding that delivery costs have increased by 15% in the 2006 to 2008 timeframe is reasonable, and roughly consistent with data that we derive annually from our industry benchmarking.

For 2007 (using the most recent data we have), the average delivery cost in New Brunswick was 1.14 cpl[4]. It is very likely that smaller remote gas stations in New Brunswick incur costs exceeding 2 cents per litre, and we would therefore concur with the Gardner Pinfold recommendation to increase the maximum delivery cost from 2 to 3 cents per litre, given that the price/margin impact would only be in the case of those outlets whose costs are above the previous 2 cpl limit.

### Full Service Charge

It is assumed that Gardner Pinfold was not engaged for the purpose of recommending whether or not regulated margins, costs, or full service charges should exist at all, yet in the case of the latter, the Gardner Pinfold recommendation is not to change the maximum full service charge, but to drop it entirely.

We would fully agree. In our view, this can and should be self-regulating. As Gardner Pinfold did not propose a cpl adjustment in the event that the Board was to reject its recommendation, a critique of the Gardner Pinfold narrative relating to this factor would be pointless.

### Propane

Methodological concerns with the Gardner Pinfold Propane addendum recommendation (5.3 cpl increase) mirror those observed in the report main body: the underlying calculations are based on assumptions and estimates that have little or no documentary basis. Notwithstanding, the assumptions appear to be reasonable, and even if they are inaccurate, the total proposed change as a percentage of the propane marketing margin is very small by comparison to the motive fuel and heating recommendations.

Given the precedent of Gardner Pinfold having recommended dropping the Full Service Charge, a similar recommendation might have been expected - that propane be entirely removed from the regulatory regime. By the account of the Gardner Pinfold report addendum, propane represents a very small percentage of the heating market, and an even smaller percentage if solely considering the volumes related to primary (versus supplementary) heating.

## Summary of Findings

1. **Non-Petroleum Revenues**: The Gardner Pinfold report totally ignores the significance of non-petroleum revenues as a critical influencer of motive fuel margins, as well as (to a lesser degree) of heating fuel margins.

[4] Based on data derived from company-controlled outlets, from our benchmarking participants

2. **Volume of Sales**: The Gardner Pinfold report erred in not recognizing a 2008 (May YTD) increase in New Brunswick retail gasoline sales volumes as a mitigating factor, relevant to the justification of an adjustment in the maximum margin for retail motor fuels.

3. **Storage Costs**: The Gardner Pinfold assumptions used in carrying cost justifications are too unreliable to form the basis of a cpl adjustment recommendation. Furthermore, the price assumptions exemplify a lack of methodological transparency that diminishes the report's integrity.

4. **Credit Card Costs**: the 0.58 cpl recommendation appears to be premised on very flawed assumptions, particularly with respect to the price and usage rates.

5. **Minimum Wage**: An assumption of 19% as the rate of total wage increases from 2006 to 2008 is highly unrealistic, and the assumption of 50.0% (40% for heating fuel) as the assumed wage portion of total operating costs is purely anecdotal and likely inaccurate.

6. **Distribution Expense**: We have no particular concerns with the Gardner Pinfold methodology or recommendation.

7. **Full Service Charge**: We agree with the Gardner Pinfold recommendation that this element be entirely removed from the regulatory regime.

8. **Propane**: The proposed increases reflect methodological weaknesses similar to those cited in the main body's report, but nevertheless represent a small change as a percentage of the total propane margin. As per the Full Service Charge, we question its need to be in the PPPA.

## Conclusions

It is important to acknowledge that the Gardner Pinfold report appears to have taken a good general approach in attempting to quantify the parameters that might be relevant to proposing changes to the Board's setting of margins, costs and full service charges. Based on our assessment of the report however, it is very likely (and in our experience, almost certain) that dealer and marketer operating revenues, costs and other data could not be collected and compiled with any degree of accuracy or completeness.

Gardner Pinfold has thus resorted to what amounts to anecdotally derived estimates of certain costs in the course of proposing specific amounts by which to amend the Board's existing regulatory parameters. This is unsound, since many of these estimates appear to faulty; in some cases to a significant degree.

Of equal if not most concern is the lack of consideration towards non-petroleum revenues as a factor in determining the degree to which petroleum marketing and dealer margins are influenced; particularly in the case of retail motor fuels, but also likely in the case of heating fuels. Over several decades of our benchmarking the retail gasoline sector, we have observed a steady and significant growth in non-petroleum revenues in Canada, and we are aware of some stations whose net C-store revenues alone are more than the entire operating costs of the station, including costs related only to pumping gas.

As consultants who have worked in and with the downstream petroleum sector for decades, we can appreciate the difficulties that Gardner Pinfold likely faced in attempting to quantify the margin and cost factors necessary to justify their changes. In any study of this nature, some assumptions must be made. In our view however, many of Gardner Pinfold's assumptions were without sufficient basis, or sufficient accuracy, yet having a fundamental impact on the quantitative outputs.

We do agree with the need to review and adjust margins and costs in a regulated "price ceiling" structure such as exists in New Brunswick. In fact, there may very well be a current need to adjust those margins. The Gardner Pinfold report however, has significant and fundamental deficiencies in arriving at its findings and recommendations, which in our view render many of them not justified in adopting.

## Annex A: Our Project Qualifications and Experience

MJ Ervin & Associates Inc. specializes in the downstream sector of the petroleum industry. As downstream industry consultants, our knowledge, experience, and contacts with this industry in Canada are unmatched. In particular, our experience in conducting and presenting petroleum prices has given us a reputation as the premier source for this type of information.

Some of our project experience that is directly relevant to this proposal inc ludes:

### PETROLEUM MARKET REGULATORY ANALYSIS IN NOVA SCOTIA

For the Province of Nova Scotia, and in partnership with consultants Gardner Pinfold, we conducted a comprehensive review of the Nova Scotia retail fuel industry. We documented and analyzed the infrastructure trends in that province, and we identified and assessed the regulatory options for addressing the principal stakeholder issues. We participated in interviews of a variety of industry stakeholders, and we collected, presented, and analyzed a number of price and margin data related to fuel prices.

### MARKET PRICE MONITORING AND ANALYSIS

From 1999 to 2006, our firm operated the Canadian Petroleum Markets Data Service (CPMDS), a web-based market information and data resources service for subscribers. CPMDS offered our clients up to date petroleum markets information and analysis of crude, wholesale, and retail pump prices and operating margins. Natural Resources Canada (NRCan) purchased our historical price database in April 2006. Since that time, we have been under contract with NRCan to provide the data to populate their Fuel Focus database.

We also produced a regular industry newsletter entitled FuelFacts, in collaboration with Purvin & Gertz Inc., and funded by the Canadian Petroleum Products Institute. FuelFacts provided subscribers with a twice-monthly overview and analysis of retail, wholesale and crude market activity, aimed at the non-industry observer.

### PETROLEUM INDUSTRY INFRASTRUCTURE SURVEY

In 2004, MJ Ervin & Associates developed an annual National Retail Petroleum Site Census, in order to provide an accurate and comprehensive overview of Canada's retail petroleum infrastructure. This annual report is the definitive source of information about the numbers of retail gasoline outlets in Canada. It also provides important insights into the trends in the industry with respect to brand diversity, types of marketers, types of dealers, corporate control of retail pricing, average throughputs, and the emergence of non-traditional petroleum marketers and outlets.

### COMPETITIVENESS STUDIES

In 1997 we released a major industry study of competitiveness in the Canadian Petroleum Retail industry, for a consortium of clients which included two federal government ministries and the Canadian Petroleum Products Institute. Entitled the

"Canadian Petroleum Markets Study", this 105-page document still serves as an oft-cited reference for understanding the petroleum marketing industry in general, and competitiveness issues in particular. The study provided some unique insights into the state of competitiveness and price differentiation in the Canadian petroleum marketing industry, one of the most competitive markets in the industrialized world.

## REGULATORY ANALYSIS

We have been directly involved in examining and preparing analytical reports on a number of industry regulatory issues, including:

- Assisting the **State of Hawaii's Division of Consumer Advocacy** during the pre-implementation phase of Hawaii's price regulation statutes. Our assistance consisted of performing detailed reviews of the statutes and intervener submissions, and providing the Consumer Advocate with assistance in preparing its own position and submission to the state regulator.

- Assisting a major Eastern Canada marketer with their submission to the **Québec Regie de l'Energie**, concerning the setting of below-cost selling laws.

- Helping a national industry association make representations to several regional municipalities on the matter of regulating retail petroleum service offerings.

- Preparing a government briefing package to provide an overview of the background, issues, merits and drawbacks of a range of regulatory options pertaining to petroleum marketing and pricing.

## PERFORMANCE BENCHMARKING

Since 1991, MJ Ervin & Associates has worked with Canada's top petroleum marketers to conduct a comprehensive annual performance benchmark analysis of their bulk plant, retail and commercial cardlock operations. We take in detailed, confidential operating data on thousands of marketing facilities across Canada, and provide our clients with detailed analysis (over 50,000 data measurements) of their overall site performance relative to the industry in general. Our clients have used this information to set strategic goals, and to identify "performance gaps" in their operations. Our reports have become an intrinsic part of strategic planning processes at companies like Shell Canada and Imperial Oil. We have also conducted intra-organizational benchmarking for Shell UK and Shell Canada, using this exclusive benchmarking tool.

## GOVERNMENT BRIEFINGS

We have conducted well over 20 comprehensive briefings to governmental organizations at ministerial and senior departmental levels, on the issue of petroleum marketing competitiveness. This has included briefings to Federal caucus committees, task forces, provincial governments, and several municipal governments.

## SEMINARS

We have provided a hundreds of individuals and dozens of organizations across North America with a comprehensive two-day familiarization workshop into the Canadian and US petroleum refining and marketing industry. Clients have included petroleum employees, lawyers, investment analysts, and third-party vendor organizations.

# Annex B: Professional Resumes

## MICHAEL J. ERVIN

Mr. Ervin is the President of MJ Ervin & Associates. His functional specialties include marketing economics, operations management and reviews, feasibility studies, and marketing strategy and planning.

Mr. Ervin has had a successful and varied career in the downstream petroleum industry spanning twenty-eight years. Management assignments have taken him to all regions of Canada, working with major integrated oil companies such as Gulf Canada, as well as regional refiners and marketers. He has an extensive background in marketing, and has supplemented his base of experience with undergraduate and graduate studies in Business Administration. Prior to forming MJ Ervin & Associates in 1991, Mr. Ervin was a Senior Consultant with Peat Marwick Stevenson & Kellogg, an international consulting firm.

Mr. Ervin is active in explaining the petroleum marketing industry to the public through speaking engagements and the media. He has also written feature articles for several industry trade journals.

Mr. Ervin is a serving officer in the Canadian Forces Reserve, holding the rank of Commander. From 2000 to 2003 he served as Commanding Officer of HMCS Tecumseh, Calgary's Naval Reserve establishment, and was an Honorary Aide-de-Camp to Her Excellency, Madame Adrienne Clarkson, Governor General of Canada. He is an avid runner, and has completed over 17 marathons, including the 2006 Boston Marathon. Mr. Ervin is a private pilot, and enjoys downhill and cross-country skiing, and summer hiking and backpacking.

Mr. Ervin has had a principal role in a number of petroleum marketing consulting and management assignments, including:

**Canadian Petroleum Markets Data Service (CPMDS)** – Mr. Ervin implemented an extensive petroleum markets price data collection and reporting service, available to subscribers and the general public through a web-based system. This service is a central source of petroleum markets data, meeting the critical information needs of a variety of organizations with an interest in the downstream petroleum sector.

**FuelFacts** – Mr. Ervin's firm published a twice-monthly newsletter entitled FuelFacts, in collaboration with Purvin & Gertz Inc. This publication served to provide timely and comprehensive analysis of petroleum markets in Canada, and was directed towards a primary audience of elected officials and media organizations.

**Canadian Petroleum Markets Study -** Mr. Ervin conducted a major review of competitiveness in the Canadian retail petroleum sector for Industry Canada, Natural Resources Canada, and the Canadian Petroleum Products Institute, in 1997. In this study, he developed several unique models and views of industry competitiveness that have been widely cited in explaining the downstream sector to the public.

**Regulatory Issues -** Mr. Ervin has appeared before the Quebec Regie de l'Energie as an expert witness in the petroleum marketing industry, particularly in Canadian wholesale and retail marketing, cardlock and bulk operations, with emphasis on price economics, performance benchmarking and analysis, and marketing mix and infrastructure issues. Mr. Ervin's testimony played an important role in assisting the Regie in determining appropriate provisions of that province's retail petroleum pricing laws.

## CATHY HAY

Ms. Cathy Hay is an MBA with extensive marketing experience in the downstream oil industry. Cathy is currently a Senior Associate at MJ Ervin & Associates, providing specialized consulting services in all aspects of petroleum marketing, including performance benchmarking, price/margin analysis, and industry economic research and analysis.

Cathy's career in the downstream industry spans over 23 years. Her experience includes strategic and operational planning, marketing management, relationship marketing, pricing and business process re-engineering. Prior to joining MJ Ervin & Associates Cathy was employed at Petro-Canada and Calgary Co-operative Association. During her tenure at Petro-Canada, Cathy held a number of progressively responsible positions in the marketing area including, Wholesale Category Manager, Re-engineering Project Manager, Retail Pricing Manager, and Credit Card Marketing Manager.

Ms. Hay has a broad range of expertise within the downstream sector, including petroleum price and market analysis; regulatory structures relating to the marketing of petroleum products; and competitiveness dynamics at the retail and wholesale level