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Regulatory Options for OPG's Prescribed Assets

Comments by the Independent Electricity System Operator

IESO Comments on OEB Staff Discussion Paper "Regulatory Options for Setting Payments for Ontario Power Generation Inc.'s (OPG) Prescribed Generation Assets"

INTRODUCTION

The IESO is pleased to submit the following comments on the final draft of the Ontario Energy Board Staff Discussion Paper "Regulatory Options for Setting Payments for the Output from OPG's Prescribed Generation Assets" issued on July 6, 2006.

As stated in our comments on Discussion Paper Draft 1 (May 8, 2006), the IESO supports a pricing methodology that promotes economically efficient generation by OPG's prescribed assets while maintaining the company's financial integrity. We applaud the Board's recognition of the importance of achieving these objectives within an effective and efficient regulatory process. We also appreciate the Board's willingness to engage stakeholders in the shaping of this regulatory mechanism.

The IESO believes that it would be beneficial for the Board to also solicit comments from the Market Surveillance Panel (MSP). The MSP is uniquely qualified to address whether the proposed pricing methodology would promote economic efficiency and contribute to the mitigation of OPG's market power.

In this regard we recommend that the Board's determinations of the proposed payment methodology take into consideration observations made by the MSP in its most recent monitoring report on the IESO-Administered Markets for the period November 2005-April 2006. With respect to the current regulated arrangement for OPG's prescribed assets, the MSP states:

> ***…the financial arrangements for OPG's prescribed and non-prescribed assets and the Lennox RMR contract may under certain circumstances provide incentives for inefficient bidding. For OPG's prescribed and non-prescribed assets, fixing the contract price but not the contract output can lead to circumstances when OPG has a financial incentive to run the plant even if the market price is less than incremental cost. This could lead to a loss of efficiency if a lower cost supplier is displaced and market price is less than the incremental cost of generation.*** (emphasis added)
> - Chapter 4, Section 2: On Future Supply Agreements, p. 120.

The Panel further notes that:

> ***The point is that market incentives are a more effective means to promote efficiency than oversight by market monitors or regulators***.
> - p. 121.

Drawing on the MSP's insight, the IESO offers for Board consideration a payment methodology for regulating the OPG prescribed assets that is an alternative to the methodologies provided so far in this proceeding. Under this proposal, for convenience called 'Regulated CfD' (Contract for Difference), a market-based incentive mechanism would be implemented by imposing hourly prescribed quantities for each generating facility along with corresponding prescribed prices. Similar to a commercial CfD, OPG would be obliged to make good on (purchase at the real-time market clearing price) any output shortfall but, by the same token, it could obtain additional revenue for sales in excess of the prescribed amount. The Regulated CfD introduces an automatic self-regulating regime with incentives for OPG to manage its assets efficiently in response to market signals. The difference from the commercial CfD is that the Board sets the prices and quantities so that public policy goals are realized.

An important benefit is that the Regulated CfD would require only minor modifications to the existing methodology and would adopt key elements of the Board Staff's recommendation as outlined in the July 06, 2006 Discussion Paper. We believe it:

- is superior to the cost-of-service and incentive regulation (IR) approaches because it would achieve the four objectives set out in the Discussion Paper with the least regulatory burden;

- is simple to implement and would involve very little change to the current settlement arrangements between the IESO and OPG;

- allows maximum flexibility to adopt different regulatory or market-based approaches in the future.

THE IESO AGREES WITH BOARD STAFF'S STATED OBJECTIVES AND EVALUATIVE FRAMEWORK

In its final Discussion Paper, staff asserts that the task before the Board is to identify the methodology for determining payment amounts for the OPG prescribed assets that meets the following objectives:

- continues to limit exposure to price volatility and provide price stability for consumers;
- contributes to the mitigation of OPG's market power;
- maintains OPG's financial integrality (revenue sufficiency); and
- maximizes opportunities for efficiencies and cost containment of OPG's operations.

The Discussion Paper further asserts that the payment methodology selected should be the one that is best suited to meet the above objectives on a sufficiently timely basis with the greatest degree of transparency, fairness, regulatory efficiency and consistency (the four regulatory criteria).

We agree that these are the correct objectives and that this is the appropriate evaluative framework to be applied in the selection of a payment methodology.

THE IESO RECOMMENDS A MODIFIED VERSION OF THE EXISTING PAYMENT METHODOLOGY – THE REGULATED CFD

The following is a general description of the Regulated CfD methodology.

Payments for Existing Capacity

- ***Prescribed Prices:*** Consistent with the current regulatory arrangement, the Board would establish an hourly prescribed price for each of the prescribed assets (P^N and P^H). The IESO agrees with Board Staff that initially, these prescribed prices should be equal to the current prescribed prices for OPG's nuclear and baseload hydroelectric assets; $49.50/MWh for the prescribed nuclear assets and $33/MWh for the prescribed hydroelectric assets. These prices would be adjusted annually by an input cost inflation factor (to be determined by the Board as recommended by Board Staff). However, under the Regulated CfD approach there would be no need to include a productivity factor adjustment. The reason for this is discussed below.

- ***Prescribed Quantities:*** The Board would establish an hourly prescribed quantity for OPG's nuclear and baseload hydroelectric assets (Q^N and Q^H).
  - The prescribed quantity for the nuclear assets would be established as a percentage of the combined nuclear unit capacities and the hourly quantity would be prescribed by the number of weeks per year (and allowing for some weeks for outages based on historic outage time period for specific facilities). The percentage figure chosen could be calibrated according the Board's weighting of the four objectives. A higher percentage and hence a larger prescribed quantity would provide more rate-payer price protection and market power mitigation. A lower percentage (lower prescribed quantity) would provide more incentives for efficient and reliable operations.
  - The prescribed quantity for hydroelectric assets could be set equal to the hourly minimum "run-of-river" level of output for the combined facilities in any given year. Historically, for the Sir Adam Beck I, II this output level is approximately 500 MWh, for R.H. Saunders it is approximately 850 to 900 MWh and for De Cew Falls I and II it is approximately 10 MWh. The hourly quantity would be prescribed by the number of weeks per year (and allowing for some weeks for outages based on historic outage time period for specific facilities). The Board should consult with OPG regarding these output levels.[1]

[1] Simply assigning a prescribed quantity to the prescribed hydroelectric assets would provide OPG with the proper incentives to utilize its water efficiently. This includes its incentives to peak-shave and to utilize the pump storage facilities at Sir Adam Beck. CfD arrangements such as the one that we propose preserve the incentives for generators to offer at prices related to cost, including in the case of hydroelectric generation, opportunity cost. As a result, the output of these generators would be dispatched in the real-time market when it is most economic to do so. We have suggested that the prescribed quantity be set to the hourly minimum "run-of-river" level since in our view, this would be consistent with the initial approach taken by the Government when prescribing these assets. The actual quantity chosen by the Board would depend on their weighting of the different objectives. A larger prescribed quantity would increase the price

- No special pricing arrangements would be required for the Beck pump storage facility since establishing a prescribed quantity for the hydroelectric assets would provide the appropriate incentives for OPG to efficiently manage output/load at the pump generation station.

- ***Prescribed Payments:*** For both the prescribed nuclear and hydroelectric assets, OPG would receive an hourly payment in any given hour during the prescribed weeks equal to the following:
  - $P^r \times Q^r + HOEP \times (Q^d - Q^r)$ (for r=N or H), where HOEP[2] is the hourly market clearing price in the IESO real-time wholesale market and Q^d is the actual level of output scheduled and produced in the hour by either the combined prescribed nuclear assets or the combined prescribed hydroelectric assets.

  Under this hourly payment schedule, OPG has hourly financial rights and obligations for both the prescribed nuclear and prescribed hydroelectric assets in the amount equal to the prescribed price times the prescribed quantity. When Q^d is greater than Q^r (OPG produced more than the prescribed quantity), OPG has the right to the prescribed payment plus additional revenue equal to the HOEP times the output produced in excess of the prescribed quantity. When Q^d is less than Q^r (OPG produced less than the prescribed quantity) OPG receives the prescribed payment for the output actually produced but is obligated to purchase the amount of the output shortfall ($Q^r - Q^d$) at the real-time market clearing price, HOEP.

- ***Settlement and Rebate Arrangements:*** Under this methodology, payment to OPG and rebates to rate-payers could continue to utilize the existing settlement and rebate arrangements of the IESO and the Global Adjustment account.
- ***Force Majeure:*** The Regulated CfD could include a force majeure clause where a force majeure event would be defined as it is defined in section 1.1.1.147, Chapter 11 of the Market Rules for the Ontario Electricity Market.

Investments to Increase Output of, Refurbish or add Capacity to Prescribed Assets

- Investment costs to the prescribed assets could be reviewed by the Board as per Regulation 53/05. It is presumed that these investments would be considered in conjunction or as part of the OPA's Integrated Power System Plan (IPSP). The IESO recommends that any additional capacity or output that would result from these investments would receive a prescribed payment as described above. The prescribed price for the additional capacity or output would be determined through an OEB hearing (perhaps a cost-of-service review). The prescribed price would allow for recovery of those costs specific to the investment made to increase output or

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protection provided to consumers and provide further mitigation against OPG's potential to exercise market power. However, OPG would be exposed to more outage risk with a larger prescribed quantity, which could threaten its financial integrity.

[2] If the IESO Administered Markets evolve to include either locational marginal pricing (LMP) or a day-ahead market, the HOEP may no longer be the relevant price against which the Regulated CfD should be settled. Under the Regulated CfD methodology, the HOEP would be used in settlement until either an LMP regime or a day-ahead market is introduced, at which time, the HOEP could at the Board's discretion, be replaced by either the relevant locational prices or the day-ahead price (or relevant locational day-ahead prices of a LMP day-ahead market was adopted by the industry).

capacity. For nuclear assets, the prescribed quantity would be set as a percentage of the additional capacity. For hydroelectric assets, the prescribed quantity would reflect any increases to the "run-of-river" levels of the facilities. Cost incurred to refurbish existing prescribed assets should be recovered through an adjustment to the prescribed price.

Other Costs – Nuclear Waste and Bruce N.G.S

- Recovery of these costs would be reviewed by the Board as per Regulation 53/05

Additional Comments

- ***Term of Payment Methodology:*** The IESO recommends that the payment methodology be set for a 3-year term, to be reviewed at the end of each term. The IESO agrees with Board Staff that for the reasons provided in the Discussion Paper, a regulatory proceeding that reviews OPG's historic cost and output would not at this time answer the question of whether OPG's current prescribed asset costs and earnings are reasonable. Board Staff recommends that OPG file quarterly financial and cost information and that this will lay the foundation to permit a full cost-of-service review in the future. The IESO suggests that after a three year period, the Board could utilize the quarterly financial and cost information to review the reasonableness of the prescribed prices, if it determines such a review is necessary.

- ***Variance and Deferral Accounts:*** The IESO submits that under their proposed payment methodology, there is no need to continue the Variance and Deferral Accounts as described in Section 78.1 5(1) of the Ontario Energy Board Act, 1998.

Illustrative Example

The following are scenarios that illustrate the workings of a Regulated CfD.

The approximate capacity of the OPG prescribed nuclear assets is 6618 MWh. Assume that the Board established a prescribed quantity for the nuclear assets equal to 95 percent of the combined nuclear assets (Q^N=6287 MWh) and a prescribed price (P^N=$49.50/MWh). The remaining capacity, 331 Mwh, is eligible to receive payment at the real-time market clearing price.

Scenario 1: In a given hour assume that the combined output of the nuclear prescribed assets is 6618 MWh - full capacity. Assume that the market clearing price for the hour is $60/MWh. Under the Regulated CfD, OPG would receive a prescribed payment equal to $49.50x6287 MWh=$311,206.50. The global adjustment account would receive a credit in the amount of the difference between the market clearing price and the prescribed price times the prescribed quantity (credit equal ($60-$49.50)x6287 MWh=$66,013.50). This amount would be used to compute the monthly rebates paid to consumers as is currently done. OPG would also receive revenue equal to the market clearing price times the additional capacity produced in the hour ($60x331 MWh= $19,860).

Scenario 2: Alternatively, assume that there is a derate at one of the OPG prescribed nuclear facilitates so that OPG produces only 6200 MWh in the hour. That is, OPG produces 87 MWh less

than its prescribed quantity. Under the regulated CfD, OPG would receive the prescribed payment described above ($49.50x6287 MWh=$311,206.50) less the cost of "making good" on the delivery of its prescribed quantity. OPG would be required to make good on the 87 MWh shortfall by buying back the output from the market at the market clearing price, which would cost ($60x87MWh=$5220). The net payment to OPG would then be $311,206.50-$5220=$305,986.50. As in the previous scenario, the global adjustment account would receive a credit in the amount of the difference between the market clearing price and the prescribed price times the prescribed quantity (credit equal ($60-$49.50)x6287 MWh=$66,013.50). Since OPG produces less than the prescribed quantity, it would not earn additional revenues at the market clearing price.

Scenario 3: Assume the facts as in Scenario 1 with the exception that the market clearing price for the hour is $40/MWh. In this case, OPG continues to receive a prescribed payment in the amount of $49.50x6287 MWh=$311,206.50. OPG also receives revenue for the additional 331 MWh produced above the prescribed quantity, paid at the market clearing price $40x331 MWh=$13,240. Since the market clearing price is below the prescribe price, a debit equal to the difference between the prescribed price and the market clear price times the prescribed quantity (($49.50-$40)x6287 MWh=$59,726.5) would be made to the global adjustment account.

EVALUATION OF THE DIFFERENT APPROACHES

We submit that the Regulated CfD methodology is best suited to meet the four stated objectives on a sufficiently timely basis with the greatest degree of transparency, fairness, regulatory efficiency and consistency. The Regulated CfD achieves the first three objectives as well as if not better than either the cost-of-service or incentive regulation approaches and it has an important additional advantage in terms of promoting the efficient and reliable operation of the OPG assets. Finally, the Regulated CfD offers the most continuity to the existing regulatory arrangements and would involve the least regulatory cost and regulatory burden of all the approaches.

1. Limits Price Volatility and Provides Price Stability to Consumers

As stated in the Discussion Paper one of the intended effects of the Government's initial approach to the prescribed assets was to "reduce price volatility and to have a stabilizing effect on electricity prices." With the Regulated CfD option, rate-payers (through adjustments to the global adjustment account) will be guaranteed to pay no more than the prescribed prices for the balance of the prescribed quantities for the prescribed number of weeks. This is an improvement to what would occur today if for example, one of the prescribed assets was not producing output in the real-time spot market due to an outage. In this respect, rate-payers are provided with additional price protection. To be fair, the Regulated CfD approach would increase the amount of output for which OPG can receive the market clearing price (both for the nuclear assets and possibly the hydroelectric assets) and hence reduces some of the protection currently provided to rate-payers.[3]

[3] As noted in the May 19, 2006 London Economics International report to the Board, OPG remains a provincially owned corporation and its shareholder is the Ontario Government and ostensibly Ontario taxpayers. The choice of the prescribed quantity would involve transfers between shareholders and ratepayers. A higher prescribed quantity provides more

Other approaches such as the cost-of-service approach and the IR approach would also prescribe a price and are equally as likely to contribute to the objective as the current arrangement. As stated in the Discussion Paper, a cost-of-service proceeding could result in a higher prescribed price and hence a smaller rebate to rate-payers. The IR approach, depending on the size of the productivity factor and the nature of "sculpted" payments, "Z" factors and "off ramps" (payment adjustment factors all yet to be determined) could also change the degree of protection provided. The level of protection under the IR approach could vary from year to year as a result of these proposed payment adjustment factors. In this regard, the Regulated CfD approach would provide more rebate certainty and consistency to rate-payers than would Board Staff's IR recommendation.

2. Mitigates OPG's Market Power

The Regulated CfD methodology would continue to address concerns over OPG's potential to exercise market power (withholding supply from the real-time market). Under the Regulated CfD, OPG's revenue on the prescribed quantities would be capped by the prescribed price. Therefore, OPG cannot profit from higher spot market prices on these assets. In other words, OPG's incentives for increasing the real-time spot prices are mitigated by fixing the price at which it is compensated. However, by prescribing a quantity as well as a price provides OPG with a further disincentive for withholding; the prescribed quantity imposes a cost to OPG from withholding supply to cause a price increase. The motivation to withhold supply on prescribed assets and produce less output than the prescribed quantities would be less than under the a cost-of-service or IR approach as well as the current arrangement, as OPG would be financially obligated to make good on (purchase at the real-time market clearing price) the withheld quantity. Withholding supply to cause a higher real-time price simply increases the cost to OPG of making good on the withheld supply, which further mitigates its incentive to exercise market power.

Both the cost-of service and IR approaches would prescribe a price to these assets and in so doing reduce the benefits to OPG from higher spot market prices; OPG cannot profit from higher spot market prices on these assets. However, neither of these two approaches nor the current regulatory arrangement prescribes a quantity to these assets and hence do not impose a further disincentive to withhold output from these assets. In this respect, the Regulated CfD approach is superior to the other approaches for mitigating market power. The Regulated CfD approach, by potentially increasing the amount of output or capacity that will be eligible for sale at market clearing prices could provide somewhat less mitigation than the other approaches. The extent to which this is a factor would depend on the amount of the prescribed quantities chosen by the Board. The larger are the prescribed quantities, the greater is the degree of mitigation provided. Finally, a complete mitigation plan should include consideration of OPG's other assets; mitigation of incentives on the prescribed assets alone cannot assure mitigation of OPG's market power through its other assets.

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protection to ratepayers but less return to shareholders – Ontario taxpayers. Conversely, a smaller prescribed quantity provides less protection to ratepayers but more return to shareholders. Depending on how the Government utilizes the shareholder dividends and the degree to which the taxpayer base is representative of the ratepayer base, ratepayers may be equally likely to benefit from OPG revenues on the prescribed assets earned at market prices.

3. Maintains OPG's Financial Integrity

The Regulated CfD option, like the Board Staff's recommended approach would continue to use the prescribed prices as the base payment (adjusted for inflation). However, the Regulated CfD option would allow for additional revenues to be earned at market clearing prices for output produced in excess of the prescribed quantities. This would provide an additional contribution towards OPG's cost recovery. We also suggest that after a period of three years, following a more transparent reporting of OPG cost information, a review and potential adjustment of the prescribed price be undertaken.[4]

4. Maximizes Opportunities for Efficiencies and Cost Containment

The IESO believes that a key advantage to assigning a prescribed quantity with the prescribed price is that it will provide more direct incentives to OPG to promote efficiency. There are two measures of efficiency relevant in this discussion: (i) dispatch (allocative) efficiency, and (ii) technical efficiency.

Dispatch Efficiency:

Efficient dispatch requires that the market price be equal to the incremental cost of the marginal supplier and that all suppliers with an incremental cost less than this be selected for dispatch. As the MSP has stated in their most recent report, "we have a well-established and transparent wholesale market and we believe there are concrete benefits to be obtained if future procurement and other regulated price contracts are designed so as to support dispatch efficiency by ensuring that generators have the incentive to offer at prices related to cost."

The Regulated CfD approach provides OPG with the incentive to offer at prices related to cost. As the name implies, it is akin to a contract for difference arrangement, whereby prices are determined via regulation rather than through bilateral agreement based on market drivers. As the MSP reports:

> ***Supply arrangements that are organized as 'contracts for difference' (CFD) also preserve the incentives for generators to offer at prices related to cost. The CFD is a trade contract in which the purchaser pays the seller the difference between the contract price and the spot market price. It insulates the parties from spot price volatility while also connecting them to the full incentive of real-time market prices.***
> MSP Report, p. 120.

Approaches that prescribe an hourly price but not an hourly quantity are vulnerable to undermining these incentives. All of the cost-of-service approach, the IR approach as well as the current arrangement, fail to prescribe an hourly quantity. Under these types of arrangements, OPG would have an incentive to offer into the real-time market at prices below their incremental cost to ensure that they are scheduled at all times so long as the prescribed price exceeds their incremental cost. In this case, there is a risk that these assets may run even when there are less expensive generation options available.

[4] Board Staff have recommended that OPG be required to make quarterly informational filings of its costs and other financial information relating to the prescribed assets.

Given that the incremental operating cost of both the nuclear and baseload hydroelectric facilities is low relative to the Ontario generation fleet, such an event is unlikely to occur often; it is most likely during periods of freshet when market clearing prices are at their lowest.[5]

However, another benefit of the Regulated CfD methodology is that it would increase the incentives for OPG to schedule their planned outages when it is most efficient to do so and to ensure that units that are forced out of service are returned to service as quickly as possible.[6] And maybe more importantly, this efficient management of outages would further enhance the reliability of the electricity grid. The prescribed quantity creates a financial delivery obligation for OPG that exposes them to all the risks associated with scheduling outages when prices are highest or for extending forced outages. The risk is that OPG will have to meet their prescribed quantity delivery obligations by purchasing from the real-time spot market. The cost of an outage to OPG is highest therefore when market clearing prices are highest (which is generally the time when supply conditions are tightest and reliability is at most risk).[7] Furthermore, allowing OPG to earn revenues at the market clearing prices for output scheduled above the prescribed quantities would provide a further driver for outage scheduling and maintenance efficiencies. The other proposed payment methodologies, do not link the outage risks to the hourly real-time market and hence do not provide the same incentives for efficiency or promote the same degree of reliability.

Technical Efficiency:

Technical efficiency means producing the maximum possible sustained output from a given set of inputs. Alternatively, it means producing a given level of output at minimum possible cost (including labour costs etc). The Regulated CfD approach, by allowing OPG to earn revenues at the market clearing prices for output scheduled above the prescribed quantities, provides additional incentives for technical efficiency.

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[5] R.H Saunders operates on a radial transmission line connected to the province of Quebec. Output from the R.H. Saunders, depending on economic conditions within Ontario and Quebec and commercial arrangements between OPG and Hydro Quebec, is frequently diverted from the province of Ontario to the province of Quebec. Under the current regulatory arrangement, the proceeds from the sale of this output remains with OPG and is not reflected in the global adjustment accounts. Furthermore, when the output from R.H Saunders is diverted to Quebec, a larger share of the output from the other prescribed baseload assets is counted towards the 1900 MWh threshold. To the extent that some of this output is peaking capacity, OPG's incentives to operate efficiently could be affected. Assigning a prescribed quantity would financially obligate OPG for the delivery of this output to Ontario and promote the efficient use of the prescribed hydroelectric assets. It would also increase the contributions to the global adjustment account during those periods in which the Saunders output is diverted to Quebec, providing ratepayers with additional price protection.

[6] The other approaches provide incentives to OPG for returning their assets to service quickly since not doing so means lost revenue. However, the Regulated CfD approach enhances OPG's incentive to return the assets to services because in addition to the lost revenue, there is a cost to OPG in that they must replace the shortfalls in the prescribed quantity at the real-time spot price.

[7] Some interested parties may argue that the IESO' proposed methodology exposes OPG to too much of the outage risk in that it is obligated to buy back all of the output at the market clearing price. For example, replacing a nuclear outage of 500 MW at market clearing prices could be very costly to OPG. As an alternative, rather than paying the full market price when scheduled output is less then the prescribed quantity, OPG could pay an outage penalty equal to, for example 1 percent of the market clearing price times the output shortfall. OPG would also forego the prescribed payment during these periods. This would reduce the potential cost of an outage to OPG but would still provide them with the incentives to choose outages when most efficient and to ensure that units that are forced out of service are returned to service as quickly as possible.

As noted in the Discussion Paper, one of the identified weaknesses of the cost of service regulation is that it provides little incentive for the rate regulated entity to improve efficiency and reduce costs. The IR approach, depending on how the proposed adjustment payments are designed, promises to provide OPG with improved incentives to realize technical efficiencies.

THE REGULATED CfD ACHIEVES THE OBJECTIVES WITH THE LEAST REGULATORY BURDEN.

We submit that a key advantage of the Regulated CfD is regulatory efficacy. There are several costs that can be incurred due to regulation. First, there are the direct costs associated with the regulatory process such as the cost of the proceedings and the regulatory monitoring. As Board Staff indicates, these costs could be considerable under a cost of service approach. However, we submit that hearings to determine a productivity factor, "Z" "off ramps" and "sculpted" payments could be equally lengthy and involved. Under the Regulated CFD approach, these costs could be avoided. There is also an opportunity cost associated with regulatory hearings – at the time of the proposed hearing for the prescribed assets, both stakeholders and regulators are likely to be burdened with several other regulatory proceedings such as the review of the Ontario Power Authority's Integrated Power System Plan and quite possibly the Hydro One Transmission Rate Review."

Another type of direct regulatory cost is the cost associated with the reorganization of the institutions. Under different regulatory approaches, OPG may be required to reorganize its business operations simply to be better situated to responding to the regulators. The Regulated CfD approach represents an improved modification to the status quo approach; an approach that arguably OPG is already set up to handle. Furthermore, settlement and rebates would continue to occur as they do now so that no additional changes to the other key institutions (such as the IESO and OPA) would be required.

A third regulatory cost includes the indirect costs associated with regulation that distorts the incentives for an entity to operate efficiently. As argued above, the Regulated CFD provides the appropriate incentives to OPG to operate at maximum efficiency. The other approaches suffer certain weaknesses in this regard.

THE REGULATED CfD OPTION WOULD FACILITATE OTHER POLICY OBJECTIVES

The Regulated CfD utilizes a mixture of regulated and market-based approaches that, depending on the future direction of the industry, would be adaptable to a more regulatory centric approach (such as cost-of-service or IR) or more market-based aspects. In this respect, the Regulated CfD is policy neutral and flexible to different future long-term visions for the industry.

Furthermore, the Regulated CfD could be ported by other key institutions such as the OPA to achieve other stated policy objectives. In particular, the design of the Regulated CfD would allow the OPA to auction off the prescribed quantities in a secondary auction, much as it is has done

previously through its Phase 1 and Phase 2 Forward Energy Auctions.[8] This could be done without any compromise to the Board's ability to achieve the four stated objectives with respect to the assets and avoiding additional regulatory cost to the OEB or the industry. With deference to the OPA's mandate this would offer Ontario and the electricity industry with further options for managing their electricity needs. If the Board chooses to adopt the Regulated CfD approach, we would encourage the Board to permit the OPA, if it were to so choose, to auction off the prescribed quantities in a Forward Energy Auction.

SUMMARY

The Regulated CfD approach works equally as well as the cost-of service approach or the IR approach in providing ratepayers with continued price stability and price protection, and maintaining OPG's financial integrity. The Regulated CfD approach has its advantage in promoting a more efficient use of the OPG prescribed assets and enhancing the system reliability. It is likely superior in its ability to mitigate potential exercise of market power depending on the Board's choice of the size of the prescribed quantities. The biggest advantage of the Regulated CfD approach is in its regulatory efficacy; it is policy neutral and can act as a platform for achieving other policy objectives as identified by key institutions such as the OPA.

[8] The Regulatory CfD provides a fixed for variable swap between OPG and OPA via Global Adjustment – wherein OPG receives fixed ($49.50 and $33.00) for fixed quantities and pays the variable HOEP – OPA in turn would sell a fixed for variable swap from the Global Adjustment wherein they receive fixed (i.e. firm forward curve pricing) and pay HOEP – this effectively takes HOEP risk away from consumers – and any concerns for changes to HOEP that consumers would otherwise have to bear