

**Board Staff Interrogatory #125**

**Ref:** Ex. G2-T1-S1, pages 4-5

**Issue Number: 7.2**

**Issue:** Are the proposed test period nuclear business non-energy revenues appropriate?

**Interrogatory**

OPG proposes that revenues (and costs) associated with the future disposition of 673 tonnes of surplus heavy water be excluded from nuclear non-energy revenues as of March 1, 2011. OPG previously used net revenues from heavy water sales as an offset to the nuclear revenue requirement.

- a) What is the origin of the surplus heavy water? Was it manufactured by OPG as a by-product of operating the regulated nuclear facilities, or, is it produced by a separate manufacturing process unrelated to the nuclear generating facilities?
- b) OPG states that the direct costs of heavy water sales are excluded from the nuclear revenue requirement. Are the costs of storing heavy water (as opposed to the direct costs for heavy water sales) also excluded from the nuclear revenue requirement?
- c) Are the heavy water storage facilities included in the regulated nuclear asset rate base?

**Response**

- a) The surplus heavy water was created in a distinct heavy water manufacturing facility unrelated to the nuclear generating facilities. The heavy water was produced at the Bruce Heavy Water Plants, built by AECL to support the CANDU fleet (OPG reactors and others). The plants were later acquired by Ontario Hydro but production ceased in the mid 90's when Ontario Hydro established that it no longer needed additional heavy water. These production plants were subsequently written off and then dismantled (1994 - 2004).
- b) The costs of storing heavy water are excluded from the nuclear revenue requirement.
- c) Heavy water storage facilities are not included in the nuclear rate base as the buildings have been written off.

**SEC Interrogatory #038**

**Ref:** Ex. G2-T1-S1, page 4

**Issue Number: 7.2**

**Issue:** Are the proposed test period nuclear business non-energy revenues appropriate?

**Interrogatory**

- a) Please provide the reference in the legislation/regulations which excludes any surplus heavy water from regulation or excludes any fully depreciated assets.
- b) Please provide the estimated current market value of the 673 tons of heavy water.
- c) Has OPG undertaken any studies or analysis as to the commercial of the surplus heavy water? If so provide these studies.

**Response**

- a) There is no reference in the legislation/regulations which excludes surplus heavy water or fully depreciated assets from regulation, nor is there any reference which includes these assets. The legislation is silent on this point.

Regulation 53/05 of the *Ontario Energy Board Act* (the "Act") prescribes nine facilities for the purposes of section 78.1 of the Act, the section under which the OEB sets OPG's payment amounts.

Since 2005, surplus heavy water has not formed part of the rate base of any of the prescribed facilities. Accordingly, OPG has earned no return on those assets. Surplus heavy water is also not required to support the operation of any of those facilities, nor does it rely on those facilities for its production or management. For these reasons and as set out in Ex. G2-T1-S1, page 4, lines 26-30, OPG proposes to exclude the revenues (net of costs) from surplus heavy water sales as an offset to the nuclear revenue requirement.

- b) Ex. G2-T1-S1, Chart 2 incorrectly shows surplus heavy water at 673 tonnes. The correct value is 537 tonnes. The market for heavy water is restricted to a small number of potential clients whose requirements are far less than 537 tonnes. OPG therefore expects that an extended time will be required to sell the current inventory of surplus heavy water. Because of the illiquid nature of this market, OPG is not able to provide an estimate of the surplus heavy water market value.
- c) OPG has not undertaken any studies or analysis as to the commercial market potential of the surplus heavy water.

**VECC Interrogatory #027**

**Ref:** Ex. G2-T1-S1, pages 4-5

**Issue Number: 7.2**

**Issue:** Are the proposed test period nuclear business non-energy revenues appropriate?

**Interrogatory**

Further to Board Staff interrogatories 125 (b) and (c), please provide the revenue requirement impact calculation that results from the allocation of OM&A and capital expenses to the 673 tonnes of heavy water that OPG is proposing to exclude from regulation by the OEB.

**Response**

Ex. G2-T1-S1, Chart 2 incorrectly shows Surplus Heavy Water at 673 tons. The correct value is 537 tons.

There is no revenue requirement impact as all costs associated with the surplus heavy water have already been excluded from the cost of service rate calculation.

The revenue requirement for 2011 and 2012 has been reduced by the exclusion of costs associated with the sales of heavy water as follows:

- 2011: \$0.8M
- 2012: \$1.0M

**VECC Interrogatory #028**  
**(NON-CONFIDENTIAL VERSION)**

**Ref:** Ex. G2-T1-S1, page 5

**Issue Number: 7.2**

**Issue:** Are the proposed test period nuclear business non-energy revenues appropriate?

**Interrogatory**

Lines 5-16 discuss the “Heavy Water Services” business, and refer to Exhibit G2, tab 1, schedule 1, Table 1 as summarizing the total revenues from “Heavy Water Services”. However there appears to be no line item quantifying the “Heavy Water Services” revenues as a distinct revenue stream. Please provide a table showing the revenues from “Heavy Water Services” from 2007-2012, including a description of the methodology used to forecast such revenues in 2011 and 2012. In the event the revenues from “Heavy Water Services” form a component of the line item “Heavy Water Sales and Processing”, please separate out the revenues from “Heavy Water Sales” that OPG is proposing to exclude from the revenue requirement from the “Heavy Water Services” that OPG is proposing to maintain as an offset to the Revenue Requirement.

**Response**

Ex. G2-T1-S1, Table 1, line 1 combines all revenues from Heavy Water Sales and Processing to avoid disclosing commercially sensitive information relating to heavy water sales.

The table below provides revenues from 2007 – 2012 for surplus heavy water sales and other heavy water services.

Revenues (\$M)	2007 Actual	2008 Actual	2009 Actual	2010 Budget	2011 Plan	2012 Plan
Surplus HW Sales (now excluded)	█	█	█	█	-	-
Other HW Services	█	█	█	█	█	█
Heavy Water Sales & Processing	30.3	28.5	25.5	23.1	17.3	15.6

For other heavy water services (primarily detritiation services), 2011 – 2012 forecasts were determined by examining the annual capacity of facilities such as the Tritium Removal

- 1 Facility, and then holding discussions with existing external clients including Bruce Power to
- 2 determine their requirements. This information was used to develop forecast information.

**VECC Interrogatory #029**

**Ref:** Ex. G2-T1-S1, pages 7, 8, and 10

**Issue Number: 7.2**

**Issue:** Are the proposed test period nuclear business non-energy revenues appropriate?

**Interrogatory**

With respect to the proposed elimination of Inspection and Maintenance Services as discussed at pages 7 and 8, please discuss the impact of the availability of the resources currently used in the provision of Inspection and Maintenance Services to third parties to OPG's "internal work programs" per lines 12-15 on page 8. More specifically, please demonstrate how the shift of these resources to "internal work programs" is captured in the filing.

**Response**

As part of the elimination of provision of inspection and maintenance services to Bruce Power, a transition plan was developed in conjunction with Bruce Power. OPG staff who were located at the Bruce site were given options including transferring to Bruce Power, retiring or remaining with OPG.

All staff remaining with OPG have been integrated into vacant positions, within current programs. The costs and resourcing for current programs is as developed through the 2010 – 2014 Business Plan and detailed in the pre-filed evidence.