

AMPCO Interrogatory #1 for OPG

Interrogatory

As discussed in the OPG's letter of November 10th, please provide any presentation notes and minutes arising from meetings with the IESO and the OPA.

Response

OPG organized an informal meeting, including some participants on tele-conference, with representatives from the IESO and OPA on October 31, 2008 to discuss the future operation of Lennox GS. No presentations were made and no minutes were recorded.

AMPCO Interrogatory #2 for OPG

Interrogatory

In the OPG's letter of November 10th, OPG indicated that a CHP option is available for Lennox with a payback of 5 years and a start date of Q4/09.

- a. When did the OPG become aware of this CHP option? Has OPG ever proposed the CHP option to the IESO in the context of previous RMR contract negotiations?
- b. Please provide a business case summary for the CHP option.
- c. What is the assumed commitment date to realize a Q4/09 in-service date?
- d. In the event that Lennox generation is retired prior to start of service of the CHP unit, what salvage could be realized?

Response

- a. OPG began reviewing the feasibility of the CHP option in early 2007. No, OPG has not proposed this option to the IESO in the context of any previous RMR contract negotiation.
- b. A business case for the CHP project is scheduled to be completed by February 2009.
- c. The start date in the fourth quarter of 2009 indicated in OPG's November 10 evidence is the start date for work on the project, not the in-service date. The estimated in-service date for this project is the fourth quarter of 2010. In order to proceed and meet this in-service date, an approved business case would be required by the end of February 2009 and a contract for engineering services would have to be in place by July 2009.
- d. In the event that the CHP was completed and Lennox was retired at about that time or shortly thereafter, the estimated salvage value would be in the \$2.5M - \$3.0M range.

AMPCO Interrogatory #3 for OPG

Interrogatory

On December 2nd, 3rd, 4th, and 5th of 2007, gas demand rate at Lennox, unauthorized by TCPL, violated TransCanada's Hourly Flow Limits as set out in TransCanada's Mainline Tariff. TCPL reported in a letter to the National Energy Board (NEB) of December 20th that these takes caused operational problems on the TransCanada system putting service to other shippers at increased risk. Specifically, "The quick ramp-up of flow (to Lennox) to levels in excess of maximum hourly flow limits caused a rapid pressure drop on TransCanada's system which triggered the shut-down of a compressor at Station 142 on the Montreal line." Please explain the measures that OPG took on December 6, 2007 (another day of high Lennox output) and measures OPG is taking to manage its gas requirements at Lennox in a way that meets the requirements of the gas pipelines serving the station. Please explain the cost consequences of these measures.

Response

As it always does, OPG managed its gas supply on December 6, 2007 to meet its obligations under the Lennox Reliability Must Run (RMR) contract within the contractual provisions of its gas supply and transportation contracts. OPG, in respect of Lennox, is an in-franchise customer of Union Gas in the Union Eastern Delivery Area and was not a shipper on the TCPL system in relation to the cited incidents.

OPG, Union and TCPL have discussed operations at Lennox many times since December, 2007. Working together the parties have adopted new communication protocols to assist with the management of flows on the TCPL system. In addition, OPG is a participant in the TCPL Tolls Task Force¹, which is developing new services to better enable shippers to meet their needs within the practical limits of the TCPL system.

The cost associated with any new gas delivery measures will depend on the details of the new services offered by TCPL.

¹ *The Tolls Task Force is hosted by TCPL and was created to review all operational, tariff, toll, and rate application issues in an attempt to arrive at a consensus position outside of a hearing process. Membership in the Tolls Task Force is open to any party with a discernible interest in, or who may be affected by, toll, tariff and operational matters, such as shippers, industry associations and governments of consuming and producing provinces.*

AMPCO Interrogatory #4 for OPG

Interrogatory

Please summarize the cost per MWh for Lennox output arising from each of the historic RMR contracts and the projected cost under the proposed contract. Break out the costs in terms of fuel and non-fuel costs. For each historic year, indicate the market based revenues earned by Lennox, the contract-based revenues, and the net income earned by OPG.

Response

Summary of Cost for Lennox Energy Production				
Item	1 st RMR 2005-06	2 nd RMR 2006-07	3 rd RMR 2007-08	4 th RMR 2008-09
	Actual	Actual	Actual	Forecast
Fuel Costs (\$)	52,609,847	78,428,609	67,085,157	11,588,761
Non-Fuel Costs (\$)	60,932,845	60,529,768	63,634,828	55,371,669
Other ¹ (\$)	5,048,959	6,485,497	5,747,013	1,691,940
Total (\$)	118,591,651	145,443,874	136,466,998	68,652,370
Lennox Energy Production (MWh)	440,962	762,428	510,193	19,000 ²
Fuel Cost (\$/MWh)	119.31	102.87	131.49	609.93
Non-Fuel Cost (\$/MWh)	138.18	79.39	124.73	2,914.30
Other ¹ (\$/MWh)	11.45	8.51	11.26	89.05
Total (\$/MWh)	268.94	190.76	267.48	3,613.28 ²
Market Revenues (\$)	59,600,110	77,863,516	62,440,265	3,445,786
Contract Revenues (\$)	58,991,541	67,580,358	74,026,733	65,206,584
Total Revenues (\$)	118,591,651	145,443,874	136,466,998	68,652,370
Lennox Net Capacity (kW)	2,100, 000	2,100, 000	2,100, 000	2,100,000
Total (\$/kW)	56.47	69.26	64.98	32.69

1 There is no "net income" term referenced in the Lennox RMR Agreement. The "Other" category includes revenues from the Retained Gross Revenue Amount, Margin Amount and the performance reward payable.

2 The Lennox energy production forecast included in the RMR agreement for 2008-09 was based on OPG's business planning information at the time. More recent business planning information has Lennox energy production at 50,000 MWh over this period. Lennox is a peaking facility and as result its output is a function of supply/demand conditions in the market, fuel prices and IESO dispatch. All of these factors make it extremely difficult to accurately forecast the energy production for this station. Actual energy production for the previous three RMR agreements has been significantly higher than that forecast. The more recent OPG forecast and Lennox's operation since October 1, 2008 indicate this trend is likely to continue.

AMPCO Interrogatory #5 for OPG

Interrogatory

In OPG's letter of November 10th, OPG states "If the Lennox facility were to be shut down, OPG would be faced with a number of significant costs including placing the plant in a safe shut-down state, the cancellation of fuel contracts, and staff severance packages." Please provide these costs. Indicate the extent to which these costs would differ if Lennox was retired in October 2009 relative to a shutdown date one year later and two years later. Please indicate the term of all fuel contracts associated with Lennox presently.

Response

It is estimated that it would cost approximately \$44M to place Lennox in a safe shutdown state, broken down approximately as follows:

- \$19M for laying up the actual units (consisting of \$9.5M for staffing, \$4.9M for temporary labour, \$3.6M for air dryers, and \$1.0M for materials)
- \$13.1M for staff severance costs
- \$4.3M for relocation costs for staff that remain with OPG
- \$2.8M for loadout of residual oil
- \$1.5M for non-marketable inventory
- \$3.2M for removal of the residual tank and day tank from service

The timing of the shut down would have minimal impact on the costs of placing the station in a safe shut down state.

Cancellation of Fuel Contracts:

Natural Gas

OPG has two gas-related contracts which would be impacted by a shutdown of Lennox on October 1, 2009. These are a firm gas supply contract and a firm transportation contract. Both are in the last year of a 10 year term and expire October 31, 2009. If Lennox were to be shut down as of October 1, 2009, there would be one month of obligation remaining on each contract. The total cost of these obligations for one month would be less than \$300,000.

Note that for Lennox to continue operating on gas, the negotiation of a new firm gas supply contract would be required before Oct 31, 2009. Terms for these contracts would be negotiated based on requirements at the time of negotiation. Also, a decision regarding changes to the terms and conditions of the firm transportation contract would have to be made before the notice deadline of April 30, 2009. The costs for shutdown in 2010 and 2011 would depend on the terms of any new contracts negotiated.

Residual Fuel Oil (RFO)

There are no shutdown costs associated with RFO, but there could be shutdown costs for OPG's contract for leased railcars. OPG leases specialized tank cars that are used for the transportation of RFO to Lennox and that are the only acceptable tank cars for deliveries. The current lease ends on June 30, 2011 and does not provide for early termination. The remaining payments by OPG for the lease are as follows:

- On October 1, 2009: \$1,050,000 US
- On October 1, 2010: \$420,000 US

AMPCO Interrogatory #6 for OPG

Interrogatory

In the event that Lennox was placed in a lay-up condition in October 2009, please outline the steps, timelines, and costs that would be involved in returning the station to service. Please indicate whether consideration has been given to laying up some Lennox units while leaving others in-service and whether cost savings might be realized.

Response

It is estimated that it would take eight months to return the first unit to service from lay-up condition and then four months for each remaining unit on a consecutive basis (20 months total for full station restart). The total cost to restart the station with all four units operating is estimated at approximately \$35M, broken down approximately as follows:

- \$12.5M for staffing the restarts
- \$5M for temporary labour
- \$8M for staff relocation
- \$8M for materials
- \$1.5M for tank inspections.

The major steps to return the units to service would be as follows:

- Development of a return-to-service plan which would include equipment assessment, equipment reassembly, unit commissioning, staffing and business plan estimates.
- Development and execution of a hiring program to hire staff to complete the return-to-service work and to initiate the process for hiring staff for ongoing maintenance and operation of the plant.
- Return to service of plant infrastructure (e.g. HVAC systems, washrooms, water supply, etc.).
- Establishment of contracts for procurement of fuel and any required parts and inventory.
- Inspection of all pressure vessels.
- Reassembly and testing of all equipment.
- Commissioning of all systems including the fuel system.

Consideration has been given to laying up additional Lennox unit(s) while leaving others in service. The cost savings of such a strategy is nominal and has therefore not been pursued further.

AMPCO Interrogatory #7 for OPG

Interrogatory

In OPG's letter of November 10th, OPG states "a longer term agreement for Lennox would be cost-effective." Please quantify this claim and provide the reference case against which the longer term proposal is compared.

Response

This statement was made in the context of the information provided in parts 1 and 2 of OPG's November 10, 2008 evidence which identified the cost implications if Lennox were to be shut down and potentially restarted, in response to the Board's interest in the cost effectiveness of a multi-year contract.