COMPETITION ANALYSIS OF THE MARKET DESIGN COMMITTEE ISSUES PAPER NO. 3, CHOICE OF MARKET MODEL

The following provides comments concerning the Ontario Market Design Committee Issue Paper No.3, Choice of Market Model, Iss-pap3.doc.

The choice of the market model will determine the mechanisms through which generators and suppliers of electricity will interact to meet the needs consumers while ensuring the integrity and reliability of the Ontario electricity system. Accordingly, it will be of critical importance for the creation of a competitive and efficient electricity system in Ontario that will ensure residents of the province of low-cost and reliable electricity supply meeting their specific needs and tastes. The Competition Bureau welcomes this opportunity to comment on this vital issue.

The comments are structured as follows. Section I provides background concerning the Competition Bureau's comments. Section II proposes a set of competition and economic efficiency principles for the development of an appropriate electricity market design. Section III comments on the proposed market design and issues set forth in the Issues Paper on Choice of Market Model (Issues Paper). Section IV provides some concluding comments.

1. Background to the Competition Bureau's Comments

The Market Model Issues Paper was released by the Ontario Market Design Committee (MDC) on March 10,1998, as a guide for comments concerning the selection of a basic market design for the Ontario electricity sector. The MDC is required to make a recommendation on this matter to the Ontario government by March 31, 1998. Toward this end, the paper sets forth an illustrative Market Design incorporating features required by "Direction for Change: Charting a Course for Competitive Electricity and Jobs" (Ontario White Paper) as well as additional design features and principles. In addition, it includes discussion of a number of alternative market features that might be considered.

The following comments focus on the broader issues relevant to the requirement for the MDC to recommend a basic market design by March 31. We recognize, however, that the full competitive implications of any market design will depend critically on the specific manner in which its various elements are implemented. Also, the electricity sector restructuring experiences in other jurisdictions indicate that the initial months of market operation may require temporary provisions or restrictions for such purposes as easing the transition for stakeholders, ensuring system reliability (e.g. to avoid crises due to software problems), and to ensure that fully open and competitive electricity markets will emerge.

For example, while a goal of market design may be to provide market participants full freedom to choose between spot market and bilateral trading arrangements, in the early stages of competition, some restrictions on this choice may be needed to ensure the development of an

active price-setting spot market.[1] Another example of an area in which continuing flexibility in market design may be needed concerns the possible need, indicated on page 15, for the IMO to have access to reserve bids from all generators in order to have a price-based signal for resolve congestion problems. In the longer-term it may be expected that market mechanisms and market participants' economic interests will deal with this issue. In the nearer term, however, requirements for some or all bilateral traders to provide merit order bids may be warranted.[2]

The material in the following sections reflects the Competition Bureau's longstanding interest in pro-competitive restructuring of network industries in Canada including, not only electricity, but also natural gas, telecommunications and others.[3] They also reflect input that has been received from Robert Wilson who is the McBean Professor of Economics for the Stanford University Graduate School of Economics.

II Competition Principles for Restructuring

In dealing with basic market design for the Ontario electricity sector, the Competition Bureau believes that the following principles for market design will be particularly important in order to maximize the benefits that electricity retail and wholesale competition can be expected to deliver.

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[1] For example, in California, the investor-owned distribution utilities, for the first five years following the opening of the market, will be required to obtain supplies for customers they serve through power exchange (i.e., spot market) transactions.

[2] The lack of reserve bids for trades in the California Power Exchange initially proven to be a major concern on at least parts of the electricity system in California. At least as an interim measure, the Exchange is now requiring that adjustment bids also be filed.

[3] Specifically in the electricity sector, the Bureau has provided submissions and other input to electricity sector restructuring initiatives in Ontario, British Columbia and Alberta as well as to the National Energy Board Inter-Utility Trade Review.

1. Market design should promote effective competition and economic efficiency.

A market may be described as effectively competitive if no firm operating in it would have substantial market power enabling it to unilaterally and profitably impose a significant and non-transitory price increase. In the electricity sector, as in other sectors, such markets will provide the most generally effective means to promote the economically efficient, and low-cost supply of goods and services meeting customers' tastes and preferences.

Competition, of course, should not be viewed as an end in itself. It will be essential that efforts to enhance competition do not also jeopardize the reliability and integrity of the Ontario electricity system. Competition should also not be promoted where it is likely to have economic costs outweighing its potential economic benefits. This may be the case, for example, where the relevant activities have natural monopoly characteristics such that efforts to create competition would result in production inefficiencies or duplicative costs that would outweigh the potential benefits from competition.

The choice of market design, alone, will not be sufficient to create effectively competitive generation and retail electricity markets in Ontario. In particular, dealing with market power concerns relating to the dominant position of Ontario Hydro's generation assets will clearly require that measures be taken in other areas. Nevertheless, careful choice of market design will a key part of the package of measures that will be required. In particular, it will be important to choose a market design that minimizes unnecessary impediments to entering the Ontario electricity market and gives smaller less diversified generators the opportunity to be effective competitors.

2. Market design should support both provider and consumer choice in regard to the supply and purchase of electricity.

The ability to choose among competing service offerings will be a fundamental requirement for consumers to be able to reveal their preferences regarding such supply characteristics as reliability, time-of-use and the desired degree of bundling. Maximizing consumer welfare and economic efficiency, however, will also require that suppliers have choice and flexibility to meet these demands in the least cost and most efficient manner.

3. It will be essential that the basic market design establish a level playing field for competition.

In all markets, there will be some businesses that are more effective competitors than others. Providing a level playing field should not be about establishing equality among them. Rather, it should only be concerned about providing a framework within which all firms will thrive or fail on the basis of their ability to meet consumers'

demands and needs at the best combination of price and product terms. Only where such conditions exist will the efficient allocation of output among competing suppliers be assured.

III Competition Analysis of the Proposed Market Design

Measured against the above principles, the Illustrative Market Design outlined in the Market Model Issues Paper provides a good starting point for the choice of the basic market model for the Ontario electricity system. As the Issues Paper states, most of its main elements are found in the market designs that have been, or are being adopted in other jurisdictions that are on the leading edge of pro-competitive electricity restructuring. The basic features of the design should be feasible to implement and capable of supporting competitive and efficient market outcomes subject, of course to the state of competition among electricity generators and retailers.

From a competition perspective, it will be particularly important that the following basic market design features be adopted.

i. Allowance for both a Spot Market and a Bilateral Contract Market

The ability of consumers and producers to choose between spot market and bilateral trading arrangements will be necessary for the development of electricity generation and supply options meeting individual producers' and consumers needs and interests. As the Issues Paper indicates, bilateral contracting may be conducted either through financial arrangements (i.e., contracts for differences) or through "physical contracts" in which the transaction is scheduled with the IMO. To the extent that physical bilateral contracts are permitted, the Competition Bureau concurs with the Issues Paper, at pages 10 -11, that they should face comparable congestion and ancillary service charges as do other trading arrangements.

ii. Settlement of the Spot Market at the Market Clearing Price

The Issues Paper, at page 16, supports all bidders into the spot market being paid according to the market clearing price rather than the price at which they bid into the spot market. The Competition Bureau supports this approach. In competitive markets, the market clearing price can be expected to provide the best signal to expand or contract their output. This should equally be the case in electricity markets. As the Issues Paper states, at page 16, the use of a single spot market clearing price would provide "an appropriate set of price signals for both market exit and entry, an essential feature of any market-based system."

iii. Demand side bidding

The Competition Bureau strongly supports allowing demand-side bidding in the spot

market. Such bidding would allow the market clearing price to be determined both on the basis of the supply schedule of bidders into the market and the willingness of consumers to forego consumption above a specific market clearing price. This would not only encourage greater consumption and production efficiency, but also could have important pro-competitive benefits. One such benefits derives from the potential for demand-side bidding to increase the responsiveness of electricity demand to prices (i.e., increase the elasticity of electricity demand). This additional responsiveness would generally discourage the incentive for any electricity supplier having market power to increase prices in order to obtain higher profits

Demand-side bidding could also help to discourage tacit collusion or strategic bidding behaviour among participants in the spot market for the purpose of increasing the market clearing price.[4] It would do this by generally increasing uncertainty concerning the causes of price and quantity setting in the market. Such uncertainty is generally recognized in economic theory and analysis to make collusive behaviour more difficult, hence less likely. For example, greater uncertainty as to the causes of price and quantity may make it more difficult to effectively detect and punish defections from a collusive pricing strategy making such strategies more difficult to establish and enforce. The Issues Paper, at page 11, mentions a further method by which demand-side bidding may generate pro-competitive benefits, by mitigating market power in locational pockets affected by congestion.

iv. Locational Marginal Pricing

The Competition Bureau supports the use of locational marginal pricing (LMP) of congestion in the illustrative market model. Such pricing, as indicated in the Issues Paper, at page 19, relates the price of electricity both to the marginal costs of generating electricity and the marginal transmission costs of serving demand at different locations taking into account dispatch, congestion and the bids of market participants. Because it relates pricing of electricity at different locations with its marginal generation and transmission costs, LMP of one form or another is recognized as necessary for the efficient management of transmission congestion.[5] As compared to more centralized means for managing congestion, it can be expected to generate greater competition and efficiency benefits by combining market and marginal cost-based signals for the expansion of transmission capabilities and the location of new generation facilities.

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[4] Such bidding behaviour has been a major concern in the U.K. electricity market and is the subject of much concern in relation to the ongoing efforts to further deregulate the Alberta electricity market. In this regard, see, for example, London Economics Inc., *Options for Market Power Mitigation in the Alberta Power Pool*, Report prepared for the Alberta Department of Energy, January 1998.

[5] See, for example, Kent P. Anderson, "Transmission Services Under Restructuring: Getting the Incentives Almost Right," *The Electricity Journal*, June 1997, pp. 14-21. The Bureau, at this point in time, however, does not have a view concerning whether zonal or nodal forms of locational pricing, as discussed at page 17 of the Issues Paper, should be used in Ontario.

5. Transmission rights

The Illustrative Market Design proposes that a system of tradable transmission rights be established. These rights would entitle their holders to financial credits to offset congestion charges at specific locations. Alternatively, market participants may be provided physical transmission rights under which their trades will be subject to possible curtailment on congested lines only after all non-firm transactions have been curtailed.

From a competition perspective, an important consideration with respect to any type of transmission rights system will be ensuring that these rights do not allow their owners to exercise market power over transmission or restrict transmission for the purpose of enhancing prices in transmission congested areas. Rights owners should be required to make any transmission capability they are not intending to use available to others. The release of transmission capability, moreover, must leave enough time before actual dispatch to prevent hoarding or the effective exercise of market power with respect to transmission.

vi An Open Access Spot Market

The Competition Bureau strongly supports the development of an active open access spot market that market participants can use for their load-balancing requirements. As indicated in the Issues Paper, at page 13, access to balancing through the IMO and the spot market "should reduce transactions costs for smaller traders, and thus encourage market entry." This property of an open access spot will it make a particularly important to implement in the Ontario because of the dominant position that Ontario Hydro can be expected to have with respect to generation. Hydro not only will have the vast majority of all generating assets in the province, but is also likely to be the only significant market player with a diversified portfolio of assets including nuclear, fossil fuel and hydro power plants. As a consequence, it would be uniquely placed to self manage load-balancing as compared to other potential competitors.

vii Access to the Spot Market by Smaller Electricity Consumers

The Illustrative Market Model, at page 14, proposes that small as well as larger electricity consumers be given access to the spot market as a possible supply source. This would be accomplished by requiring load-supplying entities to offer a rate option in which the customer would be charged for energy at hourly spot market prices. For customers not having hourly metering, load profiling would be used to allocate hourly spot prices to the total amount of electricity consumed.

The Competition Bureau supports easy access by all consumers to a supply offering based directly on competitive spot market pricing. Such an offering would provide an efficient and effective yardstick against which consumers may measure the price, certainty and other characteristics of other supply offerings that may be made available.

The spot market supply option, however, would have to be carefully designed to ensure that it does not impose unnecessary costs on market participants, and that it promotes a competitive and efficient marketplace. Related to be considered include, for example:

Should only some LSEs should be required to carry a spot market offering? It may be sufficient for only a subset of LSEs, such as distribution utilities, to make it available.

How should the spot market offering be structured to take account of such matters as existing metering capabilities, consumer demand for price stability and other factors?

Should the pricing of the spot market offering be subject to a regulated, if any, rate of return to its providers?

IV Concluding Comments

The basic market design proposals put forward in the Market Design Committee Issues Paper No. 3, Choice of Market Model, overall, make a good start on the development of a market design that will support competitive and efficient electricity supply in Ontario. However, there are also critical issues to be resolved concerning the specific manner in which the basic design will be implemented. The Competition Bureau looks forward to the opportunity to provide further input to the Market Design Committee as it continues its work in this vital area.