

Board Staff Interrogatory #128

Ref: Ex. C2-T1-S1 and C2-T1-S2, Tables 1-5

Issue Number: 8.1

Issue: Have any regulatory or other bodies issued position or policy papers, or made decisions, with respect to Asset Retirement Obligations that the Board should consider in determining whether to retain the existing methodology or adopt a new or modified methodology?

Interrogatory

Please file policy positions or papers, or decisions from any energy regulatory or other bodies that were issued since the EB-2009-0905 decision with respect to the revenue requirement methodology for recovering nuclear liabilities?

Response

As part of its regular business activities, OPG monitors emerging issues with respect to methodologies for the recovery of asset retirement obligations across North America. These activities include discussions with other regulated entities through various forums. With the exception of the NEB's review related to pipeline abandonment, discussed below, OPG is not aware of any policy positions, papers or decisions related to the methodology for recovering asset retirement obligations that have been issued since EB-2007-0905.

The NEB's review of financial issues related to pipeline abandonment is relevant to recovery of asset retirement obligations. The NEB is in the early stages of a multiyear process to determine the amount that should be recovered for pipeline abandonment, how to collect it and how to set aside and eventually access funds. The next step in the NEB's Land Matters Consultation Initiative Stream 3, Pipeline Abandonment – Financial Issues (RH-2-2008) process is the submission by May 2011 from pipelines of their proposals regarding the level of abandonment costs. Proposals regarding how to collect and set aside funds are due in November 2012. Information related to RH-2-2008 is posted on the NEB's website at: <https://www.neb-one.gc.ca/ll-eng/Livelink.exe?func=ll&objId=501196&objAction=browse&sort=name>.

Board Staff Interrogatory #129

Ref: Ex. C2-T1-S1, page 1

Issue Number: 8.1

Issue: Have any regulatory or other bodies issued position or policy papers, or made decisions, with respect to Asset Retirement Obligations that the Board should consider in determining whether to retain the existing methodology or adopt a new or modified methodology?

Interrogatory

OPG has stated that for the 2011-2012 test years, it has proposed to maintain the revenue requirement treatment for nuclear liabilities approved by the Board in EB-2007-0905 for Pickering, Darlington and the Bruce facilities. However, OPG also states it is continuing to investigate the impacts of the Board approved revenue requirement treatment on its ability to fully recover its nuclear liabilities. Based on the results of this investigation, OPG may propose modifications to the existing treatment or an alternative treatment in a future application.

- a) Can OPG please provide the results of its continuing investigation into this matter to date?
- b) Is OPG planning to propose any modifications to the existing treatment or an alternative treatment in its next application?

Response

- a) OPG's investigation into the ability of the OEB-approved recovery methodology to provide cost recovery over the life of the assets and their retirement is a complex analysis. OPG is in a preliminary stage of its analysis and there are no results available for review.
- b) OPG has not yet determined whether it will propose any modifications to the existing treatment or an alternative treatment in its next application. That determination will only be made when OPG has completed its analysis.

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Exhibit L
Tab 1
Schedule 129
Page 2 of 2

1
2
3
4
5
6
7

CME Interrogatory #039

Ref: Ex. C2-T1-S1

Issue Number: 8.1

Issue: Have any regulatory or other bodies issued position or policy papers, or made decisions, with respect to Asset Retirement Obligations that the Board should consider in determining whether to retain the existing methodology or adopt a new or modified methodology?

Interrogatory

The Board's decision in OPG's first payment case was released on November 3, 2008. In April 2009, the National Energy Board ("NEB") released a report containing recommendations pertaining to financial issues related to pipeline abandonment. In that report, at page 32, the NEB adopted, as key principles and considerations, the principle that funds for abandonment costs should be collected and set aside in a transparent manner and that funds for abandonment costs should not be collected as part of depreciation and should be a separate element of cost of service. The NEB provided guidance for setting aside funds and established an action plan for implementing its recommendations. In a report dated May 2009, the NEB directed utilities that it regulates to comply with the steps set out in the Framework and Action Plan contained in the Board's April 2009 Report. Having regard to these developments at the NEB, please provide the following information:

- a) What, if anything, is OPG doing to monitor the NEB's development of a transparent method for recovering abandonment costs as a separate element of the cost of service?
- b) What is the status of responses by the utilities the NEB regulates related to the implementation of the NEB's recommendations for the collection and setting aside of funds related to pipeline abandonment costs as a separate element of cost of service?

Response

- a) OPG is monitoring the submissions and pronouncements posted by the National Energy Board ("NEB") on its website pertaining to the NEB's Land Matters Consultation Initiative Stream 3, Pipeline Abandonment – Financial Issues (RH-2-2008).
- b) See Ex. L-01-128. Pipelines must submit proposals regarding the level of abandonment costs by May 2011.

SEC Interrogatory #040

Ref: Ex. C2-T1-S1, page 1

Issue Number: 8.1

Issue: Have any regulatory or other bodies issued position or policy papers, or made decisions, with respect to Asset Retirement Obligations that the Board should consider in determining whether to retain the existing methodology or adopt a new or modified methodology?

Interrogatory

- a) The evidence states that “OPG is continuing to investigate the impacts of the OEB approved revenue requirement treatment on its ability to fully recover its nuclear liabilities”. Please outline these concerns.
- b) Has OPG commissioned a study or developed terms of reference for such a study. If yes please provide the terms of reference.

Response

See the response to the interrogatory in Ex. L-01-129. OPG has not commissioned a study nor has OPG developed a terms of reference for such a study.

VECC Interrogatory #030

Ref: General

Issue Number: 8.1

Issue: Have any regulatory or other bodies issued position or policy papers, or made decisions, with respect to Asset Retirement Obligations that the Board should consider in determining whether to retain the existing methodology or adopt a new or modified methodology?

Interrogatory

Board staff IR 128 requests as follows: "Please file policy positions or papers, or decisions from any energy regulatory or other bodies that were issued since the EB-2009-0905 decision with respect to the revenue requirement methodology for recovering nuclear liabilities?" (emphasis added) Please enlarge the scope of that request to include such positions, papers or decisions that precede the decision in EB-2009-0905 that were not brought to the attention of the Board in EB-2009-0905.

Response

The reference number in the question is to OPG's payment amount application, EB-2007-0905, not EB-2009-0905.

In June, 2008, OPG provided undertaking Ex. J1.3 Addendum in EB-2007-0905 (see Attachment 1) which contains the precedents reviewed by Fosters Associates, Inc. that related to the recovery of nuclear liability costs.

OPG is not aware of any policy positions or papers or decisions from any energy regulatory or other bodies that were issued between the oral hearing in June 2008 and the OEB's EB-2007-0905 Decision With Reasons issued November 3, 2008. Ex. L-01-128 addresses the time period after November 3, 2008.

ATTACHMENT 1

UNFUNDED NUCLEAR LIABILITIES PRECEDENTS

There are only two utilities in Canada that have nuclear generation assets and related nuclear liabilities. Given the lack of precedents in Canada,¹ the focus is on regulatory practice in the U.S.

Prior to the adoption of FASB 143, Accounting for Asset Retirement Obligations, in the U.S. (which corresponds to CICA 3110 in Canada), the original cost of utilities' nuclear assets was simply the acquisition cost, with no adjustment or recognition in the undepreciated original cost for any decommissioning liability. The vast majority of U.S. utilities² with nuclear generation (33 of 38) recovered decommissioning costs³ as part of their depreciation expense. The basis for determining the total cost to be depreciated was the original cost of the asset plus the estimated decommissioning costs. Decommissioning costs were treated as negative salvage, and the depreciation rate was set to permit recovery of the decommissioning costs.

As a result of this practice, at the end of the life of the asset, the asset balance would be negative, with the reserve for depreciation exceeding the original cost of the asset by the amount of the decommissioning obligation. In effect, the liability for decommissioning was included (but not explicitly identified) in the reserve for accumulated depreciation; the liability was not explicitly disclosed on the utilities' balance sheets. Amounts collected in depreciation expense for decommissioning costs were a source of funding for the segregated trusts required to be able to discharge the decommissioning obligation. The earnings on the segregated funds were typically credited to accumulated depreciation, which increased the amount of accumulated depreciation and decreased the decommissioning costs to be recovered from ratepayers. When an estimate of the

¹ Neither of the other two Canadian utilities with nuclear assets, Hydro Québec and New Brunswick Power, have had those assets subject to rate base rate of return regulation. Therefore, neither case provides a precedent for OPG's circumstances

² James R. Boatsman, Inder K. Khurana, and Martha L. Loudder, *The Economic Implications of Proposed Changes in the Accounting for Nuclear Decommissioning Costs*, American Accounting Association, *Accounting Horizons*, Vol. 14, No. 2, June 2000, pp. 211-233.

³ The liability for spent (or used) fuel lies with the government, to whom the utilities pay a per kWh charge for assuming the disposal obligation.

Filed: 2008-06-12
EB-2007-0905
J1.3 Addendum
Page 4 of 8

decommissioning costs was updated, the depreciation rate would be changed to allow for recovery of the revised amount; no retroactive adjustments were made to the depreciation reserve or to equity as a result of the updated cost estimates.

The remaining firms with nuclear assets used what is referred to as the non-current liability method. Under that method, the depreciation expense was based solely on the acquisition cost of the plant, with decommissioning expense recovered as a separate revenue requirement item. The accumulated decommissioning expense was recognized through a straight-line accrual of the liability.

The amount of expense recognized was the same for both the depreciation expense/negative salvage and non-current liability methodologies, but the composition of assets and liabilities was different. Under the first method, the rate base was reduced for accumulated decommissioning expense via the reserve for depreciation; under the second method, the rate base was reduced by netting the non-current liability against rate base. In both cases, the rate base was reduced by the cumulative decommissioning expense that had been recovered from customers, in the first approach through the reserve for depreciation and in the second approach through the reduction of the rate base by the cumulative liability.

The adoption of FASB 143 in 2003 required the utilities to estimate the fair value of their asset retirement obligations, record them as a liability and capitalize the associated ARCs as part of the original cost of the assets. For utilities with nuclear generation assets, the adoption of FASB 143 resulted in the recognition of legal ARO liabilities related to decommissioning. The audited financial statements of the utilities now reflect the full amount of the decommissioning AROs on the liability side, the ARCs and the decommissioning trust funds on the asset side.⁴

To my knowledge, the adoption of FASB 143 has not resulted in material changes in regulatory practice with respect to rate base and capital structure for U.S. utilities with ARCs and AROs. Utilities continued to use long-established regulatory practices for regulatory accounting purposes rather than switch to GAAP accounting. For U.S. utilities

⁴ Some of the utilities also have trust funds on the balance sheet for spent fuel. Spent fuel funds are funded through a per kWh of nuclear production charge.

that qualified for rate regulated accounting,⁵ adjustments for differences between GAAP and regulatory accounting could be and were made in the GAAP financial statements to account for the differences. For these utilities, regulatory assets and liabilities were recorded to recognize the cumulative effects of differences in amounts recovered and recoverable under the old and new standards. If the cumulative expense that has been recovered in rates as dictated by regulatory practice is less than the cumulative expense recorded in the financial statements (including the interest component) under ARO accounting, a regulatory asset, which recognizes the assurance that the utility will be able to collect the difference in future rates, appears on the GAAP financial statements

APPLICABILITY OF US PRACTICE TO OPG

INTRODUCTION

It is necessary to set forth the regulatory objective in order to determine the appropriate treatment of nuclear liabilities in the context of the regulated rate base and/or capital structure. The objective in the decisions as to how nuclear liabilities should be treated for regulatory purposes is to ensure that OPG is provided an opportunity to recover, in its revenue requirement, the costs of financing the assets that are used and useful in the provision of public service.

The measurement of the amount of investor-supplied capital that is required to finance regulated assets typically starts by focusing on the assets that are devoted to public service, that is, the rate base. The starting point for the rate base is net depreciated property, plant and equipment in service plus an allowance for working capital. The next step is essentially to identify funds that have been made available by ratepayers that are financing utility assets. Examples of these funds include accumulated deferred taxes, contributions in aid of construction, and customer deposits. Ratepayer-supplied funds are in most cases deducted from the rate base.⁶ When rate-payer supplied funds are

⁵ As in Canada, if certain criteria are met, U.S. utilities are exempt from certain GAAP reporting standards.

⁶ In a few instances in Canada, customer-supplied funds in the form of accumulated deferred taxes, e.g., Consumers Gas, now Enbridge Gas (in the mid-1980's), FortisBC and Pacific Northern Gas, have been included in the capital structure. Customer contributions have on

deducted directly from the “gross” rate base, the resulting net rate base is typically viewed as a proxy for investor-supplied capital. Thus, the objectives are to ensure that OPG has a reasonable opportunity to recover the costs of the investor-supplied capital financing regulated assets, while simultaneously ensuring that ratepayers are not charged for funds that they have provided. As part of that task, appropriate rate base/regulated capital structure treatment for unfunded nuclear liabilities needs to be evaluated.

Regulation 53/05 requires the Ontario Energy Board to accept the asset values as per the most recently audited financial statements for purposes of establishing the rate base. The ARCs are included in the original cost of the assets and will continue to be included in rate base. Thus, the point of departure is different from that of the U.S. utilities.

In addition, U.S. utilities are generally regulated on the basis of an actual capital structure, rather than a deemed capital structure. In the case of OPG, the choice of deemed capital structure can (and does) take into account the inclusion of the ARCs in rate base and the risks associated with recovery of the liabilities that have been assumed by OPG. The relative size of the liabilities and the attendant recovery risks (compared to the productive capacity of the plants) assumed by OPG is materially larger than that of U.S. utilities with regulated nuclear plants.⁷ The resulting approach to the deemed financing of the total assets needs to recognize the size of the liability that has been assumed. In addition, the contributions to the decommissioning and waste management funds required under ONFA precede the recovery of the related expense in the revenue requirement. Thus, investor funds are effectively required to pre-fund the funds, for which there is an opportunity cost. All of these factors lead to the conclusion that an alternative approach (to that of the U.S. utilities) is warranted for OPG.

occasion been expressed both ways in the same regulatory decision e.g., Alberta utilities, including ATCO Gas and AltaGas Utilities. When customer-supplied funds are assigned a zero cost, the impact of including them in the capital structure rather than deducting them from rate base should be neutral.

⁷ Two examples are: Arizona Public Service has a regulated rate base of over \$4 billion and total asset retirement obligations of \$270 million. AmerenUE has a regulated rate base in Missouri (where its nuclear plant is located) of approximately \$11 billion, of which \$3 billion is nuclear, and total asset retirement obligations of under \$500 million. At the end of 2007, OPG's asset retirement obligations related to its nuclear plants were \$2.5 billion compared to a total nuclear rate base of \$3.5 billion. Further, OPG's total nuclear liabilities exceed \$10 billion; the cost of decommissioning all nuclear plants in the U.S. (over 100 reactors) is approximately \$35 billion. OPG's exposure alone is thus close to one-third of that of U.S. utilities with nuclear plants.

With ARCs included in OPG's rate base, the issue from a capital structure and recovery of an appropriate return perspective becomes one of the treatment of the unfunded liability. Three possible approaches are outlined in the table below.

	Option 2 from CIBC	Rate Base Method	Method #3
Rate Base and Capital Structure	Deduct unfunded liability from gross rate base	No adjustment to rate base. Use deemed debt in capital structure as plug to equate rate base and capital structure	No adjustment to rate base. Include unfunded liability in capital structure as a source of debt financing
Recovery of ARC Principal	Recover ARC principal in depreciation expense	Recover ARC principal in depreciation expense	Recover ARC principal in depreciation expense
Recovery of Return	Recover accretion in OM&A expense. Credit revenue requirement for segregated fund earnings. Apply weighted average cost of capital to rate base minus unfunded liability	Apply weighted average cost of capital to rate base where rate base is supported by a deemed capital structure of debt plus equity; exclude consideration of accretion and seg fund earnings	Apply weighted average cost of capital to rate base. WACC is based on a deemed capital structure of debt (including unfunded liability as one debt source) plus equity.

From an economic impact perspective, the Rate Base Method and Method #3 will provide the same income stream when a deemed capital structure is used and the discount rate on the unfunded liability is the same as the cost of debt that would be used in the Rate Base Method. Option 2 from the CIBC, which deducts the unfunded liability from rate base, effectively negates the requirement that the OEB accept OPG's asset values as per the most recently audited financial statements for purposes of establishing rate base

The treatment of unfunded nuclear liabilities should be premised on the following:

- (1) The proposed deemed capital structure, comprised of debt and equity, should reflect the stand-alone business risks of the regulated operations;
- (2) While the actual debt cost of OPG is used to establish the notional debt expense to be included in the revenue requirement, effectively, a deemed capital structure does not explicitly trace dollars of financing to the specific asset being financed.

Filed: 2008-06-12
EB-2007-0905
J1.3 Addendum
Page 8 of 8

However, since the unfunded nuclear used fuel management and decommissioning liability can be associated with an identifiable rate base asset of material size, it may be interpreted as one source of rate base financing. Thus, while the choice of methodology should ensure that OPG recovers the costs of financing its rate base assets, it should also ensure that there is no double recovery of financing costs.

In my opinion, the Rate Base Method is the preferred approach. Method #3 represents another valid approach to the treatment of the unfunded nuclear liability for regulatory purposes. Both methods entail deeming a common equity ratio compatible with the stand-alone business risks of the regulated operations. The deemed common equity ratio would be the same under both approaches. Both apply a weighted average cost of capital to the same measurement of rate base. While Method 3 may provide a closer matching of the financing costs recovered in the revenue requirement with those incurred, the Rate Base Method follows the traditional practice in Ontario of not “streaming” or “tracing” of financing costs. In effect, the Rate Base Method treats asset retirement costs as any other rate base asset that is financed by a combination of debt and equity.

Further, I am not aware of any utility that has been required to include an unfunded liability related to asset retirement obligations in capital structure, as would be the case if Method 3 were adopted. Two utilities in Ontario have included ARCs in rate base, but their deemed capital structures are comprised solely of debt and common equity.

Considering the advantages of both approaches, the Rate Base Method, which is the same methodology adopted for purposes of interim rates, is recommended. Under the Rate Base Method, the debt component of the deemed capital structure would reflect the allocation of actual and forecast OPG debt at the embedded cost, with the amount of any difference between capitalization and rate base reflecting OPG's cost of long-term debt for that period.