



IPPSO

Independent Power Producers' Society of Ontario

**IPPSO Response to the Market Surveillance Panel Discussion Paper on Congestion
Management Settlement Credits (CMSC) In the IMO-Administered Electricity Market
Issues related to constrained off payments to generators and imports**

March 31, 2003

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Executive Summary

IPPSO has reviewed the discussion paper on Congestion Management Settlement Credits (CMSC) prepared by the Market Surveillance Panel (MSP) in February 2003 and is pleased to provide comment. IPPSO is concerned with the direction of the discussion paper, in which the MSP states its position “that it is appropriate to reconsider the payment of constrained off payments for energy to generators and to imports.” In effect the MSP proposes elimination of constrained-off payments.

IPPSO sees a range of CMSC concerns expressed in section 3.2 of the paper, but none that provide sufficient reason to eliminate constrained-off payments. Such a move would have a number of disadvantages and result in an immediate and unexpected transfer of risk and loss of revenue for existing generators. Such a transfer would create a substantial additional burden for existing generators, and appears to do so without providing any mitigation measures to reduce the burden, or consideration of the mechanisms needed for generators to be able to even partially manage such risks.

In the case of investors evaluating new generation opportunities in Ontario, the transferred risks and loss pose extra barriers for new investment. For existing plants, the imposition of the extra risk and loss of revenues is a burden they can do little to respond to since moving an existing plant to a non-congested location is not feasible.

The MSP paper does not sufficiently recognize that constrained-off payments are an integral and fundamental part of Ontario’s uniform price market design. CMSC payments permit the IMO to manage congestion and ensure alignment of the interests of market participants to follow IMO instructions such that congestion can be managed and the network remain reliable. They avoid the creation of conflict between optimized system dispatch and optimum generator operation.

The MSP paper expresses concerns regarding the current state of transmission planning which need to be acted on. However, partial removal of CMSC does not help transmission planning, and in fact will create additional problems such that new generation investment and new transmission investment will be stalled. Generators are not responsible for transmission planning. IPPSO recommends that steps be taken to clarify the IMO’s current role of managing congestion in Ontario and the IMO’s responsibility to plan and implement transmission enhancements as appropriate to alleviate congestion. IPPSO would support a review by the IMO and OEB of the transmission planning and investment regime, which review should parallel the ongoing review of Long Term Resource Adequacy for supply. Without such broader review, any comments on the impact of CMSC on transmission investment are inappropriate.

Simply ending constrained-off payments would exemplify the type of market changes that create regulatory instability and discourages new investment.

IPPSO recommends the continuation of constrained off payments as part of the overall CMSC regime that supports the parallel existence of constrained dispatch schedules and unconstrained market schedules. Only if

LMP results in elimination of all differences between market schedules and real-time operations /dispatch
could CMSC be reasonably eliminated.

1. Introduction

The Market Surveillance Panel published a discussion paper entitled “Congestion Management Settlement Credits (CMSC) in the IMO-Administered Electricity Market” which focused on issues related to constrained-off payments to generators and importers, dated February 2003. The panel invited interested parties to respond by March 31.

IPPSO is a non-profit industry association representing more than 100 companies and individuals active in the generation business in Ontario. As an organization, it is engaged in a range of consultative mechanisms related to electricity policy in Ontario, including several stakeholder bodies associated with the IMO.

IPPSO is very interested in and concerned with the matters raised in market surveillance panel discussion paper and appreciates the opportunity to have input into the MSP deliberations. As a result, IPPSO has undertaken consultation with its members and received input from its members in order to develop this response. Views expressed in this paper are the views of IPPSO and are supported by consultation recently carried out amongst concerned IPPSO members.

Congestion Management issues were noted by the MSP as being complicated (page 1). Experience elsewhere in North America supports the conclusion that congestion issues are complicated and also that they are key aspects of a market’s design and operation. Congestion has resulted in significant costs. Some estimates of congestion costs on a single transmission path in California over a 16 month period exceed \$200 million.

IPPSO’s comments are focused on transmission related congestion only. Transmission related congestion is a broad market issue and the most serious concern identified by the MSP. IPPSO’s comments first provide a review of the current state of the Ontario market, transmission planning, and congestion management. IPPSO then comments on the proposed changes and provides recommendations.

IPPSO includes some comments on other forms of CMSC mentioned in the discussion paper, many of which only affects certain types of generators or are related to specific IMO practices.

2. Current State of the Ontario Electricity Market

The Ontario market has been designed consistent with the concept of a uniform price. As such the Ontario market facilitates competition by a large number of generators in a large market spanning the entire Province. In order to facilitate such broad competition, adequate transmission must be in place such that load customers have access to competing supplies, not just local supplies. IPPSO is aware that the IMO has been encouraging non-dispatchable load facilities and generation units to become dispatchable so that more generators are responsive to market conditions and competition is broadened.

Constrained-off payments are an essential element of Ontario’s uniform price design. Constrained-off payments are important to the reliability of the electric system in that CMSC aligns a generator’s business objectives with the need to follow dispatch instructions from the market operator. Other designs can create conflicts between business objectives and the need to follow dispatch instructions. If dispatch instructions are not followed, system control and reliability issues arise. The present market design properly looks first to establishing the economic incentives for

generators to follow dispatch instructions. Policing of compliance should remain a secondary mechanism.

In a market, location decisions by new generators depend on numerous factors that vary with the generation technology. Some forms of generation are quite flexible with respect to location, particularly gas-fired combustion turbines and combined cycle plants. Other forms of generation are not flexible. Sources like hydro and wind must locate where the resource is located. Cogeneration facilities must locate near the facilities that use the thermal energy co-produced in the cogeneration plant. In Ontario, generators considering new investments using technology which is not location-flexible are aware of the potential move to some form of LMP, although significant uncertainty exists on details. The MSP paper does not identify the existence of any inappropriate location decisions by existing or planned generators due to any expectation of constrained-off payments.

Constrained-off payments appropriately recognize that the existing configuration of generation and transmission is a legacy of the former integrated monopoly structure. Recent investments in generation in the province have been based on the understanding that generation revenue would be from a uniform market price in the near term, with CMSC, and a possible move to LMP in the future. Both constrained-on and constrained-off payments are an integral part of uniform price model.

3. Current State of Congestion Management and Transmission Planning

The use of CMSC is consistent with an approach in Ontario where the IMO is responsible for managing congestion, individual generators are not. CMSC provides a signal to the IMO of the degree of congestion and its overall cost. The IMO is in position to assess if new transmission facilities are economic and would reduce the cost of congestion. The IMO is also positioned to ascertain the type of transmission facilities or transmission enhancements, which could reduce congestion costs. At page 14 of the paper a concern is raised that constrained off payments are worsening transmission planning. IPPSO believes the opposite is true. By providing a party, in this case the IMO, with the full cost of congestion and full visibility of details of those costs, the IMO is able to determine beneficial transmission enhancements. The IMO can also assess when transmission elements are not worth enhancing due to a small volume of congestion and low costs. Thus the IMO is well positioned to determine transmission needs and stimulate planning and implementation of those new transmission facilities which have broad benefits to the Ontario market. Currently the IMO does not have a clear responsibility to plan and implement new transmission that would alleviate congestion. Establishing clear responsibility for transmission is urgent before congestion costs increase.

Most transmission facilities in Ontario are owned by Hydro One. In the event that additional transmission capacity is needed between two locations, in many cases the most economical additions involve upgrading existing facilities. Such upgrades where possible are preferable to constructing completely new transmission lines on new right of ways. Upgrades to existing lines are not only less expensive but also avoid landowner disruptions and environmental issues.

Currently in Ontario, generators have little information of the status of congestion and are faced with many barriers if they attempt to remedy the congestion by stimulating new investment in transmission. In fact there are prohibitions on generators owning transmission. Since most

transmission is owned by Hydro One, line upgrade possibilities are not readily apparent to generators and even if they were, a generator could not implement an upgrade to assets owned by Hydro One.

The IMO is the party best able to efficiently manage congestion in Ontario.

4. Proposed Change – Elimination of Constrained-Off payments

The thrust of the MSP paper would be to implement a significant change to one aspect of congestion management, that being constrained-off payments. Due to its fundamental nature, such a change would require several aspects of the market design to be rethought such that companion changes could be implemented simultaneously. When significant changes are contemplated, transition mechanisms should also be considered to mitigate large and sudden impacts on existing participants. Simply ending constrained off payments without companion changes would exemplify the type of market changes that create regulatory instability and discourages new investment.

We have not noted any reference in the paper to the corresponding elimination of constrained-on payments to dispatchable load. On the one hand, this would seem a corollary of the elimination of constrained-off payments to generation. On the other hand, such elimination would be totally contrary to the Hour Ahead Dispatchable Load proposals which aim to mitigate risk of departure of the scheduling basis from the pricing basis.

5. Proposed Changes Effect on Electricity Market

Ending constrained-off payments will increase generator risk and reduce revenues, both of which will harm existing generators and discourage new generation from locating in Ontario. The current market design provides no mechanisms for generators to manage the domestic congestion risk they become exposed to.

The paper notes that generators may alter bidding strategies in response to the loss of constrained-off payments. It is also possible under the existing market rules that generators could shift to become non-dispatchable. Neither of these actions will necessarily enhance the Ontario market and in fact may lessen the competitiveness of the market. Such mechanisms alone are unlikely to mitigate much of the impact of the loss of revenue. Generators will also have a perverse incentive to vary from dispatch instructions. A generator will financially benefit by ignoring dispatch instruction to reduce output if it is in a congested zone.

The MSP Paper states that ending constrained-off payments, and the adoption of rational generator pricing behaviour will raise prices to consumers, which is obviously not a desirable stand-alone objective. As well, continuing to include the offers from constrained-off generators in the pricing algorithm simply to lower market price without compensating the constrained-off generators is fundamentally unfair. In the event constrained-off payments are eliminated, the consideration of the appropriate algorithm for calculating MCP is clearly one of the issues to be addressed. Yet it must be emphasized that this is not the only associated issue, and that many aspects of the market design must be re-evaluated, and transition mechanisms considered where needed.

Placing an unmanageable congestion risk on generators will dissuade investment in wind, hydro and cogeneration sources since those types are location inflexible. Ontario's growth will likely become largely dependent on natural gas fuelled generation. Adding other risks arising from differences between dispatch and market schedules is counterproductive for all generation investment.

6. Proposed Changes Effect on Transmission Planning

The shift of congestion risk to generators is not in line with a fundamental market design principle, that being: To allocate risks to those best able to manage the risks.

Generators are not well positioned to address transmission planning issues and therefore have little ability to manage congestion risks for the following reasons:

1. Generators are not in the transmission business.
2. Generators have limited ability to be aware of practical upgrades to the existing transmission network or to execute such upgrades.
3. Generators are prohibited from owning such transmission facilities.
4. Currently, responsibility for transmission planning rests with the IMO, Hydro One and the OEB.

The primary area where generators can impact transmission planning is in the individual generator's original location decision, so logically, that is where the economic signals to generators should be placed.

As far as new transmission goes, experience elsewhere suggests that even seasoned players are finding it difficult to build transmission in most jurisdictions.

7. Congestion Management is a Fundamental Issue

The congestion issue raised by the MSP, is a fundamental market design issue. Should congestion be managed by the IMO as a central role or be managed by market participants through market mechanisms. Locational Marginal Pricing (LMP) would be an example of a market mechanism. For illustration, a comprehensive transition to LMP would be a major undertaking involving determining, publishing and settling multiple prices around the Ontario grid. A move to LMP would also require establishing transmission rights between different locations. Typical LMP market designs involve establishment of existing transmission capacity such that participants in the market can manage the risks of congestion through the issuance of rights to existing transmission capacity. It may also be appropriate to grant or ensure that existing players receive rights to

existing transmission capacity in fairness to suddenly burdening those existing players with congestion consequences. IPPSO's comments on LMP are not intended to indicate support for LMP rather to illustrate the fundamental nature of the issue raised by the MSP.

A piecemeal approach, such as simply eliminating constrained-off payments, is inappropriate when addressing fundamental issues like congestion management. A piecemeal approach will create new problems and create uncertainty as to the direction and stability of Ontario's market. If a shift is to occur on a fundamental issue, such a shift needs a comprehensive analysis, definitive directions to be set and a detailed implementation plan.

Given that a review of LMP is planned in 2004 and appears to envisage the comprehensive review needed and that the market is currently struggling for stability, this is an inappropriate time to consider a piecemeal change like elimination of constrained-off payments.

In the meantime, it would be beneficial to clarify the IMO responsibility to manage congestion until such time as a fundamental change to the market is adopted. Such clarification would ensure that congestion is managed in the interim and that transmission investment in Ontario does not lag due to unclear responsibilities. The stakes are high. The absence of clarity leaves Ontario in a state where both transmission and generation investment will stall and congestion costs will escalate.

8. IPPSO Recommendations and Conclusions

IPPSO recommends against any elimination of constrained -off payments, until issues related to congestion management and transmission planning are resolved in a durable manner consistent with the rest of the market design and in keeping with the other recommendations below.

IPPSO also recommends that steps be taken to clarify the IMO's current role of managing congestion and its responsibility to plan and implement transmission enhancements as needed to manage congestion.

In response to the specific issues raised on pages 28 & 29 of the discussion paper:

- ◆ CMSC is based on the difference between Dispatch and Market Schedules. CMSC payments should only be eliminated if and when LMP results in the merger of these two schedules. Elimination of CMSC in any other circumstances would introduce perverse incentives to the market, which would jeopardise market efficiency and reliability.
- ◆ The present CMSC regime is consistent with the efficient use of resources in the operational time frame. While LMP remains a prospect, that prospect will play a major part in location decisions. If LMP is cancelled or deferred long-term, then the IMO needs to review its connection assessment and cost allocation process and its transmission planning process, and the OEB needs to review the transmission tariff implications, to provide assurance of appropriate investment location signals. It is possible to contemplate at that stage that new generation, inappropriately sited, might not qualify for constrained-off payments arising from transmission congestion.
- ◆ CMSC does not jeopardise reliability. The elimination of constrained-off payments except in the limited potential context noted immediately above, would have neutral or negative impact on reliability.

- ◆ The elimination of constrained-off payments would tend to reduce dispatchability of load and generation, and might tend to reduce generation investment, all of which effects would harm competition.
- ◆ Other issues addressed in the body of this comment include (1) clarifying transmission planning responsibilities and (2) avoiding market changes that create regulatory instability and discourage new investment. To the extent that the CMSC regime is to be adjusted, then it would be important to address transition issues.

9. Other Comments and Issues

Process to Address Specific Improvements to CMSC

The current CMSC system may be improved upon. IPPSO's comments should not be taken to suggest that no changes to the CMSC should be made. But, rather those specific issues may be explored and changes made without changes that would be disruptive to key principles of the market design such as elimination of constrained-off payments. If there are specific features of the market that cause unwarranted CMSC, these should be fully explained, the impact analyzed and specific changes proposed to address them should be considered through the IMO Technical Panel and broader stakeholdering as appropriate.

Some CMSC payments are related to differences between the unconstrained IMO pricing algorithm, and the actual or realistic generator operation/dispatch. The use of unrealistic ramp rates in the market schedule, and the need for manual over-ride of the dispatch algorithm to achieve reliability in the look-ahead time frame are examples of such discrepancies, outside generator control, whose impact is appropriately mitigated by the combination of constrained-on and constrained-off payments. Unless and until differences are eliminated it is appropriate to maintain both constrained-on and constrained-off payments.

Congestion in Alberta

The Alberta Energy and Utilities Board (AEUB) recently issued a decision on Congestion Management Principles (AEUB Decision 2002-099). As noted in the MSP paper (page 27), the EUB did not endorse constrained off compensation for generators subject to congestion. However, the AEUB has clearly given the Transmission Administrator in Alberta accountability to "plan for and ensure the timely development of transmission system enhancements required to ensure service to firm Alberta generation expected to be in merit using accepted AIES reliability criteria." (AEUB Decision 2002-099 page 85). Thus Alberta has taken steps to ensure that transmission constraints are reviewed and acted on.

Elimination of Constrained off Payments for Imports

While IPPSO's comments have focused on generation, the MSP proposal also would remove constrained off compensation for importers. The effect on importers is similar to generators in that importers are also subject to a transfer of risk and loss of revenue. While importers have not made investments in physical facilities like generators, many have made investments to purchase transmission rights and/or contract for supply. In response to elimination of constrained off payments, some importers would be expected to cease import activities due to the extra risk, which would lessen competition. Those importers who stay active in Ontario would expect higher premiums for imported energy to compensate for the extra risks being assumed. Such higher premiums would be reflected in higher offer prices and higher MCP.

Elimination of constrained off payments for imports is fundamentally unfair since importers are subject to penalties by the IMO for non-deliverable imports. Since importers are responsible for non-deliverable imports, the IMO should continue to be responsible for non-receivable imports.