

National Energy Board

Evaluation of Energy Markets and Supply Monitoring Function

**Report by
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A. Executive Summary

The National Energy Board (NEB) has a responsibility to monitor energy supply and market developments in Canada. The monitoring function has three objectives:

- 1) To keep Canadians informed on a timely basis about the functioning of Canadian energy markets;
- 2) To provide up-to-date information on energy supply and demand, and energy market developments to the Board; and
- 3) To ensure that exports of natural gas, oil, natural gas liquids and electricity do not occur to the detriment of Canadian energy users by satisfying itself that Canadians have access to domestically produced energy on terms and conditions that are at least as favourable as those available to export buyers.

As part of the monitoring function, The Board produces a variety of public and internal reports including:

- 1) Public reports on exports and imports
- 2) Energy Market Assessments (EMA's)
- 3) Technical Studies
- 4) Long Term Supply / Demand Reports
- 5) Briefing Notes

To ensure the energy markets and supply monitoring function is meeting its objectives effectively, the Board commissioned an evaluation of the function:

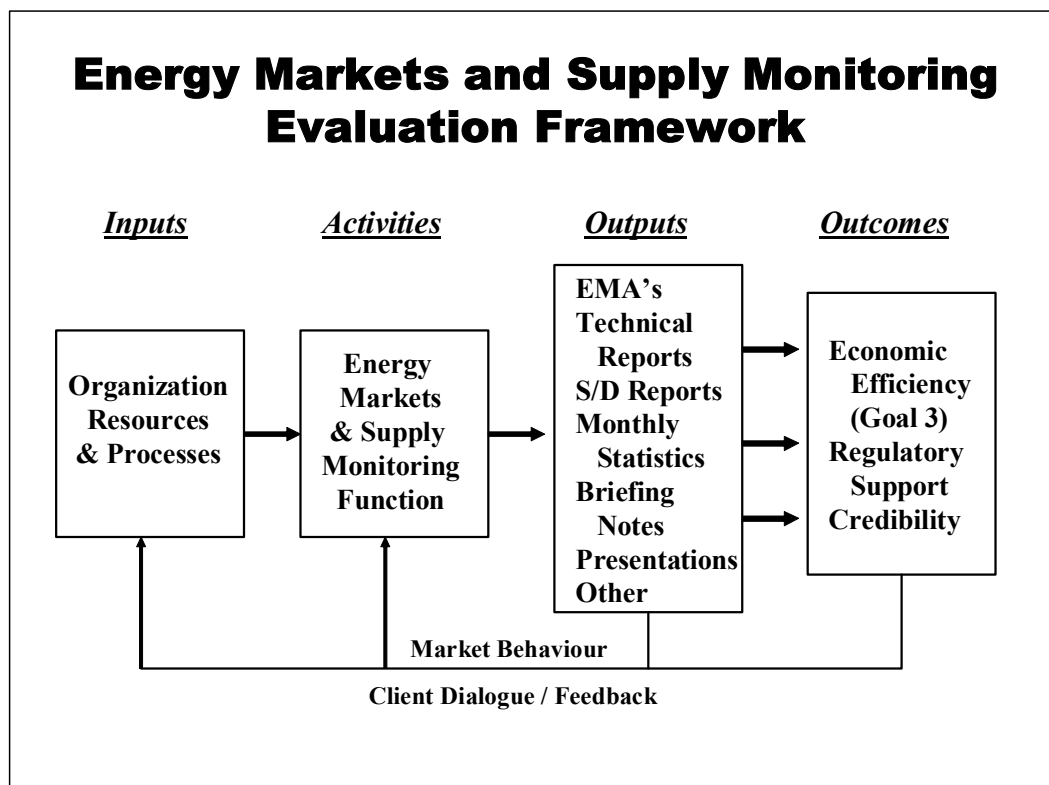
- 1) To evaluate the effectiveness and efficiency of the Board's energy markets and supply monitoring activities;
- 2) To identify "gaps" in these activities in meeting desired outcomes; and
- 3) To develop specific recommendations within an overall action plan to improve the effectiveness and efficiency of the monitoring function.

An analytical framework was developed as shown in Figure A.1 below. An analysis of inputs and activities was undertaken to examine the efficiency of processes used to generate the range of reports (outputs). Current processes were "mapped" as a basis for identifying potential improvements. An analysis of outputs and outcomes was undertaken to examine the effectiveness of the monitoring function. This involved a series of interviews with internal (11) and external (47) users to assess the quality, value and use of the information currently provided and to identify areas of improvement.

Our interviews and analysis generated a range of opportunities and options for improvement that were evaluated against a set of criteria to develop our recommendations. The criteria focused on whether the recommendations addressed internal and external gaps or needs, including forward-looking perspective, contributed to the desired outcomes of economic efficiency, regulatory support and statutory commitments, enhanced the Board's reputation and credibility, were feasible and addressed the risk of acting (or not).

The results of the interviews indicated that user needs and use of NEB information and analyses vary widely. As well as internal users (Board members and Business Units), external stakeholder groups were identified and their specific needs examined. *Overall, the external stakeholders were happy with the quality, timeliness and relevance of the information and analysis. The Board's unique role as an objective, unbiased and high quality source of information and analysis on Canadian energy markets was recognized.* The national scope of reports, while including provincial detail, is seen as an important aspect of the Board's work. Similarly, stakeholders viewed access to knowledgeable and professional staff, both formally through consultation processes included in developing reports and, informally through direct communication, as important aspects of the monitoring function.

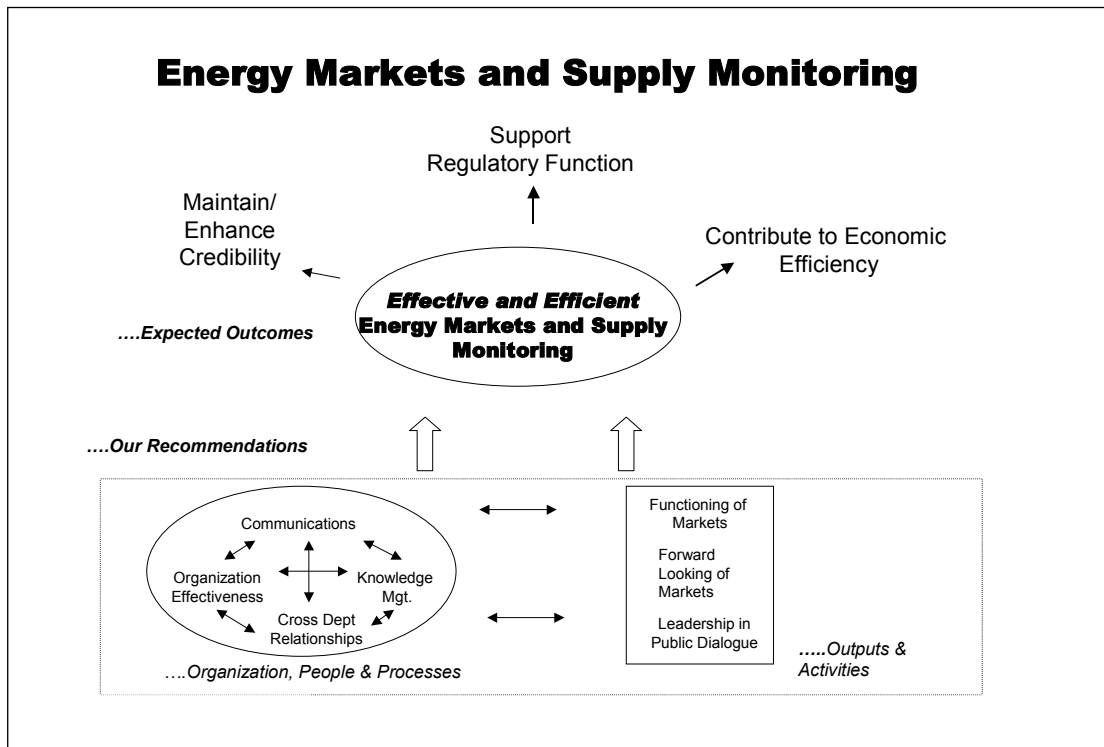
Figure A.1



From analysis of internal and external interviews, seven recommendations were developed. These recommendations are directional with specific options and opportunities included for the Board's consideration. They are intended to enhance the effectiveness and efficiency of the energy markets and supply monitoring function in achieving the desired outcomes: economic efficiency, regulatory support, and Board reputation and credibility. The linkages between recommendations and outcomes are shown in Figure A.2.

Implementation of all or any of the recommendations will have resource implications. The Board will need to assess these implications after establishing its acceptance and any prioritization of the recommendations.

Figure A.2



Recommendation 1

Increase focus and analysis on the functioning of gas (first priority) and other commodity markets.

Economic efficiency (Goal 3) focuses on the efficient operation of markets. It is a critical responsibility of the Board to keep Canadians informed about the functioning of Canadian energy markets. While Board reports have consistently analyzed supply, demand and prices, this recommendation proposes greater focus on the *functioning* of markets. For example, is supply and demand responding to price changes in an orderly way? Or are there structural barriers impeding the efficient functioning of markets? Gas markets are particularly important within the Board's mandate. There is an opportunity to analyze the current gas market in this way both to provide a timely analysis of this key market and to clarify the definition and characteristics of an "efficient market".

Recommendation 2

Increase emphasis on forward-looking market analysis and issue identification

Internally, Board members expressed a need for early identification and analysis of emerging issues and anticipation of “market adjustments”. Externally, clients expressed a desire for EMA’s that projected trends and identified future market developments. The Board has considerable experience in both short-term and long-term projections. The thrust of this recommendation is to expand this forward-looking analysis both to meet expressed needs and contribute to market efficiency. Markets are anticipatory. Briefing notes and EMA’s that are more forward looking would be valuable. The Board might consider developing external “briefing notes” to enhance timely dialogue on emerging issues.

Recommendation 3

Demonstrate continued leadership by encouraging public dialogue on a broad range of energy market issues

Stakeholders expressed a desire for the Board, which has a high level of credibility and respect, to expand its scope of analysis to deal with crosscutting issues not addressed elsewhere. Regulatory differences across the country and restructuring electricity markets were two examples. These are outside the Board’s jurisdiction but important factors affecting the functioning of energy markets. The Board could use its position to act as a facilitator or convener in bringing stakeholders together to encourage dialogue and understanding of major issues. Or the Board, through “briefing notes” as suggested above, could assist in framing issues for public discussion. Such leadership initiatives pose risks. The Board’s regulatory and monitoring roles would need to be carefully distinguished from this “dialogue” role. Convening discussions of this sort would be neither a hearing nor a consultation. The benefits to enhancing economic efficiency, however, are potentially large.

Recommendation 4

Improve communication and increase visibility of the NEB within the stakeholder community

Stakeholders are diverse in the information and analysis they use. Some prefer executive overviews while others want in-depth analysis and access to underlying data. Yet others – “unsophisticated” consumers and small energy companies – appear to have limited (unknown) knowledge and access to Board reports. The thrust of this recommendation is to encourage the Board to take a more pro-active approach to tailoring information to specific groups of stakeholders, including newly identified stakeholders. This begins by defining, at the outset, the key target audiences for receipt of each report. Process steps

would include: stakeholder consultations; providing a range of outputs to satisfy different levels of audience needs; improved post-release support, such as access to individual analysts. One example of tailoring information would be the use of “plain language” executive summaries designed to make results more accessible to “unsophisticated” stakeholders. Regional press conferences, where appropriate, would be another. Within resource constraints, small but deliberate improvements in the communication process could significantly enhance the Board’s effectiveness, visibility and credibility amongst a wider range of stakeholders.

Recommendation 5

Build on knowledge management and organizational learning capabilities

A critical success factor for the monitoring function is the ability to capture and share market information and intelligence across the organization, and subsequently with external stakeholders. Currently, exchanges of information are largely informal except in preparation of major reports when a group of analysts come together to undertake the project. These projects facilitate learning, particularly across groups within the Commodities BU. There is no central mechanism, however, for managing intelligence and knowledge. The thrust of this recommendation is to move toward a more formal system of capturing and sharing knowledge to improve communications and learning. This should involve the establishment of a central repository to facilitate the systematic capture and sharing of information from conferences and meetings; market information from hearings, etc. The recommendation suggests the Board make a commitment in this area, act on some immediate opportunities and consider a longer term investment in a knowledge management system. The objective is for the Board to develop leading edge capacity over time as part of the market monitoring function.

Recommendation 6

Improve communications and sharing of information between the Applications and Commodities Business Units

The relationship and sharing of information between the Applications and Commodities business units is a key element of an improved knowledge management system. Neither group seems to consistently view this as a priority. Applications need a sound understanding of market developments, while Commodities could benefit from the market intelligence that emerges from hearings that Applications supports. The thrust of this recommendation is to raise the priority of information sharing and create formal and informal mechanisms for this to happen. For the Commodities BU, which has primary responsibility for market monitoring, there is an opportunity to clarify its balance of priorities in supporting both the regulatory function and meeting external stakeholder needs, as well as clarifying their mutual relationship and expectations with the

Applications Unit. The BU leaders need to define expectations in this area. Improving the exchange of information and intelligence between these units will assist in moving toward an overall improved knowledge and learning system within the Board.

Recommendation 7

Enhance organizational effectiveness of the Commodities Business Unit

Input from internal stakeholders and review of processes used to develop reports indicated that the current structure and processes are working effectively. But there is a desire for ongoing organizational improvements to be identified and incorporated in the business processes of the Commodities group. The mapped processes may assist in standardizing some procedures. Project planning tools, used effectively in the EMA process analyzed, is an example of an improvement which can be incorporated in future projects. Including Communications support early and throughout the process was another improvement identified. The thrust of this recommendation is to raise awareness of the opportunity to constantly improve business processes by recognizing innovations and capturing them formally so that they become part of the ongoing process. This type of continuous improvement also includes external processes and relationships. Media training for staff, who are increasingly required to respond to interviews, information requests and press conferences, as well as lead consultation exercises, is an example in this area. This recommendation stresses the need for an ongoing effort to enhance staff training, build leadership capabilities, improve internal processes and expand external relations as part of enhanced organizational effectiveness.

B. Introduction

The National Energy Board (NEB or the Board) was created by an Act of Parliament in 1959. The Board's responsibilities include the regulation of exports of oil, natural gas, natural gas liquids, and electricity; the regulation of the construction and operation of international and inter-provincial pipelines; the setting of just and reasonable tolls for pipelines under federal jurisdiction; the regulation of the construction and operation of international and designated inter-provincial power lines; and the regulation of oil and gas activities on certain Canada lands.

The Board also has a responsibility to monitor energy supply and market developments in Canada. This responsibility is carried out within its Commodities Business Unit through an Energy Markets and Supply Monitoring function.

To ensure this monitoring function is meeting its objectives effectively, the Board commissioned an evaluation of the function:

- 1) To evaluate the effectiveness and efficiency of the Board's energy markets and supply monitoring activities;
- 2) To identify "gaps" in these activities in meeting desired outcomes; and
- 3) To develop specific recommendations within an overall action plan to improve the effectiveness and efficiency of the monitoring function.

This report conveys the results of this evaluation.

C. Energy Markets and Supply Monitoring Mandate

The Energy Markets and Supply function has three objectives:

- 1) To keep Canadians informed on a timely basis about the functioning of Canadian energy markets;
- 2) To provide up-to-date information on energy supply and demand and energy market developments to the Board; and
- 3) To ensure that exports of natural gas, oil, natural gas liquids and electricity do not occur to the detriment of Canadian energy users by satisfying itself that Canadians have access to domestically produced energy on terms and conditions that are at least as favourable as those available to export buyers.

As part of the monitoring function, The Board produces a variety of public and internal reports which, among other things, address current and emerging issues associated with energy commodities. The reports include:

- 1) Public reports on exports and imports
- 2) Energy Market Assessments (EMA's)
- 3) Technical Studies
- 4) Long Term Supply / Demand Reports
- 5) Briefing Notes

D. Evaluation Objectives

The objectives of this evaluation are:

- To evaluate the effectiveness of the Board's energy markets and supply monitoring activities and the efficiency with which the underlying data gathering, analysis and information provision activities are carried out
- To identify gaps in these energy markets and supply monitoring activities
- To develop specific recommendations within an overall action plan that will improve the effectiveness and efficiency of the monitoring program.

This evaluation involves analyzing the efficiency and effectiveness of the function, identifying gaps, making specific recommendations for improvement and designing an action plan for implementation. Effectiveness focuses on the format, timeliness, content and reliability of information from the perspective of users of the information and objectives of the program (market efficiency). Are the reports meeting the needs of internal and external consumers of the information so they can make informed decisions? Efficiency, in contrast, focuses on the process of collecting, analyzing, producing and distributing the information. Are the activities in producing the information as efficient as possible?

Specific objectives are:

- To map the expected and actual processes of generating and distributing energy market and supply monitoring information
- To analyze the efficiency of the process against defined objectives and evaluation criteria to identify gaps or areas of improvement
- To determine the range of user needs for each product currently distributed and how such information is used in decision-making
- To identify new user needs for information within the context of the energy markets and supply monitoring function
- To analyze the effectiveness of the function and identify gaps in information requirements for individual reports and the portfolio of products
- To define clear objectives, expected results and performance measures to assist in managing the function
- To make specific recommendations for improving the efficiency of the process and effectiveness of the range of products (reports, presentations, discussions, etc.) in meeting the objectives of the NEB
- To develop an overall action plan for implementing changes in the function.

E. Evaluation and Analytical Approach

The overall approach or framework for evaluating the efficiency and effectiveness of the monitoring function is depicted in Figure E.1

Outcomes

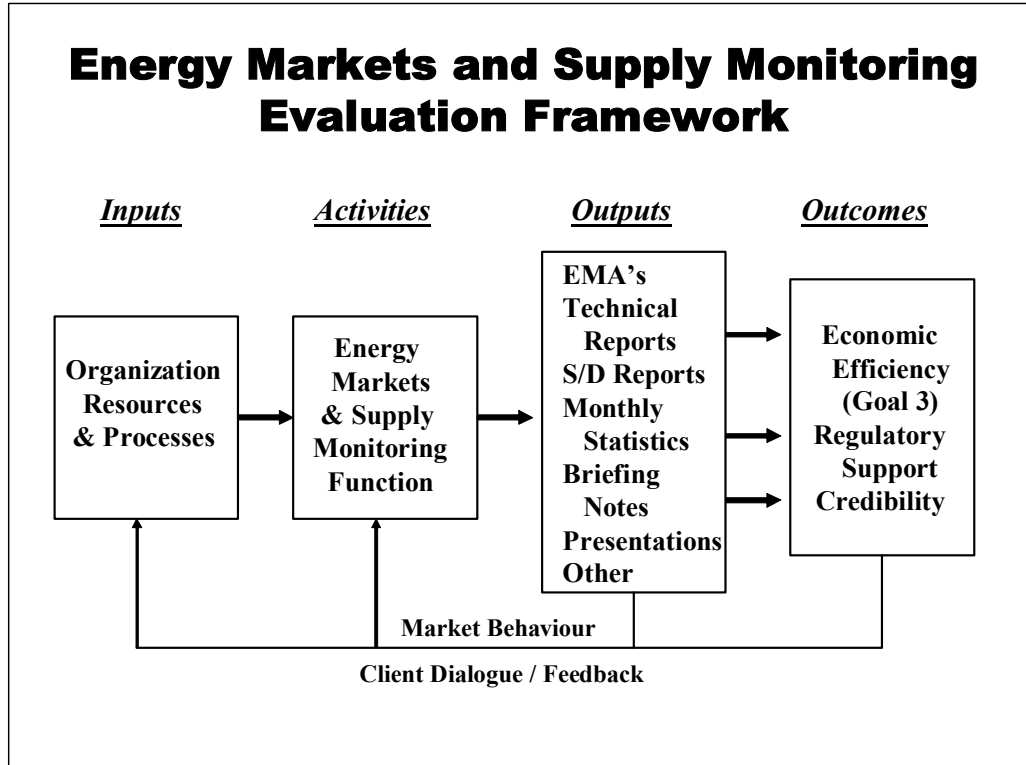
An efficient and effective Energy Markets and Monitoring function leads to certain desired outcomes which enable the Commodities Business Unit to deliver on its mandate (see Section C. above) and contribute toward overall Board goals and objectives. We focused on recommendations leading to desired outcomes for the **monitoring function** – one could look at these outcomes as a subset, contribution or stepping stone to the overall desired outcomes for the Board as a whole.

Economic Efficiency (informed markets and better decisions) - Keeping Canadians informed on a timely basis about the functioning of energy markets will lead to more informed energy decisions.

Regulatory Support (enabling more informed decisions) - The monitoring function represents a critical connection for the Board to the energy industry and its stakeholders. The Commodities Business Unit provides market information through the monitoring function – this market information is important for the Board to make informed regulatory decisions

Credibility – of the Board, Commodities Business Unit and the monitoring function is an outcome of the success of the Board; but we also saw maintaining credibility as a critical input to its ongoing success. The issue of Board credibility and specifically of the information that it provides was raised in many of our external interviews.

Figure E.1



Efficiency focuses on how resources and processes are used to generate and disseminate outputs to individuals and organizations. Effectiveness focuses on the extent that the outputs produced achieve the outcomes desired.

In examining the efficiency of the monitoring function the approach adopted was to explore and map the processes used to produce four major outputs. This formed the basis for evaluating the current program and to identify inefficiencies, areas for improvement and successes that should be maintained or enhanced. “Process maps” were developed for EMA’s, Technical Reports, Monthly Statistical Reports and Briefing Notes. A specific example was used as a representative of a “typical” process. For example, the process used to develop the recent report “Canadian Electricity Exports and Imports” was used as a model for the process in producing EMA reports. The detailed process maps are presented in Appendix 1. The results of that analysis on efficiency are presented in Section F.

In examining the effectiveness of the monitoring function, the approach involved three steps:

First, a questionnaire was designed and used as a basis to interview internal and external users of the information and analyses produced by the Commodities Business Unit. The purpose was to obtain perspectives on the quality, value and use of the information currently provided and to identify opportunities for improvement. The questionnaire is included as Appendix 4.

Second, the interview results were analyzed across the internal stakeholders and the six different external client groups to identify both areas of excellence – what are we doing well and need to continue? – and areas of improvement – what are the opportunities to improve the value to users? We refer to this as gap analysis since opportunities for improvement indicate a gap between what is currently being produced and what could be produced to increase value to users.

Third, the gap analysis results were used to develop recommendations. Not all opportunities necessarily lead to a recommendation. The critical question in developing recommendations is to what extent does the recommendation reinforce and enhance the desired outcomes from the outputs produced? In short, how can we improve the outputs to achieve the outcomes desired, as shown in Figure E.1.

To evaluate opportunities as possible recommendations, the analytical approach shown in Figure E.2 was followed. Opportunities for improvement were tested against evaluation criteria in defining recommendations. Criteria were developed based on the outcomes, gaps, risks and client feedback. Ten criteria were defined as shown below in Table E.1 The criteria, in effect, are an operational set of questions designed to link outputs and outcomes. If a recommendation meets some or all of the criteria, then that recommendation should reinforce achievement of the desired outcome.

Figure E.2

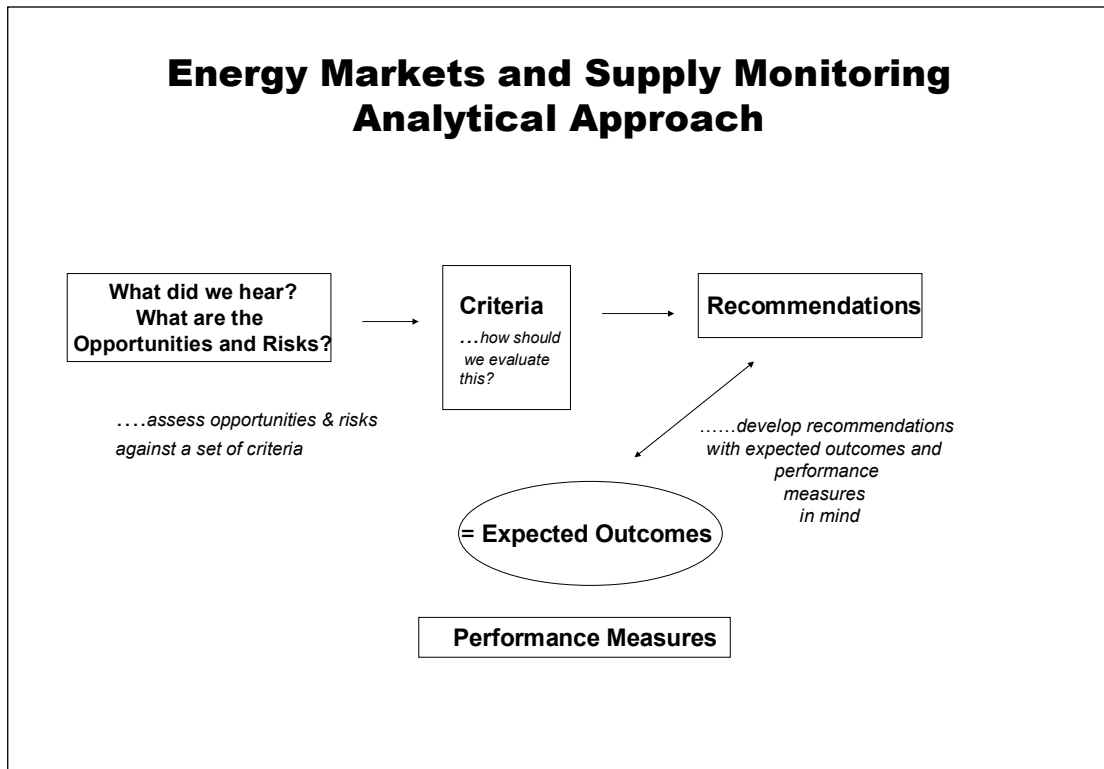


Table E.1 - Evaluation Criteria for Recommendations

➤ Internally identified gaps	Does it address the gap?
➤ External client gaps or needs	Does it address the need?
➤ Economic efficiency (Goal 3)	Does it contribute to efficient functioning of markets?
➤ Regulatory support	Does it improve understanding of markets?
➤ Credibility	Does it enhance the NEB's reputation / credibility as an independent / objective source?
➤ Legal commitments	Does it support the Board's legal commitments and mandate?
➤ Forward looking	Does it provide perspective on future changes?
➤ Risk	If the Board does not act, does it incur greater risk that stakeholders will view the Board as not fulfilling its mandate?
➤ Feasibility	Is it "doable"? Does the Board have the resources / mandate?
➤ Measurability	Can we measure success?

Finally, it may be noted that the ongoing management and performance of the monitoring function depends on two types of feedback: one is dialogue and feedback from clients on the quality, value and use of energy markets and supply monitoring information and analysis to ensure the function is meeting client needs; the other is monitoring market behaviour and developments as part of the intelligence gathering process.

F. Results of Process Mapping

The “Project Roadmap” included a step, which was to develop “Process Maps” which documented the key steps taken in the development of NEB documents, which would be communicated to internal and / or external stakeholders. The ‘Maps’, that were developed, captured the key process steps for the following subject documents:

- Energy Market Assessments (EMA’s)
- Technical Reports
- Briefing Notes
- Statistical Reports.

In order to accomplish this task, small knowledgeable teams were assembled to create each of the four maps listed above. The goal was to display the “current state” of each process. Significant activities included the clarification of the work process of interest, the first step, the final step, and the output or product of the process. Other steps included the identification of key stakeholders, identification of high-level process steps and then the lower-level (supporting) activities.

These maps, when properly documented, were then shown to another group of knowledgeable staff that could confirm / adjust the maps as developed. The four maps, as developed, are portrayed in Appendix 1.

Points relating to improving the “Processes” and identified gaps follow:

- Ensure early and ongoing involvement (and feedback) of key external stakeholders in the “Processes” - from identifying new topics, through analysis, and to the communication stage
- Ensure rigor in the process ... allow ability for addressing ad hoc timely issues
- Include key stakeholders (upfront) to develop comprehensive communication plans which include target audiences / clients, logistics, provision for feedback, questions and clarity
- Ensure that other NEB Business Units are included in the processes as appropriate
- Provide references to focal points i.e. creators of the document
- Increase numbers of presentations and direct discussions with stakeholders to enhance dialogue and sharing of information
- Develop methods to issue “alerts” to the fact that a specific document is being developed, when and how the document will be communicated, key contacts at the NEB for further information about the report / document
- Consider the best use of the internet/information technology to communicate information
- Where possible, reduce cycle times to enable more timely release of reports and information.
- Reports were generally considered of high quality and very professional; however, a need for timely “updates” was identified

- Incorporate ‘continuous improvement’ process steps such as de-briefs, ‘look backs’ and the capturing and incorporation of ‘learnings’ in subsequent document development.

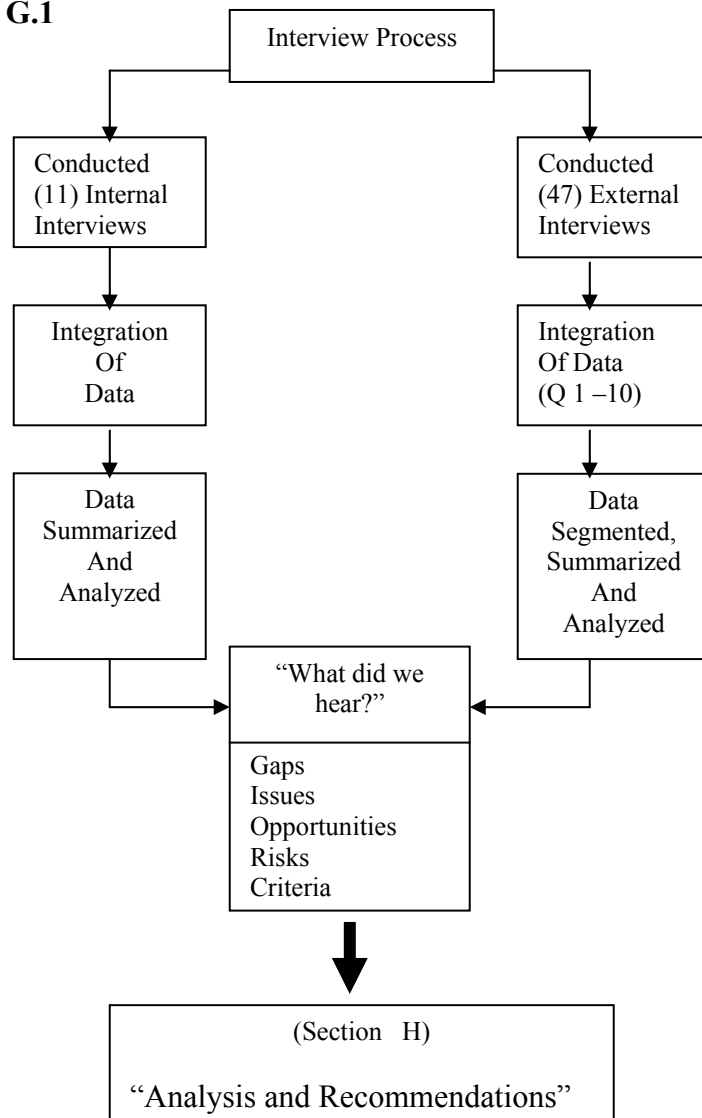
A general observation would be that there are no apparent huge gaps in the processes noted above. Very capable staff have taken a professional approach with respect to the delivery of well-received documents but are still anxious to recognize and incorporate feedback and improvements.

G. Results of Interviews - “What did we hear?”

To achieve its objectives for this project, the Board commissioned the consultant to conduct interviews with a broad range of market participants and stakeholders. The purpose was to solicit input and feedback on the effectiveness of the Board’s monitoring program. More specifically, the purpose of the interviews was to obtain perspectives on the quality, value and use of the information currently provided and to identify areas for improvement. The interviews were informal discussions covering a range of topics and lasted from 30 minutes to an hour. The interview questions are included in Appendix 4.

The process used in analyzing the interview results is shown in Figure G.1. The large database created from the (total of 58) interviews was integrated, segmented and summarized to allow for a more effective analysis and interpretation of findings.

Figure G.1



Detailed results of the data collected, summarized and segmented, from the external interviews are provided in Appendices 2 and 5. This data formed the basis on which specific “Recommendations” have been developed and described in Section H of this report.

A summary of key themes and issues resulting from the interviews is presented below. Results from the internal interviews are presented first followed by the results of the external interviews.

G.1 Results from Internal Interviews – “What did we hear?”

Internal interviews generated two broad types of responses. One focused on the market and supply monitoring needs of internal clients. The other focused on internal perspectives on the external or client expectations of the monitoring process.

G. 1.1 Internal Stakeholders

There are a multitude of internal users and stakeholders associated with the market and supply monitoring function. The Commodities Business Unit itself is a primary user of this market information in its analyses. Key internal client groups who rely on this function as well include: Board Members, the Applications Business Unit, the Executive office and Corporate Services. Other stakeholders include important support staff involved in the production and dissemination of energy market and supply monitoring reports.

Board Members

Board Members have two major requirements. One requirement is to have a sound knowledge of energy markets as a context for making regulatory decisions in the public interest. They need to understand how the market is working so they can understand the outcomes of their decisions. Another requirement, linked to the first, is to have timely information and analysis on market adjustments. This focuses on identifying and understanding changes in market conditions and emerging issues. Both of these are vital in ensuring that Board Members have a strong business perspective on the industry and are able to discuss issues knowledgeably with external parties.

Currently the Commodities Business Unit provides information and analysis to Board Members in three ways:

- 1) Through the preparation of EMA’s, Technical Reports, Long-Term Supply / Demand Reports and monthly statistical reports. In fact Board Members are active in deciding which EMA’s and Technical Reports to undertake and individual Board Members actively champion each project;
- 2) Through Briefing Notes and emails initiated by Commodities staff and distributed to Board Members;

- 3) Through requests from Board Members to staff on issues of interest. This leads to Briefing Notes and presentations to Board Members as well as material for presentations and speeches.

Board Members expressed a high level of satisfaction with the quality and timeliness of information and analysis provided. But there were several suggestions for improvement.

- 1) There was a strong desire for more forward-looking analysis of markets and emerging issues. Board Members need to be at the leading edge of changes and market issues both for regulatory decisions and for discussion and consultation with external stakeholders.
- 2) There was satisfaction with the quality and level of analysis in briefing notes, but implications of the analysis for the Board need to be included.
- 3) The current approach by which staff members decide whether new intelligence merits a note to Board Members or not, seems largely ad hoc. There is agreement that a spontaneous staff-initiated process is desirable. Yet there was a view that a more disciplined, rigorous process might be needed to complement the existing arrangement. This might involve, for example, a quarterly briefing on key issues, a regular update on important trends or briefings after key events, like the briefings provided after major OPEC meetings. Regular briefings of Board Members, by Commodities Business Unit staff, of discussions with their numerous contacts would enhance the sharing of intelligence in a more systematic way (this is part of the larger knowledge management challenge/opportunity - see Section H. below). Another area in which formalizing Board-staff communications might be beneficial is in Board Member requests for information. Some system of rating of priorities that was understood by both Board Members and staff might alleviate this communication difficulty.

Cross Business Unit Relationships

The Applications Business Unit provides direct support in the regulatory function. They require a sound knowledge of markets and recent developments as a basis for understanding the market consequences of decisions. At the same time, there is considerable market and supply information that emerges from the regulatory hearings. Despite the obvious value added potential, cross-BU sharing of information and intelligence, either formally or informally is not maximized.

This seems to reflect two problems. First, there are relatively few appointments across the business units. Staff tend to be recruited and stay in a single business unit, which hinders their knowledge of the work in other business units. Second, the pressure and priorities of work tend to focus staff on their immediate business unit requirements. Consequently, passing on intelligence to another group is not a high priority.

It would seem appropriate to develop mechanisms to encourage greater sharing of intelligence between the Commodities and Applications Business Units. Periodic

briefings would be one approach. Cross-training to encourage greater mutual awareness and understanding would be another.

These efforts, however, will only be successful if each group sees that knowledge and information sharing is an important priority in their work. Commodities, for example, has at least three key client groups: external stakeholders, Board Members and Applications Business Unit staff. Which group has priority? Should support to the Applications Business Unit on regulatory matters take precedent over external reports? The Commodities and Applications groups need to clarify their respective missions and priorities in balancing the requirements to meet the needs of all client groups.

A larger issue underlying all of the work of the commodities group, and highlighted here, is knowledge management. The Commodities BU has primary responsibility in collecting and analyzing market and supply intelligence and information for the Board. Yet considerable intelligence is acquired by Board Members and Applications BU staff. How can the Commodities group tap into these sources of information, record it systematically and use it effectively in their analysis and knowledge generation? Even within the Commodities BU, there are no formal mechanisms to capture individual knowledge and intelligence in a central database. There is a lack, at least formally, of sharing and knowledge across commodities groups, for example, between oil and gas or NGL's and electricity. Specifically, the Commodities group should consider developing enhanced formal and informal mechanisms for sharing information across the different commodity groups. More generally, the group/the Board needs to consider whether a larger knowledge management system would be desirable, and if so, how it could be implemented.

G. 1.2 External Expectations

External expectations were grouped into three main themes: external monitoring priorities, NEB profile, and NEB leadership role.

External Priorities

Internal participants raised questions on the priorities in meeting the NEB's economic efficiency mandate. One priority focused on the extent the NEB was meeting its obligation to provide information for the general public. While there was a sense that large organizations actively involved in the industry had access to a range of market information, including reports and information from the NEB, they wondered whether "unsophisticated" consumers / citizens were fully served. Did consumers have adequate information to make informed choices? What was the Board's responsibility in providing that information? And specifically, how could the Board make its information and analysis more accessible to a wide range of consumers?

The recent EMA on the Maritimes Natural Gas Market, which was produced with an emphasis on "plain language" writing, is one example of trying to make information more accessible to a wider public. Putting greater emphasis on communication media,

who are major providers of information to the public, is another example. This might entail executive summaries with news releases, press conferences and specific contact names on the reports to allow journalists direct access to report authors.

A second priority focused on the balance between market data / information and analysis. Internal stakeholders placed greater emphasis on in-depth market analysis than on market statistics in supporting the objective of economic efficiency. Yet we also heard in our external interviews (Section G.2 below) that external clients use and value both in-depth analysis and market statistics

A third priority raised questions about the focus of the EMA reports. In particular, there was a view that greater emphasis was needed on defining and understanding market efficiency. Are markets working? What evidence is there that supply and demand are responding to price changes? Are there “adjustment difficulties” that need to be identified and analyzed? Similar questions were raised in the external interviews. This is particularly important because it relates directly to the market-based procedure adopted to ensure the market is working to serve Canadian needs adequately and fairly. It is important that the Board can demonstrate to Canadians and the Minister that markets are functioning effectively. Such analysis is a central part of the monitoring function.

NEB Profile

Internal participants were very conscious of the unique reputation and profile that the NEB has with stakeholders. The credibility of the Board depends not only on regulatory decisions but on the objective, unbiased and high quality analysis provided through the market and supply monitoring function. They were concerned, however, that the Board was not fully exploiting all the potential opportunities at its disposal for communicating with stakeholders and enhancing its profile. While Board Members make numerous presentations on major issues, there was a view that staff members could be more proactive in making presentations and engaging a wide range of stakeholders in dialogue about energy issues. In short, the NEB could be more visible in public dialogue with stakeholders thereby improving intelligence and raising the profile and presence of the NEB. This would complement the extensive consultation processes undertaken in developing reports as was done with the case in the Long Term Supply / Demand Report.

Leadership

Raising the NEB’s profile and role in major energy market issues was also part of a concern about the Board’s leadership role and responsibilities. The Board’s role in providing objective, unbiased information and analysis is critical. But should the Board take more risk – “bolder and gutsier” – in exploring controversial topics? At present the Board is very sensitive to its mandate. But would it be appropriate, for example, to explore issues pertaining to restructuring of electricity markets in Canada and North America? Could the Board convene a group of stakeholders to examine issues in this area even though it might involve topics outside its jurisdiction? What is the responsibility of

the Board to take a leadership role in supporting economic efficiency in markets beyond its regulatory jurisdiction? This is a question that the Board needs to consider.

G.2 External Interviews – “What did we hear?”

As indicated above, a significant number of interviews (47) were conducted with key “External” stakeholders, which are summarized in Appendix 5. The data gathered from these interviews was analyzed in order to capture key and consistent messages, which described, in the views of the interviewees:

- Gaps in the services delivered by the NEB
- Issues the interviewees felt needed to be addressed
- Potential opportunities they would like to see the NEB pursue
- Risks of (not) pursuing the stakeholders’ suggestions
- Criteria to assist in developing a reasonable portfolio of opportunities.

The information provided by the “External” stakeholders was captured through a series of specific questions and, given the magnitude of the data collected, was segmented to facilitate specific “Recommendations” described in “Section H.”

The Board was anxious to hear the opinions of a very diverse selection of stakeholders, all of who have a direct or indirect influence on energy markets in Canada. To accomplish this task, information and opinions were solicited from the following groups of stakeholders:

- Oil & Gas Producers
- Electricity and Other Energy Producers
- Regulators / Government bodies
- Distribution / Pipeline companies
- Traders / Investors
- Trade Associations / Consultants
- Consumers.

Feedback from these stakeholders indicated that all the information produced and available to the public from the NEB was generally known to be accessible. However, depending on the level of need and sophistication of the stakeholder, the information had varying degrees of use and value. It is felt the broad array of offerings including Executive Summaries, Supply / Demand Reports, Technical Reports, Energy Market Assessments all have merit but in varying degrees and ways for individual stakeholders. It was suggested that some communication of availability of all releases should be made to all stakeholders with a view towards allowing them to decide the particular relevance to their specific organizations. What we heard was that value is derived in many ways: direct use of data and analysis, regulatory and policy context, background information, strategic input, presentation material, support of advocacy efforts, educational input, professional interest etc.

Stakeholders received the information from the Board by a variety of means: hard copy, web site, library research, telephone, fax, presentations, informal discussions, and indirectly from direct recipients. This feedback suggested that, while web site sourced information was growing significantly, other sources should be maintained. In fact, direct interface with NEB staff to discuss Board information releases and to understand the Board's thinking was suggested as a way to preserve, enhance and expand the relationships with a wide array of stakeholders.

For the most part, the information provided by the NEB did not directly influence the decision-making of the various stakeholder groups but was one of many sources that they used for their business activities. However, they did view the Board information as a credible, independent, neutral and reliable source of information; data is national in scope, looks at the big picture and also provides provincial circumstances, all developed by a group of knowledgeable and professional staff.

Quality and professionalism of the NEB information, in general, was seen to be high. The Library is seen as a valuable and critical component of the overall information and communication process. While relevance seemed to be appropriate, it was suggested that the NEB focus on significant emerging issues as well as updating current data in the hands of the stakeholders. Format of the reports was thought to be generally good, but there are opportunities to improve the ability to navigate the material with improved "headings" and the ability to more effectively drill down to desired levels of detail. Timeliness of the data came into question as it was felt the reports became quickly "dated", which suggested a need for more frequent updates by the NEB. Provision of daily and very near-term market data was not seen as something the Board should focus on – this type of information requirement is already well served by other commercial providers. The NEB, it was recommended, should find and exploit appropriate niches where they are not competing and / or duplicating other reputable sources of information.

Stakeholders were questioned about their ability to provide input and feedback to the NEB regarding their activities, information and analysis. It does not appear to be important to have a formal feedback mechanism for the users. What is important is that they have contact points and established personal and professional relationships with individual NEB staff members. *These relationships and the opportunity to interface with Board staff members are very important to the stakeholders, and presumably to the NEB.* Stakeholders encouraged the Board to continue to support the various interface opportunities including ongoing industry information and opinion exchanges, input to key issues that may be addressed by way of a report, input to the report production and ongoing review, final review, and discussions amongst the NEB and stakeholders as the report is presented to target audiences.

During the interview, stakeholders were asked to consider specific subjects that they felt were important enough to warrant the NEB's consideration as they developed their strategy and work plans for the future. Specific suggestions of "Potential New Topics" are presented in "Appendix 6". These topics, while significant in number, represent a broad range of interest, again, dependent on the individual interests and drivers for each stakeholder. A general indication of suggested studies for the NEB to consider includes:

- **Oil** – Potential "large" investment opportunities and the implications on markets, logistics, distribution, technology and downstream implications.
- **Gas** – Focus on more market analysis including updated information, market efficiency (supply, demand and pricing dynamics), associated infrastructure, competing resources, new basin opportunities, and a Continental perspective.
- **Electricity** – Update available information; address the restructuring situation, jurisdictional issues, regulatory environment, current and anticipated issues.
- **Alternatives** – Status and potential of new technologies.
- **Other** – Environmental, NAFTA etc. topics
- **Organizational / Communication** – NEB evaluation of topics including: access to information, best practices, interface of regulatory bodies, materials updates, stakeholder focus, roles and relationships etc.

In summary, an analysis of the opinions gathered from a broad cross-section of key "External" stakeholders suggested a variety of "efficiency and effectiveness" initiatives:

- continuous improvement in activities already considered value-adding
- assuming a leadership role in leveraging off the NEB's unique National presence
- proactively address emerging issues and opportunities
- communicate often and effectively with all current and other relevant stakeholders.

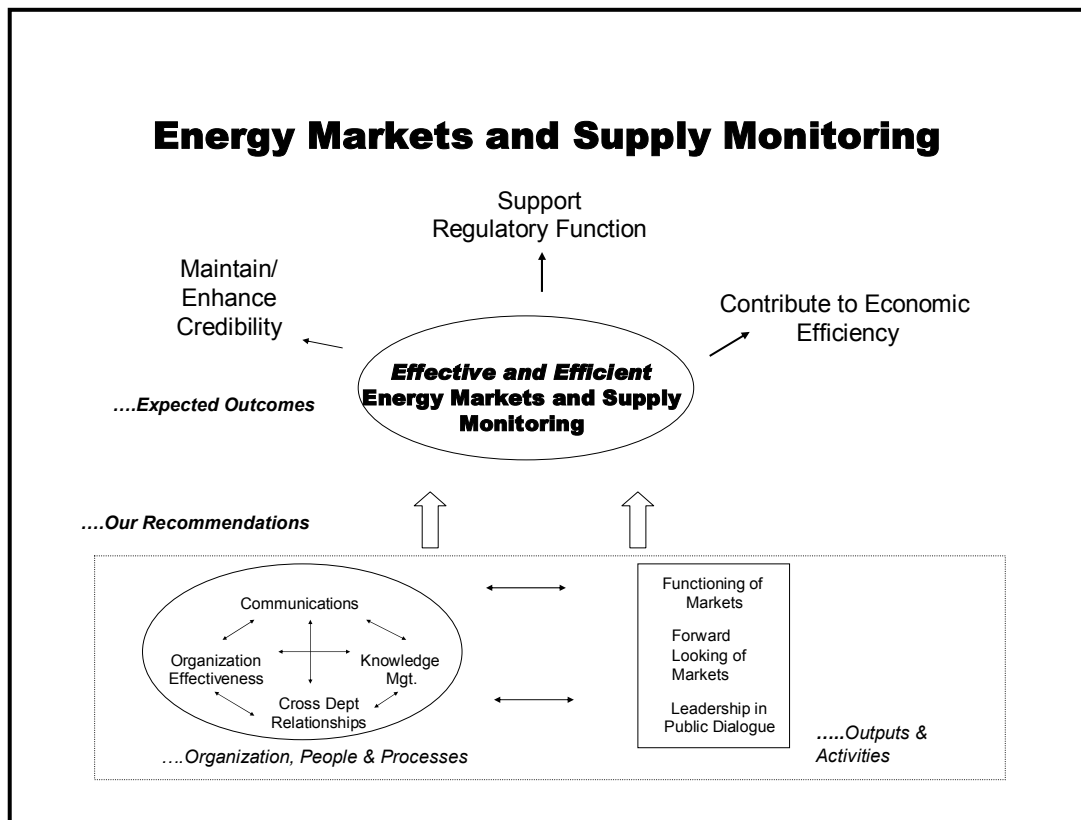
H. Analysis and Recommendations

Our analysis is focused on linking the results of our interviews with desired outcomes (see Section E). Our recommendations are focused on changes which will contribute to these desired outcomes, evaluated using certain criteria discussed earlier, and linked to the main issues from our interviews.

Our recommendations are inter-related and each recommendation may contribute to multiple outcomes. In other words, the Board should consider these inter-relationships in acting on the recommendations in terms of expected results, resource allocation, cross business unit interfaces and relationships. Figure H.1 graphically depicts these inter-relationships.

Implementation of all or any of the recommendations will have resource implications. The Board will need to assess these implications after establishing its acceptance and any prioritization of the recommendations.

Figure H.1



Acknowledging our reference above to the inter-relationship of our recommendations and desired outcomes, there are also direct linkages between the recommendations and desired outcomes. We have conveyed our recommendations below with these direct linkages in mind.

Desired Outcome – Contribute to Economic Efficiency (Goal 3)

(Recommendations 1&2)

Recommendation #1

**Increase focus and analysis on the functioning of gas
(first priority) and other commodity markets**

Background

The Board has an impact on economic efficiency through three main actions:¹

- 1) The decisions it renders
- 2) The energy market information it provides to Canadians
- 3) The efficiency and effectiveness of its regulatory processes.

The Board must have a thorough understanding of supply and markets in order to render decisions as an expert regulatory tribunal.¹

A thorough understanding of the market requires an understanding of the impact of a decision on the market over the life of the decision; this requires the Board to understand the workings of the market, including its regional differences and continental issues (for gas) in the short term, but also extending out over the medium and long term. This same understanding of the market also represents an opportunity to convey or report this information to Canadians ‘about the functioning of Canadian energy markets in order to help energy users and suppliers make decisions based on unbiased accurate information’² Energy decisions are made based on expectations of supply, demand and price. These decisions range from how much energy to supply to the market, energy procurement and fuel switching decisions in the short and medium terms, longer term energy supply contracting, risk management and hedging decisions and energy capital investment decisions.

¹ Part 111 - Report on Plans and Priorities
2003-2004 Estimates

² Annual Report to Parliament – 2002

There is a need for timely analysis of commodity markets. Are they functioning efficiently today and what are our expectations for the near term e.g. the next 12-18 months, but also for the medium term out to 5 years? What will some of the challenges be over this time frame? We consistently heard throughout our interviews the need for more analysis and information about the workings and expectations for markets (in particular gas) over the short to medium term. The focus on gas may stem from the high price structure of the current market(s) vs. historical prices, and the Board's historical and ongoing gas export regulatory role.

The Board has a statutory obligation through Part VI of the National Energy Board Act to ensure Canadians have access to gas and electricity on 'fair and market' conditions and to 'satisfy itself that the quantity of oil or gas to be exported does not exceed the reasonably foreseeable requirements for use in Canada'.³

Canadian gas markets, while mature, continue to evolve and are responding to fundamental drivers and events. The way gas is marketed for example has been impacted with the demise of Enron and the restructuring of many trading operations. Gas prices are higher and more volatile. Canadian consumers and politicians are concerned about gas prices and supply.

We also heard that small to medium sized organizations in particular could benefit from market information covering this time frame. These organizations do not typically have the capability / resources to either perform extensive internal analysis or to purchase external reports, yet they must make energy decisions that again are based on expectations of price, supply and demand

Efficiency of capital markets, with regard to energy in Canada, is enabled by improved understanding of the workings of Canada's gas basins, in particular the WCSB. Accurate and independent assessments of the WCSB contribute to improved understanding of the basin investment opportunities – this improved understanding of investment opportunities facilitates more informed investment decisions leading to more efficient allocation of capital.

Options and Opportunities

Efficient gas markets are critical for Canadian economic efficiency. This efficiency will become even more critical going forward with gas providing an increasingly important source of energy as it is becoming the fuel of choice for new electrical generation. What do we mean by an efficient gas market? What constitutes a 'market failure'? Analysis needs to reflect the Board's assessment of market efficiencies but also its reasoning - what is working well or not so well?

Consider acting on the following:

³ National Energy Board Act

a) The issuance of an ‘NEB Definition Paper’ on Efficiency in Gas Markets would provide greater clarity amongst Canadians as to how the Board assesses the functioning of gas (and other) markets. Such a paper should focus on the key components of the various Canadian gas markets - reserves, production capability, processing and pipeline capacity, storage levels and capacity, continental considerations etc. The Board could analyze how each of these components contributes to or undermines the efficient functioning of a given market. The Board’s definition of ‘market failure’ would also add clarity to the understanding of how the Board looks at the functioning of markets.

b) Providing an annual assessment of the functioning of gas markets. This analysis could be completed to coincide with the annual planning cycles of much of Corporate Canada. The analysis should provide an assessment of the state of the current market – is it functioning efficiently today as well as an outlook for the market 12-18 months forward. The Board should include not only *its assessment of the efficiency of the market but also its reasoning* – how each of the components are working or not working e.g. pipeline capacity or storage levels, etc. In its 12-18 month outlook the Board should identify challenges it sees potentially impacting the market over that time frame. The review could include an ‘Update’ section which simply identifies major changes from the previous year’s report.

c) Regular/annual reviews of other commodity markets would also be well received, however, in terms of priority – based on what we heard and generally in keeping with the Board’s mandate, the above noted gas market(s) analysis is the most important.

d) Clarify expectations between the Board and the office of the Minister of Natural Resources regarding exchanges of information (the nature and timing of advice and consultation) on the workings of gas (and other) markets.

e) The Board is reaching a wide spectrum of users with its EMA’s – from the less sophisticated in terms of their understanding of gas and other markets to industry analysts. Taking this into consideration, we would recommend market analysis reports be structured into perhaps 3 parts (in addition to an Executive Summary) – an overview section providing a high level summary of the Board’s views, an in-depth section (directed to the industry user) and a detailed appendix providing the relevant data and statistics.

Expected Outcomes

Energy related decisions are based on expectations of market performance. An annual in-depth analysis of the functioning of current markets along with a 12 - 18 month outlook would be well received by Canadian energy market participants and meets many of our criteria. We feel this type of analysis would also reach a segment of the market, the smaller to mid-sized organization that heretofore has not typically been a user of NEB information for its energy related decisions. Generally speaking, this type of analysis should provide additional, unbiased information on the functioning of gas markets that will contribute to more informed energy decisions (economic efficiency) and would add to the Board’s credibility. This analysis

will also be supportive of the Board's statutory obligations with regard to gas exports and its surplus determination procedures.

Recommendation #2

Increase the emphasis on forward-looking market analysis and issue identification

Background

Stakeholders widely support the quality of analysis and relevance of topics addressed by the Board in its Energy Market Assessments. The view was expressed, however, that the analysis was weighted more to the past than the future. Internally, Board Members expressed a need for early identification and analysis of emerging issues and anticipation of "market adjustments". Externally, clients expressed a desire for EMA's that analyzed market supply and demand trends and identified issues affecting future market developments. A particular gap, noted by a few stakeholders, was the 1 – 5 year projection period. This is particularly important because this coincides with the planning period of many companies. The Board assessment of future market developments in this time frame would be particularly valuable.

Options / Opportunities

The Board has undertaken a number of Energy Market Assessments that explicitly focus on future developments or include forward-looking assessment of issues. The Long Term Supply / Demand Reports and the EMA, "Canada's Oil sands: A Supply and Market Outlook to 2015" are explicitly forward-looking in their analysis. The recent EMA, "The Maritime Natural Gas Market" balances an historical review of the market, and an analysis of how the market is functioning and issues that may act as barriers to future development. Similarly, the EMA, "Short Term Natural Gas Deliverability", is explicitly forward looking.

In general, EMA's require extensive resources in a lengthy process of development. This means that traditional Board EMA's (depth of analysis, length, development time) may not be appropriate for some important issues that may have a limited window (time) of opportunity for discussion and analysis. A current example might be examining the implications of the Eastern power (grid) challenges. Internally, briefing notes serve this purpose. They are short, focused and timely in providing up-to-date intelligence and analysis of issues. Is there an opportunity to develop similar "briefing notes" for external distribution? At least one internal briefing note was cited as the basis of an EMA. The challenge is that internal briefing notes are often intelligence based involving anecdotal observations rather than rigorous analysis. This would be unacceptable in a traditional EMA.

An increased emphasis in this area could include the following:

- a) There is an opportunity to consistently extend analysis/assessment of gas (again, first priority) markets into the 3 – 5 year time period. In essence we are suggesting any assessment of markets should look at the current situation, and then provide the Board’s perspective on the short term outlook e.g. 12-18 months **and** this more medium 3- 5 year time frame.
- b) There may exist opportunities to develop external “briefing notes” designed to frame and clarify an issue and encourage dialogue, rather than provide a formal NEB position on an emerging issue. The Board might consider a vehicle of this sort in promoting forward thinking on key issues and facilitating informed market decisions.

Expected Outcomes

Markets are anticipatory. Participants interpret current events and developments and project changes into the future. These interpretations are the basis for decisions and action. The Board has an opportunity to participate more fully in this forward-looking interpretation of events affecting market decisions. A number of EMA’s already provide examples of forward-looking analysis and issue identification. Continuing and expanding this focus would support economic efficiency, demonstrate leadership and enhance credibility externally, and support the Board’s internal need to be at the leading edge of industry thinking as a basis for understanding the implications of regulatory decisions.

Desired Outcome – Maintain and Enhance Credibility of the Board (Recommendations 3, 4 and 5)

Recommendation #3

Demonstrate continued leadership by encouraging public dialogue on a broad range of energy market issues

Background

Stakeholders hold the Board in high esteem. It provides objective, unbiased information and analysis; the work is high quality; staff are knowledgeable and professional; and

perspectives and analysis are national in scope. Combined, these give the Board a high level of credibility in understanding and analyzing energy markets.

Given this position, stakeholders expressed a desire for the Board to expand its scope of analysis and monitoring activities to deal with cross-cutting issues not addressed elsewhere. Two areas were specifically mentioned:

- 1) Restructuring of provincial electricity markets and:
- 2) Jurisdictional disconnects between national and provincial regulators. Views were expressed, for example, that there is a need to analyze provincial electricity markets. Are “deregulated” markets working? What are the barriers to efficient electricity markets? What are the implications for inter-provincial and international power flows? Similarly the view was expressed that there is confusion on jurisdictional issues. Who has the regulatory authority on new facilities is not clear to some. The philosophy of regulation across the country is not consistent and can lead to conflicts. Developers of new facilities can be caught in a “catch 22” position.

The difficulty is that many of these issues are outside the mandate of the NEB, at least narrowly defined. The NEB, for example, has no jurisdiction over either provincial electricity markets or provincial regulators. Yet these are vital issues for market efficiency. Should the NEB take a broader perspective and strong leadership role in interpreting its energy market and supply monitoring function?

Options / Opportunities

The unique position of the NEB offers an opportunity to lead discussions on important issues that affect economic efficiency. The proposed role is not to take a position on these issues but to facilitate dialogue across key stakeholders.

It should be emphasized that there are risks to these types of leadership initiatives. The Board’s role would need to be carefully defined to prevent confusion. This form of dialogue would be neither a hearing nor a consultation. The Board would need to act as an unbiased and objective facilitator to encourage open and transparent dialogue in promoting an overall process of understanding and the development of options for change.

Leadership opportunities include:

- a) The Board could take the lead in bringing together private companies, interested 3rd parties and regulators to explore barriers to efficient electricity markets and the implications for inter-provincial and international trade.
- b) A similar dialogue process could be facilitated for cross-jurisdictional regulatory issues that impact economic efficiency - the objective being greater alignment and consistency of regulations across the various provincial jurisdictions

Expected Outcomes

Exercising this leadership role through encouraging and facilitating discussion on energy issues would promote economic efficiency, respond to an identified gap in client needs, enhance credibility and encourage greater understanding of markets. Contribution to greater economic efficiency would stem from the potential for greater consistency and alignment of regulations across the country and the breaking down of barriers to more efficient markets. This would enable energy market participants to be more efficient in their decision making process and operations. There are obvious and not insignificant risks in taking a leadership role in this way. The most important is the possibility of confusion between the Board's regulatory and monitoring functions. On the other hand, not acting means that barriers to economic efficiency are not identified and addressed, contrary to Goal 3 of the Board's mandate.

Recommendation #4

**Improve communication and increase visibility of
the NEB within the stakeholder community**

Background

Internal stakeholders (NEB Board and staff) stated that there was a desire for continuous improvement in fulfilling their mandate which included a more proactive approach to communicate to a broader / more diverse stakeholder base. It is important to put reliable, credible and real-time information into their hands. In order to accomplish this, it was suggested that the NEB would need a more rigorous business process (plan) to gather and disseminate information, prioritize publications, and improve accessibility by the stakeholders to the relevant data and reports.

External stakeholders also offered their opinion on the efficiency and effectiveness of the communication and availability of information relevant to their organizations. The larger ('more sophisticated') stakeholders know what NEB information is available and how to access the material; however, there are a number of organizations that are less informed and have limited knowledge of and contact with the resources available at the NEB. It became obvious that not all stakeholders used all the data in the same fashion and that the communication of NEB information should address the needs of a broad stakeholder base in general, but recognize the differing levels of analysis required by clients.

Consulting with stakeholders, whether it be related to the development of an EMA or more generally in maintaining dialogue with the industry is time consuming. Timeliness

of reporting on emerging issues is important; the Board will need to be conscious of the need to balance the requirement for consultation (with all the value added this brings) with the need to provide information to market participants on a timely basis.

Options / Opportunities

Clients were very supportive of the Board's approach in developing its reports involving stakeholders and industry at the front end and throughout the process. The Board should continue to build on this success and continue to emphasize the opportunity this dialogue offers.

A range of options exist for the Board to improve / enhance its communication, internally and externally, along with enhancing its visibility in general. Consider acting on the following:

Planning

- definition of the "customer" base to whom the NEB should be communicating and identification of new client segments to target communication efforts
- production and communication of a document which informs the newly targeted stakeholders as to what services, reports /data are available, what mechanisms are in-place to acquire this information, key contacts, etc.
- prioritized development of publications to maximize value from a limited resource base

Consultative

- early inclusion of key "external" industry stakeholders in the process of gathering information and consultation.
- early and ongoing inclusion of key "internal" stakeholders in the process e.g. Board, Communications, Library, Media, other Business Units
- continued use of workshops to solicit input on draft reports

Report Development and Communication / Distribution

- develop reports to address wide ranging needs of clients – different sections designed to meet a) less sophisticated users (more introductory in nature), b) in-depth analysis for industry users, and c) detailed data appendix
- e-mail distribution to existing clients indicating an upcoming release of a particular report, expected timing of the release, how to access it, including an executive summary (as an attachment)
- continued involvement of the media in releases, but also consideration could be given to paying for a 'newspaper advertisement' announcing a new release.
- making Board staff available in specific locations across Canada, in association with a release (as with the Maritimes Natural Gas report), should be continued and increased where possible.
- web-site indication of who to contact for support – board staff members e-mail addresses, phone numbers, etc.

Organizational and Management

- acknowledging resource limitations, increase the number of Board speeches/presentations across the country.
- emphasize the importance of maintaining existing and developing new working relationships with industry
- continue to encourage user feedback
- ongoing media training for staff who are the conveyors of information

Expected Outcomes

A foundation of the Energy Markets and Supply Monitoring function is the collection of data and market intelligence and the dissemination of data and the Board's views on energy issues – this is all about communication. Improving two way communication with stakeholders along with enhanced Board visibility would be expected to contribute to a broad range of desired outcomes and meet many of our criteria including: addressing both internal and external client needs; providing better support for the regulatory function; contributing to more informed energy decisions by Canadians; and economic efficiency and enhancement of Board credibility.

Recommendation #5

Build on knowledge management / organizational learning capabilities

Background

The efficiency and effectiveness of the “Energy Markets and Supply Monitoring Program” in keeping Canadians informed about the functioning of the Canadian energy markets is a measure, amongst other things, of the ability of the NEB to capture and share market information and intelligence across the organization, and externally with key stakeholders / industry representatives. It is recognized that, while this activity is necessary in the conduct of the monitoring role, approaches vary in extremes from the informal exchange of data to a very formal systematized and managed business process

Internal stakeholders (NEB Board and staff) stated that there was a desire for continuous improvement in identifying and communicating, to a broader / more diverse stakeholder base, key information in the market place. Having good “intelligence” helps to educate (un) sophisticated stakeholders and assists the market players in making better decisions. Formal and informal gathering and exchange of information helps to break down “silos” and improves communication within organizations (NEB included) as well as enhancing the relationships with external stakeholders. There are many vehicles that can be

considered and pursued beyond the current ad hoc approach; suggestions are made in the next section.

External stakeholders also offered some (indirect) opinion on the value and approach to “Knowledge Management / Organizational Learning”. Specifically, they felt that the information gathered by the NEB, in the monitoring role, offered good value as contextual background when shared. “Learning” is helped considerably with the establishment of good personal and professional relationships and interfaces. “Just-in-time” briefings on looming issues together with regular dialogue also help in the learning process. The NEB (commodities BU) has a unique opportunity (as an independent stakeholder) to gather information from numerous sources and then communicate the consensus of opinion amongst the stakeholders in a “market efficient” manner.

Options and Opportunities

There is opportunity for ongoing or continuous improvement in the area of Knowledge Management and Organizational Learning at the Board. There also exists the opportunity for the Board to make a substantial commitment in this area over time to develop leading edge capacity.

Efforts have been ongoing at the Board towards sharing /leveraging ‘knowledge’. Sustained improvement in this area will need continuous support and leadership from the Executive Management team at the Board. *This process needs to be seen as a critical success factor for the organization and be woven into individual performance plans.* Successes should be recognized.

Ongoing opportunities for improvement include the following:

Technology and Process:

- establish a central repository for ‘knowledge’ which is easily accessible and user friendly
- evaluate the role of the internet/intranet to enhance the process
- consider any potential role the library may play

People and Process

- *Management leadership – expectations in this area in terms of knowledge capture and transfer need to be explicit and formalized:*
 - ensure key market data gleaned from conferences, meetings with industry, workshops etc. attended by staff is captured in a central location and circulated
 - capture and share market information gathered through hearings and applications
 - capture and share learnings from EMA and other report de-briefings
 - keep the Board (informally) apprised of key market developments

- convene regular interdepartmental meetings (NEB) to share data / intelligence

Organizational

- cross BU training
- consider role for multi-disciplinary (cross BU) teams

Build on Existing Process

- nurture existing and develop new external networks of expertise
- maintain regular dialogue and contact with the industry and stakeholders

A major and longer term commitment in this area (by the Board as a whole) could also be considered. It should first involve the development of a ‘business case’ (opportunity and risk) for a substantial and sustained investment in the core elements of knowledge management - people, process and technology. Identification of ‘best in class’ organizations and benchmarking opportunities would be a useful first step in developing a long term knowledge management strategy, should a decision to proceed be made.

Expected Outcomes

Given the importance (to the Commodities unit and to the Board as a whole) of gathering and managing/sharing information and market intelligence – essentially a core activity, one could expect improvements in this area to have a broad impact in contributing to the achievement of many of the Board’s goals and desired outcomes:

- more informed regulatory decisions
- improved energy markets and supply monitoring ‘products’
- enhanced internal interfaces/relationships
- enhanced external relationships
- demonstrate leadership in the market place
- enhanced credibility of the NEB (Commodities BU)

Desired Outcome – Enhanced Support for Regulatory Function

(Recommendations 6 & 7)

Recommendation #6

Improve communications and sharing of information between the Applications and Commodities Business Units

Background

The Commodities Business Unit has two avenues for supporting the regulatory function of the Board. One is through timely, forward-looking intelligence and analysis on energy markets, as part of an ongoing dialogue with Board Members. Although improvements have been suggested – more anticipatory analysis and specific implications to the NEB – this relationship seems to be working very well. The other is through ongoing dialogue and exchange of information with the Applications Business Unit. This relationship does not seem to be working as effectively.

There is a need for the Applications group to be well informed on how energy markets are functioning and changing as a basis for understanding the implications of regulatory decisions. At the same time, there is information from hearings that is relevant to the Commodities group in their monitoring and understanding of markets. There is an opportunity for better two way sharing of information and intelligence

The opportunity / problem seems to be twofold. First, communication between the two groups does not seem to be a priority for either group. Second, there are few formal or informal mechanisms for sharing information. In a situation where resources are scarce and staff are extremely busy, what level of priority should both Business Units place on supporting each other?

Options and Opportunities

Options for action include the following:

- a) There is an opportunity for the Commodities and Applications BU's to clarify their "mission" and balance of priorities in meeting that mission. An open discussion with the Applications group to understand and clarify the needs and expectations (information, analysis, support staff, etc.) of both groups would be part of that process.
- b) Continue to work toward establishing formal and informal mechanisms to enhance sharing of information:
 - A formal approach might include regular joint meetings, say quarterly, to review market developments and current issues.
 - Informally, there are numerous avenues for dialogue. Brief emails to share recent intelligence are one approach. Extending invitations to informal "lunch-time" sessions on specific topics is another. The onus would be on the BU leaders to support this type of informal, ad hoc type of communication.
- c) Business Unit leaders should establish clear expectations for change in this area

All of this would be consistent with evolving toward a more disciplined knowledge management capability (as per the above recommendation).

Expected Outcomes

Enhancing and clarifying this internal exchange of information would enhance the monitoring function as well as the regulatory function. It would support a forward-looking / anticipatory need and could be accomplished with little risk. The challenge is in managing scarce resources. Would this add to workloads and reduce capacity, for example, to produce the current level of external reports? This is what needs to be examined and clarified.

Recommendation #7

Enhance organizational effectiveness of the Commodities Business Unit

Background

Internal stakeholders (NEB Board and staff) indicated that the current structure and processes are working effectively. They recognized the need, however, for ongoing organizational improvements to be identified and incorporated in the business processes of the Commodities Unit.

External stakeholders also expressed their views on the organizational effectiveness of the Commodities BU. Comments made reflected on: the need for good personal / professional relationships with NEB staff, free-flow of information, having a “business” perspective on energy matters, maintaining informal discussions, being proactive in getting a national perspective on the energy businesses, achieving continuous improvement in the conduct of their responsibilities, achieving a higher public profile, and ensuring the availability of sufficient / capable resources. Finally it was suggested that the Commodities “monitoring” mandate should be reviewed in consideration of the fact that the primary role of the NEB is as a “regulator”.

Ongoing organizational effectiveness initiatives can be categorized along the following:

- **Vision / Mission** – clarify and develop
- **Leadership** – availability of programs for leadership development, and coaching and mentoring, and staff recognition
- **Team Management** – having a clear understanding of team purpose, roles and responsibilities, and training requirements as they relate to productivity improvements with respect to internal (NEB) Business Unit relationships, and meeting the needs of the external customer / stakeholder base
- **Performance Management** – identification and use of appropriate business tools, performance management tools, and accountability tools to enable the BU to carry out the monitoring role

- **Continuous Improvement** – maintaining work processes to efficiently and effectively deliver client desired products
- **Learning and Improvement** – ensuring availability of means to enhance individual development, organizational learning and change management, benchmarking / best practices, information technology, technology deployment.

An assessment of the BU's performance in the above areas will determine a "plan" to reinforce their successes and address areas for improvement by addressing gaps and setting priorities.

Options and Opportunities

Opportunities identified through internal discussions and process mapping for enhancing overall organizational effectiveness include:

- a) A need to break down internal "silos" was identified which would serve to improve communication and intelligence across Business Units – this is consistent with our above recommendation regarding the working relationship between the Commodities and Applications groups.
- b) Early and regular involvement of appropriate stakeholders in the report development process e.g. Communications
- c) Consistent application of project planning and management tools in the development and delivery of EMA's.
- d) Formalizing a report de-briefing and learning process

Expected Outcomes

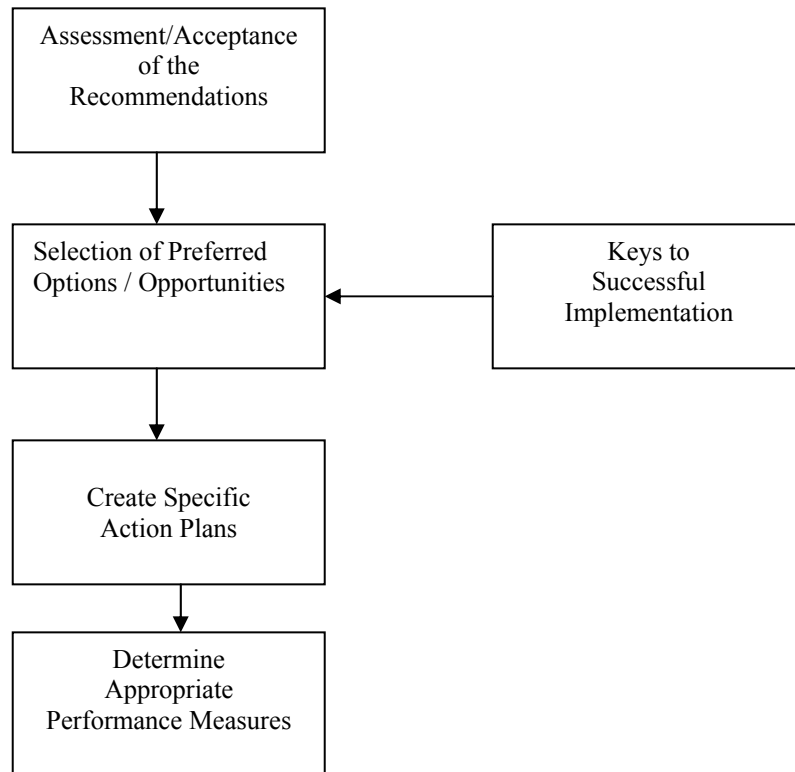
High levels of achievement in the areas indicated above will yield a high degree of business excellence with respect to the role of the Monitoring Program.

More specifically:

- this process will identify (and initiate plans to address) noted gaps identified by both internal and external sources
- credibility will be enhanced through the visibility of a focus on good business practices
- a better working relationship with the customer /client base will be created
- organizational efficiency and effectiveness will be enhanced (for the Commodities BU and interfaces
- the risk of being viewed as excess "overhead" rather than "value-adding" will be minimized.

I. Action and Implementation Plans

A general ‘roadmap’ below outlines the broad steps the Board may want to consider in developing its implementation plan:



Assessment/Acceptance of the Recommendations

It is important that the NEB (specifically the Commodities Business Unit) support and internalize the need / opportunity to pursue recommendations as described in Section H before considering going forward with implementation.

Selection of Preferred Options / Opportunities

We have offered a range of options and opportunities associated with each recommendation as described in Section H. The Board must now prioritize and select opportunities to pursue, with consideration given to the impact or contribution to desired outcomes and resource limitations. The criteria used in evaluating and developing recommendations (as outlined in Table E.1 – Evaluation Criteria for Recommendation) should also be considered along with the following thoughts that factor in a ‘portfolio approach’ and contemplates the inter-relationship and synergies of the recommendations:

- Does implementation involve only the Commodities BU or are other units involved – either in implementation or are impacted?
- Is the opportunity a 'quick hit'?
- Synergies of actions – are there one or two that in particular are synergistic?
- Is the opportunity for improvement short or longer term
- What is the risk factor – does it escalate over time if the gap/opportunity is not closed?
- What is the organizational capability and readiness?
- Does action leverage existing competencies?

Keys to Successful Implementation

The Board should give consideration to the following “best practices” in implementing recommendations:

- tie-in to the overall mandate and strategy
- staff buy-in to the recommendations
- understanding / ownership of the plan
- comfort that key issues are being addressed
- having a plan that is clear, simple, explicit, and unambiguous
- plan has technical and market validity
- goals are congruent / non-conflicting
- adequate resources can be available
- clarity on expected impact on organization, people, processes, and systems
- clear understanding of responsibilities and accountabilities

Create Specific Action Plans

Our recommendations represent actions that focus on a mixture of new outputs, processes and relationships - the recommendations and the desired outcomes are interrelated. Expectations associated with implementation of these recommendations need to take this into consideration. Improving working relationships, communications and knowledge management will positively impact new report developments. Increased focus on market analysis and assessment will support the applications & regulatory functions and the Market Based Procedure (MBP).

Acknowledging our limited perspective on organizational priorities and dynamics, and considering the inter-relationship of our recommendations, the cross unit implications of some and overall risk assessment, we would suggest the following:

▪ Recommendation #4 - Communications

The Commodities Business Unit should act on a number of the opportunities which will have a quick but also an ongoing impact:

- define the customer base – existing and targeted
- reach new clients with document identifying Board services
- establish e-mail distribution list for advance communication of pending report release

Recommendations: #1 – Functioning of Markets.

#2 – Forward-Looking Markets

Act immediately on planning for the delivering of these new ‘outputs’ – gas reports associated with recommendations #'s 1 and 2. These are the responsibility of the Commodities unit and will be well received by existing and new clients. Planning for these new releases should be managed as ‘projects’ with supporting project management processes and should incorporate our other recommendations in this area (#'s 4 and 7)such as involving stakeholders early, post project debriefs, 3 part report structure, etc..

A number of our recommendations involve interface and relationships with the rest of the organization and in particular the Applications Business Unit. Solutions, by nature, will be more complex, may have a longer time horizon and to achieve success on a sustained basis, expectations need to be incorporated on an ongoing basis into individual performance management plans. Work can and should be started now / early with initial discussions:

- Recommendation # 3 – Leadership.

While facilitation of regulatory workshops would likely be carried out by the Commodities Business Unit – actions in this area do not come without risk. First step would be to get Board members and the Executive team to buy-in.

- Recommendation #5 - Knowledge Management.

Determine what level of commitment the organization feels is appropriate in this area – The Board and the Commodity Business Unit have the option to act on a number of short term opportunities and or plan for a more organization wide commitment and investment in this area. Our recommendation is for the Commodities Business Unit to act now on a number of the short term opportunities (People and Process) and discuss longer commitments with the Executive Team.

- Recommendation # 6 – Cross Department Relationships

Begin to establish a ‘go forward plan’ with Applications – this can be started in parallel with the above. The two Business Unit leaders need to begin this process.

- Recommendation # 7 – Organizational Effectiveness

This recommendation is ongoing – the Commodities Business should be looking to continually improve its OE processes that will serve to enhance the efficiency and effectiveness of the Monitoring function. We do not see any reason for not implementing the identified options immediately.

An Implementation Plan which addresses a specific action item, or a group of interrelated actions, should be constructed to include, on a “fit-for-purpose” basis, the following:

- project title
- project manager
- action description
- project scope and approach
- current status
- issues and risks
- project schedule (activities, milestones, start and end dates etc.)
- resource requirements (people, roles, focus of effort, technology, costs etc).

Determine Appropriate Performance Measures

“Action and Implementation Plans”, when developed, should consider their expected impact on achieving the expected outcomes which in turn support the effectiveness and efficiency of the “Energy Markets and Supply Monitoring” function.

The development of “Performance Measures” should be developed in consideration of the following guidelines:

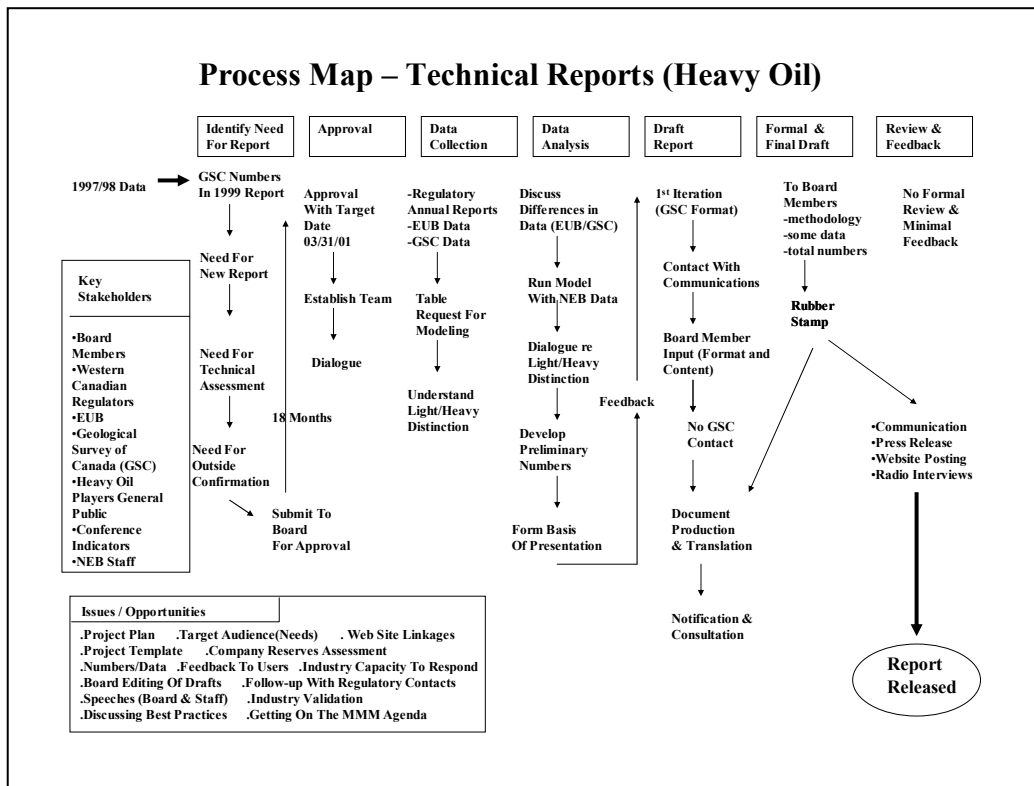
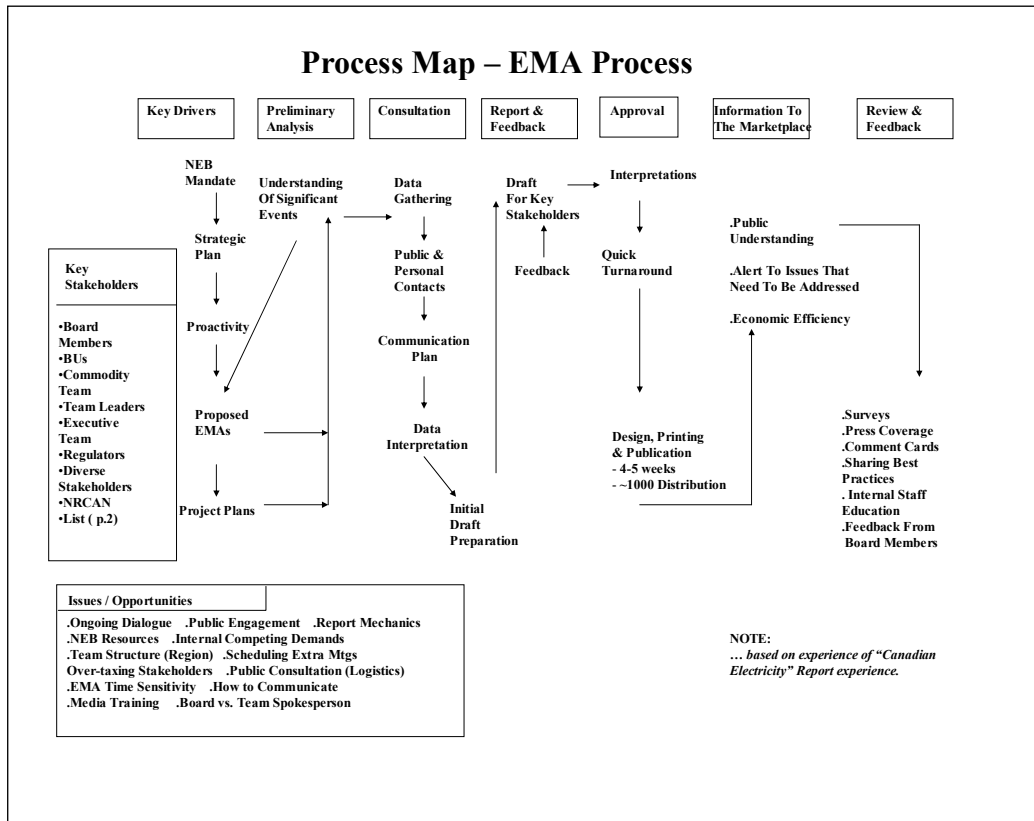
- alignment “Expected Outcomes” and “Mandate”
- important and meaningful to the Commodities Team
- measurable
- provide early identification of problems
- reinforce the right behaviors
- motivating
- visual and track changes over time.

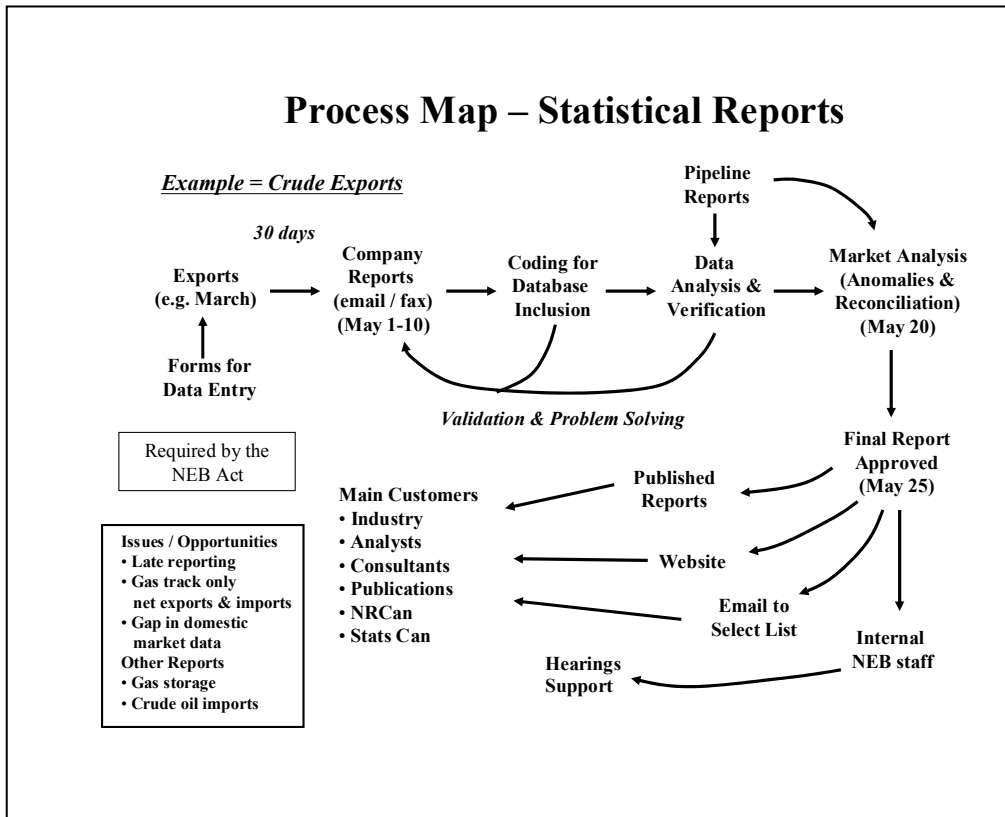
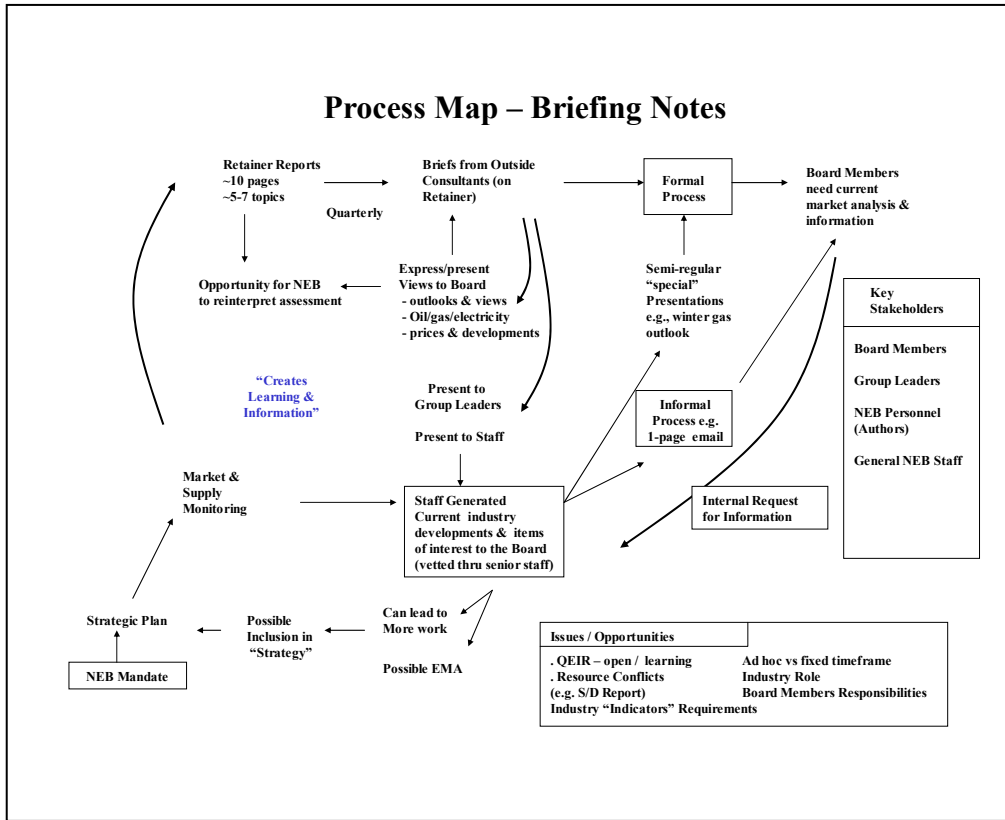
Measuring the impact of the implementation of a given recommendation can be done at a high level through gathering stakeholder (internal and external) feedback addressing specific actions of the Board e.g. going out and soliciting feedback on how a new report was received by clients. Our external interviews indicated providing unsolicited feedback to the Board was not a high priority for clients – this suggests the Board will need to be very direct and proactive in gathering this type of feedback.

Measurement of the success of the implementation of a specific action item can be also be determined by measuring certain types of activities - activities that act as proxies for the impact of an action:

- Measuring the number of requests for a new report – requests for hardcopy via the Library or the number of times the report was downloaded off the web-site.
- The number of ‘hits’ to that report on the web-site
- Use of a new central data base for knowledge – how often is it updated with new information, how many times are users accessing it?
- Frequency of inter-departmental meetings
- Logging calls for data / information
- Counts of reports requested
- Recording ongoing list of contacts made

Appendix 1 – Process Maps





Appendix 2 – Internal Interviews

Interviewees:

<i>Advisory Committee</i>	<i>- Representatives from the Board and Business Units (Deborah Emes, John McCarthy, Glenn Booth, Bill Bingham, Barry Lynch, Albert Fung)</i>
<i>Internal Consultants</i>	<i>- Colette Craig, Henry Mah, Bob Modray</i>
<i>Ken Vollman</i>	<i>- Chairman and CEO</i>
<i>Deborah Emes</i>	<i>- Board Member</i>
<i>Gaeton Caron</i>	<i>- Chief Operating Officer (now Board Member)</i>
<i>Dr. John Bulger</i>	<i>- Board Member</i>
<i>Judith Hanebury</i>	<i>- General Counsel</i>
<i>John McCarthy</i>	<i>- Business Leader, Commodities (now Acting Chief Operating Officer)</i>
<i>Sandy Harrison</i>	<i>- Business Leader, Applications</i>
<i>Hans Pols</i>	<i>- Applications Business Unit</i>
<i>Charlene Gaudet</i>	<i>- Communications</i>
<i>Library Services</i>	

Total - 11

(Please refer to Section G.1 Results from Internal Interviews – “What did we hear?”)

Appendix 3 – External Interviews

Interviewees:

Oil and Gas Producers

***Shell Canada
Esso
CAPP
ENCANA (2)
BP Canada
CNRL***

Regulators / Government

***NRCAN (3)
BC Ministry of Energy and Mines
Regie de l'energie
Alberta Department of Energy
AERI – Alberta Energy Research Institute***

Distribution / Pipelines

***EMERA Inc.
OPG – Ontario Power Generation
Gaz Metropolitan
Hydro Quebec
Union Energy
Superior Propane
Union Gas
TransAlta
Duke Energy
Maritimes & Northeastern Pipeline
Enbridge
TransCanada***

Traders / Investors

***Peters & Company
ARC Financial
Coral Energy Canada
Brascan
CIBC***

Trade Associations / Consultants

Ontario Energy Association
IMO – Independent Electricity Market Operator
Oil Week
IPPSO – Independent Power producers Society of Ontario
Canadian Gas Association
Energy Probe
CEA – Canadian Electricity Association
Purvin & Gertz
CERI

Consumers

Public Interest Advocacy Centre
IPPBC – Independent Power Producers of BC
Option Consommateurs
IGUA – Industrial Gas Users Association
Industrial Gas Consumers Association of Alberta
Consumers Association of Canada
Enmax

Total - 47

Appendix 4 – Questionnaire For External Interviews

National Energy Board Energy Markets and Supply Monitoring

Interview Questions for Discussion

- 1) What information/reports do you receive? Which are the most valuable and why?
- 2) How do you receive the information – via reports, website, email, phone, other?
- 3) How is this information used within your organization?
- 4) Does the information influence decisions in your organization? Any examples?
- 5) What is the most valuable aspect of the information/reports received from the NEB?
- 6) How would you rate the quality of the information and analysis in terms of relevance to issues, timeliness, format etc.?
- 7) Do you provide feedback to the NEB regarding this information/analysis and if so, how do you normally provide that feedback?
- 8) What new topics/issues would you like the NEB to address over the next 12 months or so, as part of its Energy Markets and Supply Monitoring role?
- 9) How could the reports/information be modified to better meet your needs?
- 10) Thinking ‘out of the box’, what could the NEB do to dramatically improve the energy market information they provide to you?

Appendix 5 – Summary of External Interview Results

Summary Data From Interviews:

Oil and Gas Producers

- All reports are available
- Reports need long shelf life (for reference) ... also need regular / timely updates (e.g. S/D)
- Need to be objective, unbiased, independent, and credible
- Address current and evolving issues
- Web based material is good ... it can be forwarded easily to other stakeholders
- NEB material is generally used as contextual background ... no “direct” influence on decision-making
- Focus of info. should be for the public / all stakeholders ... get them on board sooner
- Quality of reports and information was generally seen as good
- Timeliness in some cases was of concern
- Consistency of data with other sources is an issue (e.g. Stats Canada)
- Personal / professional relationships with NEB staff are important ... need the opportunity to physically meet at times
- Clients value good communication / appropriate interfaces and participation
- Reports need an Executive Summary and good / thorough Appendix data
- Ensure web site is easy to navigate
- Analysis needs to have a “continental” perspective
- Gas continues to be a key issue ... current market studies essential

Regulators / Government

- All NEB reports are available
- Info received from various sources
- Problem with consistency of data with other sources (e.g. NRCAN)
- Reports need to address regional plus national and international implications as appropriate
- Reports / info supplement other sources in assessing markets
- Little influence on decisions ... used with other sources
- Does reflect the “business driver” side, which is good for government bodies
- Provides good background info ... reliable, national in scope, unbiased
- Presents “big picture”
- Timeliness sometimes an issue
- Need appropriate levels of detail to fit individual stakeholder circumstances ... should be able to drill-down
- Key stakeholders need to be included in report generation (concept to completion)
- Input indicated generally good relationships with NEB ... allows for effective feedback
- Reports should reflect geographical differences
- Need early notification of report availability

- NEB should be proactive in delivering “briefings”
- Clarify situational detail on jurisdictional boundaries ... and make this public
- Regular dialogue / visits with stakeholders

Distribution / Pipelines

- All reports are available ... although some stakeholders are not sure what is available and how to get the info.
- Various methods are used to retrieve reports and info.
- Communicate to stakeholders what is available and key NEB contacts
- Info. is used for background, speeches / presentations, testing strategies, comparison to other sources
- Influence on stakeholders / decisions varies from ... ‘lots’ to ‘background’ to ‘none’
- Reports should clarify what the Board is thinking ... has implications on applications and hearings
- Generally, data is reliable, national in scope and unbiased
- Should not focus on ‘day-today’ data ... others do this
- Clients like the informal discussions with NEB staff
- Reports should meet wide-ranging needs of multi-stakeholder base
- Good reports but need to reflect all levels of depth for differing stakeholder needs
- Accuracy and consistency of data (with other sources) can be an issue
- Need frequent updates of reports
- Information developed / released should dovetail with planning cycles of corporations
- Historical info is good ... but need more focus on looming issues
- Need more interface and feedback with stakeholders, as a practice
- Clients would like to see greater frequency of S/D studies
- Need to be proactive in getting a national perspective on evolving / independent approaches (by Provinces) to electricity
- Keep data current ... but take a risk / stand in identifying emerging issues
- Continuous improvement for current services
- Need clear and open communication policy
- More focus on the 18 month to 5 year period ... better fit with companies planning schedules
- Neb should “take their independence to their advantage to create an efficient and effective marketplace”

Traders / Investors

- All reports are available (some see limited number)
- Reports are of little value to “traders” (daily activities)
- Reports provide another source of data to supplement other sources (background data)
- Access generally through the Board web site
- No direct influence on decisions ... part of a larger database
- Information is seen ‘ of quality’, but not critical

- “The market goes where the market goes!” ... NEB data gives them an appreciation of how policy may evolve over time
- NEB is “chartered” to get info. into the public domain ... to all stakeholders
- Relevance / quality is high ... but little use to traders
- See a benefit in having data provided in the 12-18 month and 3-5 year periods ... with annual updates
- NEB should strive for continuous improvement with current mandate ... don’t compete with others where they excel

Trade Associations / Consultants

- NEB provides the “big picture”
- “Library is a great resource ... don’t cut back!”
- All reports are accessible ... some don’t know what is available ... some communication (initial and ongoing) would be good
- Use a variety of means to get data
- Use data to make comparisons to US data
- Factual / historical data is used to support positions taken, and policies they are advocating
- Reports are good background ... context ... benchmark
- Influences “thinking” not “decisions”
- Data provides informed opinion / consensus of multiple stakeholders / credible
- NEB “logo” is important ... need to leverage
- Timeliness of data an issue
- Good reports for data and focus ... but some inconsistencies
- Too many entities gathering info (NEB, NRCAN, StatsCan) ... inefficient and not always aligned
- Feedback is given through personal contacts and invitations to “events”
- Need layered levels of detail ... click for depth (stakeholder dependent)
- Communicate “alerts” to stakeholders about new reports
- Communicate ongoing summaries of major NEB decisions
- Earlier interface with key stakeholders when doing a report
- Confirm roles and mandate relative to FERC
- Move from being providers of info to providers of options and solutions, policy and legislation ... be more proactive as markets restructure
- Keep looking at the “big picture”
- Focus on “market failures” (along with successes)
- Review “monitoring” mandate if NEB role is “regulatory”

Consumers

- Use info to support advocacy role on behalf of small consumers
- Use info for research ... and responses to media ... support opinion ... bolster evidence
- Also used for background for regulatory hearings ... and backdrop for their strategic plans

- Receive info from a variety of sources
- Executive summaries / overviews a good approach
- Do make informed decisions based on the data (one source) ... find data to be objective and unbiased
- NEB have the opportunity to explain how the market works ... and reports should reflect if they are, in fact, working efficiently
- Need to be more open in disclosing info relevant to the consumer
- Need better navigation for the web site
- Reports need better headings and summaries
- Timeliness an issue
- Feedback best provided through personal contacts
- Separate “official” info from the rest
- Need a higher public profile ... public (small consumers) don’t understand the NEB mandate
- More focus on consumer implications from the market activity
- Would like a comparison to FERC and their ability to get info
- A single regulatory body playing a national role would be good
- Keep reports in tune with industry restructuring
- Communicate to stakeholders regarding availability of new reports
- Look for a solution to the fragmented (electricity) regulation

Appendix 6 – Proposed New Topics/Initiatives

Summary Input Offered by Internal and External Interviewees:

The following represents the ideas we heard during our interviews/discussions about new topics that stakeholders would like the Board to address or new initiatives the Board should take on. It is essentially a ‘wish list’ on the part of stakeholders but it is valuable input for the Board as it indicates what is on the minds of stakeholders at the present time:

Oil

- Oil Sands, Heavy Oil, Crude Oil – potential investments, supply, refinery capacity, markets, pipeline capacity, logistics, distribution, technology needs, impacts etc.
- Studies could be done together with EUB, CAPP, Pipeline Companies, etc.

Gas

- “Briefings” on how markets work
- Annual review of state of gas markets – taking into consideration regional differences – are gas markets functioning efficiently today and what is the expectation for the near term – how will demand be met – demand erosion - considering all aspects of supply including pricing, storage/inventory levels (incl. pipeline inventories), operational issues, resource depletion, coal substitution and fuel switching. Report should be focused on Canadian markets but with consideration of relevant US issues / Continental perspective
- Potential supply in the 3-5 year timeframe
- Address net vs. gross exports
- Atlantic and Maritimes - status and potential
- Northern gas – potential timelines, ownership structures, supply etc.
- Alaska gas – plans, impacts, implication on Alberta infrastructure
- CBM report – current status, opportunities, barriers etc.
- BC Offshore – current status, opportunities, barriers etc.
- LNG report – current status, opportunities, barriers, etc.
- Mid-term update for L/T SD report

Electricity

- Average Cost of Electricity Cost – breakdown by fuel type and by region where possible
- Electricity Update – more focus on east/west or inter-provincial trade, barriers impeding electricity restructuring process, barriers to greater inter-provincial trade, prices across Canada for all customer types –

industrial, commercial and residential, data availability / sources, links to US markets etc.

- Electricity Regulatory Review – a report describing the overall regulatory process (including jurisdictional issues) in Canada – federal/provincial/municipal body is responsible for what across the country - include contacts for each regulatory body, status of regulation and restructuring – wholesale vs. retail etc.
- Monthly Electricity News report – monthly news release highlighting major issues/events
- Long term role for NEB in electricity markets in Canada

Alternatives

- New Energy Technology report – current status and outlook for new technologies
- Technology transfer
- Hydrogen
- Green power
- Clean fuels impact on refineries
- Clean coal
- Nuclear power
- Wind power

Other

- Climate Change and GHG report – emissions today and outlook for forward years – perhaps do GHG analysis of Scenarios
- Kyoto
- ‘Finish’ L/T SD report with other 2 scenarios
- Clarification of NAFTA & interface with the Board’s regulatory role and Canadian markets
- Monthly commentary on propane
- Report / document describing the role and mandate of the NEB and how it compares / contrasts to FERC
- NEB could work with stakeholder companies to deal with security of energy infrastructure by involving CISIS, RCMP etc.