

**Proceeding EB-2010-0279  
Ontario Power Authority  
2011 Revenue Requirement**

**Evidence  
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**On Behalf of  
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## EXECUTIVE SUMMARY

This report reflects our views on behalf of HQ Energy Marketing Inc. with respect to the OPA's proposal to start charging exporters usage fees to recover the OPA's revenue requirement.

Our view is that the OPA has not performed a cost allocation study based on cost causality principles to identify which customers or entities impose costs on the OPA and should be charged for the recovery of OPA's revenue requirement. The charges being proposed by the OPA therefore have no causal cost basis or analytic cost allocation support.

The OPA's argument that exporters derive benefit from the OPA's activities and the existence of that benefit is sufficient justification for the quantum of the charge to exporters is inconsistent with the recovery of other OPA's costs. The bulk of the OPA's costs are recovered as part of the Global Adjustment and Regulated Price Plan (RPP). While the recovery is not based on a formal cost allocation study, there is at least *prima facie* evidence that those costs are recovered from customers in a manner consistent with cost causality principles from Ontario domestic customers.

Before approving the recovery of a portion of the OPA's costs from exporters, a proper study should be conducted based on cost causality principles to determine the share of OPA costs that should be recovered from exporters, if any, and hence the level of charge to exporters that would be just and reasonable.

# 1 INTRODUCTION

John Todd and Michael Roger have been experts dealing with cost allocation, rate design and rate regulation issues for over 30 years. Mr. Todd testified before many regulatory agencies throughout Canada on similar issues as the policy issue now being raised by the OPA by proposing to charge exporters for costs that, based on OPA's response to interrogatories, exporters derive benefits from, but do not directly impose on OPA. Mr. Roger worked for over 32 years at Ontario Hydro, Ontario Power Generation and Hydro One and spent most of his career dealing with Cost Allocation and Rate Design issues for wholesale and retail customers in Ontario. He has also testified in numerous occasions at OEB proceedings.

HQ Energy Marketing Inc. (HQEM) has retained Elenchus in order to present expert opinion evidence on their behalf in the Ontario Power Authority's (OPA) application to the Ontario Energy Board on OPA's 2011 Revenue Requirement, Proceeding EB-2010-0279.

This report includes our assessment and recommendations with respect to the OPA's proposal to recover part of its revenue requirement, starting in 2011, from export customers through a new usage fee. Up until now and since the inception of the OPA, its revenue requirement has been recovered from domestic Ontario customers only.

The evidence presented in this report is divided into 4 main sections. Section 2 describes cost allocation principles and how these principles are used in Ontario and in Quebec, OPA's proposal to start recovering some of its costs from exporters, OPA's proposed revenue requirement and activities and exporters' role in these activities. Section 3 describes how the same cost causality principles could be applied to the OPA and section 4 describes what the estimated results would be if the cost causality principles were applied to the 2011 OPA Revenue Requirement in order to determine an OPA charge that would be applicable to exporters. Section 5 provides a summary of our recommendations.

## 2 PRINCIPLES OF COST ALLOCATION

### 2.1 ONTARIO APPROACH

The Ontario Energy Board (OEB or Board) regulates the electricity sector in Ontario. Ontario Power Generation, all transmission and distribution companies operating in Ontario, the OPA and the IESO are required to submit to the OEB their respective revenue requirements in order for the OEB to approve their operating costs and the method for recovering these costs through unbundled electricity rates in a just and reasonable manner from Ontario electricity customers.

There are widely accepted principles that provide guidance to regulators in determining rates that are just and reasonable. These are often referred to as Generally Accepted Regulatory Principles (GARP). The seminal work of James C. Bonbright, which sets out ten “attributes of a sound rate structure”<sup>1</sup>, is a primary reference used by regulators and regulatory experts in identifying the key ratemaking principles. Although the broad principles have been restated over the years in many different ways in the literature on economic regulation<sup>2</sup> the basic concepts remain at the heart of economic regulation.

We note that the OEB has explicitly endorsed a version of the Bonbright Principles, as stated in the Staff Discussion Paper for Rate Design for Recovery of Electricity Distribution Costs<sup>3</sup>.

*The Board identified three rate design principles for the purposes of this process. These principles encompass all of the “Bonbright attributes of a sound rate structure” identified in the March 2007 Staff Discussion Paper:*

*1. full cost recovery;*

*2. fairness; and*

<sup>1</sup> Bonbright, James C., Albert L. Danielson and David R. Kamerschen, (1988) Principles of Public Utility Rates (Second Edition), Public Utilities Reports, Inc., pages 383-384.

<sup>2</sup> A particularly thorough and relatively recent restatement of the Bonbright principles made by a Canadian regulator appears in Newfoundland and Labrador Board of Commissioners of Public Utilities, in the Matter of an Application by Newfoundland and Labrador Hydro for a General Rate Review, Decision and Order of the Board, Order No. P.U. 7 (2002-2003), June 7, 2002, pages 28-29.

<sup>3</sup> Ontario Energy Board, Staff Discussion Paper, Rate Design for Recovery of Electricity Distribution Costs, EB-2007-0031, March 31, 2008 (revised June 6, 2008).

3. *efficiency.*

In our opinion the Generally Accepted Regulatory Principles that are used as a touchstone for determining just and reasonable rates for transmitters and distributors are equally relevant for determining just and reasonable charges for recovering the costs of the OPA. The OPA operates as a regulated monopolist that is subject to economic regulation administered by the OEB.

Cost allocation is one step in the overall rate making process that is guided by the Bonbright Principles. The most essential element of these principles in the specific context of cost allocation is that costs should be allocated to customer classes in a manner that reflects cost causality. The importance of this approach within the OEB's regulatory regime was clearly stated in the Report of the Board EB-2007-0667.

*The establishment of specific revenue requirements through cost causality determinations is a fundamental rate-making principle. Cost allocation is key to implementing that principle. Cost allocation policies reasonably allocate the costs of providing service to various classes of consumers and, as such, provide an important reference for establishing rates that are just and reasonable.*<sup>4</sup>

In our opinion, the applicability of the concept of allocating and recovering costs in a manner that reflects cost causality is not limited to electricity distributors; it is a core principle that guides the setting of just and reasonable rates in all applications of economic regulation, including the setting of OPA rates and charges. Certainly, the cost causality principle is not the sole determinant of just and reasonable rates; however, significant deviations from this principle should result from an explicit determination of the appropriateness of deviations from pure cost causality that result in cross-subsidies among customers as a result of balancing the relevant rate making principles.

Furthermore, it is our opinion that it is inappropriate to establish a charge without first determining the causal costs in order to have an appropriate reference point in determining whether the deviation from strictly causal costs is appropriate and necessary in order to accommodate other rate making principles or legislated policy considerations. In our opinion it would be inconsistent with GARP to accept rates as just

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<sup>4</sup> Ontario Energy Board, Report of the Board, Application of Cost Allocation for Electricity Distributors, EB-2007-0667, November 28, 2007.

1 and reasonable when they embed cross-subsidies that have not been quantified and  
2 have not been explicitly recognized and accepted by the regulator.

3 The OPA has provided no evidence based on cost causality principles to support its  
4 proposal to start charging exporters usage fees to recover, in part, the OPA's revenue  
5 requirement. In the OPA's response to APPrO interrogatory # 5, the OPA supports its  
6 proposal by stating that exporters derive benefits from certain OPA activities. However,  
7 no cost allocation study was performed by the OPA to apportion its revenue  
8 requirement amongst customers or entities that impose costs on the OPA. Any usage  
9 fee imposed on export customers approved by the OEB should only be done if the OPA  
10 can satisfy the Board that any such charge is just and reasonable and based on  
11 Generally Accepted Ratemaking Principles.

12 The OPA's proposed approach departs from standard practice. In Ontario, transmitters  
13 and distributors recover their costs from customers based on cost causality principles  
14 and not based on benefits received. In our opinion the same principle should be applied  
15 to recover the OPA's revenue requirement. To accept the OPA'S approach without even  
16 *prima facie* evidence – let alone a full cost allocation study that meets the OEB's usual  
17 high standard – demonstrating that costs are being recovered from different types of  
18 customers in a manner that at least roughly corresponds to cost causality would be  
19 inconsistent with the Board's established practice.

20 The OPA incurs procurement costs to secure generation of electricity for Ontario  
21 domestic customers by signing long term contracts for the supply of electricity. The  
22 difference between the market prices and the long term contract prices are recovered  
23 from Ontario domestic electricity customers by way of the Global Adjustment or through  
24 the RPP. In recovering these costs a cost causality principle is applied, at least  
25 implicitly. A similar approach is used by the OPA to recover conservation related costs  
26 from Ontario domestic electricity customers. While the OPA has not prepared a formal  
27 cost allocation study demonstrating this result, it at least appears equitable at a very  
28 high level. On the other hand, in order to recover the OPA's revenue requirement, the  
29 OPA is now proposing (at least in its responses to interrogatories) to apply the user

benefit principle and not the cost causality principle to justify recovering its costs from exporters.

Recovering costs on the basis of benefits received is an alternative to cost causality that is discussed in the literature; however, it is an alternative that has limited acceptance among regulators. In our opinion, any deviation from the standard cost causality principle should not be undertaken without a compelling rationale. In our view, the OPA has not provided any rationale, let alone a compelling one. Consequently, in our opinion, the OPA should apply, and the OEB should approve, consistent principles to recovering its generation procurement and conservation program costs and its indirect operating costs. The OPA should not choose which principle to apply depending on the types of costs to be recovered, or based on the types of customers paying the charges. In order to establish just and reasonable charges, consistent principles should be applied to recover all of the OPA's direct and indirect costs.

## **2.2 OPA'S REASONING FOR CHARGING EXPORTERS**

The only evidence provided by OPA in support of applying new fees to exporters are statements contained in Exhibit D, Tab 1, Schedule 1, page 2, line 6 to page 3, line 2, (page 242 in PDF document):

*"The OPA proposes to recover the 2011 revenue requirement by establishing a \$0.523/MWh usage fee to consumers of Ontario electricity to be effective January 1, 2011.*

*The usage fee is derived by dividing the net revenue requirement of \$79.9 million by the Ontario electricity forecast of 142.9 TWh, less line losses of 3.1 TWh, plus electricity exports of 12.9 TWh for a net forecast<sup>1</sup> of 152.6 TWh. Assuming average consumption of approximately 1,000 kWh per month, the total monthly bill impact of the OPA's fee on a residential consumer is approximately \$0.52.*

*In past years, the OPA has recovered its fees from Ontario customers only. The addition of export volumes for calculating the usage rate considers that export customers also benefit from the planning, conservation and procurement*



*activities undertaken by the OPA. The OPA therefore proposes to recover its fees from export customers, in addition to Ontario customers. This is consistent with the practice used by the IESO for recovery of its fees.”*

We agree that “export customers also benefit from the planning, conservation and procurement activities undertaken by the OPA”, just as each class of distribution customer “benefits” from the distribution services provided by distributors to other classes of customers. That fact that customers benefit does justify a charge, but the charge should reflect the causal costs for which they are responsible and not the benefits. A charge based on causal costs should be just and reasonable.

Furthermore, the IESO’s approved practice does not support rejection of the cost causality principle for allocating and recovering costs. The IESO and OPA have fundamentally different legislative mandates and purposes. For example, the IESO only serves wholesale markets. That is, it provides services to all market participants including loads and exporters, whereas OPA mostly serves domestic customers. There is no evidence to suggest that the IESO charges are not consistent with cost causality principles. On the contrary, given its role in the market, the *prima facie* evidence would suggest that the IESO’s practice is likely to be consistent with cost causality principles. Certainly, it does not provide a clear precedent for rejecting the principle of cost causality in allocating and recovering the OPA’s costs from market participants.

### **2.3 OPA’S REVENUE REQUIREMENT**

The OPA’s evidence in support of its requested 2011 revenue requirement divides the revenue requirement among its 5 strategic objectives. The requested 2011 revenue requirement is shown in the table below, (based on Exhibit D, Tab 1, Schedule 1, page 2, which is page 242 in PDF document):

<b>Table 1</b>		
<b>OPA Revenue Requirement</b>		
<b>(\$ 000)</b>		
	<b>2010 Budget</b>	<b>2011 Budget</b>
Operating Cost Budget	\$65,127	\$64,107
Registration Fee Income	-\$375	-\$1,400
Interest Income	\$0	-\$600
<b>Revenue Requirement</b>	<b>\$64,752</b>	<b>\$62,107</b>
FVDA*	-\$3,151	\$2,132
RCSDA**	\$14,324	\$15,622
GPCDA***	\$102	\$0
<b>Net Revenue Requirement</b>	<b>\$76,027</b>	<b>\$79,861</b>

\* Forecast Variance Deferral Account ("FVDA")

\*\* Retail Contract Settlement Deferral Accounts ("RCSDA")

\*\*\* Government Procurement Costs Deferral Account ("GPCDA")

The 5 OPA Strategic objectives with a 2011 budget of \$64.107 million are:

1. Strategic Objective 1 Exhibit B, Tab 1, Schedule 1, (page 151 in PDF document)  
(\$6.070M)  
*"Plan for and facilitate the development of a cost-effective, reliable and sustainable electricity system."*
2. Strategic Objective 2 Exhibit B, Tab 2, Schedule 1, (page 161 in PDF document)  
(\$16.421M)  
*"Together with our partners, plan, procure and support the development of verified conservation/energy-efficiency resources as identified in the integrated plan and its subsequent iterations. Build capability and enable partners to achieve targets and contribute to a culture of conservation in Ontario."*
3. Strategic Objective 3 Exhibit B, Tab 3, Schedule 1, (page 181 in PDF document)  
(\$11.172M)

*“Plan and design standardized tariff-based, competitive and bilateral Plan and design standardized tariff-based, competitive and bilateral procurement processes and enter into procurement contracts for generation resources that meet the requirements identified in the integrated plan, ministerial directives and legislation, and incorporate world-class contracting and settlement practices that support investment in electricity. Identify barriers and limitations; develop and/or define methods and solutions to deliver enhanced generation developments through innovation, analysis, assessment and benchmarking, with a view to economic efficiency and environmental sustainability.”*

4. Strategic Objective 4 Exhibit B, Tab 4, Schedule 1, (page 205 in PDF document) (\$24.653M)

*“Develop and maintain organizational capacity to achieve the strategic objectives and be recognized as a strategic partner.”*

5. Strategic Objective 5 Exhibit B, Tab 5, Schedule 1 (page 227 in PDF document) (\$5.791M)

*“Be a trusted and respected source of information in the electricity sector.”*

In our view, the implication of these objectives is that the needs of export customers are purely incidental or peripheral to the OPA’s responsibilities and work effort.

## **2.4 OPA’S WORK ON BEHALF OF EXPORTERS**

The only Ontario electricity system assets that exporters utilize are transmission assets. This view is also found in the Decision with Reasons issued on May 26, 2000, in Proceeding RP-1999-0044, an application by Ontario Hydro Networks Company Inc., the prior name of Hydro One Transmission Inc., in section 3.8 dealing with Export and Wheel-through Transactions, section 3.8.2 states:

*“Export of power from Ontario generators (exports) or the pass-through of power from generators located outside Ontario to customers in other jurisdictions (wheel-through), collectively referred to as Export and Wheel-through*

*Transactions (EWT), in addition to paying to the IMO the specific transaction costs, also utilize the assets and facilities of the Ontario transmission system.”*

Export revenues collected in Ontario are returned to Ontario’s domestic customers in the form of a credit to Hydro One’s Transmission Revenue Requirement, specifically shown as a credit to the Network rate pool revenue requirement. Hydro One Transmission represents over 96% of the Ontario Transmission Revenue Requirement for all transmitters.

Based on cost causality principles, it is our view that the only type of work that the OPA performs that relates to the export of power is its work related to the planning of Ontario electricity transmission system.

The only instance where transmission planning is mentioned in the OPA’s Strategic Objectives is for strategic objective # 1, under initiative # 4, out of 6 initiatives for objective # 1, (Exhibit B, Tab 1, Schedule 1, page 3, line 23 to page 4 line 5, page 153 PDF document):

***“Initiative # 4 Continuing to evaluate transmission priorities and options***

*The Power System Planning division will continue to evaluate transmission priorities and options against a range of possible futures and create associated transmission development and implementation plans. The output of this work is necessary to support government commitments and Directives, maintain system reliability, provide input to regulatory proceedings for proposed transmission development, and form a component in the development of the second IPSP.*

*Longer-term transmission plans and options will also be assessed as part of the second IPSP. Transmission plans will be developed in 2011 to support the load forecast and supply option scenarios used as input in the IPSP.”*

The OPA, in interrogatory response #5, (Exhibit I, Tab 10, Schedule 5), states that Transmission Planning is covered by all initiatives in Strategic Objective # 1.

## **2.5 OPA'S CONSERVATION AND GENERATION PROCUREMENT ACTIVITIES**

The first three Strategic objectives of the OPA deal with:

1. Planning the electricity system, including transmission;
2. Conservation related activities; and
3. Generation procurement activities.

The conservation activities being undertaken by the OPA that include planning, procurement and support of the conservation programs developed by the OPA, serve public policy goals for Ontario, regardless of exporters' wholesale activities at the Ontario border. The conservation activities and their associated costs are not being imposed or otherwise caused by exporters, nor are they done to benefit exporters.

The generation procurement activities being undertaken by the OPA, that is the procurement of contracts for generation resources entered by the OPA that meet the requirements identified in the integrated plan, Ministerial directives and legislation, are planned based solely on the need of domestic electricity usage. The generation procurement activities being undertaken by the OPA and their associated costs are not being imposed or otherwise caused by exporters, nor do they benefit them.

## **2.6 OPA'S VARIANCE ACCOUNTS**

A portion of the 2011 OPA's proposed net revenue requirement of \$79.9 million, \$17.8 million, is related to the proposed clearance of OPA's variance accounts. The largest variance account amount for 2011, \$15.6 million, relates to the Retail Contract Settlement Deferral Account that reflects the compensation to retailers for contracts entered with low-volume and designated customers in Ontario.

In our opinion based on cost causality principles, these variance accounts are not related to activities caused in whole or part by exporters. Recovering any portion of these costs from exporters would amount to a Board-approved cross-subsidization of domestic customers by export customers.

## **2.7 RECOVERY OF CONSERVATION AND GENERATION PROCUREMENT RELATED COSTS IN QUEBEC**

In Quebec, conservation programs are functionalized as distribution costs and are allocated to the various customer classes based on direct assignment, as per Decision D-2008-024 of the Régie de l'énergie, Proceeding R-3644-2007, dated February 26, 2008, section 4.3, page 79. Generation procurement costs are also allocated to distribution customers based on total supply of electricity as per the Decision D-2004-047 of the Régie de l'énergie, Proceeding R-3492-2002, dated February 26, 2004, section 4.7.2, page 119. These costs are recovered from Quebec's domestic customers only. In our opinion this same approach would be appropriate in Ontario since it would reflect cost causality principles.

## **3 COST CAUSALITY PRINCIPLES – METHODOLOGY FOR OPA**

Taking Ontario distributors as an example of how to determine revenue requirement responsibilities based on cost causality principles by customer group, if the OPA were to develop a methodology to apportion its revenue requirement using cost causality principles amongst the customers and entities that impose costs on OPA, it would divide its revenue requirement into cost functions, that is by activities undertaken: conservation, generation procurement, generation planning, transmission planning, etc. All direct and indirect costs related to these various activities would be identified.

The next step would entail identifying which group of customers impose the costs associated with these OPA activities: domestic (and perhaps subgroups of domestic customers) and/or exporters. Costs that have been identified as being imposed by either domestic or export customers would be directly allocated to each group. Shared or common costs that are imposed on the OPA by both domestic and export customers could be allocated between domestic and exporters by using energy withdrawn from the Ontario transmission system as an allocator.

This would result in the apportionment of OPA's revenue requirement to domestic and export customers that could be the basis for developing charges that would be reflect the cost causality principle and would be just and reasonable for all users of Ontario's electricity system.

#### **4 ESTIMATE OF COST CAUSALITY PRINCIPLE APPLIED TO OPA'S 2011 REVENUE REQUIREMENT**

Based on cost causality principles, objective #1 which is related to transmission planning and could be considered to be caused in part by exporters and therefore could be recovered from domestic and export customers. The costs associated with this objective can be identified and, to reflect cost causality, could be allocated between domestic and export consumers based on forecast electricity sales. Based on OPA's evidence in Exhibit D, Tab 1, Schedule 1, page 2, lines 9 and 10, for 2011, the IESO has forecast domestic electricity sales of 142.9 TWh, less line losses of 3.1 TWh, plus electricity exports of 12.9 TWh for a net forecast of 152.6 TWh; therefore, export consumers could be allocated 8.5%,  $(12.9/152.6)$ , of the cost related to transmission planning, which would be \$6.070M identified for objective #1.

Strategic Objective #4 includes overhead costs that may be considered to support all other strategic objectives. Objective #4 includes costs for CEO Office, Finance, Information Technology, Planning & Reporting/Office and Facility Services, Human Resources and Legal, Aboriginal and Regulatory Affairs. Some allocation of these costs to the other four strategic objectives may be appropriate and could be based on the share of costs for each of the other four strategic objectives.

## 5 SUMMARY OF RECOMMENDATIONS

It is our opinion that the following recommendations should be adopted by the OEB in this proceeding:

**#1: The principle of cost causality should be applied to the OPA in determining the extent to which different types of customers should be responsible for the recovery of OPA's revenue requirement.**

**#2: All of OPA's costs, direct costs and indirect generation procurement and conservation costs should be allocated using a consistent approach based on cost causality principles.**

**#3: The OPA's conservation activities are not caused by exporters; hence, these costs should not be recovered from exporters.**

**#4: The OPA's generation procurement activities are not being imposed by exporters; hence, these costs should not be recovered from exporters.**

**#5: Based on cost causality principles, the OPA's objective #1 which is related to transmission planning could be recovered from domestic and export consumers.**

**#6: Strategic Objective #4 includes overhead costs that support all other strategic objectives. Some allocation of these costs to the other four strategic objectives would be appropriate and should be based on the share of costs for each of the other four strategic objectives**

**#7: No new usage fee on exporters should be levied by the OPA until such cost allocation study has been prepared by the OPA and evidence reviewed by the Board at the OPA's next fees case.**