

E m p o w e r i n g O n t a r i o

operating and evolving an effective and reliable electricity market

2003-2005 BUSINESS PLAN

OCTOBER 2002

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1. INTRODUCTION

The year 2002 saw an historic transformation in Ontario's electricity industry, with the opening of electricity markets and the introduction of competition and customer choice in May.

In the broader context of our society at large, that accomplishment was overshadowed by turbulent events both within and outside the energy industry – the aftermath of the events of September 11th and the war in Afghanistan, the collapse of Enron, loss of business credibility, battered energy stocks, a scorching summer with record high electricity demands, continuing revelations about the California electricity system, and persistent pressure toward larger and more seamless regional electricity markets.

The year was successful for the IMO: smoothly launching the electricity market in Ontario, while continuing to administer the reliable operation of the electricity grid.

At the same time, this accomplishment brought with it practical insights into market operations and behaviour, and expectations that the IMO will move expeditiously both to address current market issues, and to develop the electricity markets to better realize benefits for Ontario.

This Business Plan is built on these two themes. The first major focus is to consolidate the IMO's transition from building and launching the market to operating that market efficiently while maintaining reliability and continuing to earn our customers' respect and support.

Beyond this core, consultations with our customers and stakeholders have reinforced the need to evolve Ontario's electricity markets - to increase our ability to capture the advantages of broader regional participation and to encourage needed investment in Ontario. This second theme – market evolution – has driven a set of strategic choices, aimed at future success but needing attention now.

The IMO's business agenda is straightforward – develop and administer an effective, reliable and mature marketplace serving the needs of Ontario. The plan provides for continued success, industry leadership, balanced market evolution, and building customer trust in our capabilities as Ontario's Independent Electricity Market Operator.

Business Plan Document Overview

This document addresses various facets of our planning: the background to the choices facing the IMO at this time; the current actions and resources required to sustain and improve current market operations; the strategic decisions required to guide the company's future; and - distinct from current market operations - a market evolution program and the associated resources required for program definition, including stakeholdering and the development of program budget envelopes. It is organized as follows:

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|------------|--|
| Chapter 2: | Describes the challenges met in opening the market in 2002, and the lessons learned that influenced the resource allocations proposed. |
| Chapter 3: | Reviews the developments that will shape the necessary evolution of the IMO-administered markets. |
| Chapter 4: | Sets out the strategic direction adopted by the IMO to guide market evolution. |
| Chapter 5: | Provides a financial and staff resources summary principally focusing on the Current Market Operations Program. |
| Chapter 6: | Describes the resourcing approach to the Market Evolution Program flowing from the strategic direction outlined in Chapter 4. |
| Chapter 7: | Summarizes the IMO's fees and regulatory approvals requested. |

2. CHALLENGES MET... LESSONS LEARNED

2.1 Ontario Electricity Market Opens

May 1, 2002 was the first time in Ontario's history that the electricity that flowed through the Ontario transmission grid had been dispatched and paid for through market-based systems.

Market driven operations now proceed non-stop, around the clock, every day. The continuous flow of electricity belies the complexity of the operations. Each day, 500 settlement statements are produced for the 244 market participants, the end product of 4,000 different electricity prices spread among 65 different charges, matched with electricity quantities derived from 34,000 dispatch instructions that yield 2 million pieces of data from 2,100 registered meters across the Province.

Along the path to market opening and in the months since, challenges were met, obstacles were overcome, and valuable lessons were learned, thanks largely to the dedication, ingenuity, and resilience of all those involved across Ontario. These lessons helped form the cornerstone for the plans we set out in the chapters that follow.

2.2 Challenges Met

Among the factors contributing to the success of the market's opening was the IMO's leadership and initiative.

- In addition to opening the market while directing system operation reliably, the IMO took on the administration of the 115 kilovolt transmission systems of Hydro One, Great Lakes Power, Five Nations and Canadian Niagara Power, adding to our responsibilities in administering the 230 and 500 kilovolt transmission systems.
- The IMO developed and introduced new business processes and the information technology tools to support them. Tight schedules meant specifying the requirements of many information technology (IT) based tools before many of the market rules were completed. Improvements to market rules took place right up to market opening.
- Other initiatives included: formation of a market commissioning task force to facilitate delivery of the market; implementation of contingency arrangements for resolving non-readiness of market participants; initiation of Production Environment Validation (PEV) and Market Readiness Shadow Operation (MRSO) test environments to provide enhanced systems verification; creation of enhanced surveillance capabilities and processes to ensure adequate oversight; and design and implementation of the Deferred Payment Plan.

Market success also required communications and training by the IMO through:

- Intensive training of participants through classroom and on-site sessions held throughout the province, and by the use of webcasting.
- The IMO website, <http://www.theimo.com> has proven to be an effective communication vehicle and is widely accessed. In the five months leading up to and including market opening, the site was accessed in excess of 2.5 million times. During the summer of 2002, the site was accessed over three million times.
- Launching the IMO Help Centre with the aim of providing a one-stop interface for participants and others to present questions and concerns and have issues resolved promptly. The Help Centre handled over 18,000 inquiries in the 6-month period leading up to market opening. Participant feedback both before and since market opening has been extremely positive.

Managing unexpected events required the IMO to act with flexibility and resourcefulness, and in some cases provided an opportunity to deliver a better market. For example, we were able to:

- Take advantage of a rescheduling of market opening from March to May, 2002, by offering additional participant support and opportunity for participation in pre-market

opening activities. The IMO reacted to market participant concerns regarding a lack of facilities to test and prove their systems over an extended period of time through the introduction of the PEV test environment, which took place in the months before Coupled Operational Dry Run (CODR) and enabled market participants to verify their systems over a longer period. Participants felt that this helped both CODR and market opening.

- Mobilize market mechanisms and close cooperation with neighbouring markets as Ontario endured record demands for electricity over the summer, to satisfy the demand for electricity. This past summer proved to be the first substantial test of Ontario's wholesale electricity marketplace, with multiple demand records. The IMO believes the marketplace was a critical factor in enabling Ontario to satisfy load requirements.
- In situations where market rules were found to cause significant operational or other difficulties for market participants, exemptions were applied for and reviewed by the IMO. Over 250 exemptions were filed. After extensive review, the IMO resolved 158 of these, either through effecting market rule changes, or granting the exemption on the basis of minimal impact on the market. The handling of these exemptions resulted in savings (or postponement of spending) estimated by participants to be in the range of \$450 million, without compromising the market. Ninety-nine additional exemptions currently in-progress are estimated, if granted, to result in participants saving \$10-20 million.

In recognition that the IMO's need for human resources would peak during the transition period to Market Opening, the IMO managed a contingent work force to augment its permanent work force, so as to avoid the need for regular staff reduction after project completion.

The full set of operational performance measures, showing the IMO's performance in key areas from May 1 to August 31, 2002, is provided in Appendix 1. These measures are being revisited to ensure their relevance in driving continuous improvement and ongoing customer satisfaction.

2.3 Lessons Learned - Current Market Operations

Ontario's market design brings with it a high degree of complexity. Market Operations over the first several months have placed greater requirements on staff than previously anticipated. Examples are:

- Each month, some 1,600 outage requests, representing an increase of 60% over 2 years, are processed in order to deal with changed conditions and to respond to market participants.
- Significant increases in interconnected transaction volumes; manual effort and processes to support some aspects of operation; providing support to ensure market participants understand their obligations and responsibilities under the new market rules; and ensuring adequate operating reserves are examples of how the demands on the IMO have expanded beyond previously anticipated resource requirements.
- Market participants, stakeholders and the public have obvious needs for information to better understand market operations, and the IMO continues to expand the scope of available information and analyses.
- Our initial experience with the market has identified a number of issues related to current market rules and processes. Those currently being addressed on a high priority basis include:
 - price divergence between pre-dispatch and real-time prices
 - counter-intuitive real-time energy price signals at times of shortage
 - size and content of hourly uplift costs
- The IMO responded rapidly to eliminate unintended profit opportunities related to Import Offer Guarantee payments. The opportunities for "implied wheeling" were addressed by urgent market rule amendments.

These greater than expected demands arising from the complexity of market operations, current issues in respect of market outcomes, and continued high demand for support to market participants have been key factors in formulating business unit plans.

Market operations over the summer, and the IMO's recently issued 18-Month Outlook identified resource adequacy as a matter requiring urgent attention. Similarly, demand-side response and participation needs attention at both the wholesale and retail levels. These issues were reinforced in the Market Surveillance Panel's (MSP) initial report, released on October 7, 2002, providing a comprehensive review of the operations of the first four months of the Ontario market, and identifying specific issues requiring further attention. In addition to conclusions with respect to resource adequacy and the need to foster demand-side responsiveness, the MSP report identified:

- Ontario's electricity market, as currently structured, may not be sending clear, credible and consistent signals to prospective entrants.
- The system may not always make effective use of existing or potential transmission capacity.
- It is important to proceed with planning the future evolution of the market, and with implementing measures that will enhance the effectiveness of competition.
- The panel has concerns regarding the incentive effects of some aspects of market design.

2.4 The IMO Today

The IMO today is an operating organization, configured to provide six services;

- Directing operations
- Assessment, compliance and current market development
- Operating markets
- Participant administration
- Settlements
- Customer services

We are not currently configured for major market evolution work. Project capabilities and staffing levels have subsided since market opening, and are consistent with annual capital spending levels that support on-going markets and provide limited IT infrastructure upgrades such as servers and local networks.

The IMO will continue to aggressively control the costs of current market services. We will seek opportunities to contain costs, reprioritize work programs, and make necessary trade-offs. Prudent limits have been placed on both capital committed for existing service improvements and on staff additions. Continual improvement will be pursued.

Current comparisons with other Independent System Operators (ISO's) indicate that the IMO is cost competitive as a market operator at this time. However, this is a high fixed cost business, undergoing consolidation toward larger and more integrated markets transacting significantly highly volumes. Accordingly, as discussed in Chapter 3, it will become increasingly difficult for the IMO to meet dollar per megawatt hour benchmarks – a common basis for comparisons with U.S. ISOs.

2.5 The IMO 2003-2005

This 2003-2005 Business Plan represents the culmination of extensive internal review and discussion aimed at providing the marketplace with value from its operator. Appendix 5, in addition to outlining business units' accomplishments and accountabilities, addresses the shifts needed to execute the Current Market Operations Program for 2003-2005. These trends reflect the management team's consideration of the business of the company as a whole, providing resources to areas requiring greater emphasis by prioritizing across the entire business - not simply within business units - and limiting the overall growth in required resources for current market operations.

The background to the strategy and funding for the Market Evolution Program is discussed in Chapters 3, 4, and 6.

3. A CHANGING WORLD – NEW CHALLENGES

3.1 Consolidating Markets

Restructured electricity markets around the world are consolidating¹ in an effort to capture the greater economic benefits that can be achieved through increased trade. In general, the history of restructuring has been one where market designs have been formulated with rules specific to each jurisdiction. Where those jurisdictions interconnect, seams issues pose an impediment to the free trade of electricity related products. Trade with neighbouring jurisdictions is of critical importance for the Ontario electricity markets and for market participants wishing to conduct business in the Province. Evolving Ontario markets to be more seamless with neighbouring markets will bring real economic benefits, including:

- improved economic efficiency – to the extent that markets in adjoining jurisdictions are similar in design, methods, and interfaces, participants will be able to trade energy and other electricity products more easily and at lower overall transaction costs.
- greater reliability – more seamless coordination between markets will enhance short-term reliability. Matters related to reliability were especially important to Ontario during the summer of 2002 when record demands due to hot weather led to the need to import power in order to satisfy load in Ontario.
- enhanced investment - in generation and transmission that will better ensure long-term adequacy of supply. The ability of generators and transmitters to easily participate in a broader, more consolidated market will strengthen investment proposals for Ontario.

These economic benefits will provide the foundation for lower consumer costs.

In 2002, the IMO commenced a market participant consultation process to identify and prioritize those market enhancements that participants consider important for improving the Ontario market. A participant consultation meeting was held on January 22, 2002, and the inaugural meeting of the Market Advisory Council (MAC) was held on August 13, 2002. These sessions identified strong market participant support for reducing seams with neighbouring markets.

Consolidation toward stronger regional markets has two significant implications:

- The IMO's experience to date is that the attempts to "manage seams" are not sufficient to provide the economic benefits that could be achieved by being essentially "seamless" with neighbouring markets.
- The IMO will be a smaller-sized player in the "ISO/RTO" sector, placing it and Ontario market participants at a distinct competitive disadvantage.

3.2 The IMO's Relative Economies of Scale

The IMO's operations, as all North American ISO's, are characterized by high capital investments needed for information systems, and relatively low variable cost for processing additional bids and offers and for managing an incremental change in load served. Due to this structure, there

¹ Scandinavia: A deregulated market was first formed in Norway in 1990, and this has expanded in the formation of a common market, with Sweden joining the market in 1995, Finland in 1998, and Denmark in 1999.

United States: In July, 2002 the Federal Energy Regulatory Commission (FERC) proposed a Standard Market Design (SMD) (Reference Appendix 2) intended to bring about a common market model to be implemented across the United States.

PJM (comprising Pennsylvania, New Jersey, Maryland, Virginia, and Delaware), the Midwest ISO and the Southwest Power Pool signed in 2002 a Memorandum of Understanding to form a market based on a common design, reflecting FERC's Standard Market Design. Manitoba is also a signatory to an agreement with PJM.

New York, New England: NYISO and ISO-NE are cooperatively developing a proposal to FERC on the nature and design of a Northeast Region Transmission Organization (NE RTO) that incorporates features from FERC's Standard Market Design (Reference Appendix 3).

are significant economies of scale in ISO operations.

Table 3-1				
ISO Cost & Load Comparisons - 2002				
<i>(costs in \$CDN million)</i>	NE	NY	PJM	Ontario
a. O&M Costs	\$ 91.79	\$ 134.45	\$ 140.62	\$ 85.00
b. Other Costs	8.84	48.46	87.42	68.90
c. Total Revenue Requirement (a+b)	100.62	182.91	228.04	153.90
d. Capital Budget	61.48	12.46	38.48	66.30
e. O&M & Capital Budget (a+d)	153.26	146.91	179.11	151.30
f. Gross Control Area Load (TWh)	128.0	177.4	335.7	152.6
g. Normalized Revenue Requirement (c÷f) (\$/MWh)	\$0.79	\$1.03	\$0.68	\$0.959*
Source Information provided by the EUCG Contact Group				
*Ontario Tariff 2002 (May-Dec only)				

Table 3-1 illustrates the IMO's current competitive position, and shows that the IMO's 2002 tariff of 0.959 \$/MWh is comparable to the normalized revenue requirements of New York (NY). However, for those systems where capital costs can be spread out over a significantly larger load, the IMO tariff is less competitive – reference PJM at 0.68 \$/MWh at twice the Ontario load. The Midwest Independent Transmission System Operator (MISO), with a total load that will far exceed Ontario's, is also expected to be a low unit cost provider. New England, with O&M costs somewhat higher than the IMO's, shows a lower normalized revenue requirement. As can be seen however, the New England ISO is making significant capital investments in 2002, which will have rate impacts in future years.

As the U.S. moves to a Regional Transmission Organization (RTO) structure, PJM is expanding its service territory, further enabling economies of scale. The formation of the Northeast RTO (NERTO) will create an interconnected RTO that will be in the order of twice the size of the IMO's load.

In this environment, there is a significant and escalating challenge to the IMO to remain cost competitive while operating from its relatively smaller base. The IMO plans to address this issue by sharing market evolution costs with suitable partners (e.g. development of a Day-Ahead market in conjunction with other ISO's), and through the development and sale of additional products and services that provide value to the electricity industry.

3.3 Energy Market Retrenchment

A number of turbulent events in the U.S. economy and in the power industry have adversely affected many market participants. Those events include:

- An economic slowdown in North America over the last two years.
- A failure of the California energy markets in 2001 leading to the bankruptcy of Pacific Gas and Electric, near bankruptcy of Southern California Edison, and the shutting down of the California Power Exchange.
- Allegations of corporate malfeasance throughout many business sectors in the U.S., including the electricity industry, starting with Enron and affecting numerous trading firms.

The fallout from these events has been dramatic on several fronts:

- There has been a significant decrease in Ontario's demand forecast as a result of slower economic activity.
- Numerous U.S. firms have scaled back or cancelled generation projects due to economic conditions, falling wholesale energy prices, and reduced investor confidence - adversely affecting participants' ability to raise capital.
- Trading companies have experienced liquidity pressures as both their past and future income streams and accounting practices are being challenged or questioned. Asset sales and workforce reductions are among the responses to these issues.
- A developing credit crisis as risks, and sensitivity to risks, have increased. As a result, trading on new energy exchanges that do not provide settlement guarantees has decreased substantially. The lack of trade credit has also decreased overall trading.
- There has been a call in the U.S. for more regulatory oversight with respect to electricity energy trading.
- In-service dates for anticipated new investment in Ontario generation are more uncertain, with only 1000 MW of new generation initiated, beyond the return to service of Bruce A and Pickering A nuclear units.

The challenges discussed in this chapter have been taken into account in the development of this Business Plan, and in particular have shaped the Market Evolution Program set out in Chapter 4.

4. MARKET EVOLUTION PROGRAM

Consultations with the IMO's stakeholders and recent findings by the Market Surveillance Panel have reinforced the need to evolve Ontario markets - the key strategic focus for the Market Evolution Program. Elements of that Program are driven by the need to encourage generation investment, to achieve resource adequacy in Ontario, to address in a more complete way the high priority issues identified in current market operations, and to capture the advantages of broader and more seamless regional participation. Ontario is not unique in facing post-market opening challenges. Most jurisdictions that have restructured have not remained static, and continue to refine their market structures².

The IMO considers several elements as critical in executing the strategy of creating a more effective, reliable and mature market to better serve the needs of Ontario. For the most part, these market elements were identified in the "Straw-Plan for the Evolution of the Ontario Market Design" reviewed in the IMO's August, 2002 consultation process with market participants. These consultations will continue under the Market Advisory Council (MAC) framework, providing for the necessary review and discussion with participants, and helping to provide the IMO Board with well-considered recommendations for implementation.

Resource adequacy will be a principal objective in pursuing market evolution, and will require integration with the following Market Evolution Program elements:

- A Day-Ahead Commitment Market, with the real-time market evolving to a balancing market
- Wholesale/Retail Market Structure
- Locational Marginal Pricing
- Better Optimization over Time
- Environmental Information Tracking
- A Longer-term Energy Forward and Futures market

4.1 Resource Adequacy

The heavy reliance on imports and the high prices experienced this past summer, the IMO's latest 18-Month Outlook, and the recently issued Market Surveillance Panel report all point to the need for additional capability in the Province to address growing electricity demand. Capacity assurance, including the possibility of a capacity obligation on loads, will necessarily be considered in the discussion of several market evolution elements

There is no single, simple answer. But the IMO is committed to working with participants and stakeholders both to identify possible short-term actions that would facilitate early capacity additions, and to maintain resource adequacy assurance as a principal objective in the evolution of Ontario's markets. This objective will also be reflected in the IMO's broader regional market discussions with the New York, New England and Midwest ISO's.

² U.K. - In the United Kingdom, there have been both refinements and dramatic shifts in market design. From 1990 to 2001 prices in the U.K. were determined by a single clearing price mechanism. That price was determined through a merit order of generation offers to supply that were stacked from lowest to highest offer and the clearing price set at the offer price where supply met demand. In 2001, the single clearing price system was replaced by the New Electricity Trading Arrangements (NETA) in an attempt to combat alleged abuses and to bring wholesale prices in line with generators' costs.

U.S. - In July, 2002 the Federal Energy Regulatory Commission (FERC) proposed a Standard Market Design (SMD) designed to establish a common market model to be implemented across the United States. This is the third step in FERC's initiatives. The first occurred in 1996 with Order 888 and 889, the second in 1999 with Order 2000, and now the SMD Notice of Proposed Rulemaking.

NordPool - Scandinavian countries during the 1990's consolidated four sovereign markets into one common market that featured a single price for electrical energy, and open access to transmission systems with a common transmission tariff. Real-time markets have been augmented with a successful forward and futures exchange.

In addition to new generation, it is also clear that mechanisms need to be developed to facilitate a much greater portion of electricity demand becoming price-responsive. Enabling consumers to respond to price signals will have the dual benefit of reducing overall need for generating capacity, and ameliorating the high prices that occur in times of shortage.

The IMO intends to use the Market Advisory Council consultation process to involve market participants and stakeholders in the deliberations on both the generation and demand side issues.

4.2 Day-Ahead and Real-time Markets

The existing electricity market in Ontario is based on a single settlements design. That is, it consists of a real-time spot market only, and relies on market participants to self-commit resources and to hedge risks related to real-time spot price volatility by entering into bi-lateral contracts. A day-ahead market would allow participants to transact quantities and make critical operating decisions in advance of real time, thereby providing greater stability for the day at hand. The real-time market would act as a balancing market.

Support for the implementation of a day-ahead market to create a two-settlement electricity market has arisen in a number of forums. On January 22, 2002 the IMO held a consultation on market evolution priorities. A number of attendees called on the IMO to implement a two-settlement market to match the operations in the US Northeast as soon as possible. Further, several stakeholders/market participants presented papers continuing to press for Ontario to have a day-ahead market.

A day-ahead market is a key element of FERC's Standard Market Design, and is already included in the New York, New England, and PJM designs. The development of an Ontario day-ahead market would enable Ontario participants to more easily transact across borders, to participate more fully in a larger regional market, and would facilitate the short-term assurance of resource adequacy.

The IMO's "Straw Plan for Evolution of the Ontario Market Design", concluded that some form of day-ahead market is necessary to achieve price and operational stability and transparency. As well, it would allow the real-time market to become effectively a balancing market and hence the natural volatility of the real-time market would become less of an issue. Such a market would also assist the IMO in carrying out its functions to provide reliable physical market operations, and should help mitigate other current issues such as the Intertie Offer Guarantee. The lower volatility of a day-ahead market would also provide an improved point of convergence for the forward and futures market.

The IMO proposes to commence feasibility and design studies for the day-ahead market as soon as possible, making full use of stakeholder input through MAC, and achieving efficiencies through co-ordination with New York and New England.

4.3 Wholesale/Retail Market Structure

The Ontario Wholesale and Retail market structures are essentially defined by legislation, regulation, the IMO and the OEB through the Market Rules and various OEB codes such as the Retail Settlement Code. The obligations that are placed on Local Distribution Companies (LDC's) affect wholesale market evolution decisions in several areas. These include: the tools the IMO needs to provide LDC's; prudential levels that must be posted by market participants; and settlement timelines.

Consideration of the various elements of the market evolution program will necessarily involve a re-examination of the obligations that are placed on LDC's in the Ontario market. Preliminary

discussions have been held with the OEB - recognizing that this re-examination will necessarily involve the IMO and the OEB working with market participants and stakeholders.

Within the context of that broader examination, there is a need to review prudential requirements. For example, the pay/collect cycles, not only at the wholesale level, but also at the retail level, affect the appropriate prudential levels that need to be set by the IMO. Changes in the wholesale market, such as the addition of a day-ahead market and the introduction of a forward/futures market, could require parallel changes to the Retail Settlement Code. At the same time, opportunities could be developed to lower total prudential support that must be posted by participants through harmonized prudential requirements³ for participants that are active in real-time, day-ahead, and longer-term forward markets. In addition, settlement timelines would be reviewed in light of new market features to be introduced into Ontario.

An objective review of the wholesale/retail market structure is an essential prerequisite to the successful introduction of a mechanism, or mechanisms, for the assurance of adequate resources to satisfy Ontario demand.

4.4 Locational Marginal Pricing (LMP)

The underlying design of the Ontario electricity market is based on locational marginal pricing, though a uniform Ontario energy price, either in a 5-minute or hourly form, is currently used for most settlements. The Market Design Committee (MDC) recommended that “beginning in the 19th month of market operations, some form of congestion prices (nodal, zonal or some variant) be used in settlements for generators and wholesale market buyers.” Further, they recommended “that the IMO have the ability to calculate, and that it publish during this initial period, the prices that would apply under a nodal form of congestion pricing, although Ontario market settlements would be based on a uniform price that did not reflect congestion effects.” The Market Rules, and consequently the IMO’s software tools, include the nodal pricing capability recommended by the MDC - but further development would be required to implement LMP.

LMP was the element that received the most support at the January, 2002 consultation on priorities for market evolution. It was the only priority issue that was within the top three across all classes of Market Participant and other stakeholders. Much of the market is anticipating the potential for an introduction of LMP within the next few years.

Clearly, there are market participant benefits for LMP. It is a core requirement of FERC’s SMD for several reasons: locational marginal pricing effectively manages congestion to ensure that the transmission system is utilized in the most efficient manner; socialization of congestion costs are avoided; and the cost of transmitting energy from one location to the other is better reflected in prices.

Implementing LMP would provide market participants with economically correct price signals to drive appropriate production, consumption and investment. In addition, the implementation of LMP would facilitate economically beneficial demand side responsiveness, and better permits consumers and suppliers to manage price risk. The foregoing, especially investment, are all key to the longer-term assurance of supply adequacy in the Province. LMP also provides the important benefit of providing the means to separate out congestion related costs – allowing for derivative instruments such as forward basis contracts to be introduced to assist participants in managing those congestion risks. Development of a defined “hub” would also assist in developing liquidity in a forward/futures market.

³ Credit harmonization or harmonized prudentials, is the netting of the prudential support obligation that is required to participate in the IMO real-time market and the prudential support obligation that would be required to participate in the forwards and futures markets.

LMP also holds benefits for the market operator. A move to LMP would eliminate the need to calculate an unconstrained “market schedule” and constrained-on and constrained-off payments relative to the actual dispatch of resources in the market. This would serve to reduce the congestion management settlement credit portion of the hourly uplift charge in the market, yield prices that better reflect the actual (real-time) activity in the market, and remove some complexity in the IMO’s processes, thereby reducing costs while increasing transparency.

The IMO is obligated to review the nodal prices currently being calculated by the dispatch software and to make recommendations within 18 months of market opening on the timing and form of LMP.

4.5 Better Optimization Over Time

Better optimization of bid and offer schedules over the day and hour would provide market participants with more assured and predictable dispatch and operating instructions. Further, it would assist the real-time assurance of supplies. Currently, the Ontario market is dispatched on a five-minute basis where energy and operating reserve are co-optimized within the five minute interval only. Optimization of bid/offered resources over the hour(s) (or over the day in the case of a day-ahead market) would replace the dispatch currently used.

Operating experience with Ontario’s market to date suggests that the lack of temporal optimization in the market dispatch process may be the cause of difficulties in the scheduling and dispatch of energy-limited and fast-ramping resources within the hour, and in the advance commitment of slow starting resources. These difficulties have caused an increased need for the IMO to take actions to constrain on, and to constrain off, plants to address the reliability of the IMO-controlled grid. The overall economic efficiency of Ontario’s wholesale electricity market would be improved by the incorporation of temporal optimization.

The market designs in PJM and New York, often cited as the “successful markets” in the U.S., have processes and software that not only optimize the dispatch of resource offers/bids over time, but that also optimize the commitment of resources as well. To achieve the latter, the markets allow the submission of multi-part offers/bids to allow the market operator to dispatch resources with the lowest total costs.

The IMO will address refinements to the dispatch algorithm and market rules to effect an improved optimization methodology. As with other changes in the market, evolution to achieve better optimization over time will be reviewed amongst market participants and other stakeholders.

4.6 Environmental Information Tracking

The Ministry of Energy has proposed the development and implementation of an Internet-based Environmental Labeling and Information System (the “tracking system”) to provide consumers with credible information regarding the generation sources and related emissions of retail electricity products generated and consumed in Ontario. The information provided by the tracking system will assist consumers in making more informed choices, and lead to the increased contribution of “green” resources to meet Ontario’s electricity needs. The *Ontario Energy Board Act, 1998*, provides the legislative authority to mandate the tracking system, including prescribing the requirements placed on program participants and the provisions of labels and certificates which characterize the relevant generation attributes associated with energy produced and consumed in Ontario, including imports and exports.

The proposed program has been undergoing extensive consultation with the IMO, the Ontario Energy Board and industry stakeholders. The IMO anticipates that the pending regulation will obligate the IMO to develop and implement the tracking system and a market for trading

environmental certificates. The particulars of the program, including the specific role and responsibilities of the IMO and affected participants, will be set out in the pending regulation.

When the regulation is passed, it will be necessary for the IMO to develop and stakeholder the program rules, determine the functionality and characteristics of the required system, and develop the program implementation and administration procedures. This is expected to require significant work early in 2003.

4.7 Longer-Term Forward Market

A longer-term forward⁴ market (extending beyond the day-ahead) would provide participants and other financial intermediaries with three key benefits:

- price discovery over longer time frames
- additional instruments to manage portfolio risk caused by price volatility
- valid incentives for investments to assure reliable supplies in Ontario

The IMO has had a number of discussions with market participants and has conducted two surveys concerning the advantages a liquid forward market could provide. Results from those surveys indicate a strong need for this market, but some stakeholders have suggested that private sector players could be expected to fill this need. This hasn't happened - in part because it appears that the success of forward exchanges such as NordPool is dependent on strong links with physical market operation.

Accordingly, the IMO took an opportunity that arose in June of 2002 to work with TSX Group to investigate the possibility of jointly establishing and operating an electricity forward/futures market designed to serve Ontario. This investigative work involves two phases. Phase I assessed preliminary design and financial viability of an IMO/TSX arrangement that would provide exchange-tradable instruments. Phase II will involve the balance of the project and business case definition.

Phase I has been completed and results from that study warrant proceeding to Phase 2. The IMO's participation is seen as a key success factor for the venture, as are certain other Market Evolution Program elements. In addition to bringing positive benefits to the market, the IMO considers its involvement in a forward /futures exchange as a key strategic response to the issues of scale and its competitive position vis-a-vis larger U.S. based RTO's. The addition of a successful forward/futures market's revenue stream would mitigate the impact of smaller scale on the IMO's volumetric based fee for market operation, as well as offering other advantages to market participants.

Being cognizant of the concerns expressed by the Market Advisory Council, the IMO would, through a joint venture, be diligent with respect to the IMO's development costs, risks, and resources applied to developing this service. Further, third party expertise would be brought to bear on the operation of a forward/future market. TSX Group is a desired participant in this initiative because of its expertise in developing and operating electronic marketplaces, its connections with the financial community, and the regulatory integrity of its brand.

Both TSX Group and the IMO anticipate management concurrence to proceed to Phase II. For the IMO, Phase II will be included as a distinct element in the Market Evolution Program.

⁴ "Forward" in this context is used in its most general sense and includes any agreement to buy or sell a specified amount of electrical energy at a certain time in the future for a certain price. This general definition includes forward and futures instruments.

4.8 Funding the Market Evolution Program

The Market Evolution Program elements described above are likely to require significant investment. Accurate estimates of the costs of delivering the various elements will be one of the key products of the feasibility and project definition work for each element of the Market Evolution Program. However, the IMO judges that it may be facing program implementation costs of the order of \$35 million, with implementation schedules extending to late 2004 for some elements.

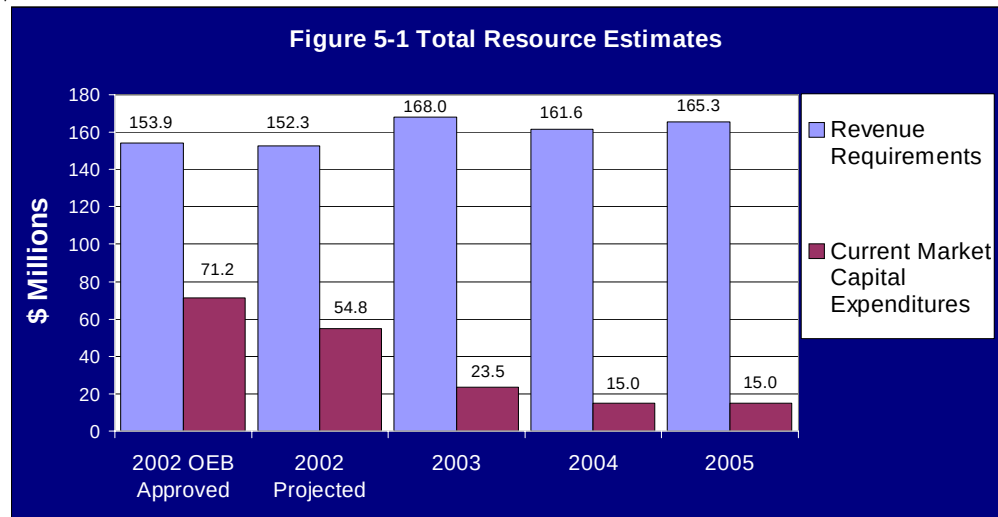
At this time we are identifying costs of \$0.05/MWh to perform the feasibility and project definition work associated with each of the program elements. This work will be conducted in 2003, and will detail benefits, costs, schedules, and other information necessary to support the IMO's Board decisions on project implementation.

In recognition of the uncertainty associated with the costs of project definition, MEP costs will be segregated and identified separately from current market operations.

Further funding details are provided in Chapter 6.

5. FINANCIAL & STAFF RESOURCES

Resource requirements are summarized in two categories, revenue requirements (annual revenue needed to run the business) and current market capital expenditures (investments in infrastructure). These are shown in Figure 5-1. Pro forma financial statements are provided in Appendix 7.



5.1 Revenue Requirements

The IMO's revenue requirements are projected to be \$152.3 million (M) in 2002, \$1.6M lower than the OEB-approved budget. The level is forecast to be \$168.0M in 2003, \$161.6M in 2004, and \$165.3M in 2005. Revenue requirements comprise four components: operating, maintenance, and administration expenses (OM&A); market evolution program; amortization; and interest.

A variance analysis is provided below to explain changes through the business planning period and to identify trends that emerge over time.

Revenue Requirements: Comparison of 2002 Projection against 2002 OEB Approved Budget

Projected 2002 revenue requirements are \$1.6M under the OEB-approved budget. While the overall levels of revenue requirements are similar, there are projected variances in each of the components.

OM&A consists of i) program costs, and ii) pension plan adjustments. OM&A is projected to be \$1.9M above budget due to:

- Staff costs (including pension adjustments) being \$6.0M higher than planned due to the continued work demand on the IMO related to both opening and operating the IMO-administered markets and the IMO-controlled grid. This demand meant that it was not possible to meet the needs of market participants while accommodating the \$4.0M corporate-level reduction included in the 2002-2004 Business Plan. Furthermore, transition OM&A work was \$1.2M above budget due to i) the delay in market opening from the March 1, 2002 date assumed in last year's plan to May 1, 2002, and ii) some expenditures within the Integration Management Program (IMP - originally planned as capital) being reclassified as OM&A costs.
- Computer support, maintenance & equipment costs being projected at a level \$2.2M below budget. This variance is the result of ongoing management of the role and scope of external service providers, including some re-negotiation of contracts in a manner more beneficial to the IMO.

- Telecommunication costs projected to be \$0.8M below budget, a result of the advancement of work to decommission system voice circuits.
- A remaining OM&A variance of \$1.1M under budget for administration, consultants, and contract services. These variances are across the entire business and results from factors such as: lower than expected property tax; less external support provided to the Board of Directors and Surveillance Panel in areas including exemptions and surveillance; and a reduction in the \$0.3M contingency held by the President & CEO.

Amortization is projected to be \$2.8M lower than planned due to lower than planned capital spending in 2002. In addition, capital being spent in 2002 is occurring later in the year.

Interest costs are projected to be \$0.7M below budget due largely to higher than planned capitalized interest. This was due to the Integration Management Program continuing later into 2002 than planned.

Revenue Requirements: Comparison of 2003 Budget against 2003 Forecast made last year

Within the 2002-2004 Business Plan, the revenue requirements for 2003 were identified as \$150.4M. The IMO is now requesting an additional \$17.6M (\$168.0M in total) for fiscal 2003.

The most significant change is in the area of OM&A, which increases by \$8.4M (from \$86.0M to \$94.4M).

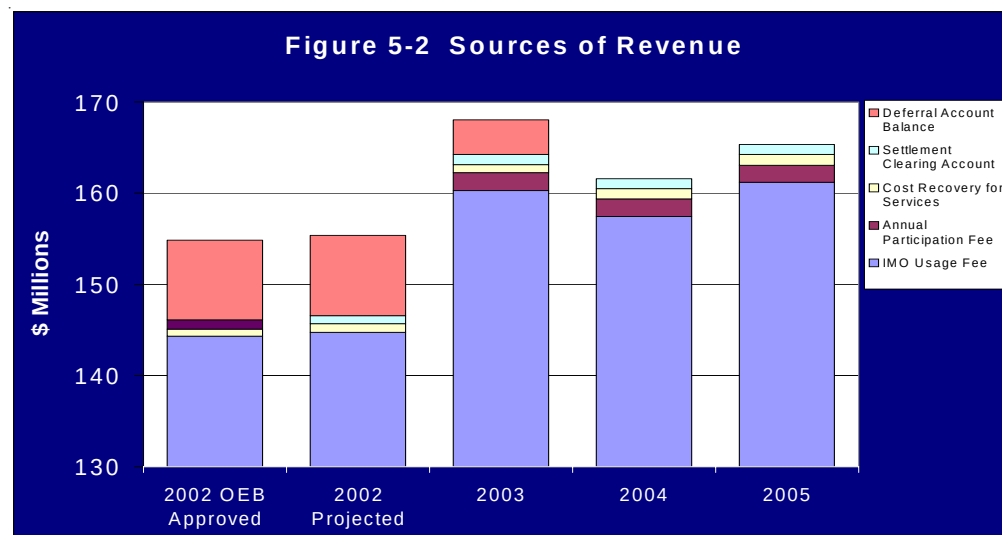
- There are various increases and decreases in OM&A across the business. However, the overall increase is largely due to two factors: an increase of \$4.5M for pension expense; and \$4.0M in additional labour costs. The higher pension expense is due largely to poorer than anticipated returns - reflecting the poor equity markets - while the labour increase reflects the removal of the corporately-held reductions that were included in the 2002-2004 Business Plan. In assessing the resource requirements necessary to meet operational commitments, it is not considered practical to continue to include this corporate labour reduction within the OM&A budget envelope.

The other significant increase relates to the introduction of the Market Evolution Program in 2003. The Budgeted cost is \$7.3M, and this program is discussed in detail in Chapter 4.

The remaining \$1.9M increase from last year's forecast, results primarily from higher amortization. Amortization is higher by \$2.2M due primarily to the Digital Acquisition and Control System (DACS) replacement project being completed and in service earlier than forecast in last year's plan, and due to the replacement of some network hardware that continues to perform at unacceptable levels.

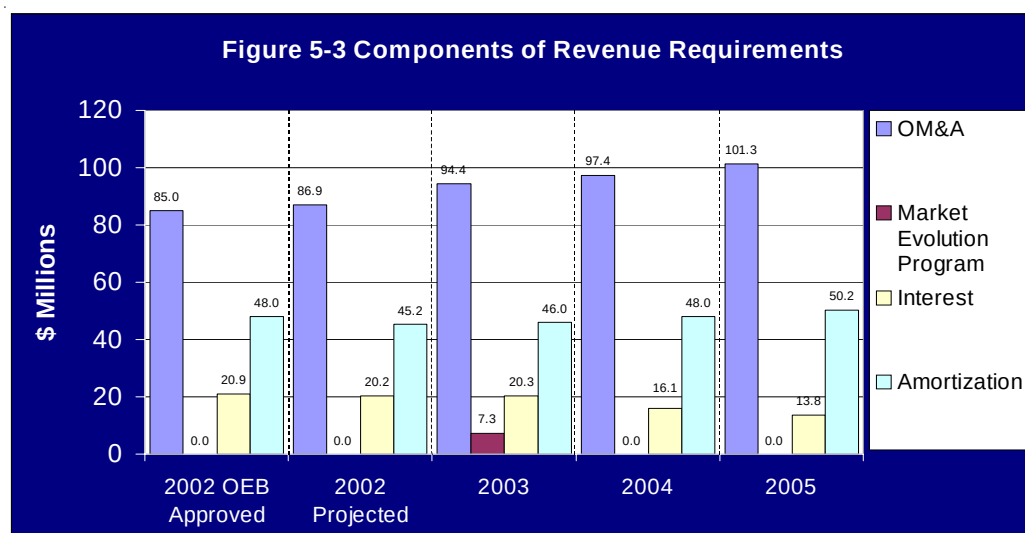
5.1.1 Sources of Revenue

As depicted in Figure 5-2, the IMO has five sources of revenue, the largest being the IMO Usage Fee that represents over 95% of the IMO's revenue in each year over the planning period.



5.1.2 Components of Revenue Requirements

Figure 5-3 depicts the planned increase in OM&A expenditures over the next three years. The introduction of the Market Evolution Program is also shown for 2003. Amortization remains relatively constant in 2003, with slight increases in both 2004 and 2005. Interest also remains relatively constant in 2003, with a reduced level in 2004 and 2005. Table 5-1 provides further details about the components of revenue requirement.



	2002 OEB Approved	2002 Projected	2003	2004	2005
OM & A - Program Costs	\$ 85.0	\$ 87.1	\$ 90.1	\$ 91.6	\$ 94.0
OM & A - Pension Expense/(Income)	-	(0.2)	4.3	5.8	7.3
OM & A Sub-Total	\$ 85.0	\$ 86.9	\$ 94.4	\$ 97.4	\$ 101.3
Market Evolution Program	-	-	7.3	-	-
Amortization	48.0	45.2	46.0	48.0	50.2
Interest	20.9	20.2	20.3	16.2	13.8
Revenue Requirements	\$ 153.9	\$ 152.3	\$ 168.0	\$ 161.6	\$ 165.3

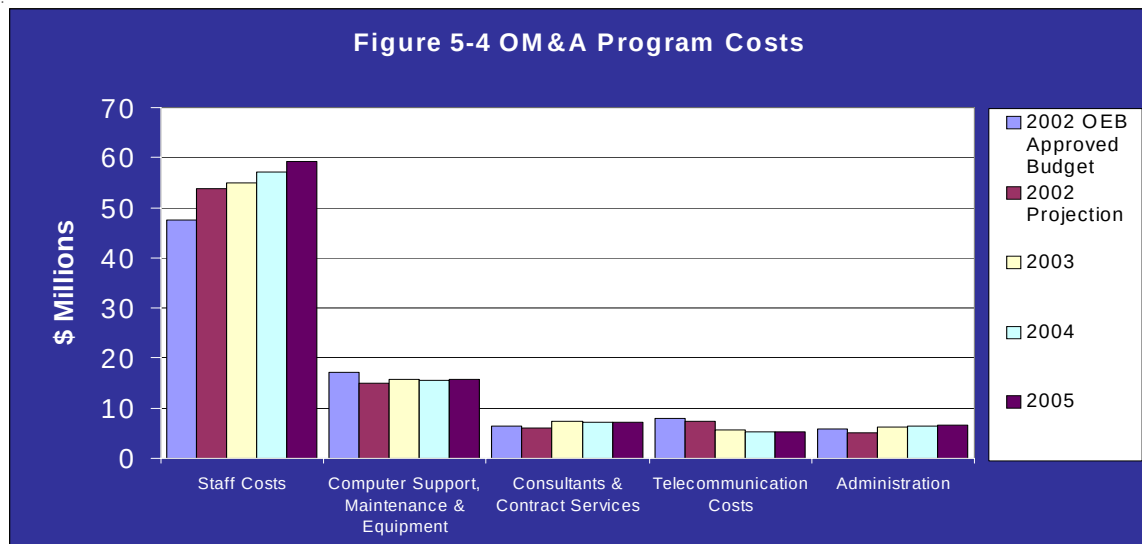
5.1.2.1 OM&A

Total OM&A consists of program costs and pension expense. Total OM&A is projected to be \$86.9M in 2002, \$1.9M above the OEB approved level of \$85.0M. The analysis on the variance for 2002 between the projected level and the OEB approved level is included in Section 5.1. Total OM&A spending levels are planned to increase beyond the 2002 projected level by \$7.5M in 2003. OM&A is planned to increase by \$3.0M in 2004 and \$3.9M in 2005.

As outlined in Table 5-1, a large portion of total OM&A increases over the planning period is due to increased costs related to the IMO pension plan. Projected pension expense increases are largely due to poor returns in the global equity markets. Pension expense increases over the 2002 projected level are \$4.5M in 2003, and a further \$1.5M in each of 2004 and 2005. Overall, this represents 60% of the total OM&A increases in 2003, 50% in 2004, and 38% in 2005.

Total OM&A cost detail by business unit is provided in Appendix 5

Figure 5-4 and Table 5-2 present OM&A program costs over the plan period. These costs increase from the projected level of \$87.1M in 2002, by \$3.0M in 2003, by a further \$1.5M in



	2002 OEB Approved Budget	2002 Projection	2003	2004	2005
Staff Costs	47.5	53.7	55.0	57.1	59.2
Computer Support, Maintenance & Equipment	17.2	15.0	15.8	15.7	15.7
Consultants & Contract Services	6.4	6.1	7.4	7.3	7.2
Telecommunication Costs	8.1	7.3	5.6	5.2	5.2
Administration	5.8	5.0	6.3	6.3	6.7
Total Program OM&A Costs	85.0	87.1	90.1	91.6	94.0

2004, and by a further \$2.4M in 2005.

OM&A program costs at a 2003 budgeted level of \$90.1M represent an increase of \$3.0M from 2002 projected levels. Staff costs are budgeted to increase by \$1.3M, due largely to salary escalation. Computer support, maintenance & equipment costs are budgeted to increase by \$0.8M due to increased vendor support on market applications. Consultants & contract services are budgeted to increase by \$1.3M largely due to higher external legal costs and consultant support for labour relations, fees associated with external audits required under the market rules, higher insurance costs, and fees associated with obtaining and maintaining a credit rating. Telecommunication costs are budgeted to decrease by \$1.7M largely due to the decommissioning of DACS ahead of the timelines included in the 2002-2004 Business Plan. Administration costs increase by \$1.3M, a result of increased property tax expense and small increases in various areas, including rental facilities, building services, and materials & supplies.

In 2004, OM&A increases by \$1.5M over 2003, largely as a result of increased staff costs due primarily to salary escalation, slightly offset by minor staff reductions. The staff cost increase of \$2.1M over 2003 budget is partially offset by a reduction of \$0.4M in telecommunication costs due to DACS being out of service for the entire year.

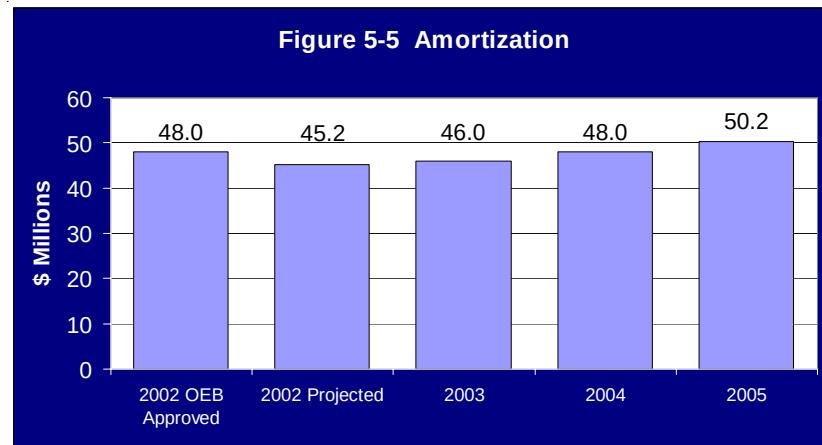
In 2005, OM&A increases by \$2.4M over 2004. \$2.1M of the increase is due to increased staff costs (primarily salary escalation).

5.1.2.2 Market Evolution Program

The budgeted level of spending associated with the Market Evolution Program is \$7.3M in 2003. This program is discussed in detail in Chapter 4.

5.1.2.3 Amortization

The projected level of amortization for 2002 is \$45.2M, \$2.8M lower than the 2002 budgeted level. The level of amortization is budgeted to increase to \$46.0M in 2003, to \$48.0M in 2004, and to \$50.2M in 2005, as shown in Figure 5-5.



Amortization is the direct result of capital spending and the placement of the related assets into service. Analysis of the planned capital expenditures over the planning period is included in Section 5.3.

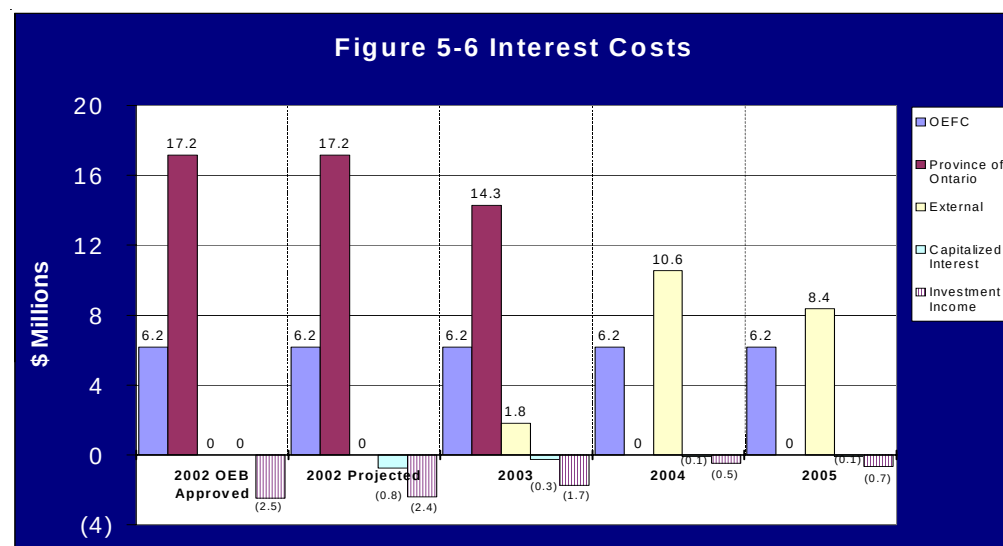
Amortization in 2002 is projected to be \$45.2M, \$2.8M lower than the OEB approved budget of \$48.0M. This variance was explained in Section 5.1.

Amortization in 2003 is forecast to be \$46.0M. This \$0.8M increase from the 2002 projected level reflects the amortization related to capital projects completed in 2003, and the impact of capital projects completed in 2002 being in service for a full year (\$7.8M). These increases are largely offset by a \$7.0M reduction due to the Data Acquisition and Computer System reaching the end of its useful life in 2002.

Amortization in 2004 and 2005 is forecast to be \$48.0M and \$50.2M, respectively. These increases are due to the capital projects/spending outlined in Section 5.3 going into service and being amortized.

5.1.2.4 Interest

Figure 5-6 depicts forecast interest costs over the planning period.

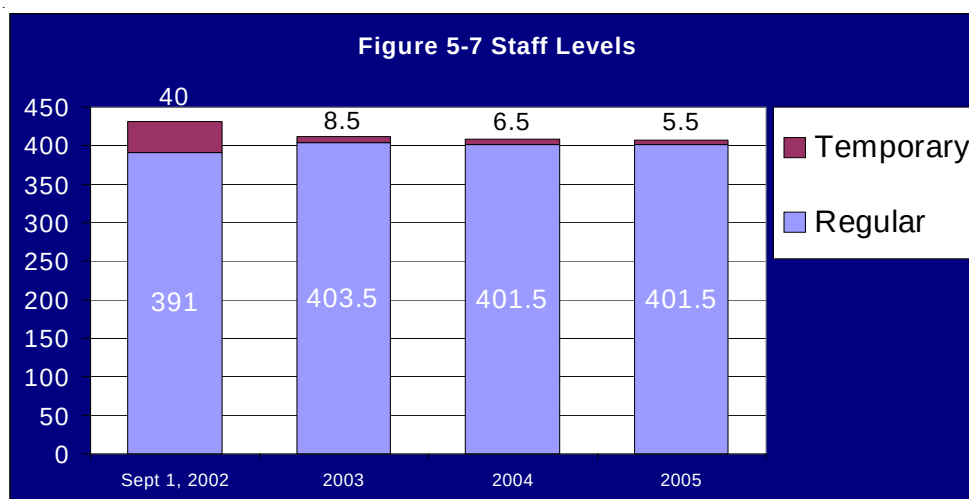


Interest costs charged to operations are projected to be \$20.2M in 2002, \$0.7M lower than budget. This was due to higher than planned levels of interest being capitalized. Interest costs are forecast to increase by \$0.1M in 2003, to \$20.3M. The 2003 increase is a result of lower capitalized interest, reflecting reduced capital spending and lower investment income from lower forecasted cash levels, offset by lower interest charges (resulting from refinancing only \$175M of the current \$275M of debt currently held with the Province of Ontario). Interest in 2004 is budgeted to decrease by \$4.1M, to \$16.2M as a result of the planned lower debt level. Interest costs in 2005 are planned to be \$13.8M, \$2.4M lower than the 2004 level.

For planning purposes it has been assumed that \$100 million of notes payable to the Province of Ontario are paid in November 2003. The balance of \$175 million is assumed to be refinanced at 6.24 % and repaid over a 5-year period.

5.2 Staff Levels

Figure 5-7 depicts the staffing⁵ levels over the planning period for the current market operations program:



Overall, staffing levels are forecast to decrease from the current level of 431, as a result of reductions in the number of temporary employees. Total staffing levels are forecast to be 412 in 2003, 408 in 2004 and 407 in 2005. The current staff level is expected to be reduced on a continuing basis over the remainder of 2002, with year-end staffing levels close to the level of 414 included in the 2002-2004 Business Plan.

The staffing level of 412 in 2003 is also close to the level outlined in the prior year's plan (a level of 409).

The 2004 and 2005 staffing levels are forecast to remain relatively constant, with reductions of 4 in 2004 and 1 in 2005.

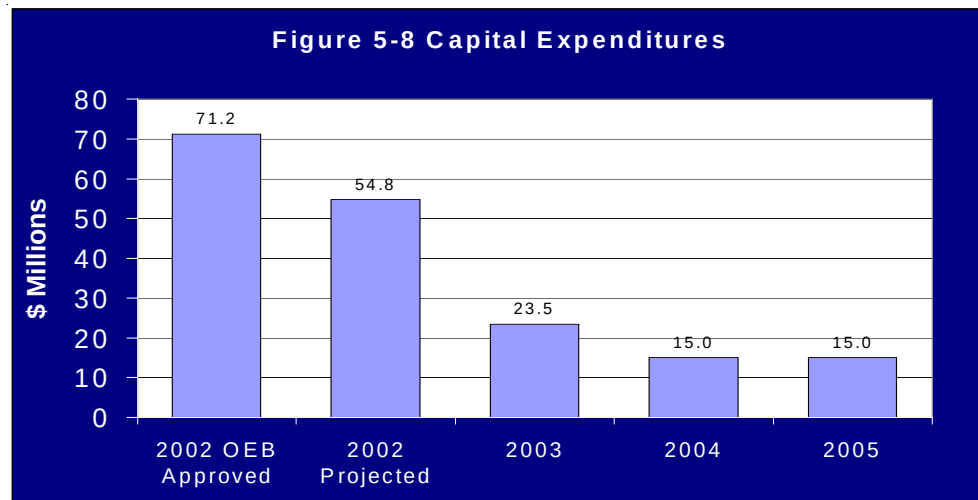
These staff levels do not include any staffing needs associated with the Market Evolution Program.

Staffing levels by business unit for the current market operations program are included in Appendix 5.

⁵ All staffing levels are as at the end of the year, except for 2002 Actual which is as of September 1, 2002.

5.3 Capital Expenditures

Figure 5-8 depicts the capital expenditure levels associated with current market operations over the planning period.



Capital expenditures are projected to be \$54.8M in 2002, \$16.4M lower than the OEB approved budget of \$71.2M⁶. This variance is largely due to capital spending within the IMP, projected to be \$28.9M in 2003, \$15.6M lower than the \$44.5M budget. \$8.5M of this variance represents items that are going to be spent in 2003. The remaining \$7.1M of this variance reflects the IMP costing less than budgeted, and some items being reclassified as OM&A that were included as capital costs in the 2002-2004 Business Plan

The projected capital expenditures levels for current market operations are \$23.5M in 2003, and \$15.0M in each of 2004 and 2005. The only changes from the capital expenditure levels included in the 2002-2004 Business Plan are a shift in timing on the spending of \$8.5M that was to be spent in 2002. It is now included in the 2003 capital level and reflects the increase over the \$15.0M level included in last years' plan.

Additional details of planned capital spending are included in Appendix 6.

⁶ The OEB Approved Budget of \$71.2M comprises the total IMP capital budget less the actual spending to the end of 2001 (\$265.4M less \$220.9M = \$44.5M), plus the \$22.5M for other capital as identified in the 2002-2004 Business Plan, plus \$4.2M for timing delays on 2001 projects included in the 2002-2004 Business Plan.

6. MARKET EVOLUTION PROGRAM FUNDING

6.1 Building Block Approach

This chapter outlines the IMO's approach to funding the requirement to evolve the Ontario wholesale electricity market. The IMO has defined an initial scope of work for 2003 focussing on confirming feasibility and definition of requirements for the various elements of the Market Evolution Program.

Reliable cost estimates for implementing specific program elements can only be developed in conjunction with the feasibility and definition work. Therefore the focus in this submission is on funding this initial effort, and would only provide limited, if any, funding for implementation. Subsequent funding to support the full implementation of program elements will be addressed in the context of approvals by the IMO Board prior to commitment.

The IMO's management team is taking this building block approach in order to ensure that cost implications are well understood before major program elements proceed to implementation.

The feasibility and definition work for each program element will provide:

- Specifics of the proposed design for that program element
- Detailed implementation plans and schedules
- Assumptions and projected costs required for successful implementation

6.2 Value Proposition

The IMO would use a combination of the following strategies in order to provide best value to market participants when carrying out the Market Evolution Program:

- Use of the IMO's existing systems infrastructure to the greatest extent feasible;
- Focus on market integration efforts with neighbouring jurisdictions that already have required market design feature in place;
- Partnership and alliance arrangements to capitalize on marketplace expertise and avoid duplication;
- Identify opportunities for offsets by reducing overall transaction costs through harmonization across markets.

6.3 Funding of Project Costs

The building block approach to the Market Evolution Program implementation will be used in managing the funding for market evolution costs. As feasibility work is completed and implementing decisions are made, funding associated with subsequent phases will be reflected in the IMO's annual business plan submission.

For the year 2003, the IMO is requesting funding of \$7.3 M for the costs associated with the development of the Market Evolution Program. The IMO will track and carry over any unused amounts in the following years.

7 FEES AND REGULATORY APPROVALS REQUESTED

This chapter details specific fees requested for the year 2003 for OEB approval. The fees are first set in the broader context of all revenue sources for the IMO, followed by detailed rationale, derivation and amounts.

7.1 Revenue Sources

There are several sources of revenue for 2003:

- Cost recovery for services
- Deferral account balance
- Settlement clearing bank account balance
- Fees

There is also investment income that is considered as an offset to interest expenses, and shown in Chapter 5.

The following sections elaborate on the contributions to revenue requirements for the year 2003 and specific approvals requested from the OEB.

7.1.1 Cost Recovery for Services

The IMO will continue in its plan to recover the cost of services that are directly attributed to a participant, such as training, assessments, and other services on a cost recovery basis. In aggregate, total revenues from cost recovery in 2003 is estimated at \$0.9 million.

7.1.2 Deferral Account Balance

The deferral account balance at the end of 2002 is projected to be \$3.8 million. It will be used to contribute to the 2003 revenue requirements.

7.1.3 Settlement Clearing Bank Account Balance

As per the market rules, at the end of each year, the monies in the IMO settlement clearing bank account balance which have been earned from interest on funds in this account are applied to off-set the IMO administration charge in the following year. The end-of-year balance for 2003 is projected to be \$1.1 million.

7.1.4 The IMO's Fees

The IMO's fee methodology was approved by the OEB in 2000. The fee structure, which has been in effect since market opening, includes an application fee of \$1,000 per application plus a \$/MWh usage fee.

In RP-1999-0049, the IMO undertook to unbundle its fees within two years of market opening. The IMO has discussed options for the future evolution of its fee structure with the OEB and more recently in a detailed discussion paper with stakeholders, that will be filed as part of the year 2003 OEB fee submission. The paper describes the drivers and options for unbundling of fees.

This year, the IMO proposes to start the unbundling of its fees by introducing a tiered annual participation fee. Details and rationale are presented below:

7.1.4.1 Annual Participation Fee

In addition to the currently approved application fee, the IMO is proposing the introduction of an annual participation fee. This was previously contemplated in our 1999 fee application (RP-1999-0049) but not implemented at that time.

The IMO is now proposing, commencing with the year 2003, a tiered annual participation fee, payable on May 1st 2003, as shown in the table below:

Proposed Annual Participation Fee Per Market Participant Per Year	Threshold Level: Applied to all participants on the basis of market activity
• Not applicable	• From 0 to 99 MWh/yr
• \$1,000	• From 100 to 2,999 MWh/yr
• \$8,000	• From 3,000 MWh/yr and up

The fee will be applied to all market participants (generators, local distribution companies, exporters, traders, direct customers and other buyers and sellers). The threshold level will be based on their volume transacted in the IMO-administered markets. The volume will be assessed on the basis of activities over the 12-month period ending April 30. Annual quantities that will be used for the assessment include: AQEW, AQEI (allocated energy withdrawals and injections), SQEW, SQEI (scheduled quantities of energy withdrawn and injected), BCQ (bilateral contract quantities), or any other indicative quantities of market activity. The fee will contribute to the fixed costs associated with ongoing participant administration.

The threshold MWh and fee level is comparable to that charged by market operators in the U.S. Northeast, as shown in the table below. The IMO has structured the proposed fee to avoid creating a barrier to participation by smaller market participants.

Annual Fees at Northeast U.S. ISOs	
PJM	
- Annual membership fee of \$US 5,000. No additional cost for committee representation. - Load serving entities(LSE) must pay a one-time Reliability Assurance Agreement fee of \$US 5,000 for a seat on the Reliability Committee.	
ISO-NE	
Annual fee of \$US 5,000. No additional cost for committee representation.	
NYISO	
- Annual fee to participate in the NYISO Committees (Management Committee, Operating Committee, and Business Issues Committee). The fee (\$ US) depends on the party's status as follows: - Governmental agencies that represent Small Consumers or act as Retail Load Aggregators primarily for Small Consumers \$0 - Non-profit organizations representing Environmental Parties and Small Consumers \$100 - Small Consumers that use: (a) From 0 to 499 MWh/yr \$100 (b) From 500 to 1999 MWh/yr \$500 (c) from 2000 MWh/yr and up \$1,000 - All other companies and organizations \$5,000 - No annual membership fee for market participants	

A projection of the total revenues stream from the annual participation fee for the planning

period is as follows:

Year	Annual Participation Fee	Number of Participants	Projected Revenues
2003	\$1,000 \$8,000	4 235	\$ 4,000 <u>\$1,880,000</u> \$1,884,000
2004	\$1,000 \$8,000	4 235	\$ 4,000 <u>\$1,880,000</u> \$1,884,000
2005	\$1,000 \$8,000	4 235	\$ 4,000 <u>\$1,880,000</u> \$1,884,000

7.1.4.3 Usage Fee

This fee is already in place, and it recovers the IMO's revenue requirements. This section derives the fee for the year 2003 for approval of the OEB, and provides a projection for 2004 and 2005.

The calculation of the IMO usage fee starts by calculating the revenues to be recovered by this fee as shown in the following table:

Revenue Requirement Calculation for IMO Usage Fee (in \$million)	Year		
	2003	2004	2005
Revenue Requirements – Current Market Operations Program and Market Evolution Program	168.0	161.6	165.3
Less: Other Revenues			
• Projected Revenues from Annual Participation Fee	1.9	1.9	1.9
• Cost recovery for services	0.9	1.1	1.1
• Deferral account balance	3.8	0.0	0.0
• Settlement clearing bank account balance	1.1	1.1	1.1
Revenue Requirement to be recovered by IMO Usage Fee	160.3	157.5	161.2

The second step is to estimate the charge determinant for the usage fee. It is the total AQEW (Allocated Quantity of Energy Withdrawn) for the year, including exports out of Ontario:

Year	18-Month & 10-Year Outlook Demand Forecast (TWh)	-	Transmission Line Losses (TWh)	+	Exports (TWh)	=	Forecast AQEW (TWh)
2003	150.9	-	4.4	+	4.7	=	151.2
2004	152.9	-	4.5	+	4.7	=	153.1
2005	153.8	-	4.5	+	4.7	=	154.1

The third step is the rate calculation:

Year	Revenue Requirement To Be Recovered (\$ million)	÷	Forecast AQEW (TWh)	=	Usage Fee (\$/MWh)
2003	160.3	÷	151.2	=	1.06
2004	157.5	÷	153.1	=	1.03
2005	161.2	÷	154.1	=	1.05

The Usage Fee calculation is premised on a January 1, 2003 implementation. If approval from the OEB is received so as to not permit a January 1 implementation, the Usage Fee will be recalculated to recover the revenue requirements based on an estimate of the AQEW to year-end. For example, the preliminary estimate for Feb. 1 implementation is a fee of \$1.07/MWh.

Appendices

APPENDIX 1 - OPERATIONAL PERFORMANCE MEASURES

Table A1-1 Operational Performance Measures

<i>Description</i>	<i>Measure</i>	<i>Criteria</i>	<i>Standard</i>	<i>Run-In Period Results: May 1- Aug 31, 2002</i>	<i>Cumulative Results To Aug. 31, 2002</i>
Provide Sufficient Information For Effective and Successful Bids and Offers					
Implement accurate Intertie Schedule	Accuracy	Average Daily	≥ 90%	Standard met 4 months out of 4	96.50%
Manage inappropriate Dispatch Instructions	Timeliness	288x/day	≥ 95%	Standard met 4 months out of 4	99.99%
Publish SAA's and SSR's on time	Timeliness	As per schedule	≥ 95%	Standard met 2 months out of 4	93.67%
Minimize Day Ahead Forecast Errors	Accuracy	Average Daily	≤ 3%	Standard met 3 months out of 4	2.83%
Effective Outage Request Processing	Accuracy	Processed vs. Valid	≥ 95%	Standard met 4 months out of 4	99.83%
Determine Operating Security Limits (OSL's) and Populate OSL Database	Timeliness	Average Daily	≥ 98%	Standard met 4 months out of 4	99.86%
Effective processing of Transmission Rights Auction	Timeliness	As scheduled within market rules	1 failure to complete a full auction during run-in period	Standard met 4 months out of 4	100%
Dispatch instructions issued Every 5 minutes (288 times/day)	Completeness	288x/day	≥ 95%	Standard met 4 months out of 4	99.13%
Continuous Operation Of the Market	Frequency of Market Suspension	Number of Market Suspensions per Year	Will Track During Run In Period and Target After 4 months	Standard met 4 months out of 4	No suspensions
	Duration of Market Suspensions	Total Duration (hours) of Market Suspensions per year	Will Track During Run In Period and Target After 4 months	Standard met 4 months out of 4	No suspensions
Manage Meter Information					
Interrogate, validate and estimate revenue metered data	Timeliness	Average Daily	≥ 95%	Standard bettered 4 months out of 4	99.5%
Issue Trouble Reports on the 1 st business day following the Trade day (Automated System)	Timeliness	Average Daily	≥ 85%	Standard bettered 3 months out of 4	88.5%
Complete meter edits by the end of 1 st business day following the agreed resolution with the MSP	Timeliness	As per schedule	≥ 85%	Standard bettered 3 months out of 4	88.3%
Settle The Market					
Issue Preliminary and Final Settlement Statements as per IMO Settlement Statement Payments Calendar (SSPC)	Timeliness	Average Daily	≥ 97%	Standard met 4 months out of 4	100%
Notices of Disagreement issued as a result of IMO errors	Accuracy	As required	≤ 15%	Standard not met	19.3%
Invoice Market Participants					
Issue Invoices as per IMO Settlement Statement Payments Calendar (SSPC)	Timeliness	As required	≥ 95%	Standard met 4 months out of 4	100%
Invoice Accuracy	Accuracy	Average Monthly	≥ 95%	Standard met 4 months out of 4	100%
Market Facing Systems Availability					
MIS (Schedules, Prices & Dispatch, Contract Manager, Message Exchange, ICCP)	Availability	Average Daily as per respective schedule	≥ 95%	Standard bettered 4 months out of 4	96.31%
MOS – MPI (MOS/MIM & Web) (Bids/Offer, Report retrieval, IOMS)	Availability	Average Daily	≥ 99%	Standard bettered 3 months out of 4	99.48%
RMS (CRFA, Settlements/Meter Data/Invoices/MV-WEB)	Availability	Average Daily	≥ 92%	Standard bettered 4 months out of 4	99.78%

APPENDIX 2 - U.S. FERC STANDARD MARKET DESIGN (SMD)

Background

While the IMO is not under FERC's jurisdiction, the implications of its policy proposals, rules, and orders are profound for the U.S. entities, and will affect our markets, interconnected grid operations, and other areas of our mandate.

On July 31, 2002, FERC issued a long awaited notice of proposed rulemaking (NOPR) with the objective and title of "Remedying Undue Discrimination through Open Access Transmission Service and Standard Electricity Market Design". This is the third in a trilogy of orders that started in 1996 with orders 888 and 889, and continued in 1999 with Order 2000.

The IMO contributed to the development of this proposed rule over the past year by participating in technical conferences, filing comments, and co-ordinating with regional and industry groups.

Main features of the proposal

The Commission proposes to mandate that every utility becomes an Independent Transmission Provider (ITP), contracts for such a service, or joins an (RTO), with the objective of independent direction of the operation of its transmission facilities.

An ITP is the next member of the ISO-RTO family of independent entities. An ITP will be required to administer a modified Network Access Transmission tariff that replaces the tariff of Order 888. It will also be required to operate spot markets, monitor and mitigate market power, and be active in regional planning and coordination. The proposal adopts a model for the industry that relies mainly on complete transmission access and on bilateral contracts. This is supplemented by the necessary spot and ancillary markets.

The proposal concludes that locational marginal pricing (LMP) and its associated suite of Congestion Revenue Rights (CRRs) are the best options to manage congestion. The Commission concludes that imperfections will persist in electricity markets and that makes market monitoring and mitigation essential. To enhance reliability and encourage investments, the Commission is proposing a resource adequacy provision that relies in part on shifting responsibility for resource adequacy to entities that supply end-use customers. The Commission recognizes the value and necessity of working closely with states, and consulting extensively with stakeholders, including Canadian entities.

An early assessment of the FERC notice

Our early assessment indicates that there is much that is attractive about the proposal. Attractive features include: the form and mandatory nature of the new proposed transmission tariff; the bid-based, security constrained market basis; the use of financial (not physical) transmission reservations and rights; the emphasis on planning and interregional co-ordination; and the attempts to harmonize with standards setting authorities such as the North American Electricity Standards Board (NAESB) and NERC. Ontario's markets are quite compatible on the transmission access side, have three gaps on the market design side (LMP, Day-Ahead markets, and resource adequacy requirements), and have started to address the regional planning and co-ordination issues.

The Commission has been strongly influenced by the market design features of the northeast US ISOs, including those of New York and PJM with whom the IMO is already actively involved in a market integration effort. The NOPR calls for elimination of multiple transmission charges for inter-jurisdictional power flows ("pancaking"), which could increase market efficiency around Ontario.

The table below shows a comparison of FERC proposed features to the market design features of New York, PJM and the IMO.

Table A2-1 ISO Market Design Features – 2002			
Standard Market Design Elements	PJM	NYISO	IMO
Day-Ahead Market (DAM) for Energy and Operating Reserves • Multi-settlement • Bid-based • Unit commitment • Financially binding	Yes Yes Yes Yes	Yes Yes Yes Yes	No
Real-Time Market (RT) for Energy and Operating Reserves • Imbalance market • Bid-based • Co-optimization with operating reserves	Yes Yes No	Yes Yes Yes	No Yes Yes
Congestion Management			
• Locational Marginal Pricing	Yes	Yes	Only at interties
• Financial Transmission Rights			
-Obligations	Yes	Yes	Only at interties
-Options	No	No	No
-Monthly Auction	Yes	Yes	Yes
-Long-Term Auction	No	Yes	Yes
Capacity Adequacy	Yes ICAP	Yes ICAP	No
Market Monitoring • Compliance & Surveillance • Bid Price Caps • Must Run Contracts • Automatic Mitigation Procedures	Yes No Yes No	Yes Yes Yes Yes	Yes Yes Yes No
Demand Side Programs	Yes	Yes	Limited

APPENDIX 3 - NORTHEAST RTO (NERTO)

On August 23, 2002, the New York ISO (NYISO) and the New England ISO (ISO-NE) filed with FERC a proposal to combine the ISOs to create the Northeast Regional Transmission Organization (NERTO). The proposal would develop the NERTO market to further the goals of standardizing wholesale electricity markets and eliminate or reduce trade barriers within these ISO jurisdictions. These proposed benefits include:

- larger and more efficient markets with no trade barriers;
- improved regional operations and reliability;
- the elimination of pancaked rates;
- improved processes for expansion of the region's transmission system and connection to the transmission system; and
- the creation of an even more capable and efficient organization to administer the NERTO market and maintain reliability in the Northeast.

The benefits are expected to result in both regional savings in wholesale power costs and costs to market participants, through the elimination of multiple, different markets.

IMO Planning and Market Development Agreement

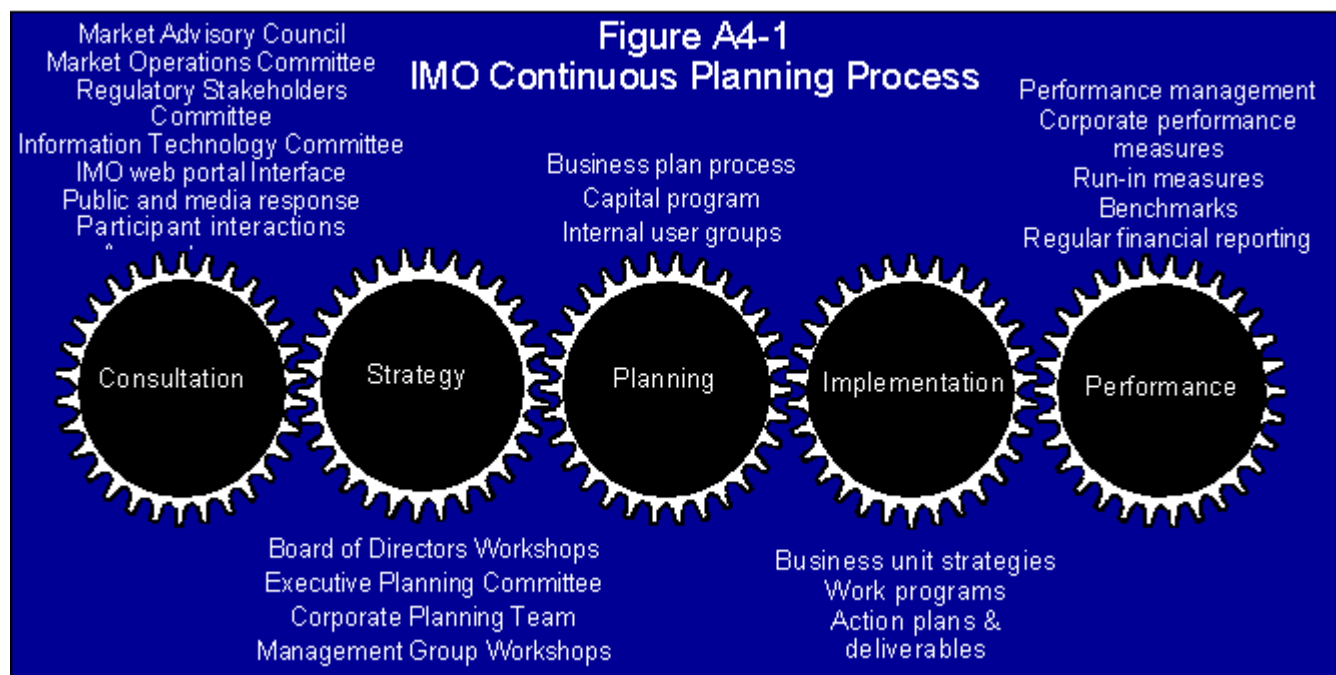
On July 17, 2002, the IMO finalized a Planning and Market Development Agreement with NYISO and ISO-NE to resolve seams issues and harmonize electricity markets between the Northeastern U.S. and Ontario. The agreement sets the stage for achieving better coordination in such areas such as:

- consistent calculation, coordination and publishing of transfer capabilities;
- sharing operating reserve arrangements;
- outage coordination;
- planning cooperation;
- enhancements to existing market features;
- streamlining transaction procedures and data requirements.

Other mutually beneficial cooperative efforts would include the formation of compatible Day-Ahead Markets that will enable market participants to engage in seamless Day-Ahead transactions between control areas, and elimination of multiple transmission charges to facilitate more trade potential over the larger region.

APPENDIX 4 - BUSINESS PLAN PROCESS & GUIDELINES

The IMO's continuous planning process is summarized in Figure A4-1. It links many activities together comprehensively to ensure optimum results in the development of both the IMO-administered markets and the IMO's business units.



The overall planning process consists of 5 interconnected elements. Together they enable a wide and growing spectrum of consultative activities and inputs to influence strategies that result in plans, which, in turn, generate actions that are measured to ensure that anticipated results are achieved.

The process that generates IMO's business plan and rate proposal, is one part of our evolving continuous planning effort. For the 2003-2005 Business Plan, detailed instructions were provided to all IMO business units. They incorporated a challenging schedule, strategic guidelines for business units to consider in the development of their plans, and other more detailed instructions aimed at providing clarity, focus, and consistency in achieving an integrated set of plans. The instructions, entitled "2003-2005 Business Plan Preparation Support Document" are provided in their entirety in this appendix.



IMO 2003-2005 Business Plan Preparation Support Document

July 2002

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Appendices

Appendix A - 2003-2005 Capital Program Assumptions

Appendix B - IMO Business Services

Appendix C - IMO Performance Management

Appendix D - Strategies, Work Programs, and Resources Summary Template

Introduction

This reference document provides IMO business units with relevant information and instructions intended to assist business units (BU's) in the preparation of work programs that comprise the 2003-2005 IMO Business Plan (BP) document.

1. Business Plan Process

Objectives of the 2003-2005 business plan process

- Build on last year's process
- Make material improvements in product unbundling, performance management
- Consider impact on line units during the market opening and 1st year operation period

Overview of the process

- The starting point will be the 2003 projection from last year's plan, possibly modified to reflect changes to organizational structure or unallocated corporate reductions.
- The IMO Executive Planning Committee (EPC) will declare capital program starting assumptions
- If a BU agrees with the deliverables, programs, financial envelopes, and human resource envelopes from last year, the submission requirement will be minimal
- If a BU proposes a change to any of the above elements, the proposal must be supported with a business case justification
- Assuming that the proposed change involves increased resources, the business case support will include the following:
 - Quantification of the increase that is being requested.
 - Additional deliverables associated with the increase.
 - Performance measures and targets to be applied
 - Applicable benchmarks

Timeline

- | | |
|--------------|---|
| · Early June | - Review guidelines and process with CPT/EPC/MT/CEO |
| · Early July | - Issue instructions to BU's |
| · August 6 | - 1 st BU Submissions due |
| · August 8 | - First rough draft of plan text |
| · August 9 | - Review of compiled 1 st submissions by CPT |
| · August 16 | - Recommendations on BU resource envelopes from EPC |
| · Sept 4 | - Final BU Submissions due |
| · Sept 10 | - Final DRAFT Plan |
| · Sept 12 | - MT Mtg. Reviews and Approves Bus. Plan |
| · Sept 16 | - Final Business Plan Ready For Printing |
| · Sept 26 | - Board Package distributed - including 2003-05 Bus. Plan |
| - Oct 3 | - Audit committee review |
| - Oct 4 | - Board Approval |
| -Nov 1 | - OEB Submission |

Responsibilities

- **CEO** – will sponsor the process and approve process, principles, guidelines, instructions, and final business plan
- **Executive Planning Committee (EPC)** - will declare capital program starting assumptions
- **EPC / Mgt Team (MT)** – will receive BU submissions and recommendations from Corporate Planning Team (CPT) to address issues arising from the business units' submissions, and will make decisions to address issues to produce a corporate plan that is within guidelines.
- **CPT** – will develop guidelines and process, will make recommendations to EPC & MT on how to address issues arising from BU submissions, will serve as resources to BU's to produce the BU submissions
- **IMO Business Units (BU's)**– will produce plan submissions consistent with identified principles and according to guidelines

Corporate Support:

- **Business Development** – will drive the process overall, will prepare presentation material for CPT, EPC, MT and Board, will author the BP document exclusive of the financial analysis, will prepare Board submission
- **QD&A** – provide a service to the author with respect to corporate level performance measures and benchmarks
- **Regulatory & Governmental Affairs** – will provide support with respect to regulatory driven elements
- **Finance** – will issue financial templates to BU's, will produce the financial analysis in the BP document, will produce financial presentation material
- **Communications** – will prepare associated communications

2. Principles

The following planning principles, first introduced in the 2002-2004 Business Plan, serve to provide continued focus for IMO work programs and goals. Business unit work programs should consider deliverables, performance measures, and goals consistent with the principles below.

1. Financial flexibility - The need to place increased emphasis on financial management in order to maintain flexibility to respond to customer requirements and evolve the IMO administered markets remains a challenge throughout this plan.

2. Focus on operations - IMO expects significantly elevated demands on its facilities, tools, and staff from market participants and other stakeholders, during the post market opening period. To ensure that the IMO can adequately meet these demands, the undertaking of projects or initiatives that will significantly impact ongoing operations, specified deliverables, or the Usage Fee during the planning period should be carefully considered, bearing in mind key business drivers.

3. Customer-oriented service culture - Work programs need to continue to transform culture and activities to ensure the IMO is routinely assessed as being excellent at satisfying our customers.

4. Operational flexibility - Change initiatives should recognize the need to maintain flexibility in our operation and support of the wholesale market, to ensure we can evolve and be competitive with other markets, while not limiting improvements to current services and products.

5. Unbundling products and services - Strategic unbundling of products and services will continue to be pursued in order to more readily demonstrate value to customers. Unbundling is consistent with and supports several of the other principles stated.

6. Making it simpler - IMO will demonstrate its value to customers through simpler, more transparent rules and processes that are easily understood and can be conveniently used to assess the extent to which the IMO performs according to those rules and processes.

7. IMO visibility - A key to IMO's future success will be its ability to position itself as an industry leader, neutral and independent, and championing the Ontario electricity market. The IMO should be a valuable source of useful information, assessments and knowledge to its current customers, to investors, and to key stakeholders for all matters related to the electricity market, not just the IMO-administered wholesale market.

8. Managing human resources - Demographic and industry developments, including early retirements with undiscounted pension and external opportunities for staff, are a current reality. IMO will have to incorporate new entrants into its workforce and support cultural change objectives through the recruitment process.

9. Reviewing past commitments - Past commitments and methods of delivering obligations should be reviewed to ensure that they are consistent with evolving customer needs and continue to contribute to corporate principles and objectives.

3. Guidelines

The instructions below are intended to provide more specific considerations for business units to incorporate into the development and preparation of an improved plan.

a) Last year's business strategies, plans and resource levels for 2003 and 2004 (possibly adjusted for unallocated corporate level reductions) will form the basis for work programs for this year's 2003-2005 planning horizon. Financial templates issued to business units will contain resources as defined last year for the 2003 and 2004 periods. Business units are obligated to review and modify work programs as befits the current best estimates of performance levels, schedules and resources required to achieve identified and approved goals. Specifically, increases in overall and work program resource levels will necessitate a detailing of increased deliverables, improved performance measures, or other compelling justifications driven by planning principles in order to be accepted for this year's plan.

b) Consolidation and process improvement after the May 1, 2002 market opening is a key message in the preparation of work programs. The expectation of future value-added products and services to serve the market has merit, and other processes for change and development of business initiatives are and will identify the needs, implications and impacts, and be separate from this year's business plan development. While it may be anticipated that future evolutionary steps for the IMO will work their way into future business plans through the continuous planning process, for the 2003-2005 planning exercise no major initiatives have been identified in detail. *Corporate and Legal Affairs* will provide leadership in the allocation of internal resources for, and the assessment of future initiatives and work to amalgamate business development with business planning.

c) The current IMO capital program is based on the 2nd Quarter 2002 Consolidated Capital Project Cost listing, summarized in Appendix A. Capital projects other than those identified and accepted by IMO Executive Planning Committee in early July 2002, and identified in Appendix A, should not be assumed in work program development. Additional capital projects will be considered regularly by the EPC on an ongoing and continuous basis through the capital planning and delivery process.

d) In the interests of better defining and delivering work programs on behalf of the customer, business units are expected to discuss cross-business-unit work program interactions with other business units, as appropriate. This will facilitate a common understanding of the relative priorities, expected work program activity levels, and work program responsibilities of other business units. Improved communication during the planning stage will drive efficiency at the work program execution stage. Listing of assumptions, particularly those involving resource or service delivery commitment expectations from other business units, should be included in work programs. In particular, *Information Technology & Infrastructure* will, as a key service provider, be undertaking to charge out certain of its services to other divisions based on usage - these instructions will be provided at a later date, and are expected to be budget-neutral.

e) Customer feedback and consultation input to business unit planning is strongly encouraged in order to drive improvements and a customer oriented service culture.

f) Unbundling of services and products, as both an established sound business direction, as well as a stakeholder concern, will be pursued through a definition stage during 2003. Six service categories were identified in the 2002-2004 IMO Business Plan, an extract of which is provided in Appendix B. The expected unbundling definition work will not affect IMO work program planning or plans directly. Business units are, however, expected to identify by the final, or detailed submission, resources associated with each service and be able to distribute work plans according to the six services again for the 2003-2005 business plan. Business units should also identify specific products provided to external clients (within each service category), associated costs and possible revenues, and maintain awareness of potential value-added products that may be feasibly developed in the future. Products might include i) maintaining the active status of a market participant, with a view to separating out an annual participant fee, ii) specific market products, iii) training, iv) dispute resolution, or v) other unique, variable-use, or customized user-specific services.

g) 2003 performance expectations from work programs shall be consistent with the current set of corporate performance measures, including the run-in period operational performance measures identified in Appendix C.

h) The business plan summarizes IMO's work programs and associated funding requirements for the IMO Usage Fee rate case. The Usage Fee is the regulated blended tariff that the IMO charges to market participants for satisfying a number of market and related functions, primarily obligations and deliverables outlined in the Energy Act (Bill 35), the Ontario Market Rules, and IMO's market manuals. Work programs or elements extending beyond these commitments should provide an indication of how the product of the work program or element could be self-funded.

i) The IMO's fee methodology was approved by the OEB in 2000. The fee structure, which continues for 2003, includes an annual usage fee (\$/MWh). The usage fee numerator is based on IMO's total revenue requirement (\$) adjusted for any prior period surplus or deficit, and cost recovery revenues. The usage fee denominator is the forecast allocated electricity withdrawals (MWh) the source of which is the September 2002 18-Month Outlook for year 2003, and the June 2002 Ten-Year Outlook, for the years 2004 and 2005. Exports are included in the withdrawal amount. Line losses are subtracted from withdrawals for the purpose of the usage fee calculation. *Market Operations & Forecasts* will supply the allocated electricity withdrawal input by the end of August for usage fee calculation.

j) The \$1 / MWh annual Usage Fee target identified in the 2002-2004 business plan continues with the objective of achieving a financially prudent and flexible plan for the 2003-2005 planning period.

4. Templates

Two sets of templates will be made available to business units:

- the Strategies, Work Programs and Resources Summary template is attached as Appendix D.
- the Financial template will be provided to BU's by Finance in mid-July, 2002

5. Clarifications

Questions or clarifications regarding business planning should be directed to Don Lee or Roy Sepa, Business Development, Corporate & Legal Affairs.

Appendix A - 2003-2005 CAPITAL PROGRAM ASSUMPTIONS

In preparing business plan submissions, Business Units should assume that only the following projects continue or may be committed by or during the plan period:

Project	Total Life Budget (k\$) ¹	Note
Approved & Committed Projects		
DACS replacement	14,639	High priority infrastructure
CSCC building expansion project	8,538	High priority infrastructure
IMP Phase II	4,214	Post market opening vendor change requests & associated hardware
SVC upgrade	751	High priority infrastructure
Tivoli service desk migration to Peregrine	750	High priority infrastructure
MSS applications	250	Market surveillance
Subtotal	29,142	
Recommended & expected to proceed to business case development (July 2002)		
Remote terminal unit expansion - initial registration	480	High priority infrastructure
Server enhancements	725	High priority infrastructure
EMC expansion / enhancement projects	400	High priority infrastructure
QA/test network environment	400	High priority infrastructure
Wall board expansion	1,600	High priority infrastructure
Real time web interface	150	Public and participant interface
Windows upgrade	687	High priority infrastructure
Software licenses	250	High priority infrastructure
Security device replacement	750	High priority infrastructure
Anticipated change requests	9,000	High priority infrastructure
Subtotal	14,442	
Total	43,584	

¹ Committed & approved project costs are incorporated into budgets and on-going project management processes, and tracked on a monthly basis. Recommended project costs and schedules are estimates only, subject to comprehensive definition upon approval and commitment.

Appendix B - IMO BUSINESS SERVICES (from 2002-2004 IMO Business Plan)

Description of IMO Services

Consistent with stakeholder feedback, this year's Business Plan begins a shift from an internal focus on resourcing by organization unit to a mapping of the IMO's resource use that ties more directly to services offered to market participants. To date this mapping is not at the same level of resolution as that for the organizational budgets, but the intention is to continue to develop this model over the next year.

The IMO serves one of the largest centrally dispatched control areas in North America. It serves 11 million people in Ontario, with average annual energy over the planning period of 155 TWh, peak demand of 25,000 MW, 29,900 km of transmission lines, and extensive links to the neighbouring markets and systems in Canada and the U.S. Approximately two hundred and fifty market participants with estimated transactions of \$8 billion Cdn per year are expected to be active in the IMO administered markets.

IMO services are a function of its mandate, primarily directing the operation of Ontario's bulk electricity system and the administration of electricity markets in Ontario.

The IMO has identified its services according to six key areas. All the costs of the IMO will be allocated to these services or functions. The purpose of doing this at this early stage of market development is to illustrate where resources are being spent. Unbundling for fee purposes is quite a different matter and will be undertaken once sufficient operating experience is accumulated. The following are the six services that have been identified to date:

1 Directing the operation of the electricity system

The IMO directs the operation of the Ontario Electricity system. The purpose of this direction is to ensure the ongoing reliable supply and delivery of electricity throughout the province. This direction process begins well in advance of each operating day and progresses through to actual time. It encompasses many critical aspects including; the assessment of planned transmission capability and the requirements of new connections to the system, the development of operating agreements with Ontario Transmitters and neighbouring system operators to coordinate operation, the preparation of emergency plans, the determination of system capability within which the system can operate reliably, the establishment of reliability standards, the ongoing assessment of reliability impacts, management of facility outage plans proposed by participants and the real-time minute to minute operation of the system within its capabilities and in a way which meets reliability standards and agreements. This operation requires sophisticated tools, databases, models and analysis as well as reliance on a distributed communications and computer infrastructure to monitor and direct operation. Once the market opens, this operation will be integrated seamlessly with the operation of the IMO markets.

2 Operating the various IMO markets

The IMO will accept offers from producers of electricity and providers of reserves and bids from consumers of electricity, will determine a market-clearing price (or spot market price) and dispatch resources every five minutes.

In addition, the IMO will auction financial transmission rights to allow wholesale market participants who import or export power to hedge their prices across the interconnections.

3 Customer Services

The IMO offers a suite of services to help market participants understand the markets and the associated systems and products, and to provide customer-responsive support. These services include:

- Participant training programs which consist of written guides, classroom sessions and on-line web courses.
- A publicly accessible Help Center which provides prompt response to questions using a rigorous tracking process.
- Access to a wide variety of Market Information and Communications, which contributes to connecting the marketplace and forming a virtual community of shared information. The IMO provides timely information and documentation in the form of manuals on market rules and procedures available on demand from the website, and will expand its information provisions to include items such as immediate real-time price information, regular reports on performance of IMO markets, and other pertinent material as the market opens.
- The IMO produces longer-range forecasts of power demand, generation, and transmission adequacy, including associated impacts on reliability. The IMO also issues shorter-term forecasts that are critical to scheduling maintenance.

4 Settlements and Funds Administration

This service spans all activities from reading meters to funds transfers for payment. The IMO bills and settles payments for all transactions handled in the wholesale marketplace. Reconciliation of purchases and sales is carried out on a daily basis. In addition, the IMO manages the prudential requirements for the marketplace. The IMO will issue invoices for and then settle transactions in the Real-Time Energy Market and the Transmissions Rights Market.

5 Market Development, Assessment and Compliance

The IMO monitors the markets and the behaviour of the participants to identify flaws or conduct that is detrimental to fair and efficient competition.

In addition to its surveillance service, it ensures that market participants are in compliance with the market rules.

The IMO will maintain the market rules, including rule amendments in response to market needs. Future market development is an integral function of the IMO.

6 Market Participant Administration

The IMO has put into place several administrative processes to better facilitate how market participants transact in the marketplace, including:

- Authorization: (approval, facility and meter registration, exemptions, etc.)
- Dispute resolution

Appendix C - IMO PERFORMANCE MANAGEMENT

Operational Performance Measures For Run-In Period

Measures will be reviewed in consultation with market participants about 4 months after market opening. Measures will be revised as necessary based on experience and feedback.

Market System Performance	Measure	Criteria	Performance Standard
Provide Sufficient Information For Effective and Successful Bids and Offers			
• Implement accurate Intertie Schedule	Accuracy	Average Daily	90%
• Manage inappropriate Dispatch Instructions ⚙	Timeliness	288x/day	95%
• Publish SAA's and SSR's on time	Timeliness	As per schedule	95%
• Minimize Day Ahead Forecast Errors	Accuracy	Average Daily	< 3%
• Effective Outage Request Processing	Accuracy	Processed vs. Valid	95%
• Determine Operating Security Limits (OSL's) and Populate OSL Database	Timeliness	Average Daily	98%
• Effective processing of Transmission Rights Auction	Timeliness	As scheduled within market rules	1 failure to complete a full auction during run-in period
• Dispatch instructions issued Every 5 minutes (288 times/day)	Completeness	288x/day	95%
• Continuous Operation Of the Market	Frequency of Market Suspension	Number of Market Suspensions per Year	Will Track During Run In Period and Target After 4 months
	Duration of Market Suspensions	Total Duration (hours) of Market Suspensions per year	Will Track During Run In Period and Target After 4 months
Manage Meter Information			
• Interrogate, validate and estimate revenue metered data	Timeliness	Average Daily	95%
• Issue Trouble Reports on the 1 st business day following the Trade day (Automated System)	Timeliness	Average Daily	85%
• Complete meter edits by the end of 1 st business day following the agreed resolution with the MSP	Timeliness	As per schedule	85%
Settle The Market			
• Issue Preliminary and Final Settlement Statements as per <i>IMO Settlement Statement Payments Calendar(SSPC)</i>	Timeliness	Average Daily	97%
• Notices of Disagreement issued as a result of IMO errors	Accuracy	As required	< 15%

⚙ The intent of this measure is to ensure that equipment overloading does not occur due to the issue of an inappropriate dispatch instruction. Such an event will be defined as dispatch over a limit that cannot be corrected within 15 minutes.

Market System Performance	Measure	Criteria	Performance Standard
Invoice Market Participants			
• Issue Invoices as per <i>IMO Settlement Statement Payments Calendar (SSPC)</i>	Timeliness	As required	95%
• Invoice Accuracy	Accuracy	Average Monthly	95%
Market Facing Systems Availability			
• MIS (Schedules, Prices & Dispatch, Contract Manager, Message Exchange, ICCP)	Availability	Average Daily as per respective schedule	95%
• MOS – MPI (MOS/MIM & Web) (Bids/Offer, Report retrieval, IOMS)	Availability	Average Daily	99%
• RMS (CRFA, Settlements/Meter Data/Invoices/MV-WEB)	Availability	Average Daily	92%

Appendix D - STRATEGIES, WORK PROGRAMS AND RESOURCES SUMMARY

Business Unit Name:

1. Business Unit Strategies:

2. Major Associated Initiatives (Capital or OM&A):

3. Business Unit Work Programs:

Description, objectives, associated FTE's (full time equivalent's), and quantifiable indicators of achievement / success:

4. Assumptions, including agreed upon inter-business unit considerations on identified work programs:

APPENDIX 5 - BUSINESS UNIT STRATEGIES AND PLANS

The complexity of administering the IMO markets, combined with cost pressures on our total fees and the need to address current market operations issues, have all contributed to necessary trade-offs in formulating business unit plans. This Appendix, in addition to outlining business unit accomplishments and accountabilities, addresses the shifts in work programs that are anticipated in the 2003-05 Business Plan. These trends reflect the management team's consideration of the business of the IMO as a whole, providing resources to areas requiring greater emphasis by prioritizing across the entire business – not simply within business units – and limiting the overall growth in required resources.

A major consideration in such efforts is balancing cost pressures with potential impacts on market participants, electricity reliability, and current market operations. Examples include:

- while ensuring that internal oversight and assurance processes are maintained at an appropriate level, shifting greater attention to ensuring productive business processes.
- carefully assessing and rationalizing effort dedicated to maturing market processes.
- restricting system changes and enhancements to those identified to be higher priority bearing in mind resource limitations.
- avoiding the practice of parallel development of market rules and functional requirements for the existing market, new market systems, or additional major enhancements. This practice, although necessary during the implementation of the IMP, can impact costs significantly. Market rule definition and user requirements will now be developed to a near final state before development of the systems is undertaken.
- better scrutinizing and tracking of tool enhancements and changes to ensure that predicted efficiency gains, cost savings or workload reductions are achieved.

Some changes will be evident external to the IMO, but will be consistent with the recognition of market participants' expected roles and responsibilities as members of a competitive industry. To ease the continuing transition, the IMO will increasingly be assisting participants to help themselves, and relying on participants to assume greater responsibility for their activities and actions. For example:

- market participants will be encouraged to take on greater responsibilities for ensuring their outage requests contain the information necessary for the IMO to respond in a timely fashion.
- NERC transaction tag updates will evolve to be the full responsibility of the submitter in order to enable their desired transactions to be scheduled among interconnected markets.
- IMO efforts to assure Ontario's ability to respond to large-scale electricity emergencies will be refocused. This will entail proving the effectiveness of plans through annual system restoration exercises driven by realistic scenarios that provide market participants with greater freedom to meet exercise objectives, rather than burdensome and intensive detailed script-driven exercises.
- short term, tactical improvements to existing market systems will be prioritized and balanced with pressures to implement new major enhancements and initiatives, taking into account participant concerns and priorities.
- meeting prudential invoicing and funds transfers will be expected to become more routine, reducing market participant's expectations for intensive oversight and support.

The balance of this Appendix provides further details of total IMO OM&A and staff by business unit and sets out strategies, work programs, trends and achievements for each of the IMO's business units.

IMO Management Team

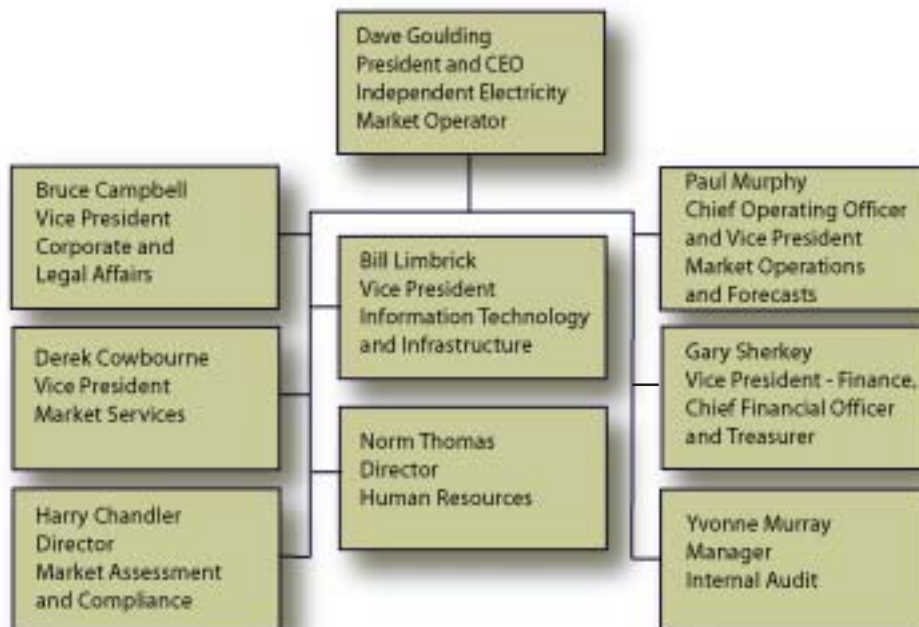


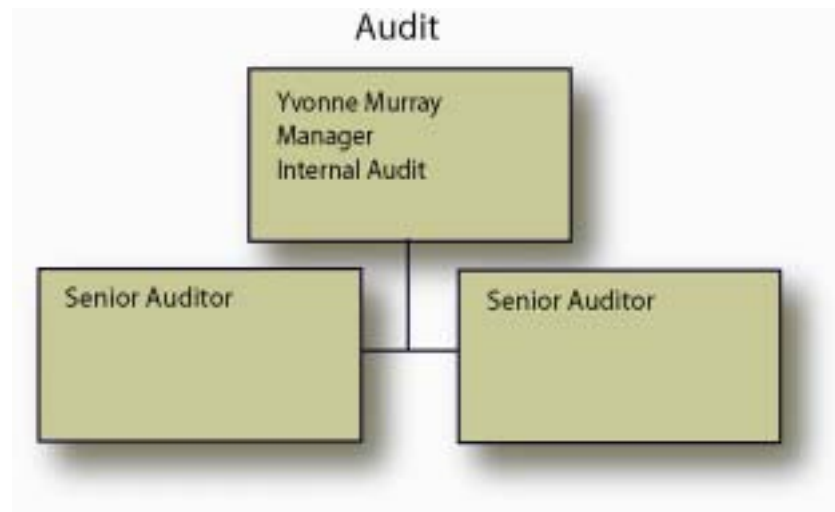
Table A5- 1
Total OM&A by Business Unit (\$million)

	2002 OEB Approved	2002 Projected	2003	2004	2005
Chief Executive Officer	2.9	3.1	3.3	3.3	3.5
Board of Directors	1.9	1.7	1.7	1.7	1.7
Audit	1.2	1.1	1.4	1.2	1.2
Corporate & Legal Affairs	5.7	5.5	6.2	6.2	6.3
Finance	3.5	4.0	4.3	4.3	4.4
Human Resources	2.3	2.1	2.5	2.4	2.3
Market Assessments & Compliance	1.7	1.8	1.9	1.9	2.0
Market Operations & Forecasts	18.2	17.5	18.2	19.2	19.6
Market Services	8.9	9.5	9.3	9.7	10.1
Information, Technology & Infrastructure	40.0	36.7	37.9	37.6	38.4
Transition OM&A	0.7	1.9	-	-	-
Corporate Items	(2.0)	2.0	7.7	9.9	11.8
TOTAL	85.0	86.9	94.4	97.4	101.3

Table A5-2
Staff* by Business Unit

	2002 Actual Sept. 1, 2002	2003	2004	2005
Chief Executive Officer	2	2.5	2.5	2.5
Audit	3	4	4	4
Corporate & Legal Affairs	25	28.5	28.5	28.5
Finance	22	21	21	21
Human Resources	13	14	13	12
Market Assessments & Compliance	14	13	13	13
Market Operations & Forecasts	138	138	137	136
Market Services	76	75	75	75
Information, Technology & Infrastructure	138	116	114	115
TOTAL	431	412	408	407

* staff includes regular and temporary staff at year end



Strategies

1. Ensure effective corporate governance is maintained throughout the organization to accomplish its objectives.
2. Promote effective risk management and controls throughout the organization
3. Support change management to lead the IMO to a successful and enduring organization
4. Demonstrate, encourage and support customer-focused culture across the organization.
5. Establish Internal Audit as a value-added service to the organization.
6. Continuously improve high quality professional audit services

Work Programs & Deliverables

To achieve the above strategies requires the following work programs and deliverables:

1. Ensure effective corporate governance is maintained throughout the organization to accomplish its objectives.
 - Audit Services Plan that meets the needs of the Audit Committee and management
 - Support to the Audit Committee & Senior Management
 - Quarterly Reports
 - Special Reports
 - Annual Audit Plan
 - Gather & disseminate corporate governance information
 - Risk-based audit methodology employed
2. Promote effective risk management and controls throughout the organization
 - Audit Plan incorporates a variety of audits and focuses on high risk areas:
 - Process
 - Compliance
 - Financial
 - Information Technology
 - Contribution to the Enterprise Risk Management process
 - Clear, concise reports on risk management controls
 - Assessment of the IMO Control Environment using the "Criteria of Control" (CoCo) model
3. Support change management to lead the IMO to a successful and enduring organization
 - Make valuable and manageable recommendations that are in line with the organization enduring plan
 - Bring critical issues to Audit Committee's attention
 - Bring significant issues to President & CEO's attention
 - Support change by reviewing processes for efficiency and effectiveness
 - Regular attendance of IA Manager to Management Meetings

4. Demonstrate, encourage, and support a customer-focused culture across the organization.
 - Demonstrate knowledge and understanding of the business units
 - Encourage and support client's participation in assignments to increase customer satisfaction
 - Incorporate customer-focused components in all assignments
 - Maintain constant communication with client throughout assignment
5. Establish Internal Audit as a value-added service to the organization.
 - Continuously improve high quality professional audit services.
 - In consultation with the Audit Committee and the IMO management team (MT), develop audit plan in line with corporate risks and priorities
 - Provide audit reports that are objective, constructive, and are added value to client.
 - Provide advice/comments on corporate policies/procedures prior to issuance
 - Provide relevant and useful information that add value to MT and the Audit Committee
6. Continuously improve high quality professional audit services
 - Review & improve IA's services on an ongoing basis
 - Solicit client feedback
 - Ongoing professional development
 - Produce clear and concise reports

Trends & Achievements

Over the past year, Internal Audit has provided support to both the Audit Committee of the Board of Directors and Senior Management of the IMO in their oversight responsibilities to prepare for market opening.

Internal Audit performed a review of the Market Funds processes and systems and provided assurance on the adequacy of the controls in mitigating key business risks. This enhances IMO's ability to provide efficient and accurate funds administration to its customers.

Internal Audit provided support to line management in ensuring that the IMO staff, business processes, systems and tools were ready to meet the needs of the competitive marketplace. This support was accomplished through the reviews conducted, (IT System Security and Controls, Business Continuity.

Internal Audit assists in fostering an effective risk management culture across the IMO through its risk-based auditing approach and the implementation of the Criteria of Control model across the IMO.

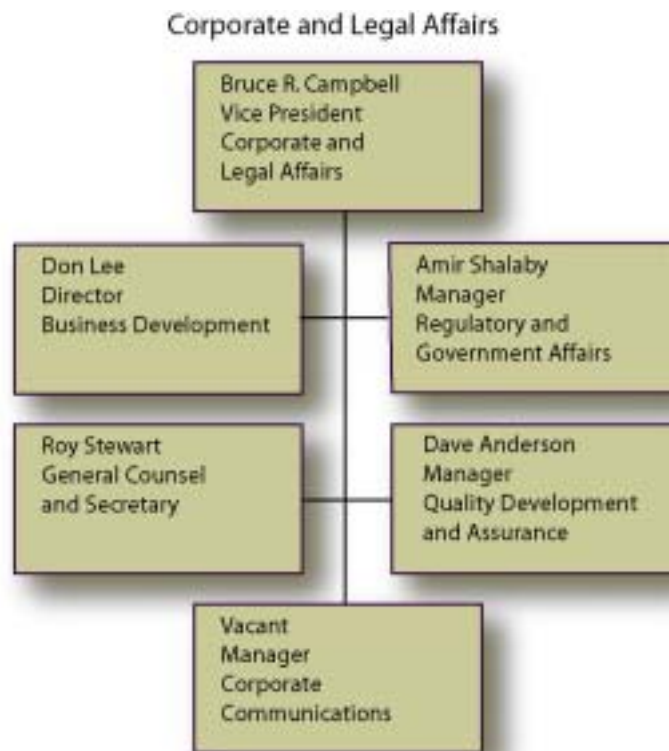
Over the past several months, significant developments have occurred in the corporate governance arena. As a result, there has been increased responsibility with the Board of Directors and, specifically, that of the Audit Committees. In general, stakeholders want assurance on reliable reporting and assurance that essential controls are firmly in place.

One of the IMO's business drivers is "Effective use of funds". As an organization that obtains its funding from its stakeholders, the IMO has to demonstrate that it is providing value-for-money and is fiscally responsible.

While many of the IMO business processes and supporting systems were reviewed prior to market opening, the focus then was on the existence or adequacy of controls. Now that the market is in production, the critical business processes will be reviewed from a control effectiveness viewpoint.

The IMO creates and receives an enormous volume of information. Security and confidentiality of information continue to be high priorities for the IMO in meeting its customers' expectations.

Taking the above into consideration, and in consultation with Senior Management and the Audit Committee of the Board of Directors, the Internal Audit Services Plan 2003 includes a combination of financial audit process audits and Information Technology audits.



Strategies

1. Corporate and Legal Affairs (C&LA) advances the IMO's interests by leading the alignment and integration of corporate-wide efforts in the definition and achievement of the IMO's vision. CL&A achieves this by representing the IMO in regulatory proceedings, including regulatory stakeholder relationships; delivering corporate communications objectives; facilitating and guiding decision support and business development activities; and providing legal counsel.

2. CL&A further supports the corporate mission by efficiently providing corporate centre support services required by all business units. These include: market change management; legal support; records, information and library services; and corporate communications services, and management team support. These have the key objective of providing efficient and cost-effective support to those areas requiring corporate-wide coordination or consistency within a rapidly evolving environment.

Specific initiatives to support these strategies include:

- Championing efforts that facilitate IMO building a competitive and efficient business to support its market participants and stakeholders.
- Managing and supporting specific IMO corporate responsibilities and programs aimed at achieving excellence in service, and responsiveness in addressing market customer needs and market change requirements.
- Providing corporate level leadership, guidance and assistance in the evolution of the IMO toward achieving its vision.

Work Programs

For strategy 1. Alignment and integration in the achievement of the IMO vision:

1. Develop Business Strategy
2. Manage Regulatory & Government Affairs
3. Define New Products and Services
4. Lead Corporate Planning & Development

For strategy 2. - Providing Corporate Centre Support Services:

1. Communications Services
2. Market Change Management Services
3. Legal Services
4. Information and Records Management Services
5. Information Security and Confidentiality Management
6. Senior Management Decision Support

Trends

Corporate level services have and are being aligned to improve efficiency and effectiveness, post market opening. Risk management has been combined with Audit and the responsibilities transferred to the Finance business unit. Capital planning has moved from the information technology area to C&LA in order to better achieve fully integrated business planning and to ensure corporate wide capital and market evolution priorities are considered in furthering and selecting among market operations and evolution proposals. While a high level of intensity related to quality assurance was necessary in the transition period to market opening, emphasis on this function has been shifted to recognize managers' accountabilities for quality assurance in all business processes.

During 2002, participation in US regulatory developments (FERC, RTO, and SMD initiatives; NAESB and NERC developments; Northeast RTO co-ordination) were a major focus for the regulatory group. As better definition is now being achieved in each of these areas, participation and co-ordination will shift to line units. While maintaining the investment in FERC and NEB relationships, the work of the regulatory group in 2003 will be rebalanced toward co-ordination of input from across the IMO on more local issues, including aspects of the Market Evolution Program and critical OEB issues and proceedings such as Hydro One's upcoming transmission rate and PBR proceeding.

Achievements

Established market change management processes throughout the IMO, and now include significant consultation with stakeholders. These processes will coordinate change and ensure all participants are aware of all changes affecting them and the market.

Increased the focus of business planning within the IMO. This included establishment of an internal Executive Planning Committee and Corporate Planning Team to coordinate corporate wide resource allocation and business planning efforts.

Put in place and provided training to IMO staff on internal policies and procedures related to information management, including information security and confidentiality.

Enhanced the corporate capital commitment process.

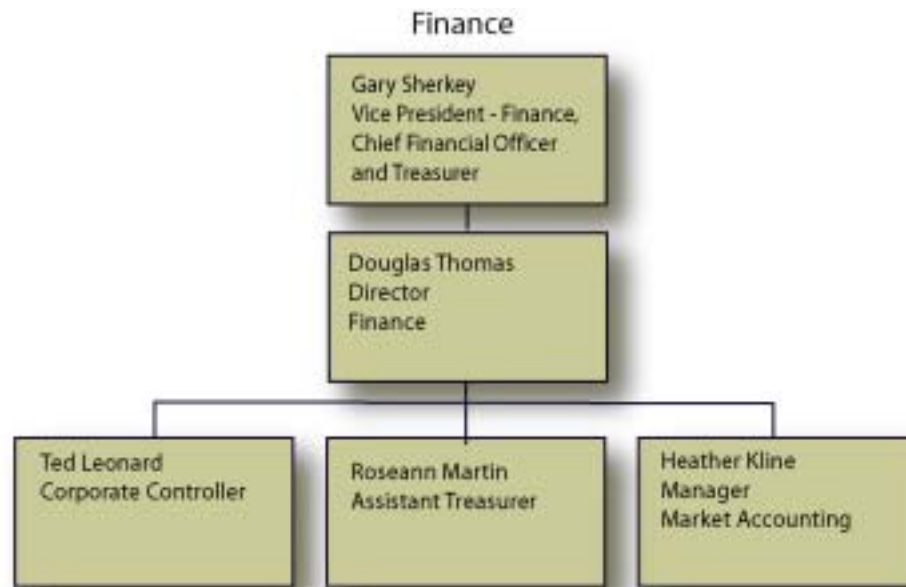
Implemented an operations exemptions process to handle participant exemptions.

Established and chaired the Regulatory Affairs Standing Committee, which provides increased consultation and interface with stakeholders regarding regulatory matters of importance to the Ontario market.

Represented the IMO's interests at various NEB, OEB, FERC, NAESB and NERC proceedings.

Managed the communications challenges of the intense summer heat wave and its associated price volatility, uplift and electricity imports issues.

Upgraded and significantly enhanced the IMO web site's content.



Strategies

Finance is a business unit comprising twenty-two staff, engaged with customers, with a scope that is both external and internal to the IMO. The following are the currently employed strategies within Finance:

1. Employ continuous improvement in all areas of core financial services, with a focus on active participation in the management of the business.
2. Employ active financial management strategies to corporate cash and debt positions.
3. Provide market participant support, manage market invoicing and reporting, market prudential requirements and market cash in accordance with the IMO's market rules. Propose and support market system enhancements and market rule changes as appropriate to meet the needs of the marketplace.
4. Maintain awareness and implement where both functionally appropriate and cost-effective, leading edge technologies related to the provision of financial information management and business process automation.
5. Provide active leadership and coordination support for Enterprise Risk Management ("ERM") through the ongoing enhancement of existing processes and through the education of risk-management awareness across the organization. Enhanced integration and focus of risk management will provide senior management and the board of directors with a new emphasis on aggregated risk reporting.
6. Retain and develop Finance staff through finance-specific training, general business skills enhancement, business knowledge support, and job enrichment/changes.
7. Manage the pension plan primarily through the use of external service providers, and provide value-added services/communication to benefit plan members.

Work Programs

Finance strategies are executed through the following work programs:

1. CFO & Admin. – Management and strategic leadership of Finance, including the support to the IMO Board (and related committees and panels) and leadership and administrative support of Internal Audit.
2. Enterprise Risk Management – Leadership and coordination support of enterprise risk management across the IMO. Utilize ERM to help identify opportunities that can be exploited to enhance the achievement of the IMO's strategic objectives.
3. Market Accounting & Reporting – Participant support, invoicing and financial reporting for IMO-Administered Markets.
4. Prudential Support & Credit Monitoring – Participant support and the ongoing execution of related activities and obligations in accordance with Market Rules.
5. Cash & Debt Management – Management of corporate and market cash, and debt/lines of credit.
6. Deferred Payment – Ongoing management and execution of Deferred Payment Plan—a financial bridge facility to help subscribers through a period of extreme price excursions.
7. Corporate Accounting/Reporting – Execution of daily accounting, management and statutory reporting, accounts payable and receivable, and expense reports/timesheets.
8. Financial Support – Business Unit reporting and support, business case review and development support, financial policy development and maintenance, and business planning/forecasting.
9. Procurement – Lead all procurement activities across the IMO.
10. Pension Plan – The execution of fiduciary responsibilities associated with the IMO Pension Plan.
11. Staff Training – Ongoing training and development of Finance staff.

Trends & Achievements

During 2002 Finance staff was engaged in the final development and testing of market-related tools and processes, ongoing participant support and training, and the execution of those tools and processes once the market opened. Market related activities in the areas of prudential monitoring, invoicing and cash receipts/payments have gone extremely well reflecting the extensive work done with both market participants and internal systems.

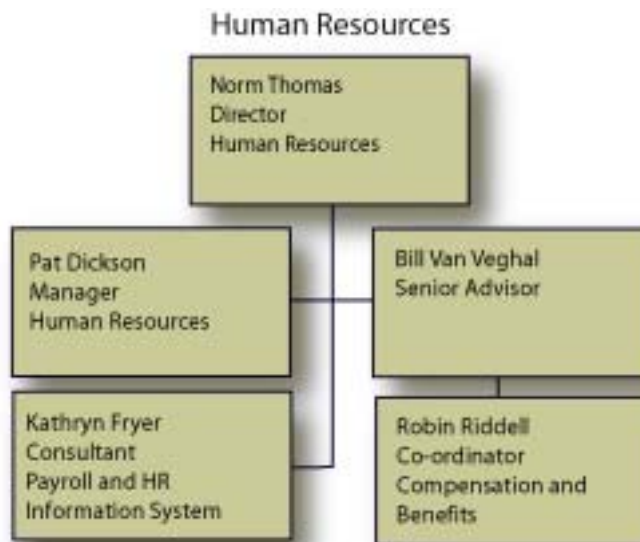
The decision to open the market on May 1st enabled the IMO to execute a second Financial Dry-Run test, allowing more participants to test more fully their ability to extract the necessary invoice data and to pay or be paid within the timelines outlined in the Market Rules. The rules related to prudential support were approved in December 2001, which was very late considering the May 1st opening. However, this late timing was done to facilitate as much participant stakeholding as possible while still being prepared for market opening. This resulted in the development and testing of the necessary tools in the early part of 2002 and a high degree of ongoing participant education to support participants in their understanding and adherence to the rules in this area. Finance staff worked closely with market participants to ensure all obligations in the marketplace

were met. Furthermore, Finance recognized certain market participant concerns related to their ability to obtain required working capital when extreme price excursions occur, and a Deferred Payment Plan was quickly established to help support these concerned participants.

In the areas of corporate responsibilities for 2002, the day-to-day demands of financial accounting and reporting were met, while process improvements were implemented in an effort to streamline all business processes. Examples include the implementation of electronic invoice routing and approvals to facilitate more timely and efficient approved payments made to vendors, as well as improvements to the expense reports process. The role of the Procurement Unit was broadened to include the area of contract management. In addition, risk management was brought into Finance and work begun on putting in place an enterprise risk management framework. Work in both these areas will continue in 2003. The management of corporate cash continued to result in positive results which exceeded related performance targets, and discussions began in relation to the refinancing of the IMO's debt with the Province of Ontario (due in November 2003). Lastly, with the final transfer of assets from the Ontario Electrical Financial Corporation Pension Plan to the IMO Pension Plan in December 2001, the focus on 2002 was on executing the related fiduciary responsibilities.

The cost associated with the 2002 deliverables is projected to be \$4.0M. Costs are budgeted to increase by \$0.3M in 2003 largely because of increased insurance premiums and certain costs associated with obtaining and maintaining a credit rating. Finance management focused attention on cost reductions, efficiency gains and general improvements in order to better manage its existing assets. As a result, the staff level in Finance is budgeted to decrease to twenty-one from the current level of twenty-two, reflecting efforts to streamline current processes.

In 2003, prioritizing Finance activities will be increasingly important given decreased staff levels and new initiatives underway. Specifically, a significant level of work will have to be done to obtain a credit rating and to refinance debt. In addition, Finance staff will have to dedicate more time in the coming year to support market development work in areas such as the forwards market and prudential support/harmonization. The expansiveness of the financial markets contemplated will have a direct impact on the level of support that Finance would provide to any initiatives in this area. In addition, contract management and enterprise risk management will continue to require an increased level of focus. The areas of Market Accounting and Corporate Accounting & Reporting will be constantly reviewing and supporting customers' needs as well as making rule, process or tool changes as required. Notwithstanding the reduction of staff, Finance will continue to provide a very high level of participant support and ongoing education in the areas of margin calls and participant invoicing and payment. Finance will continue to provide support within the business, but the trend will be toward enabling business units to become more self-sufficient in certain areas, including certain aspects of financial analysis and monitoring. Finance will continue to strive to provide excellent customer focus, both outside and within the IMO, while balancing the need to contain costs.



Strategies

1. Growing the IMO's staff capability by:
 - Targeting to meet the IMO's resourcing, recruitment and succession planning needs;
 - Meeting the organization's resourcing/flexibility needs through an effective mix of staff;
 - Enhancing/adapting/focusing staff skills and competency requirements to a changing business environment;
 - Enhancing the role of diversity/employment equity within the IMO.
2. Enhancing the IMO's results by:
 - Aligning employee total compensation/rewards/recognition programs to organization results;
 - Linking Human Resources programs to the IMO performance measures;
 - Focusing on performance management/effectiveness programs.
3. Facilitating employee and union relationships by:
 - Establishing business-like relationships with unions;
 - Establishing shared understanding/recognition of common future but differing interests;
 - Encouraging win/win solutions;
 - Encouraging employee communications through line managers.
4. Leading the IMO's capacity for change by:
 - Building capability through alignment of mission, vision and values;
 - Providing forums and support for business leadership;
 - Providing vehicles for involvement of employees when implementing changes at the IMO;
 - Focusing on communication and feedback vehicles.

Work Programs

The following outlines the work programs and responsibilities of the Human Resources business unit in support of identified strategies:

For strategy 1. Growing staff capability:

- Implementation of a realigned Succession Program;
- Focus on ensuring the right selection criteria are in place;
- Continue various recruitment programs;
- Continue various training initiatives.

For strategy 2. Enhancing the organization's results:

- Management Compensation Program – review and refine (e.g. Competency Review);
- PWU Compensation Programs - ensure consistent with the new PWU Collective Agreement (e.g. job evaluation/pay equity plans);
- Review and develop Society Compensation Program (e.g. job evaluations/competency restructuring; incentive pay program for the future; bi-weekly pay; review of 35/40 hours);
- Implementation of supplementary pension requirements;
- Review and implementation of alternative pension options;
- Continue to operate approved programs.

For strategy 3. Facilitating employee & union relationships:

- Establish Management's bargaining agenda for Society bargaining;
- Conduct negotiations with PWU and with Society for new contracts;
- Implementation of new corporate awards program;
- Continue to administer collective agreements;
- Implement new streamlined version of the Society Collective Agreement;
- Continue to work with and support line in dispute resolution and administering the collective agreement with a focus on maximizing flexibility;
- Continue to foster constructive dialogue with unions outside of negotiations on business directions/needs;
- Continue to manage grievance and arbitration process;
- Continue communications on employee and labour relations issues as well as performance agreement program and employee recognition programs.

For strategy 4. Leading the organization's capacity for change:

- Corporate review of the Vision statement;
- Implementation and operation of an IMO business leadership program
- Benchmarking/best practices relating to employee capability
- Continue orientation and awareness of Mission/Vision/Values
- Continue to facilitate strategic/business leadership and executive team building;
- Continue customer focus and management/supervisory skills training;
- Continue review/assessment of future competency requirements and focus on individual training plans for all staff.

Trends & Achievements

The following mark some of the achievements of the Human Resources Department in 2002:

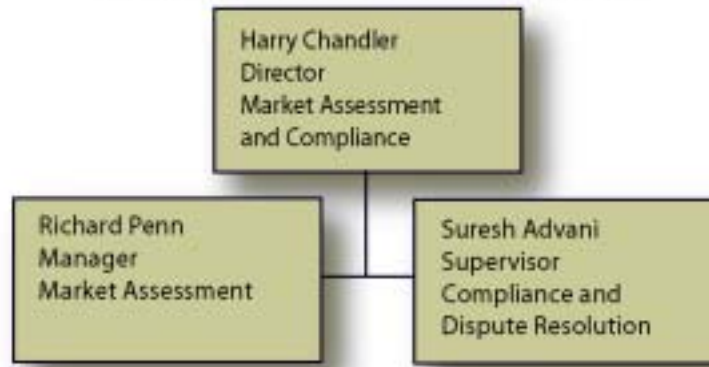
1. Staffing level requirements met to facilitate market opening.
2. Human Resources Programs meeting targeted goals;
 - i) Facilitated training such as Customer Focus, Supervisory Skills, Labour Relations, Selection & Interviewing
 - ii) Succession Planning process updated
 - iii) IMO Values orientation & awareness training
 - iv) Labour Contracts simplified and dialogue with unions amplified
 - v) Performance management and compensation practices in place to manage and motivate

With respect to trends in 2003, the IMO will have over 50 employees eligible for early retirement. There is a risk to core competency loss if these employees choose to retire within a similar timeframe. It has been our experience to date, that a low percentage of employees actually exercise this option at the date of entitlement. Thus the view is that the IMO will be able to manage staffing and replacement training and succession requirements. This 'risk' is in reality an opportunity for the organization to continue culture change with a focus on 'customer service and satisfaction', to continue to develop required competencies in our people, and to recruit new competencies into the IMO.

Human Resources will continue to focus on providing leadership, consulting and support services within the IMO relating to the effective utilization of employees' contributions in the pursuit of the Corporate Mission, Vision and Values. These areas of focus include:

1. Implementation of a business leadership program,
2. Customer focus & management/supervisory skills training,
3. Continue review/assessment of future competency requirements,
4. Administer the collective agreements with a view on maximizing flexibility,
5. Continue various recruitment programs,
6. Review and adjust compensations programs to reflect marketplace positioning, and maximize productivity and retention.

Market Assessment and Compliance



Strategies

1. Compliance and Dispute Resolution

Monitoring and enforcing compliance through the issuing of non-compliance sanctions, and administering the dispute resolution mechanism

2. Surveillance

Supporting the Market Surveillance Panel (MSP) and identifying matters to be reviewed and investigated by IMO line units to allow for the efficient running of the market

Work Programs

1. Compliance Monitoring and Enforcement

- Daily review of input related to non-compliance, investigating alleged breaches of the market rules, and communicating with market participants about the compliance process in order to facilitate compliance with the market rules and, where necessary, enforce compliance through the issuance of sanctions

2. Dispute Resolution

- Supporting the Dispute Resolution process, by providing guidance to market participants, and providing administrative support to the Dispute Resolution Panel to meet the requirement of a non-biased dispute resolution mechanism

3. Market Watch

- Daily circulation of the previous day's market outcomes to senior management, identifying tools and rules to be addressed by IMO line units, and longer term analysis of reasons for market outcomes to identify possible remedies to apparent deficiencies

4. Market Surveillance Panel

- Providing regular briefings on market operations and participant behavior, conducting economic and policy analysis, and assisting in investigations and the drafting of reports to support the MSP and to meet public demand for adequate surveillance

5. Local Market Power

- Daily screening of Congestion Management Settlement Credit payments and initiating the local market power review process with market participants regarding alleged excess CMSC payments.

Trends

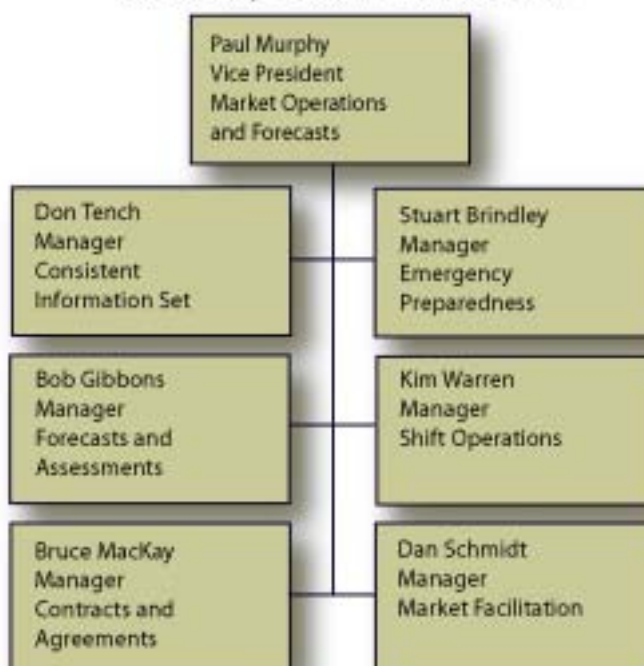
- Market Participants have shown a general willingness to adapt and meet obligations

- Non-financial penalties have been sufficient stigma to encourage compliance,
- Due to the resource intensive nature of compliance enforcement, Market Assessment and Compliance (MACD) has been strategic in pursuing non-compliance,
- Some Market Participants have shown an unwillingness to comply with rules relating to intertie transactions,
- Amount of dollars involved in the clawback of CMSC payments are higher than expected,
- Expect more participant conduct issues as market participants become more familiar with the rules and attempt to exploit opportunities,
- Formal referrals to the Dispute Resolution Panel as market participants seek clarification on ambiguous market rules,
- With better identification of the key data, making information available on a regular basis to the IMO and market participants.

Achievements

- During CODR, Market Watch identified a number of design and process issues, (e.g. volatility caused by ramping issues) and addressed them prior to market opening,
- Operations for MACD only began in earnest with market opening,
- Contingency Arrangements penalties have encouraged recalcitrant market participants to complete their necessary preparations,
- A monthly statistical summary of non-compliance showing fines and non-financial sanctions has been prepared,
- MACD has been able to clarify disagreements and avoid formal disputes,
- The MSP has prepared a report for the first four months since market opening,
- MACD has been conducting analysis and making recommendations on issues such as the persistent discrepancy between pre-dispatch and real-time prices.

Market Operations and Forecasts



Strategies

The work program of Market Operations & Forecasts centers around predicting the electricity needs of 11 million Ontarians, operating a competitive wholesale electricity market and managing the reliable delivery of electricity to local distribution companies and large wholesale customers.

Our work is driven directly by the objects of the IMO contained in the Electricity Act 1998.

The primary focus of our plans is to continue to evolve today's competitive market operation, to ensure the reliable operation of the new market and to adapt our operations on an ongoing basis recognizing the inevitable improvements and changes that will be driven from within and outside Ontario.

Work Program

The plan to deliver our strategies has five major components:

1. The periodic forecasting of longer-term electricity demands, and assessments of the adequacy of Ontario's existing and planned generation and transmission facilities to reliably meet future requirements and incorporate proposed new facilities.

These activities are critical to providing information on the needs and opportunities that exist to those who will make investment, operational, or commercial decisions. In addition, a multi-area assessment to examine the increasing North American wide reliance on gas-fired generation for future electricity supply is currently underway. This assessment, which includes Ontario, New York, New England and PJM, is scheduled to be completed by mid-2003.

2. Development of a series of contracts for certain reliability services and the management and evolution of a series of operating agreements with transmitters and neighboring jurisdictions outside of Ontario.

These contracts and agreements provide the framework within which reliability services are acquired and govern the IMO's interactions with transmission equipment owners and other inter-

connected system operators.

3. Operation of the market and the direction of reliable system operation on a minute by minute basis.

Twenty-four hours a day the state of the power system is monitored and assessed, and directions are issued to participants to maintain reliable supply and delivery based on competitive bids and offers. The real time operation of the market is where the full complexities of competitive market operations are directly felt and managed. In preparation for real time operation, preparatory activities are undertaken to facilitate efficient participation in the market, including managing auctions for transmission rights, assessing maintenance requests, publishing short term forecasts and assessments, processing bids and offers and developing a day ahead schedule of demand, supply and prices for market participants. Advance activities and real time operations both rely upon an extensive suite of sophisticated monitoring and assessment tools.

4. Ensuring that a consistent set of information covering operating documentation, facility information and power system capabilities is available to all IMO staff as well as participants.

The determination of the allowable capability within which the power system can operate is a complex analytical task requiring sophisticated databases, models, computer programs and the efforts of skilled staff. Equally important is the analytical capability to review operation of the market and electricity system, and to use the results of this ongoing oversight to make prudent changes to IMO practices, procedures and standards to benefit the marketplace. These analytical capabilities have a direct bearing on both the efficiency and the reliability of the market. Similarly, developing and ensuring understanding and compliance with reliability standards and operating procedures is a cornerstone of ensuring reliable operation. The development, management and ability to analyze information facilitating market operation and generated from market operation will benefit from several initiatives aimed at both better integrating these processes and increasing market participant understanding and access to market and system information.

5. Development, coordination and exercise of plans to respond to electricity system emergencies.

While most market participants have submitted emergency plans, there is a continuing requirement for updating plans, undertaking comprehensive drills to demonstrate and maintain readiness and to revise plans based on what is learned. In addition, the continuing rapid rate of industry change and new external threats to our physical and cyber infrastructure has created the need to increase our level of security and emergency preparedness across North America, including examining critical interdependencies with other industry sectors such as telecommunications. In Ontario, the IMO coordinates these activities across market participants and with the provincial and federal governments.

Trends

To compensate for a level of staff resources assessed to be insufficient to respond as quickly as desired to market participants' requests in key areas, MO& F will work towards helping the market participants to help themselves. For example,

1. redirecting its level of support to market participants in assuring Ontario's ability to respond to large-scale electricity emergencies. Although market participants will continue to be required to submit their emergency plans to the IMO for review, efforts will be focused on proving the effectiveness of these plans through annual System Restoration exercises. These exercises are driven by realistic scenarios that do not have detailed scripts, and provide market participants with a challenging level of free-play to meet the exercise objectives. Greater reliance will be placed on collaborating with Market Participants via teleconference and web-based information, rather than extensive face-to-face training sessions,

2. having marketers and generators enter their own NERC transaction tags will reduce a time consuming process for the IMO and focus the activity where it is best undertaken,
3. market participants taking on greater responsibilities for ensuring that their outage requests contain the information necessary for the IMO to respond in a timely fashion,
4. encouraging market participants and stakeholders to “self-access” information from IMO-provided sources about opportunities for providing economic and timely solutions to address reliability and congestion concerns in the Ontario electricity system,
5. expanding the number of ancillary service providers to increase competition among providers and simplifying the associated agreements to reduce the effort required among the parties to conclude such agreements, and
6. participating in stakeholder and inter-jurisdictional meetings and organizations to maintain and foster an awareness of industry standards and approaches to resolving common concerns.

Where feasible, MO&F will encourage greater flexibility and an environment that is receptive to changes by providing opportunities for staff to develop in areas of the business that may require additional staffing or support in implementing major initiatives. Staff trained in broader aspects of the core business, are capable of performing more job functions thereby enlarging flexibility in supporting project work or managing increased work in other parts of the IMO.

As a result of the experience gained during market commissioning and operations to date, MO&F have a better understanding of where its resources need to be applied and from where they can be shifted while maintaining adequate levels of service to market participants and supporting other IMO business units. For example, additional resources are needed to undertake a larger and more complex amount of ex-post pricing activities and to provide more timely feedback of real-time experience to other departments. Similarly, ensuring that the IMO meets NERC operational performance requirements has proven to be more demanding since market opening with correspondingly increased work, and diminished time to attend to other tasks. These extra demands on staff have been met in large part by extensive use of overtime, shifting staff from other areas and reducing their work programs accordingly, not undertaking new work of value to market participants and by implementing those Vendor Change Requests which by the end of 2002, will enable a reduction in the manual intensity of work processes within real time operations.

Rather than simply requesting the necessary resources needed during the business planning period to meet these additional demands by themselves, MO&F has carefully reviewed its work programs to determine what adjustments can be made. As a result, going forward will involve continuing trade-off among important activities such as:

- a) supporting emergency planning work,
- b) providing operating security limits for outage conditions,
- c) lending subject matter expertise in support of additional Vendor Change Requests, and
- d) undertaking analysis in support of decision-making relating to changes in market processes and procedures

to ensure available staff resources are used in the best possible fashion. Other activities will not proceed, such as undertaking the analysis needed that provide better planning information about future congestion costs.

More opportunities exist to gain efficiency and improve performance through additional enhancements to existing tools and the evolutionary development of new tools. Many of these changes cannot be implemented because of pressures to keep costs down and because of higher priority work. The IMO must balance market participant expectations by ensuring Vendor Change Requests make the best use of limited development resources to address market participant primary concerns and reduce IMO staff work loads associated with lower value added activities.

Development work is required for the implementation of Transmission Rights deferred functionality and enhancements, and implementation of Locational Marginal Pricing, all of which are stated as of high priority to a large portion of market participants. Until tool enhancements/replacement of time consuming manual processes which support existing market functions can occur, MO&F's ability to support this new development work will be restricted.

Achievements

During 2002, MO&F migrated to a new way of administering market and associated resources while maintaining reliability and significantly expanding the scope of the IMO-controlled grid through the incorporation of the 115 kV transmissions systems of Hydro One, Great Lakes Power, Canadian Niagara Power and Five Nations. Key accomplishments associated with each of the five major components of the work plan include:

1. The periodic forecasting of longer-term electricity demands, and the assessment of the adequacy of Ontario's existing and planned generation and transmission facilities to reliably meet future requirements and incorporate proposed new facilities.

- a) The 18-Month Outlooks issued throughout 2002 under the IMO's Market Rules obligations, provided an early indication of the tight resource situation that materialized this past summer.
- b) The 10-Year Outlook issued in April 2002 focused on both generation and transmission adequacy, and identified a critical need for additional sources of supply to downtown Toronto as early as 2006.
- c) The IMO is leading a multi-area study involving IMO, NYISO, ISO NE, PJM and NERC to assess the adequacy of the gas pipeline infrastructure to meet the additional gas demands arising from a large number of proposed gas-fired generation projects in the Northeast over the next five years
- d) 25 connection assessment studies were completed since Nov 01/01 (7 related to proposed generation projects and 18 related to proposed transmission projects). More than 50 other proposed new or modified connections to the ICG were assessed but did not require further study.
- e) Provided IMO support, including oral testimony, to the OEB Leave to Construct hearing for the proposed St. Lawrence Gateway project and to periodic seasonal and long-term assessments undertaken by NERC and NPCC

2. Development of a series of contracts for certain reliability services and the management and evolution of a series of operating agreements with transmitters and neighboring jurisdictions outside of Ontario

- a) New agreements were implemented with 10 ancillary service providers to obtain black start capability, regulation/AGC, emergency demand response and voltage control/reactive support.
- b) New agreements were established with 4 transmitters and 3 interconnected entities. Agreements with the 5 remaining interconnected entities are in various states of completion prior to implementation. In the meantime, coordination of joint operation with these 5 entities is carried out under the pre-market opening interconnection agreements.

3. Operation of the market and the direction of reliable system operation on a minute by minute basis

- a) In January, 2002, letters were issued to 114 market participants owning equipment requiring outage reporting. This involved compiling equipment list for each market participant and including the list as an attachment to the letter. This was a large project involving review of connection agreements between transmitters and other market participants, single line diagrams and facility registration data.
- b) On a daily basis, market participants were provided with near term (10-day) forecasts of market demands. These forecasts are used by the IMO to assess both capacity and energy adequacy, the results of which are published for market participant information.

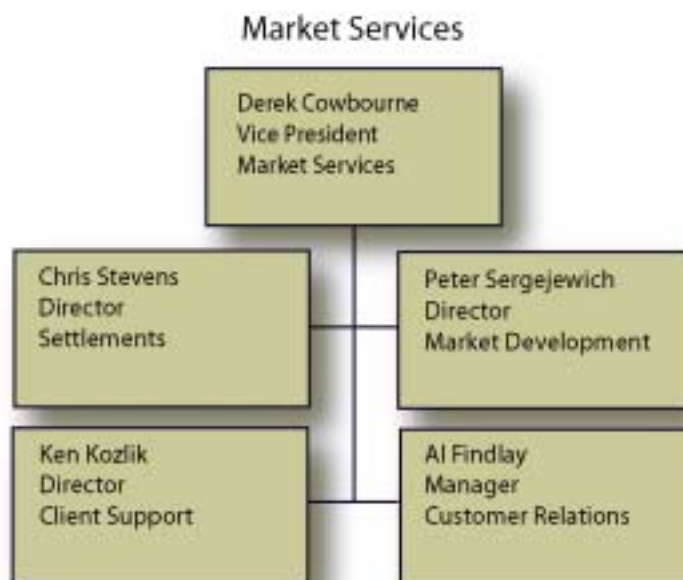
- c) Approximately 1,600 outage assessments per month were provided in responding to market participants' requests to remove their facilities from service.
- d) The challenges of directing the operation of the expanded IMO-controlled grid (e.g. learning the topography, operating characteristics and constraints of the additional transmission systems) were managed well through training and through the cooperation of the transmitters involved.
- e) Six short term (monthly) transmission rights auction rounds were completed and 17 longer-term (consecutive monthly, yearly) auction rounds were completed.
- f) Extensive testing of new tools prior to market commencement resulted in the need for modifications in tools and the development of supporting manual processes to achieve a smooth and timely transition (particularly in reliability and price stability)
- g) Met the operating challenges presented by the past summer including record setting demands (25,343 MW peak demand on August 13th and 530,160 MW.h energy on July 3rd). Control room operations were intense as MO&F frequently resorted to emergency procedures. Including purchasing emergency energy on 10 days. System operation within limits went exceptionally well as a result of close cooperation among NPCC and our neighbours.
- h) Met all obligations to NERC and NPCC for reliable operation.

4. Ensuring that a consistent set of information covering operating documentation, facility information and power system capabilities is available to all IMO staff as well as participants

- a) Processed market registration information enabling 272 market participants
- b) Supported 77 requests by market participants for exemptions resulting in significant short term and lifetime savings for them without materially compromising market rules or the reliability of IMO-controlled grid.
- c) Integrated Hydro One 115 kV system, GLP system, CNP system and FNEI transmission system into the models and databases supporting monitoring and direction of the IMO-controlled grid and IMO administered markets (e.g. doubled the size of existing network model.)
- d) Established the IMO reliability compliance program complete with procedures and catalogues to ensure reliable operation. Compliance processes were established to prioritize participant obligations and develop compliance measures around items identified as high priority for market launch.
- e) Converting Operating Security Limits into linear form for use by Dispatch Scheduling Optimizer.
- f) Established a consistent and complete procedure set for market operations and forecasts and established processes to maintain up to date.
- g) By year-end, IMO will be 90 % complete in replacing DACS with a fully functional modern Energy Management System (EMS).

5. Development, coordination and exercise of plans to respond to electricity system emergencies

- a) Ontario's first-ever Power System Restoration emergency exercise was conducted with Market Participants on November 28, 2001 to test IMO and Market Participants' ability to respond to a simulated province-wide blackout. All exercise objectives were met and lessons-learned have been incorporated into the design for subsequent annual exercises.
- b) Virtually all Market Participants submitted emergency plans to the IMO prior to the market opening that met established planning criteria.
- c) The IMO continues to play a lead role in collaborating with NERC, the Canadian Electricity Association and the Canadian and US federal governments to enhance the electricity industry's ability to respond to physical and cyber threats. Since September 11, 2001, these efforts have accelerated and include the development of industry-wide security standards and threat monitoring and response processes.



Strategies

Market Services is accountable for participant administration, providing support services to clients, metering and settlements, and leading the market development process. Market Services will provide these services through a combination of response to market rule obligations, incoming requests and proactive outreach activities. It will also review all interactions with participants to determine the learning the IMO should be gaining from these activities, and inject this learning into other IMO activities to facilitate a continual improvement in products and services. Market Services also champions an organized consultation process executed by all business units. As Market Services executes these strategies, it does so to accomplish the following goals:

1. To win the governments', regulators' and market participants' trust in the IMO through the excellence of our people, processes and products.
2. To have our customers assess that the IMO is customer focused.
3. To evolve a viable Ontario electricity market that will provide reliable electricity supplies.
4. To contribute to establishing the IMO as an employer of choice by providing opportunities, recognition and career development.
5. To have a business unit that is effective, efficient and fiscally responsible.

Work Programs

The Market Services work programs are:

1. To provide **settlement services** (Metering Service Provider regulation; revenue meter installation conformance, registration and audit; metered data processing; commercial reconciliation; and settlement statement production) which are complete, accurate and timely.
2. To fully address and **resolve customer issues**. The IMO **Help Centre** will continue to serve as a single point of contact for all queries received via e-mail, web and telephone.
3. To provide **market information** that contributes to the IMO becoming the most valued source of useful information and knowledge to our current and prospective customers, to investors, and key stakeholders for all matters related to the electricity market.
4. To deliver the **participant education and training** programs (ranging from high level overviews of the marketplace to detailed descriptions of tools and procedures) that meet participant and stakeholder requirements.

5. To manage **market participant administration** (collection of the data and documents required for participant authorization; maintaining a master database; administration of the electronic security process (Public Key Infrastructure), down to the individual level for a market participant's organization; receiving and processing all exemption requests for market participants).
6. To lead the **market development** function which has the dual roles of managing the Market Rule change process, and planning the evolutionary path for the IMO-administered markets. To perform these functions, it provides a public process for rule changes, undertakes studies of enhancements and changes to the design of the market and engages in co-operative activities with neighbouring jurisdictions such as NERTO and MISO.
7. To obtain **effective timely involvement of market participants and stakeholders** in the IMO decision making process through the IMO's consultation process.

Trends

An area in which the IMO is applying additional intensity in this business plan is consultation with market participants. This additional consultation comes in two forms; a commitment to and support for the Market Advisory Council, and an increase in efforts in the area of individual market participant support from the Help Centre staff. The Market Advisory Council and its three standing committees (Market Operations, Regulatory Affairs, and Information Technology) and subcommittees is considered to be a critical input into IMO management recommendations to the Board and its panels. The routine interaction between the IMO and its market participants is judged to be a critical linkage that facilitates market understanding on behalf of the participant, and increases the IMO's ability to receive feedback from all market participant classes and from all participants, large and small. Both of these initiatives are of particular importance to the IMO and the marketplace as the market evolves and as strategic directions are set.

An additional area of increased intensity is that of provision of market information to the marketplace. Early market results have highlighted the extreme importance participants put on timely, accurate and complete market information. Enhancement of current market information made available by the IMO is essential to increase the transparency of the market and the understanding of the market outcomes.

This business plan has incorporated a reduction in intensity in some settlement production areas. Specifically, the resources dedicated to, and in support of, the day-to-day production of settlement statements has been reduced. This will result in a slight degradation of service, which will be reflected in some lower standards for acceptable performance in the production of settlement statements in a timely and accurate fashion. Even so, the current levels of service in this domain are judged to be extremely high, and the cost savings associated with the performance reductions are considered to be better utilized in higher value areas of the IMO.

A second area of reduced intensity is marketplace training offered to the market. The IMO is firmly committed to providing high-quality web-based training materials and explanations, including occasional face-to-face training sessions. However, it is our judgement that the resource requirements to produce the incremental benefits of routine face-to-face training sessions dealing with ongoing market processes are better allocated to other IMO activities. Occasional face-to-face sessions will be held, and these sessions will serve as a barometer for the ongoing appetite for such sessions. If the demand exists and the revenues from additional sessions will exceed the costs of producing them, this decision will be reviewed at the appropriate time. Further, if outcomes of the strategic direction adopted by the IMO to guide market evolution result in significant market changes, then the IMO will provide the commensurate level of participant and marketplace training as a part of the strategic initiative.

Achievements

Mobilized participant action to prepare for market opening.

- buy-in from market participants to prepare for the opening was mixed when the deadline kept moving forward. The IMO had to encourage many to meet key readiness milestones. At market opening, all but a few were fully authorized to participate at market opening.
- participation agreements signed
- key contact and banking information provided
- prudentials posted
- PKI certificates established
- ability testing completed

Registration of Revenue Meters and Metering Service Providers

- over 2,100 meters registered prior to market opening
- every injection or withdrawal point to the IMO-controlled grid has been incorporated into our metering database in one form or another.
- 15 Metering Service Providers accredited by the IMO

Transition accommodated for all market participants

- over 250 exemption applications received by IMO
- contingency arrangements established to accommodate non-ready participants
- Help Centre accommodated over 18,000 inquiries and transactions in 6 months leading up to market opening, with volume taking a 5-fold jump once participants started to be introduced to the IMO's production systems.

Dealing with the unexpected

- we have not yet had to seek any major changes to the authorities provided in the market rules to handle unforeseen events
- the IMO was able to deal with issues that came up during testing (both Production Environment Validation (PEV) from January through March, and throughout Coupled Operational Dry Run (CODR) in April). Changes were made expediently to procedures, systems and Market Rules; changes consisted of both enduring fixes, and transitional provisions.

Information dissemination - Use of the Web

- development of information distribution through the IMO web site provided a cost effective way of dispersing a large amount of information to market participants, stakeholders and the general public.

Flexible training vehicles

- development of web based training, cost effective for the IMO and the participant.
- classroom sessions held across province on key market processes (e.g. "how to read your settlement statement")
- use of Webcast to permit "live" remote training sessions

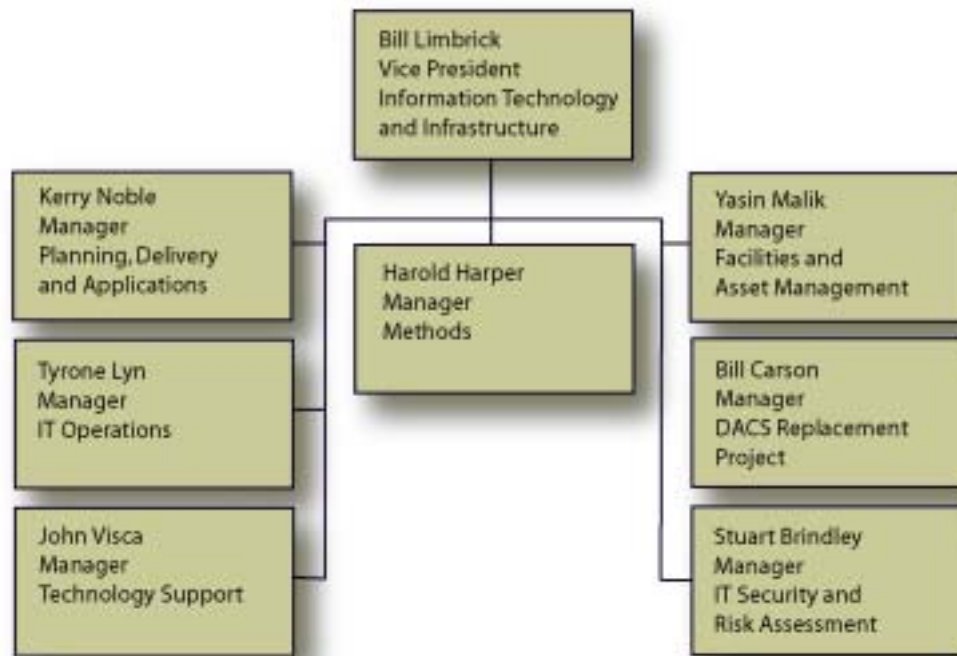
Provision of market information

- market prices are published every 5 minutes
- Today's Market web page created to provide "market conditions at a glance" for both knowledgeable market players, and for general public
- Market Summaries (Weekly and Monthly Reports) serve as both summaries and records of market activities.

Market Advisory Council created

- Market Advisory Council and its 3 standing committees (Market Operations, Regulatory Affairs, and Market Evolution) were formed
- Initial consultation meeting on market evolution held in January, 2002.
- First official Market Advisory Council meeting held in August, 2002.

Information Technology and Infrastructure



Strategies

IT Strategy continues to be to provide IT capabilities centrally using a mix of internal and outsourced services. The move of the business unit culture from a strong technical bias to a more formalized and business-oriented base will be maintained.

At this time all business analysis, requirements definition, systems integration, acceptance testing and implementation and operations, and first and second tier support will be undertaken by IMO staff. Program development and third tier support will be outsourced. The mix could change over time according to market conditions and demands for IT services. It may also vary by individual system where factors such as speed of response and critical mass will have a bearing. The principle remains to be for IMO staff to do what they can do better than others and to concentrate their efforts on delivering best value, while leaving items such as code development and its attendant functions to be done by others.

Initiatives to reduce IT costs will continue through rationalization of infrastructure, more effective use of IT resources, justification of all change, and alignment of purchase decisions with accountability. Other initiatives are required to support the direct cost containment policies such as the completion of the Service Level catalogue (against which to estimate change benefits) and performance monitoring to highlight areas for improvement. In many cases this work has begun in 2002, but is expected to extend through 2003 before achieving full coverage and maturity.

The year 2003 will see consolidation of the newly implemented systems and the continued formalization of IT practices, which are now being implemented within a recognized industry framework (ITIL).

External discussions are continuing around SMD and NERTO initiatives to determine the extent of any systems work in 2003.

Work Programs

Major projects as part of ongoing current operations program will be:

1. the implementation of the DACS replacement functionality and the retirement of

- DACS;
- 2. replacement of the internal network (subject to approval);
- 3. three or four major (market participant impactive) releases of the market systems (for defects and changes);
- 4. potentially, deferred functionality (subject to definition)

Work Initiatives include the following:

1. IT Method - Create an effective environment for the delivery of IT services. To provide monitoring services to IT&I. To provide quality review of IT&I deliverables independent of the delivery responsibilities.
2. Planning Delivery & Applications - Planning Delivery & Applications plans and manages IT capital application projects, and maintains and enhances existing application/database systems using both IMO and external resources.
3. Technology Support - The support services identified above are required to complement the Business Systems and IT Operations support services in order to meet the reliability requirements of the various systems. The Telecom/LAN/WAN Infrastructure is needed as a common backbone that enables the acquisition and transport of vital business data/information for all market and corporate systems. The network firewalls are essential to protect IMO assets against intrusion / viruses and provide access only to legitimate business users/partners.
4. IT Operations - This work program provides Operations services for all the IMO IT systems.
5. Facilities & Asset Management - Maintain, enhance and upgrade, operate and administer IMO building systems (Electrical, UPS, HVAC, Fire Alarm, Electronic Surveillance System) and services, i.e., tenant service requests, service contracts (waste and recycling, elevators, pest control, janitorial, landscaping, snow removal, window cleaning, etc).
6. IT Security & Risk Management - Develop and manage the operational framework for providing an appropriate level of information security to protect the IMO's information and assets

Trends

The IMO has determined that for the business planning timeframe it will pursue a policy of containing staff headcount and capital expenditures. As a result, the IT strategy will be to restrict system changes and enhancements to that which can be accommodated by the existing workforce. As systems functionality increases more staff from within the existing complement will be required for support and the capacity to support further development is reduced.

The list of potential system changes for market design and operational improvements is significant and the high level estimates of the "critical" items alone stands at \$50 million. Setting system stability risks aside, neither funding nor resources could deal with this level of demand in a single year and the work will be prioritized. Overall work programs will be constrained to acknowledge resource constraints and given the DACS Replacement Project commitment and IMP Phase 2 (which includes \$3.5 million for Vendor Change Requests) only a further \$4 million has been proposed in respect of other VCR work.

Based on the experience gained by the IMO while putting the electricity market into service, the parallel development of market rules and functional requirements for the new market with the development of new market systems of additional major enhancements, will not be undertaken

in the future. The market rules and user requirements must be at a near final state before development of the systems is undertaken. The parallel process of developing the market rules and the functional requirements of the market, at the same time as it was developing the market systems, caused the IMO to encounter significant additional costs and resources as the market requirements changed and additions had to be made and then systems tested again; the resourcing situation demands that all such rework be avoided. This will mean any new market developments will need to be taken over longer periods of time.

The initiatives to reduce IT costs, while hampered under the current resource constraints, will continue through rationalization of infrastructure, more effective use of IT resources, justification of all change, and alignment of purchase decisions with accountability. Other initiatives required to support the direct cost containment and performance monitoring to highlight areas for improvement are also not being completed as quickly as originally planned due to resource constraints.

The consolidation of newly implemented systems and the continued formalization of IT practices, which are now being implemented within a recognized industry framework (ITIL) has been delayed due to the current resource constraints.

Under the current operations resource envelope, the IMO will need to balance the demand for the short term tactical changes to existing market systems, with potential new major enhancements and initiatives, such as the FERC's Standard Market Design.

Achievements

During the first four months of its existence, the market has operated consistently in accordance within the service level targets established by the IMO Board. In fact, we have exceeded these, and the five systems groups for which targets have been defined have all been available in excess of 99 % of the time since May 1st.

During the lead up to the opening of the market, the IMO reacted to market participant concerns regarding a lack of facilities to test and prove their systems over an extended period of time. Through the introduction of the Production Environment Validation (PEV) test environment, which led up for a number of months before the Coupled Operational Dry Run (CODR), market participants were able to verify their systems over an extended period of time. This was a significant contribution to the subsequent success of both CODR and market opening itself.

As a result of the Market Readiness Shadow Operation (MRSO) and PEV test environments, the IMO was able to undertake a number of market system adjustments which provided a significant number safeguards to protect participants and consumers alike in the early days of the new market. These changes were made reliably and quickly, and without disrupting the opening of the market.

The IMO renegotiated a number of contracts with our suppliers and service providers resulting in reduced costs for late 2002, and for 2003 and subsequent years.

Following the opening of the market the IMO has turned its attention to the introduction of more formalized Information Technology (IT) processes with the intent of increasing the effectiveness of the IMO's operation. This has also been extended beyond the IMO to market participants in the area of pending market system software changes, otherwise known as Release Management, where the IMO has developed detailed plans for additions to the market systems.

APPENDIX 6 - CURRENT OPERATIONS CAPITAL PROGRAM

The IMO's continuous capital process underlies spending on all projects supporting current business responsibilities. Figure A6-1 outlines the key elements involved in the process, and identifies activities, sub-processes, or responsibilities associated with each element.

The current capital project listing, identifying only those projects or categories of projects which have been committed or recommended by the Executive Planning Committee to proceed to business case development, is provided in Table A6-1.



Table A6-1 IMO Capital Projects Committed or Recommended for Business Case Development (as of 3 rd Qtr 2002)					
Figures are in \$million	2001 Actual	2002 Projected	2003 Budget	2004 Budget	2005 Budget
Integration Management Program	52.6	28.9			
Software Licences	0.5	0.4			
Infrastructure Improvements	1.1	3.7	1.4		
DACS Replacement	0.8	11.4	2.4		
Application Development	0.4	0.4			
Facilities, Equipment & Furniture	0.7	0.4			
System Control Centre Expansion	0.9	6.4			
Wall Board Replacement		1.4	0.3		
Network Improvements		1.7	2.0		
Anticipated Change Requests			4.0	3.0	2.0
IMP Phase II			8.5		
Unallocated Capital Budget			4.8	12.0	13.0
TOTAL CAPITAL	56.9	54.8	23.5	15.0	15.0

This list includes capital projects currently planned to support existing operations and market systems, not major market evolution projects. There is a rigorous capital review and approvals process employed to ensure capital expenditures are done in a manner consistent with the business' priorities. Projects are approved on a project-by-project basis and the resulting approved projects may include those identified in the listing, but will not be limited to only those. This is an essential element of the continuous planning process, which provides rapid response and reaction to evolving priorities. In addition, based on shifts in priorities, some listed projects may be deferred and/or not started. That is why there is a portion of the capital budget over the planning period that has not been earmarked for any specific project. The levels of capital spending that have not yet been identified on a project-basis are \$4.8M in 2003, \$12.0M in 2004, and \$13.0M in 2005. The \$15 million capital envelope, introduced in last year's business plan, is based on several factors, including estimates of capability to manage and implement projects, and prudent financial management.

APPENDIX 7 - PRO FORMA FINANCIAL STATEMENTS

CORPORATE FINANCIAL STATEMENTS Pro Forma Income Statement For the Year Ended December 31 (Millions of Dollars)

	Actual 2001	Projection 2002	2003	Budget 2004	2005
Revenues					
Transitional Revenue Allocation	120.3	48.1	-	-	-
Usage Fees	-	96.6	160.3	157.5	161.2
Annual Participant Fees	0.1	0.0	1.9	1.9	1.9
Cost Recovery For Services	0.8	0.9	0.9	1.1	1.1
Settlement Clearing Account	-	0.9	1.1	1.1	1.1
Deferral Account Balance	7.4	8.8	3.8	-	-
	<u>128.6</u>	<u>155.3</u>	<u>168.0</u>	<u>161.6</u>	<u>165.3</u>
Expenses					
OM&A	82.5	86.9	94.4	97.4	101.3
Market Evolution Program	-	-	7.3	-	-
Amortization	26.0	45.2	46.0	48.0	50.2
Interest	11.7	20.2	20.3	16.2	13.8
TOTAL OPERATING COSTS	<u>120.2</u>	<u>152.3</u>	<u>168.0</u>	<u>161.6</u>	<u>165.3</u>
NET OPERATING SURPLUS/(DEFICIT)	<u>8.4</u>	<u>3.0</u>	<u>-</u>	<u>-</u>	<u>-</u>
Market Revenues/Costs					
Funding for Ancillary Services/Rural Rate Assistance	250.1	83.4	-	-	-
Ancillary Services, Rural Rate Assistance	250.1	83.4	-	-	-
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
NET SURPLUS/DEFICIT	<u>8.4</u>	<u>3.0</u>	<u>-</u>	<u>-</u>	<u>-</u>

CORPORATE FINANCIAL STATEMENTS
Pro Forma Balance Sheet
As at December 31, 2001
(Millions of Dollars)

	Actual 2001	Projection 2002	2003	Budget 2004	2005
ASSETS					
Current Assets					
Cash & Short Term Investments	116.1	92.4	14.7	21.3	31.8
Accounts Receivable	35.3	13.5	13.5	13.5	13.5
Prepaid Expenses	4.4	2.0	1.5	1.6	1.4
	<u>155.8</u>	<u>107.9</u>	<u>29.7</u>	<u>36.4</u>	<u>46.7</u>
Capital Assets					
Fixed Assets in Service	293.7	340.1	347.2	362.2	377.2
Less: Accumulated Depreciation	(42.7)	(87.9)	(107.4)	(155.4)	(205.6)
Fixed Assets in Service, net	<u>251.0</u>	<u>252.2</u>	<u>239.8</u>	<u>206.8</u>	<u>171.6</u>
Construction-In-Progress	6.7	15.1	5.0	5.0	5.0
	<u>257.7</u>	<u>267.3</u>	<u>244.8</u>	<u>211.8</u>	<u>176.6</u>
Other Assets					
Deferred Pension Asset	24.1	24.3	20.0	14.1	6.8
	<u>24.1</u>	<u>24.3</u>	<u>20.0</u>	<u>14.1</u>	<u>6.8</u>
TOTAL ASSETS	<u>437.6</u>	<u>399.5</u>	<u>294.5</u>	<u>262.3</u>	<u>230.1</u>
LIABILITIES					
Accounts Payable & Accrued Liabilities	53.8	19.8	16.2	16.5	16.6
Other Post Employment Benefits	21.0	22.7	25.1	27.6	30.3
Long-term Debt	<u>353.2</u>	<u>353.2</u>	<u>253.2</u>	<u>218.2</u>	<u>183.2</u>
TOTAL LIABILITIES	<u>428.0</u>	<u>395.7</u>	<u>294.5</u>	<u>262.3</u>	<u>230.1</u>
SURPLUS/(DEFICIT)	9.6	3.8	-	-	-
TOTAL LIABILITIES & EQUITY	<u>437.6</u>	<u>399.5</u>	<u>294.5</u>	<u>262.3</u>	<u>230.1</u>

CORPORATE FINANCIAL STATEMENTS
Pro Forma Statement of Cash Flow
For the year ended December 31
(Millions of Dollars)

	Actual 2001	Projection 2002	2003	Budget 2004	2005
Operating Activities					
Net Surplus	8.4	3.0	-	-	-
Adjustments for non-cash items:					
Depreciation	26.0	45.2	46.0	48.0	50.2
Deferred Pension Asset	(2.8)	(0.2)	4.3	5.8	7.3
OPEB	1.8	1.7	2.4	2.5	2.7
Surplus/(Deficit) Recognition	(7.4)	(8.8)	(3.8)	-	-
Changes in Non-Cash Balances Related to operations	(0.3)	(9.8)	(3.1)	0.3	0.3
Cash Provided/(Used) from Operations	25.7	31.1	45.8	56.6	60.5
Investing Activities					
Investment in Fixed Assets	(56.9)	(54.8)	(23.5)	(15.0)	(15.0)
Financing Activities					
Issuance /(retirement) of Long-term Debt	41.7	-	(100.0)	(35.0)	(35.0)
NET CHANGE IN CASH & SHORT TERM INVESTMENTS	10.5	(23.7)	(77.7)	6.6	10.5
OPENING BALANCE	105.6	116.1	92.4	14.7	21.3
CLOSING BALANCE	116.1	92.4	14.7	21.3	31.8

Summary of Significant Accounting Policies

The IMO financial statements are prepared in accordance with accounting principles generally accepted in Canada. These policies are more fully described in the fiscal 2001 annual report. The significant accounting policies and practices followed by IMO are described below:

a) Transition Costs and Construction-In-Progress

The IMO plays a key role in conjunction with future market participants and other stakeholders in the development of the wholesale competitive electricity market in Ontario. As part of this role, the IMO is charged with developing and implementing the systems, including hardware and software, processes and procedures required to operate the competitive marketplace. The development of these systems, processes and procedures is a multi-year effort.

Costs relating to this initiative are either capitalized, based on the expected future benefit after the opening of the market, or charged to current operations. Costs that are capitalized are included within Construction-in-Progress and Fixed Assets-in-Service, while costs charged to operations are included as transition costs. Capitalized costs generally relate to the costs of physical facilities, hardware and software required for the operation of the market and include costs paid to vendors, internal and external labour, consultants, an applicable share of overhead and an allocation of interest related funds borrowed to finance the project. Transition costs, which are charged to current operations generally relate to design of market rules, market and internal processes and procedures, and training and include costs for internal and external labour, consultants, and an applicable share of overhead.

b) Capital Assets

Capital assets at April 1, 1999 are recorded at the net book value of amounts transferred from Ontario Hydro. Subsequent additions are capitalized at cost, which comprises materials, labour engineering charges, overheads and interest applicable to capital construction activities.

c) Amortization

The capital cost of capital assets in-service are amortized principally on a straight-line basis, based on their estimated service lives. The estimated average service lives from the date the assets were transferred from Ontario Hydro or subsequently acquired are:

Administration Buildings	36 years
Communication Facilities and Data Acquisition and Computer System (DACS)	4 years
Major Market Systems and Enhancements	7 years
Minor Market Supporting Applications	5 years
Infrastructure Applications and Hardware	6 years
Communications Networks	5 years
Computers	4 years
Other	8 years

Gains and losses on sales of capital assets and losses on premature retirements are charged to current operations as adjustments to amortization expense. Removal costs are charged to amortization expense as incurred.

The estimated service lives of fixed assets and the significant assumptions underlying the estimates of fixed asset removal costs will be subject to periodic review. Any changes arising out of such a review are implemented on a prospective basis. The most recent review was performed as part of the current business planning process.

d) Pension Plan and Other Post-Employment Benefits

The IMO's post-employment benefit programs include pension, group life insurance, health care, long-term disability and workers' compensation benefits.

The IMO accrues obligations under pension and other post-employment benefit ("OPEB") plans and the related costs, net of plan assets. Pension fund assets are valued using current market values. Pension and OPEB expenses and obligations are determined annually by independent actuaries using the projected benefit method and managements' best estimates.

Pension and OPEB expenses consist of current service costs, interest and adjustments arising from plan amendments, changes in assumptions, and experience gains or losses, which are amortized on a straight line basis over the expected average remaining service life of the employees covered by the plan. Pension and OPEB expenses are recorded during the year in which employees render service.

APPENDIX 8 - STATUS OF PRIOR YEAR'S SETTLEMENT AGREEMENT & OEB RATE ORDER UNDERTAKINGS

IMO Regulatory Standing Committee

One of the undertakings of the Settlement Agreement for the IMO's 2002 fee submission was to continue consultation with Stakeholders. These stakeholder meetings that were initiated last year evolved into a more formal process under the IMO's new Consultative Framework. As part of this new consultation process, the Regulatory Affairs Standing Committee, made up of self-nominated stakeholders, was formed to address, on an ongoing basis, issues of regulatory nature, in particular, those, that would otherwise arise in the context of the IMO's annual fee submission to the OEB. Minutes and all support material from the meetings are published on the IMO web site.

The Regulatory Standing Committee scheduled a series of meetings during fiscal year 2002: April 12, June 28, September 13, October 11 and one is planned for October 25. The focus of the meetings were primarily on the IMO's deliverables for the undertakings and obligations arising out of the Settlement Agreement for the IMO 2002 Fees Submission (RP-2001-0046). A summary of these deliverables follows:

Service Cost Unbundling

The IMO continued to address the unbundling of its services, the determination of the cost of those services and the design of fees to recover those costs. In doing so, the IMO presented to the Committee a discussion paper outlining options for unbundling its fee structure. The discussion paper outlined:

- current IMO fee design
- goals for unbundling
- preconditions for effective unbundling
- short-term options
- drivers for evolution of the IMO fee design
- governance and stakeholder review
- options for unbundling
- challenges to effective unbundling
- experience of other ISOs

The IMO undertook to continue to learn from comparable organizations. For these efforts, the IMO sought a fuller understanding of the unbundling experience of other ISOs. The IMO presented the fee structures of other North American ISOs. Generally, most of the ISOs started unbundling several years into operation, and the largest portion of their budget dollars, accounting for over 85%, have been allocated to two major service categories – namely, control area and market support services. The basis for the fees for these two service categories is MWh – on quantity of energy consumed. Control area services are paid exclusively by load. Market support services have been allocated to both load serving entities and generation providers, with a higher proportion to loads.

Most North American ISOs charge an annual fee. This annual fee is in addition to the service categories, which, as mentioned above, are primarily volumetric based. A listing of these fees can be found in Chapter 7 of this plan.

Benchmarking

The IMO presented a comparison of performance measurement practices of other system operators. The IMO's performance measures are in line with those employed by other system operators in the specific areas:

- electricity reliability
- financial management
- project management/implementation
- market systems & processes
- customer satisfaction

Cost comparisons are included in Chapter 3 in this business plan.

Performance Measures

In fulfillment of one of the undertakings, the IMO's Vice President of Corporate & Legal Affairs conveyed to the IMO Board of Directors that intervenors consider the weighting contributed to reliability and market systems and process efficiency as part of overall performance in meeting participants' and stakeholders' needs.

On August 12, 2002, the IMO initiated consultation on operational performance measures. In particular, market participants were asked whether the IMO is tracking the measures that are important to them and, if not, what the IMO should be measuring, and whether the current performance standards require adjustment.

Wholesale Market Service Costs

In response to market participants and stakeholders requests for additional information regarding congestion costs, the IMO's Market Assessment and Compliance business unit (MACD) presented on June 28, 2002, the major constraints, the causes, and some statistics to date on congestion management costs. The role of the MACD and its Local Market Power Review to mitigate congestion costs was highlighted.

The IMO also provides, on an advisory basis to the OEB, estimates of wholesale market service charges. The estimates assist the OEB to establish the standard wholesale market service rate for Local Distributors. The IMO monitors these charges on a continuous basis, and advises the OEB of status.

Performance Based Regulation

Related to performance measures initiatives, the IMO presented a discussion paper exploring the relevance of Performance Based Regulation (PBR) as a potential incentive mechanism for the IMO. There was general agreement from stakeholders that, in its traditional definition, PBR is not an appropriate mechanism for the IMO to adopt at this time. This is owing to:

- PBR's fundamental incongruity with the IMO's not-for-profit, no-equity business model
- the lack of a PBR precedent within the context of RTOs/ISOs
- the apparent limited success of PBR in the Canadian gas distribution or generally in electricity utility industry (industries which are better suited for PBR).

Capital Expenditures

The IMO undertook to review and select projects proposed for capital spending on a priority basis and to report on the actual disposition of 2002 capital spending. Complete details of capital project expenditures in 2002 will be filed with the IMO's submission to the OEB.

