Ontario Energy Board

Commission de l'énergie de l'Ontario

EB-2007-0715

IN THE MATTER OF the *Ontario Energy Board Act, 1998,* S.O. 1998, c.15, Schedule B;

AND IN THE MATTER OF an application by Ontario Power Generation Inc. for approval, pursuant to Part 1, Paragraph 5.2 of Ontario Power Generation Inc.'s Generation Licence EG-2003-0104, of a Reliability Must-Run Agreement for the Lennox Generating Station facilities between Ontario Power Generation Inc. and the Independent Electricity System Operator.

BEFORE:

Bill Rupert
Presiding Member

Pamela Nowina
Member and Vice Chair

DECISION WITH REASONS

December 21, 2007

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BACKGROUND

On August 9, 2007, Ontario Power Generation Inc. ("OPG") filed an application with the Ontario Energy Board (the "Board") seeking approval of a reliability must-run contract (the "2008 RMR Contract") with respect to OPG's Lennox generating station ("Lennox"). The Board assigned file number EB-2007-0715 to OPG's application.

Lennox is a four-unit 2,140 megawatt fossil generating station located near Kingston, Ontario. It started operation in 1976 as an oil-fired station and was converted to dual oil/natural gas fueling in 1998-2000. Due to its relatively high operating cost, Lennox has been operated as a peaking plant. OPG has stated that Lennox was not able to earn sufficient revenues in the wholesale electricity market to cover its fixed and variable costs, and recovered essentially only its fuel costs. In March 2005, OPG wrote off the remaining net book value of the plant.

In July 2005, OPG filed a request with the Independent Electricity System Operator ("IESO") to de-register (i.e., shut down) Lennox. The IESO rejected that request and, instead, negotiated a reliability must-run ("RMR") agreement with OPG for the 12 months from October 1, 2005 to September 30, 2006, which the Board approved in its March 13, 2006 Decision in proceeding EB-2005-0490. During the term of this first RMR agreement, Lennox operated at an average capacity factor of 2.4% and generated 440,961 MWh of energy.

A second RMR agreement was submitted for Board approval by OPG on August 23, 2006, and was approved by the Board in its January 22, 2007 Decision in proceeding EB-2006-0205. During the term of this second RMR agreement, the capacity factor at Lennox was 4.1% and the plant generated 762,428 MWh of energy. Over the period covered by the first two RMR agreements, the output generated by Lennox exceeded 500 MW (approximately the capacity of one of the plant's four units) in only 797 hours, or about 4.5% of the total hours, in that two-year period.

On February 6, 2007, OPG filed with the IESO a Notice of Request to De-register Lennox, at which time OPG indicated that it was prepared to negotiate a third RMR agreement, if the IESO determined such an agreement to be necessary to maintain reliability of the IESO-controlled grid. On April 5, 2007, the IESO informed OPG that de-registration of Lennox would put the IESO-controlled grid at undue risk and that the IESO therefore intended to enter into negotiations for a third RMR agreement. The de-registration analysis prepared by the IESO in relation to Lennox[1] stated that:

> …all 4 units at Lennox are required for the purposes of reliability during the period Oct 2007 to Sep 2008. The new generation capacities at Goreway and Portlands, scheduled to go in service during the study period may reduce the number of Lennox units required to control flows from the west towards Toronto, but cannot control voltages in eastern Ontario as effectively as Lennox, to support the expected peak flows towards Ottawa. The total generation capacity expected to come into service at Goreway and Portlands (in the GTA, east of FETT) can only replace one Lennox unit. However, given the risk of delays to generation projects, it is recommended to contract all four Lennox units for the whole study period.

The IESO and OPG subsequently negotiated the 2008 RMR Contract that, subject to Board approval, is effective October 1, 2007.

The 2008 RMR Contract is in the same form as the RMR agreement that was approved by the Board on January 22, 2007. Salient provisions of the 2008 RMR Contract include:

- One-year term, from October 1, 2007 to September 30, 2008, without renewal or extension (although it may be terminated by either party upon written notice);
- Estimated payments to OPG of $77.8 million over the contract term (comprised of OPG's fixed and variable costs for Lennox, a "margin amount" of $1.49 million, and additional revenues equivalent to 5% of the gross revenues earned by or attributed to Lennox in the IESO-administered markets);

[1] Independent Electricity System Operator, *Lennox GS Deregistration Analysis,* Issue 2.0, May 11, 2007, filed as Exhibit A to the IESO's response to Board staff interrogatory to the IESO #1, at page 1.

- An obligation on OPG to offer into the IESO-administered markets the maximum amount of energy and operating reserve from Lennox in a commercially reasonable manner and in accordance with stated performance standards; and
- Rewards or penalties (neither to exceed $2 million) based on OPG exceeding or failing to meet agreed performance standards.

In accordance with the Market Rules, the total net cost of the 2008 RMR Contract would be recovered by the IESO from wholesale market participants as part of the monthly non-hourly uplift.

THE PROCEEDING

OPG's application was made under section 5 of OPG's generation licence (EG-2003-0104), which requires that any RMR agreement be approved by the Board prior to its implementation.

OPG requested that its application be disposed of without a hearing on the grounds that the Board had recently reviewed and approved an RMR agreement for the year ended September 30, 2007 and that the 2008 RMR Contract is essentially the same as the prior RMR agreement approved by the Board except for updated cost and revenue information.

The Board determined that it would proceed with a hearing of the matter, and issued a Notice of Application and Hearing (the "Notice") on August 23, 2007.

The Power Workers' Union (the "PWU") and the IESO were granted intervenor status in this proceeding.

The Board decided to proceed by way of a written hearing. On October 1, 2007, the Board issued its Procedural Order No. 1 establishing a process for the filing of interrogatories, responses to interrogatories and written submissions. Board staff directed interrogatories to each of OPG and the IESO, and responses were received from both parties (including a supplementary response filed by the IESO). Written submissions were filed by OPG, and then by Board staff, the PWU and the IESO. Two sets of written reply submissions were filed by OPG.

ISSUES

The Board's review mandate with respect to this matter is contained in section 5.2 of OPG's licence, which reads as follows:

> Where an agreement is entered into in accordance with paragraph 5.1 [that is, an agreement with the IESO for the supply of energy or other services for the purpose of maintaining the reliability of the IESO-controlled grid], it shall comply with the applicable provisions of the Market Rules or such other conditions as the Board may consider reasonable. The agreement shall be subject to approval by the Board prior to its implementation. Unresolved disputes relating to the terms of the Agreement, the interpretation of the Agreement, or amendment of the Agreement, may be determined by the Board.

In the two earlier proceedings in which the Board considered the predecessor RMR agreements for Lennox, the Board confirmed that the three key issues that needed to be addressed before it could approve the RMR agreement before it were the following:

1. Does the RMR agreement comply with OPG's licence?
2. Are the financial provisions of the RMR agreement reasonable?
3. What are the incentive effects, if any, of the RMR agreement?

In its Procedural Order No. 1, the Board noted that the structure of the 2008 RMR Contract is similar to the structures of the two previous RMR agreements approved by the Board. Accordingly, the Board stated that it did not intend to revisit the first and third issues identified above, and that this proceeding would focus on the reasonableness of the financial provisions of the 2008 RMR Contract. The Board indicated that this includes assessing the reasonableness of the estimated operating costs and gross revenues set out in the 2008 RMR Contract, as well as whether the financial provisions could be improved if the term of the RMR contract were to be longer than one year. In this regard, the Board stated as follows:

> The Board notes that, in various public documents, the IESO has indicated that Lennox is critical to provincial resource adequacy and must be retained or replaced.[1] Similarly, the Integrated Power System Plan ("IPSP") that was recently filed with the Board by the Ontario Power Authority assumes that Lennox will remain in service for local reliability reasons at least through 2010.[2] On that basis, and subject to the outcome of the IPSP proceeding, it appears likely that this will not be the last RMR contract entered into between the IESO and OPG with respect to Lennox. Under paragraph 5.2 of Part I of OPG's licence, an RMR contract must comply with the Market Rules and such other conditions as the Board may consider reasonable. One such condition could be that any future RMR contract have a term of more than one year, if that would be more cost-effective. While section 9.7.1.1 of Chapter 7 of the Market Rules states that an RMR contract may have a term of not more than one year, this is expressly subject to section 9.6.11.2 which in turn contemplates the possibility of the Board approving a different term.
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> [1] See, for example, *The Ontario Reliability Outlook*, Volume 2, Issue 1, March 2007, at page 20, and *An Assessment of the Reliability of the Ontario Electricity System from October 2007 to March 2009*, September 10, 2007, at page 32.
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> [2] Integrated Power System Plan, Exhibit D, Tab 8, Schedule 1, at page 9, filed in proceeding EB-2007-0707.

The remainder of this Decision addresses the issue of the reasonableness of the financial provisions of the 2008 RMR Contract and the issue of the term of future RMR agreements.

FINANCIAL PROVISIONS OF THE 2008 RMR CONTRACT

OPG, the PWU and the IESO all support approval of the 2008 RMR Contract as filed.

Table 1 is a summary of the actual costs, margin amounts, revenues and energy production for each of the first and second RMR agreements for Lennox, as well as forecasts of those items for the 2008 RMR Contract.

Table 1: Actual and Forecast Costs, Margin Amounts, Revenues and Energy Production for Lennox GS

$ millions, except production information *12 months ended September 30*		Actual 2005-2006	Actual 2006-2007	Forecast 2007-2008
Costs				
Fuel		$ 52.1	$ 78.6	$ 23.9
OM&A		50.3	51.4	60.7
IESO market costs		6.4	5.5	1.7
Working capital financing		4.7	3.4	3.7
		113.5	138.9	90.0
Margin amount		1.3	1.4	1.5
	[A]	114.8	140.3	91.5
Revenue				
Total		59.6	77.9	14.4
Retained by OPG (5%)		(3.0)	(3.9)	(0.7)
	[B]	56.6	74.0	13.7
Net cost	[A]-[B]	$ 58.2	$ 66.3	$ 77.8
Energy production (MWh)		440,961	762,428	152,000

Source: Summarized from information provided by OPG in response to Board staff interrogatories to OPG #2, #3 and #8

The Board accepts that there are no alternatives to a further RMR agreement for Lennox in the short term, as the IESO has determined that shutting down Lennox would put the IESO-controlled grid at undue risk. Thus, the Board's review of the financial aspects of the 2008 RMR Contract could not be aimed at determining whether the contract is the most cost-effective way to resolve the identified reliability issues in the short-term. Rather, the Board's review focused on whether the financial terms and conditions of the 2008 RMR Contract are reasonable in the circumstances. Specifically, and consistent with the Board's review of the previous RMR agreements for Lennox, the Board considered whether the 2008 RMR Contract should:

a. Provide for recovery of 100% of the fixed and variable operating costs (both fuel and non-fuel) of Lennox;
b. Provide for the payment of a fixed “margin amount” in addition to the recovery of the fixed and variable operating costs;
c. Include a revenue sharing mechanism and, if so, whether 5% of gross revenue was appropriate; and
d. Include performance-based incentives.

The Board finds that these four financial elements of the 2008 RMR Contract are appropriate for the same reasons as outlined in its Decision on the 2005-2006 contract.[2] In summary:

- Recovery of fixed and variable operating costs is appropriate for reliability must-run resources and is consistent with practice in other jurisdictions. The 2008 RMR Contract does not provide for the recovery of any capital costs, which in any event were written off by OPG in 2005.
- The “margin amount” under the 2008 RMR Contract is set at $1.493 million compared to $1.404 million last year, and $1.283 million in the first RMR agreement. In all cases, the margin amount is fixed at five per cent of the forecast cost of labour and corporate services directly related to plant operation. The Board finds this amount is reasonable compensation to OPG for costs and risks not included in its fixed and variable costs.
- The revenue sharing mechanism motivates OPG to ensure Lennox is able to operate as much as required, particularly in hours when market prices are high.
- Performance-based incentives/penalties are a common feature of reliability must-run arrangements in other jurisdictions and align OPG’s interests with those of the IESO.

Interrogatories filed by Board staff were directed at obtaining additional information on how Lennox actually performed during the term of the first two RMR agreements

[2] The Board’s reasons for accepting these four elements of the initial contract are set out on pages 10 and 11 of its March 13, 2006 Decision in EB-2005-0409.

relative to the forecasts built into them, the reasons for significant variances, and how this information was taken into account in negotiating the terms of the 2008 RMR Contract.

Based on the evidence in this proceeding, it is clear that actual production from Lennox during the term of the preceding RMR agreements has materially exceeded forecast production. However, the Board notes that the contract costs should not materially change solely as a result of increased production, since the increased costs associated with increased production (largely for fuel and staff) are offset by the revenues received for increased production provided to the IESO-administered markets.

Board staff also asked the IESO if it had carried out an audit of the actual costs and revenues for 2006-2007 as permitted by the second RMR agreement, and as had been done for the first RMR agreement. The IESO did engage an external consultant to carry out an audit and filed with the Board the Executive Summary from the consultant's November 2007 report. [3] The audit covered six objectives – compliance with the RMR contract, verification of billing costs, compliance with RMR contract schedules, reasonableness of maintained resources, reasonableness of plant costs, and confirmation of good utility practice. The Executive Summary of the audit report noted that the consultant was satisfied with the Lennox plant operation strategy, costs, and practices.

Based on the evidence and submissions in this proceeding, the Board finds that the financial provisions of the 2008 RMR Contract are reasonable, and approves the 2008 RMR Contract as filed.

[3] The Executive Summary of the audit report was filed by the IESO on November 16, 2007 in its supplemental response to Board staff interrogatory to the IESO #4(b).

FUTURE RMR CONTRACTS

When it approved the second RMR agreement, the Board expressed its concern about the possibility of being asked in the future to routinely approve one-year RMR arrangements for Lennox without any evidence of whether there are any cost-effective alternatives that should be pursued.

The Ontario Power Authority's (the "OPA") Integrated Power System Plan (the "IPSP") assumes that Lennox will remain in service for local reliability reasons at least through 2010. In its November 7, 2007 response to a Board staff, the IESO confirmed that Lennox is expected to be required for reliability reasons until at least the end of 2009. Accordingly, it appears to the Board that the 2008 RMR Contract is likely not the last RMR agreement to be negotiated for Lennox.

As noted above, in its Procedural Order No. 1 the Board contemplated the possibility of requiring that any future RMR agreement for Lennox have a term of more than one year, if that would be more cost-effective. All of the parties to this proceeding, as well as Board staff, made submissions on this issue.

OPG expressed the view that a multi-year RMR agreement would be more cost-effective, and requested that the Board impose a condition to that effect. OPG also proposed that any future RMR agreement continue to use the existing model, regardless of the term of such agreement. OPG also submitted that it would be beneficial to align the term of any future RMR agreement, currently from October 1 to September 30, to coincide with OPG's fiscal year (which is the calendar year).

The IESO agreed that modest cost savings would be achieved by extending the term of RMR agreement beyond one year. The PWU also supported the notion of a longer term contract, stating that financial savings would outweigh the annual costs of administering and obtaining regulatory approval of the RMR agreement. The PWU further stated that a multi-year agreement would produce greater certainty of expected generation for the wholesale market in the intermediate term.

Board staff submitted that a condition requiring that an RMR agreement have a term of greater than one year if that would be more cost-effective would be reasonable within the meaning of paragraph 5.2 of OPG's generation licence. Board staff further submitted that, although section 9.7.1.1 of Chapter 7 of the Market Rules states that the term of an RMR agreement cannot exceed one year, section 9.6.11.2 of that Chapter of the Market Rules recognizes the Board's authority to require otherwise.

In commenting on the potential cost effectiveness of a multi-year RMR agreement, Board staff noted that a longer term contract may provide OPG with greater incentives to manage the operation of Lennox. However, Board staff also submitted that evidence indicating whether or not a multi-year agreement would result in greater cost-effectiveness and/or greater incentives would be required. Board staff proposed that the Board could direct OPG and the IESO to submit, with any RMR agreement that OPG may file for Board approval in the future, the following evidence: (i) the financial costs associated with an RMR agreement that has a term of one year; (ii) the financial costs associated with an RMR agreement that has a term of 27 months (from October 1, 2008 to December 31, 2010, covering the remaining period for which it is currently believed that Lennox may be required to continue to operate under must-run conditions); and (iii) an analysis of any significant differences that may exist in relation to the management of investments in and the operation of Lennox under a one-year agreement versus under a 27-month agreement. Board staff also submitted that adoption of a multi-year approach to RMR agreements may call into question the continued suitability of elements of the existing contract model. Further, Board staff noted that the Board may wish to consider the need for additional new conditions, such as a requirement that the performance of Lennox under a multi-year RMR agreement be audited and reported annually to the Board. However, Board staff also submitted that these matters can be addressed, as required, as part of the Board's consideration of any future application for approval of an RMR agreement for Lennox.

In its November 30, 2007 supplemental reply submission, OPG indicated its disagreement with the proposal put forward by Board staff, stating that the proposal would significantly increase the burden on it and the IESO in negotiating a future RMR agreement without any apparent benefit. Board staff's proposal would also unnecessarily complicate the associated regulatory process by introducing an additional set of cost information that would have to be agreed by the parties and requiring the production of an artificial comparative analysis. In OPG's view, it should be obvious that there will be some economies in moving to a longer term agreement. OPG also reiterated the arguments made in its earlier submissions to the effect that moving to a multi-year arrangement would provide savings by reducing the effort associated with negotiating and obtaining approval of annual RMR agreements, and that the existing contract model should continue to be used for future RMR agreements regardless of the length of the term.

The Board notes that no party to this proceeding has disputed the Board's authority to require that future RMR agreements have a term of more than one year, and all parties have been supportive of that approach.

The Board sees promise in a multi-year RMR arrangement in terms of cost-effectiveness. There is clearly potential for administrative cost savings in terms of contract negotiation and approval costs. However, the magnitude and significance of those savings is not currently known, nor can the Board at this time say with certainty that there would be no off-setting costs. Similarly, while it is reasonable to expect that a longer RMR arrangement would allow OPG additional options – particularly with respect to trading off operations and maintenance against capital – for the more economical operation of Lennox over a longer period, the magnitude and significance of any such savings are again not known at this time. It may also be that, in the intervening period, expectations will change as to the length of time for which Lennox may be required to operate under must-run conditions.

OPG will need to demonstrate to the satisfaction of the Board that any future RMR agreement for Lennox should be approved. The Board is prepared to impose a condition that any future RMR agreement have a term of more than one year if that has been demonstrated to be more cost-effective. Within that context, for any future RMR agreement for Lennox that may be filed by OPG, the Board expects OPG to come forward with the contract term that OPG believes will provide the most cost-effective outcome, having regard to the then-current expectations as to the continued need for Lennox as an RMR resource. The Board also expects OPG to provide cogent evidence in support of its assertion regarding the comparative cost-effectiveness of the RMR agreement as proposed.

The Board also expects that OPG will, if it files a multi-year RMR agreement for Board approval based on the existing contract model, demonstrate to the Board's satisfaction that such model is appropriate for an agreement having a term of more than one year.

DATED at Toronto, December 21, 2007

ONTARIO ENERGY BOARD

Original signed by

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Bill Rupert
Presiding Member

Original signed by

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Pamela Nowina
Member and Vice Chair