

**MARKET SURVEILLANCE PANEL REPORT**

**CONSTRAINED OFF PAYMENTS AND**

**OTHER ISSUES IN THE MANAGEMENT OF CONGESTION**

**JULY 3, 2003**

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## CONSTRAINED OFF PAYMENTS AND OTHER ISSUES IN THE MANAGEMENT OF CONGESTION

### 1 Introduction

As part of its ongoing analysis of the efficiency of the design and operation of the electricity market, the Market Surveillance Panel undertook an examination of the role played by constrained off CMSC payments in facilitating the efficient operation of the market. The Panel's conclusion, stated in a discussion paper published in February 2003, was that constrained off CMSC payments could be eliminated without any reduction in market efficiency. The thrust of subsequent comments by market participants was that constrained off payments should be evaluated in the context of the congestion management regime in its entirety and that significant changes in this regime would be counter-productive at this stage in the evolution of the market. This report follows up on the Panel's discussion paper and on the subsequent consultation process. Its purpose is to make practical and timely recommendations to both the IMO Board and other decision-makers regarding both constrained off CMSC payments and related issues of congestion management.

Driven at least in part by the consultation process, this report ventures somewhat beyond the initial concern of the Panel with constrained off CMSC payments. In addition to a series of recommendations intended to reduce constrained off CMSC payments in some instances and eliminate them in others, the report also contains some limited recommendations involving: (1) the mechanics of CMSC review for hydroelectric facilities; (2) CMSC payments related to the 25 Hz sub-system and; (3) an examination of impediments to effective transmission planning as well as suggestions for reform.

The report begins with a brief summary of the consultation process. It concludes with a synopsis of conclusions and recommendations. The report does not revisit the analysis of the issues presented in the Panel's discussion paper. Nor does it discuss comments on the Panel's analysis by market participants. These comments can be accessed via the IMO web page identified in Appendix A.

### 2 The Consultation Process

On February 21, 2003 the Panel launched a consultation on Congestion Management Settlement Credits (CMSC) payments by placing a discussion paper on the IMO web site and inviting comments from interested parties. A starting point for discussion was the Panel's conclusion that constrained off CMSC payments to generators and importers should be discontinued.

Participants were notified about the consultation by email and a notice on the IMO home page, as well as at the Market Advisory Council (MAC) meeting on February 18, 2003. There was a

further discussion of some of the key issues at the meeting of the Market Operations Standing Committee (MOSC) on March 5, 2003.

Fourteen market participants or their representatives submitted comments.<sup>1</sup> Most submissions were from generators or traders, with a group of loads represented by AMPCO, and one transmitter (Hydro One) also commenting. All submissions were published on the consultation web page about a week after the March 31 deadline for comments.

Almost all respondents commented on the key issue of the discussion paper, the elimination of constrained off CMSC payments to generators and importers. There was limited support for the implementation of this proposal at this point in the evolution of the market; several submissions suggested that a change should be tied to a decision regarding locational marginal pricing (LMP). There was, however, broad support for eliminating, reducing or mitigating some types of constrained off payments.

There were very few comments on the local market power mitigation framework. In contrast, there were strong and consistent views regarding transmission planning and enhancements, which are perhaps best represented by the statement that there is an acute lack of coordination and incentives for transmission planning that needs urgent attention.<sup>2</sup>

Following a review of the submissions, the Panel decided to engage the IMO, Hydro One and the OEB in a more detailed discussion of the issues related to the planning framework for investment in the transmission network. This report reflects the results of those discussions.

### **3 Constrained Off Payments**

#### ***3.1 Elimination of Constrained Off Payments for Generators and Imports***

After careful consideration of the comments of market participants, the Panel remains convinced that the reasons for the elimination of constrained off CMSC payments given in its discussion paper are sound and thus that the ultimate elimination of constrained off CMSC payments would improve market design. The Panel is persuaded, however, that elimination of all constrained off CMSC payments at this point in the evolution of the market would be premature. The Market Design Committee saw the CMSC regime as a transitional mechanism pending implementation of locational marginal pricing (LMP). If LMP is implemented, the issues raised by the Panel will have been addressed in large measure. The IMO has stated that LMP cannot be implemented before October 2004; moreover the timing of any decision to proceed or not is uncertain.

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<sup>1</sup> See Appendix A for the list of submissions and how to access them.

<sup>2</sup> The following submissions raised transmission planning issues: Bruce Power, Direct Energy, EPCOR, Hydro One, HQ Energy Marketing, IPPSO, Manitoba Hydro, OPG, TransCanada.

## **Conclusion**

*The Panel concludes that should LMP not go ahead, or should it be substantially delayed beyond the end of 2004, then constrained off CMSC payments should be eliminated and other aspects of the CMSC framework reviewed. The Panel will monitor progress towards the introduction of LMP and will revisit the issue of CMSC payments towards the end of 2004, in light of conditions at that time.*

### **3.2 Basing Constrained Off Payments on Negative Offer Prices**

The MSP concluded in the discussion paper, that there is no efficiency rationale for constrained off CMSC payments based on negative offer prices. CMSC payments based on negative offer prices can exceed the MCP. If the lower limit of the offer price were set at zero for purposes of calculating the CMSC, the maximum possible CMSC payment would be equal to the MCP. In the opinion of the Panel, if the MCP is sufficient compensation for supplying energy it must also be sufficient compensation for not supplying it. Limiting CMSC payments in this way does not prevent a participant from offering energy at negative prices. Nor does it prevent the scheduling of offers in accordance with negative bid prices.

In cases where the zonal price is negative and exceeds the offer price, constrained off payments should be based upon the negative zonal price in order to prevent unwarranted CMSC payments from market participants to the IMO.

The saving to loads from using this method of calculating CMSC market would have been about \$6 million between July 2002 and March 2003.

## **Recommendation**

*The Panel recommends that constrained off payments should be calculated based upon an offer price that is no less than the lower of zero or the zonal price where the zonal price is negative.*

### **3.3 Constrained Off Imports**

As described in the discussion paper,<sup>3</sup> if an offer at the New York intertie is not selected in the Ontario market schedule or constrained schedule in the two-hour ahead pre-dispatch, the IMO notifies the NYISO that this potential transaction was not successful. The NYISO then removes this bid from its 90-minute ahead auction, making it certain that the offer cannot succeed in the New York market either. The IMO does not now remove offers such as this from consideration in the one hour ahead pre-dispatch and it is not clear that it has authority to remove them even though they are no longer available because their New York leg has been cancelled.

As stated in the discussion paper, the Panel is of the opinion that, in general, market efficiency is not served by including offers of fictional energy in the offer stack. Moreover, in the case at hand, removing the offers which do not represent available supply from the one hour ahead pre-

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<sup>3</sup> Discussion Paper, page 24.

dispatch offer stack would prevent their selection in the one hour ahead pre-dispatch schedule and the consequent necessity of constraining them off. This would result in the saving of CMSC payments when these offers are priced below the eventual real-time MCP. There would be no saving when these offers are priced above the eventual real-time MCP because they currently receive an IOG payment with an offsetting negative CMSC payment.<sup>4</sup>

### **Recommendation**

*The Panel recommends that the IMO initiate procedural changes and clarify the rules as necessary to allow it to remove import offers from New York or other jurisdictions from the offer stack when it is known with reasonable certainty that these import transactions can not be successfully scheduled.*

### **3.4 Self-induced Constrained Off CMSC**

Constrained off CMSC may be induced by a generator or load participant as the result of dispatch deviation. Self-induced CMSC may also be the consequence of plant requirements and corresponding limitations applied by the system operator in response to information provided by the participant. As the Panel's discussion paper explains, in these instances there is no efficiency rationale for CMSC payments to generators. Indeed, if anything, these payments reduce market efficiency.

Constrained off payments are also made to load as a result of dispatch deviation. As was explained in the discussion paper, these payments have no efficiency rationale and they can be very large.<sup>5</sup>

Ideally, self-induced constrained off CMSC payments to generators and dispatchable load should be eliminated. There is, however, no simple automated or near real-time process that can identify self-induced CMSC payments for all cases with reasonable certainty. A practical alternative is to identify such situations after-the-fact and then recover the CMSC.

### **Recommendation**

*The Panel recommends that the IMO initiate a rule change which does not require the IMO to make such payments in the first place or authorizes the IMO to completely recover self-induced constrained off CMSC payments to generation or dispatchable load.*

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<sup>4</sup> Because of the removal of these offers from the market schedule, the MCP would be expected to be marginally higher in some circumstances. If the removed offer were replaced by another import in the market schedule, the MCP would not be affected. Only if it were replaced in the pre-dispatch by an internal resource would the real-time MCP be affected.

<sup>5</sup> The high payments for load are most obvious when a participant puts in a bid of \$2000 per MWh for a portion of the load, signaling this should be treated as non-dispatchable. Because of its own internal processes the load may reduce consumption to the point where it appears that even the non-dispatchable portion is being constrained off. Relatively large sums have been paid to dispatchable loads due to dispatch deviations inducing constrained off payments, when bid at \$2,000 and at other lower prices as well.

## 4 CMSC Review and Mitigation of Hydroelectric Facilities

The Panel is concerned that the historical reference price currently used for purposes of review of CMSC payments to hydroelectric facilities is not an accurate estimate of the opportunity cost of their water.

The opportunity cost estimate for a hydroelectric facility should reflect market conditions prevailing during the period in which the facility is constrained. In the Panel's opinion, the thirty day average price (MCP) received by each hydroelectric facility selected in the market schedule will provide a more accurate representation of the opportunity cost for that facility than does the ninety day average offer price which is currently used in the CMSC review process.

Since the MCP must be at least as great as the offer price of successful bidders, applying this estimate of opportunity cost will increase the historical reference price for CMSC review and will thus reduce the number of constrained on situations involving hydroelectric facilities that are reviewed. On the other hand, it will increase the number of constrained off events that are reviewed.

### **Recommendation**

*The Panel recommends two modifications to the definition of the historical reference price for hydroelectric facilities. The applicable period should be 30 days prior to the trade date, rather than the current 90-day period. Also, the historical reference price across this period should be based on the MCP weighted by the market schedule quantity, rather than the average offer price.*

## 5 25 Hz Sub-system

The discussion paper identified the bottling of hydroelectric generation on the 25 Hz sub-system in the Niagara area as cause of substantial constrained off payments, and constrained on payments of a similar amount, during the first year of market operation. A portion of the constrained on payments has been or is in the process of being recovered through the mechanisms for CMSC adjustments set out in Appendix 7.6 of the market rules.

The 25 Hz sub-system exists to serve specific load in the area, at Stelco and at Niagara Mohawk. Total requirements amount to substantially less than 50 MW, but there is more than three times as much generation capacity dedicated to serving this load, as a result of both historical and reliability considerations. The continued existence of this load and the obligation by IMO to serve it reliably (at this frequency) leads to the bottling of hydroelectric resources. Moreover, to supply this load in the Hamilton area with generation near Queenston also requires the dedicated use of transmission between these locations. On the 60 Hz system, flows from Queenston area west are currently often bottled during periods of high demand and import. It is expected that making the 25 Hz transmission and generation available for 60 Hz service could be of value to the market and enhance both efficiency and reliability.

The Panel is concerned with this situation for two reasons.

First, OPG owns both the generation facilities, which are receiving these payments, and the frequency transformation equipment, which causes the bottling and gives rise to the CMSC payments. As a consequence, the potential exists for OPG to use this equipment strategically to increase the CMSC payments it receives.<sup>6</sup>

Second, these CMSC payments reduce OPG's incentive to explore changes that will enhance the efficiency and reliability of the market. Such changes might include, for example, increasing the capability of its frequency change equipment to reduce the bottling of the generation concerned or, preferably, exploring with Stelco and the IMO what changes could be made to eliminate the 25-Hz transmission requirement. The Panel recognizes that this issue has persisted for some time. It should be addressed and the Panel believes that a necessary step to encourage appropriate consideration of options is to remove the disincentive to change that CMSC payments now provide.

### **Recommendation**

*The IMO should lead a working group including Stelco, Hydro One and OPG to resolve this issue in the best possible fashion. If at the end of six months there is no resolution, this should be reported to the IMO Board, which should then consider alternatives, including the possible elimination of both constrained off and constrained on CMSC payments to generation on the Niagara 25 Hz system.*

## **6 Transmission Planning for Market Efficiency and Competition**

In its October 2002 Monitoring Report, the Panel identified concerns regarding signals and incentives for enhancing transmission capability to relieve congestion as well as concerns regarding perceived lack of outage coordination among generators and transmitters.

A constrained transmission system can hinder market efficiency and competition in the electricity market. It can prevent low cost generation from running, thereby requiring replacement by more costly supply. Reduced competition can also result if constraints restrict imports into Ontario, or restrict power flows into areas of the province with few local suppliers. Given that there is inadequate generating capacity in Ontario, reducing congestion must be helpful in making the best use of the capacity that does exist.

During the consultation on CMSC, market participants also expressed concerns about congestion, the transmission planning process and lack of information that could signal the need for transmission enhancements. They commented that there was a need to expand transmission capability, but the process is incomplete and the roles of the major players need to be clarified.

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<sup>6</sup> Due to irregularities in OPG's pricing process, occasionally very high prices are offered. However, the MAU and the MSP do not consider that OPG has attempted to take advantage of the constraints on the 25 Hz sub-system either through its offer prices or the availability of this equipment.



Various opinions were expressed by market participants regarding market signals and data ranging from CMSC having no value in terms of providing economic signals to the market, to seeing CMSC as essential information for identifying the need for additional transmission capacity. There were also mixed views about whether the CMSC data should be made public or kept confidential. There was, however, more general agreement about room for improving the economic data on congestion, whether it was through improvements to CMSC reporting or making the publication of shadow prices more accurate and useful.

## **6.1 Transmission Planning in Ontario**

Transmission planning at the IMO focuses primarily on assessing market participants' requests for connections to the IMO-controlled grid as well as the overall reliability of the power system. The IMO publishes the results of the connection assessments on its web site. Its overall reliability assessments are published in the 18-Month Outlook and 10-Year Outlook. Where a reliability concern is identified in the annual assessment, the IMO can move the process forward by issuing 'Requests for Proposals' to the market and/or 'Direction for Proposals' to transmitters.

The IMO does not currently assess specific efficiency benefits associated with proposals, whether these derive from connection assessments or other enhancements proposed by transmitters. The IMO does indicate locations where congestion occurs or is likely to occur, but it does not see itself as having responsibility for proposing transmission solutions for efficiency reasons or as having the authority to direct transmitters to develop plans to improve efficiency. IMO's mandate in this regard is primarily on system reliability; if its role were to be broader than this it would need additional authority and resources.

Hydro One explained in discussions with us that it may undertake transmission planning and development for any of several reasons, such as load and generator connections, area supply, interconnection capacity and operational performance enhancement. Hydro One does assess economic opportunities that may support investment in new transmission capacity, but as is the case for other market participants, inadequacies of publicly available data inhibit a full assessment of the benefits. Hydro One explained that where there appear to be economic benefits from some projects, it has provided opportunities for the IMO to add to its own assessment of benefits, but that the IMO has declined these opportunities.

With input from IMO, Hydro One and others, the OEB is in the process of updating the Transmission System Code<sup>7</sup>. The OEB in its Notice of Proceeding, June 12, 2002 stated "The Board is initiating, on its own motion, a proceeding to determine if changes in the Code are required, including changes that may alter the effect of existing Connection Cost Recovery Agreements and Connection Agreement.... The scope of the proceeding with respect to the Code will include, but is not limited to transmission bypass, capital cost responsibility, rules for determining capital contributions, and requirements for the transmitter's connection process, including appropriate time line." So far, there is no indication that Code revisions will deal explicitly with 'planning' issues, i.e. the identification and decision processes for transmission enhancements.

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<sup>7</sup> Reference OEB web site

It should be noted that in the United States, Regional Transmission Organizations (RTOs) are moving toward some form of centralized coordination of transmission planning over broad geographic areas. If the underlying market conditions are similar, this may be a rational direction for the Ontario electricity market.

## **6.2 Issues**

From our own observations and the comments of market participants, the Panel is persuaded that several issues regarding congestion and transmission planning need to be addressed. Experience since the market has opened has confirmed that CMSC payments have greatly exceeded estimates made by the Market Design Committee.<sup>8</sup> The magnitude of CMSC payments related to transmission suggests that there is considerable scope for efficiency gains. There are, however, a number of structural and organizational impediments to achieving these gains.

There is a lack of clarity in the decision making process for efficiency motivated transmission enhancements in the Ontario electricity market. No entity in this market is charged with the responsibility to assess and compare the relative costs and benefits of transmission system enhancements, taking into account the intentions and plans of market participants in a competitive framework. Although merchant transmission projects remain a possibility consistent with a competitive marketplace, experience in this and other markets suggest that they are unlikely to be a totally satisfactory approach in identifying projects.

There is a lack of transparency regarding the magnitude and location of transmission system constraints that hinders market participants' initiatives to provide solutions that could overcome such constraints. As well, the existence and structure of CMSC payments diminish incentives to propose solutions. Generators constrained off in surplus areas are indifferent since CMSC payments hold them harmless. Generators in deficient areas are constrained on and receive payments even though they would be out-of-the-money otherwise. Socializing CMSC payments as uplift diminishes the incentive of load to modify consumption in areas where expensive generation must be run.

There are also other structural aspects of market design that may limit the ability of generators to invest in transmission.<sup>9</sup>

Part of the reluctance of the IMO to identify the efficiency benefits of any proposal is the difficulty it has in associating CMSC payments with specific constrained transmission interfaces. This is due to the design of the Dispatch System Optimizer (DSO). Some means must be devised for identifying how much specific congested interfaces are costing the market. Neither CMSC payments nor published shadow prices currently provide the IMO or the market with the necessary information. In addition to these capabilities, identifying efficiency benefits requires making various assumptions and extrapolations into the future.

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<sup>8</sup> During the MDC deliberations, the cost of re-dispatch in response to transmission congestion was estimated by OEGC (now OPG) as \$5 million, much less than the \$230 million of CMSC payments seen during the first year of the market.

<sup>9</sup> Sections 80-81 of the Ontario Energy Board Act, 1998 give the Board an option to review generator investment in transmission.

For transmission lines greater than 2 km in length, transmitters have traditionally faced a two-stage approval process through the OEB. The first stage provides leave to construct. When a project is completed, a second stage is needed to permit recovery of costs through rates. Because there may be considerable time delay between the two stages and conditions may have changed, the proponent faces some regulatory risk that cost recovery may be delayed or denied even though leave to construct has been granted.<sup>10</sup> When a transmitter proposes efficiency driven enhancement, the market and the transmitter would benefit from an independent analysis from the IMO with respect to the financial implications of the proposal to the market. This would help alleviate concerns that the transmitter may be acting in self-interest to increase their rate base and it may also reduce some of the regulatory risk arising from the two-stage process. To provide such an independent analysis the IMO would need additional resources and would need to perform price and cost assessments that it currently does not undertake.

When approving transmission outages, IMO's mandate allows it to consider reliability impacts only and not the effects on market prices or congestion costs. Transmitters, primarily Hydro One, can and do try to coordinate their outages with generators to minimize impacts, but there is little incentive for them to do so. More likely, coordinating outages could lead to the transmitter incurring additional costs. Without specific incentives in their rate structure, this situation is unlikely to change.

### **Recommendation**

*The MSP recommends that the IMO, Hydro One, other interested licensed transmitters and the OEB each assign a small number of knowledgeable staff who, working together under the leadership of the OEB, will develop a Memorandum of Understanding that sets out appropriate roles and accountabilities for the IMO, Hydro One and the OEB in facilitating transmission planning and the approval of projects aimed at enhancing efficiency in the context of a competitive marketplace. The MOU should also identify any changes to market rules, statutory authorities and resources necessary to allow appropriate planning processes to take place. The participants should work to a timeframe that provides for a draft memorandum to be submitted to the Boards of the three organizations by end December 2003. If the Boards concur, the MOU should then be published for comment by market participants before being formally adopted by the Boards. If appropriate, the MOU can also consider outage planning and coordination, otherwise a related working group with different membership could be struck to review this issue.*

The Panel offers the following comments as a starting point for the discussions on process.

The IMO is the entity with the most comprehensive data sets and expertise on transmission constraints and market efficiencies (or lack of) and as such should identify and consider publishing these for the use of all market participants. It should be the IMO that identifies a need or an opportunity and initiates the processes for improvement; not only for reliability, but also for

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<sup>10</sup> The Panel's understanding is that there is no legal requirement for staging although this is how the process has traditionally worked. It is also the case that cost recovery has not been denied in specific projects in Ontario.

market efficiency. The IMO might also indicate the degree of improvement that could alleviate a constraint and possible alternative ways to achieve it.

Where the IMO sees a need for transmission enhancements, whether for reliability or efficiency reasons, and transmitters have not come forward with effective solutions, the IMO should direct Hydro One (or any affected transmission owner) to carry out the specific system studies to develop alternatives and recommend a preferred alternative. The transmitter should also be accountable for estimating the capital and OM&A costs associated with each alternative and should be prepared to publish and defend these.

For a given need or opportunity, there can be proposals other than transmission, made by other market participants. These may include new generation, demand-side management proposals or some combination of these with transmission enhancements. The process should ensure full transparency of IMO identification of needs/opportunities and any ongoing system studies, so that all market participants have an opportunity to propose initiatives. The IMO should be enabled to insist that any such proposals be fully costed and that proponents be prepared to defend their cost estimates. Given the flexibility afforded for any market-based solutions to be withdrawn, the proponents of such solutions should be prepared to provide substantive assurance to the IMO about the firmness of their intent and the time period to implementation, to avoid situations where transmission options are not pursued because of alternative proposals that in the event do not materialise. The IMO should evaluate alternatives with respect to their benefits to the electricity market, including benefits to reliability, efficiency and competitiveness. Should the preferred alternative be a transmission enhancement that requires OEB approval, the IMO should be prepared to support such an enhancement in hearings before the OEB.

## 7 Summary of Conclusions and Recommendations

### Conclusion 1

The Panel concludes that should LMP not go ahead, or should it be substantially delayed beyond the end of 2004, then constrained off CMSC payments should be eliminated and other aspects of the CMSC framework reviewed. The Panel will monitor progress towards the introduction of LMP and will revisit the issue of CMSC payments towards the end of 2004, in light of conditions at that time.

### Recommendation 1

The Panel recommends that constrained off payments should be calculated based upon an offer price that is no less than the lower of zero or the zonal price where the zonal price is negative.

### Recommendation 2

The Panel recommends that the IMO initiate procedural changes and clarify the rules as necessary to allow it to remove import offers from New York or other jurisdictions from the offer stack when it is known with reasonable certainty that these import transactions can not be successfully scheduled.

### Recommendation 3

The Panel recommends that the IMO initiate a rule change which does not require the IMO to make such payments in the first place or authorizes the IMO to completely recover self-induced constrained off CMSC payments to generation or dispatchable load.

### Recommendation 4

The Panel recommends two modifications to the definition of the historical reference price for hydroelectric facilities. The applicable period should be 30 days prior to the trade date, rather than the current 90-day period. Also, the historical reference price across this period should be based on the MCP weighted by the market schedule quantity, rather than the average offer price.

### Recommendation 5

The IMO should lead a working group including Stelco, Hydro One and OPG to resolve the bottling of hydro electric generation of the 25 Hz sub-system in the Niagara area in the best possible fashion. If at the end of six months there is no resolution, this should be reported to the IMO Board, which should then consider alternatives, including the possible elimination of both constrained off and constrained on CMSC payments to generation on the Niagara 25 Hz system.

**Recommendation 6**

The MSP recommends that the IMO, Hydro One, other interested licensed transmitters and the OEB each assign a small number of knowledgeable staff who, working together under the leadership of the OEB, will develop a Memorandum of Understanding that sets out appropriate roles and accountabilities for the IMO, Hydro One and the OEB in facilitating transmission planning and the approval of projects aimed at enhancing efficiency in the context of a competitive marketplace. The MOU should also identify any changes to market rules, statutory authorities and resources necessary to allow appropriate planning processes to take place. The participants should work to a timeframe that provides for a draft memorandum to be submitted to the Boards of the three organizations by end December 2003. If the Boards concur, the MOU should then be published for comment by market participants before being formally adopted by the Boards. If appropriate, the MOU can also consider outage planning and coordination, otherwise a related working group with different membership could be struck to review this issue.

## Appendix A: CMSC Consultation - List of Submissions

1. Association of Major Power Consumers Ontario (AMPCO) - Arthur Dickinson
2. Brascan Energy Marketing - Daniel Lapierre
3. Bruce Power - Corinne Draesner
4. Coral Energy - Paul Kerr
5. Direct Energy Marketing - John Messenger
6. DTE Energy Trading – Alan B. Cherkas
7. Dynegy Power Marketing - Tina Bradshaw
8. EPCOR Utilities – Graham Henderson
9. Hydro One Networks - Andy Poray
10. HQ Energy Marketing (Hydro-Quebec) - Sylvain Gignac
11. Independent Power Producers' Society of Ontario (IPPSO) - Jake Brooks
12. Manitoba Hydro-Electric Board (Manitoba Hydro) - Kelly J. Hunter
13. Ontario Power Generation - Andrew Barrett
14. TransCanada PipeLines Limited - Margaret Duzy

To access these documents refer to the following IMO web page:  
[http://www.theimo.com/imoweb/consult/consult\\_cmssc.asp](http://www.theimo.com/imoweb/consult/consult_cmssc.asp)