

**DECISION OF THE INDEPENDENT PANEL - Exemption Application No. 01-1303**

**Exemption Application:** Application No. 01-1303 made by Brighton Beach Power Limited (“Brighton Beach”).

**Panel Hearing the Application:** Glenna Carr and Peter Jones

**Date Application Heard:** July 12, 2004

**Market Rules from which Exemption is Requested:** Chapter 4, Appendix 4.2, Reference 16 of the Market Rules

**Decision:** Brighton Beach is granted an exemption from Chapter 4, Appendix 4.2, Reference 16 of the Market Rules on the terms and conditions specified herein.

**Effective Date of the Exemption:** February 27, 2004

**Conditions of the Exemption:** The exemption is granted on the following conditions:

1. In coordination with the IMO, the governors on the gas turbine units shall be set no higher than 4% droop. This affords better initial response. The block load controller shall be set no higher than 5% droop.
2. In coordination with the IMO, the block load controller performance signal will be tested, reported and assessed as part of commissioning to ensure the frequency response meets the requirement.
3. The block load controller ramp rate shall be at least 12 MW/minute with all units in service.

**Term of the Exemption:** The exemption is granted for the life of the equipment.

**Reconsideration of the Exemption:**

N/A.

**Transfer:** Approval to transfer the exemption may be granted once the following criteria have been met:

1. the transfer meets applicable terms and conditions set forth in the exemption itself and the transferee agrees to comply with all the terms and conditions of the exemption;
2. the proposed transferee is a market participant or undertakes in writing to the IMO to apply for authorization as a market participant; and

3. IMO consideration of and acceptance of the extent to which the transfer of the exemption will impact the timely implementation of the plan to become compliant with the exempted obligation (such plan may be the exemption plan, modified as required by the Panel as part of the terms and conditions of the exemption).

**Monitoring Information Required:** Brighton Beach is required to supply a commissioning report to the IMO.

**Reasons of the Panel:** In rendering our decision, we have considered Brighton Beach's Exemption Application, the IMO Staff Recommendation, Brighton Beach's comments on the IMO Staff Recommendation, the applicable sections of the Market Rules and the *Exemption Application and Assessment Procedure*.

Brighton Beach seeks an exemption from Chapter 4, Appendix 4.2, Reference 16 of the Market Rules (the "Appendix"), which requires Brighton Beach to provide normal speed governing action on the steam turbine at its combined-cycle facility.

#### Applicant's Position

- Speed governors are used at generation facilities to keep speed constant and at a desired generation output. Speed governors automatically vary the generation facility's output for changes in system frequency (speed); e.g. cruise control - when the engine slows, the decrease in speed is detected and more fuel is automatically applied.
- The speed droop describes the speed governor's sensitivity to frequency changes. A 5% droop means a 5% change in frequency will give a power change of 100% of the unit's rated output. A droop of 5% is used as the minimum requirement in Ontario.
- Brighton Beach intends to operate the station with the steam inlet valves of the steam turbine wide open, which is the normal operating mode for combined-cycle plants.
- For a decrease in electricity system frequency, with the steam inlet valves wide open, the Brighton Beach steam turbine-generation unit cannot provide any controlled governor droop frequency response (i.e. the steam governor cannot increase generation unit output to correct for the decrease in system frequency), and for an increase in system frequency, it can only respond above 60.2 Hz.
- In order to provide a response to changes in system frequency, Brighton Beach proposes using a frequency compensating signal in the generation facility's load controller, also known as the 'block load controller', that would allow the gas turbine generation units to deliver an overall station 5% droop response. Load controllers apply or stage output changes to generation units based on dispatch instructions, and factor in ramp rates, temperatures and other production parameters. They are akin to a car driver accelerating or decelerating with a speed limit change, after which the cruise control (i.e. the governor) alone controls the speed, however load controllers intentionally change the power output of the plant's generation units, not the speed.

Electricity system coordination makes other adjustments to maintain desired system frequency (speed). The load controller will automatically adjust the gas turbine generation unit outputs to compensate for any lack of response from the steam turbine for an overall 5% droop.

IMO Staff Recommendation

IMO Staff recommended granting this exemption with the conditions described above.

Conclusion

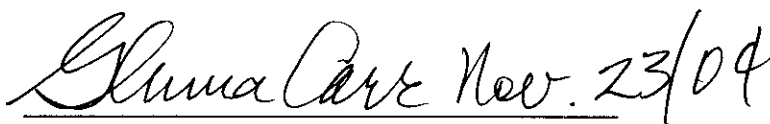
We agree with the IMO Staff Recommendation and have decided to grant the exemption requested by Brighton Beach on the conditions and for the term described herein.

The risk in granting this exemption is to the ability of the IMO to direct and maintain the reliability of the IMO-controlled grid. This risk should be adequately managed through Brighton Beach's compliance plan. Although Brighton Beach will not technically be in compliance with the Appendix, it will meet the intent of the Appendix by providing a 5% droop response to frequency variations. Brighton Beach will not use a speed governor to control system frequency variations, but will nevertheless manage the risk incurred as a result of the lack of a functioning speed governor through an alternate method – the use of the station's frequency compensating load controller design.

The IMO intends to introduce a market rule amendment to permit this alternate solution, but was not able to accomplish this within Brighton Beach's commissioning timeframe.

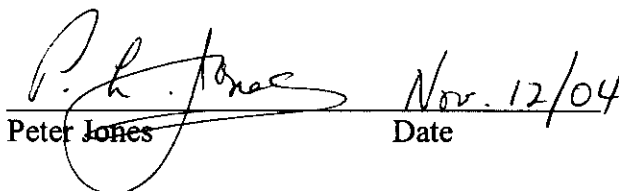
We believe that given the minimal risk to the IMO-controlled grid and the expectation of the introduction of a market rule amendment to permit the alternate solution in the near future, it is appropriate to grant this exemption for the life of the equipment.

We are of the opinion that the risk of any impact on the IMO-controlled grid is sufficiently low as to merit granting this exemption for the term and on the conditions recommended by IMO Staff.



Glenna Carr

Date



Peter Jones

Date