

IMO Staff Recommendation to Panel on Exemption Application (Specified Facilities and Equipment Prior to Market Opening)

All information submitted in this process will be used by the *IMO* solely in support of its obligations under the "Electricity Act, 1998", the "Ontario Energy Board Act, 1998", the "Market Rules" and associated policies, standards and procedures and its *licence*. All submitted information will be assigned the appropriate confidentiality level upon receipt.

Terms and acronyms used in this Form that are italicized have the meanings ascribed thereto in Chapter 11 of the "Market Rules".

PART 1 – GENERAL INFORMATION

Market Participant Name: Ontario Power Generation Inc. (OPGI)	
<i>Exemption Application ID:</i>	<i>Location/Site:</i>
01-1051	Pickering A GS
01-1080	Decew Falls II GS
01-1149	Lakeview GS
01-1160(a)	Darlington GS
01-1240	Decew Falls II GS
<div style="display: flex; justify-content: space-between;"> <div> <i>Exemption Application ID:</i> OPGI Generator <i>Performance Summary</i> </div> <div> <i>Market Participant ID:</i> </div> </div>	
<p>Description of <i>Exemption</i> Requested: The <i>exemption applicants</i> are requesting an <i>exemption</i>, in whole or part, from the requirement to provide <i>generator</i> design capabilities to the <i>IMO</i> as specified in Chapter 4, Appendix 4.2 of the "Market Rules".</p>	
<p>Date <i>Exemption Application</i> Received: All <i>exemption applications</i> covered by this Assessment were submitted between January 23, 2001 and December 17, 2001.</p>	
<p>Date all relevant application information supplied by <i>exemption applicant</i>: June 23, 2003</p>	
<p>Management Approvals Obtained: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Section of the <i>Exemption Application</i> and Assessment Procedure under which the <i>exemption application</i> is made:</p> <ul style="list-style-type: none"> Section 1.5.1 (Application for Exemptions for Facilities and Equipment prior to Market Opening) 	
<p><i>Market Rule(s)</i> or related <i>Market Manual(s)</i> from which <i>exemption</i> is requested (copy of <i>Market Rule(s)</i> or <i>Market Manual(s)</i> attached): "Market Rules" Baseline 10.1, Chapter 4, Appendix 4.2.</p>	

PART 1 – GENERAL INFORMATION

Third Party Submissions Received: ☐ Yes ☐ No

Supplemental Assessment Information Attached: ☒ Yes ☐ No

“OPG 5-Year Plan of Generator Testing for NERC Reliability Compliance”, Revision 8, January 31, 2003.

Related Historical *Exemption Application(s)* or Related *Exemption Application(s)* in Process:

☒ Yes ☐ No

Note: If YES, list History of *Exemption Applications*: **01-1015, 01-1035, 01-1023 and 01-1057**

Role of *exemption applicant* in the market as it relates to this *exemption application*: *Generator*

PART 2 - RECOMMENDATION

Recommendation: GRANTED with conditions

Criteria Used in Assessment of Exemption Applications Prior to Market Opening (Section 1.5.2 of Exemption Application and Assessment Procedure):

(If X appears in a box, the criterion is applicable to this *exemption application* and is evaluated in Part 3 - Details of Assessment; if X does not appear in a box, the criterion is not applicable to this *exemption application*.)

Whether the *exemption* that is the subject-matter of the *exemption application* would, if granted, materially:

- impact the ability of the *IMO* to direct the operations and maintain the *reliability* of the *IMO-controlled grid*; ☒
See “Assessment” in Part 3.
- affect the ability of the *IMO* to operate the *IMO-administered markets* in an efficient, competitive, and reliable manner; ☐

Whether the cost or delay to the *exemption applicant* of complying with the obligation or standard to which the *exemption application* relates is reasonable, having regard to the nature of the obligation or standard, the nature of the *exemption application* and the anticipated impact of non-compliance by the *exemption applicant* in terms of the elements referred to above. ☒

See “Cost to Comply” in Part 3.

PART 3 – DETAILS OF ASSESSMENT**Exemption Request:****# 1051, 1080, 1240:**

The *exemption applicant* is requesting an *exemption* for various time periods (two years, five years or the life of the equipment) from one or more of the following requirements in Reference 16 of Appendix 4.2 in the “Market Rules”:

- an active speed governor;
- speed droop setting of between 3% and 7%; or
- an intentional deadband not wider than ± 36 mHz.

#1149

The *exemption applicant* is requesting an *exemption* at Lakeview GS from the requirement to operate continuously with terminal voltage levels between 95% and 105% of the rated terminal voltage for two years until investigation and remedial action are taken. (Reference 2 of Appendix 4.2 in the “Market Rules”)

#1160(a)

The *exemption applicant* is requesting an *exemption* at Darlington GS from the requirement to provide leading power factor capabilities for *generation facilities* as specified in the *market rules*.

OPGI is requesting an *exemption* from providing the required performance for the 21.5 MW Standby Generators at Darlington GS, dispatchable resources which may be used occasionally during periods of tight supply, as required by Reference 1 in Chapter 4, Appendix 4.2 of the “Market Rules”. Requests for *exemptions* to other References in Appendix 4.2 will be considered in a separate recommendation, as applicable.

Market Rule Requirement:

Appendix 4.2 in the “Market Rules” requires *generation facilities* to provide 16 design capabilities and *generator* controls.

Assessment:

The five OPGI *exemption applications* which are assessed in this recommendation are grouped together to address non-compliance issues with respect to Chapter 4, Appendix 4.2 of the “Market Rules” at specified *generation facilities*. Each, in turn, has its own specific recommendation.

1051 Pickering A GS:

Pickering A governors’ droop setting is approximate where the droop is set to 4% but can vary between 3% and 5% due to age and technology of governors. The deadband is wider than specified; in the order of ± 60 to 70 mHz. These are existing governors. OPGI is requesting an *exemption* from Chapter 4, Appendix 4.2, Reference 16 for the life of the equipment.

#1080 Decew Falls II (NF23) GS:

OPGI cannot confirm deadband within 36 mHz—commissioning data is not available for the G1 unit. OPGI is requesting an *exemption* from Chapter 4, Appendix 4.2, Reference 16 for five years and plans to replace the unit governor with a compliant one within five years.

PART 3 – DETAILS OF ASSESSMENT

#1240 Decew Falls II (NF23) GS:

These *generation units* are operated on gate limit control due to the state of the governors. The *generation units* cannot comply with the requirement for governors with an adjustable speed droop.

OPGI is requesting an *exemption* from Chapter 4, Appendix 4.2, Reference 16 for two years.

OPGI's 5-year plan (2003) indicates replacement of the unit governor with a compliant one at G1 within 2 years; G2 is to be assessed within two years. The OPGI Table accompanying the Plan indicates all units at Decew Falls (NF23) GS will be addressed by October 2005.

#1149 Lakeview GS:

Lakeview has identified unacceptably low voltage levels on 600V *station service* supply when the terminal voltages are operated below 98% of rated voltage. The *market rule* requires operation within 95 to 105% of rated voltage. OPGI is requesting an *exemption* from Chapter 4, Appendix 4.2, Reference 2 for two years, until investigation and remedial actions are taken.

IMO assessment of risk to the system is minimal in this case. There is a large amount of local load and the probability of needing to operate to a low terminal voltage is considered to be very low.

#1160(a) Darlington GS:

OPGI has applied for an *exemption* to various performance characteristics on the Darlington GS standby *generators* for the life of the equipment. Subsequent follow up has confirmed that they are non-compliant for only one aspect; these *generation units* are not able to absorb reactive power, Reference 1, Chapter 4, Appendix 4.2 of the "Market Rules".

IMO assessment of risk to the system is minimal in this case. The probability of having to operate in a leading reactive power mode in this location on the system coincident with *generation offers* from these standby *generators* is very low, and the risk to the *reliability* of the ICG is judged to be acceptable.

Cost to Comply (and Compliance Plan:)

Some cost estimates have been submitted by the *exemption applicant* for compliance but are not of issue here as *IMO* staff is recommending compliance, in most instances, according to the submitted OPGI 5-Year Plan.

OPGI has submitted a new 5-year test plan for compliance, "OPG 5-Year Plan of Generator Testing for NERC Reliability Compliance", Revision 8, as of January 31, 2003.

Recommendation for # 1051 Pickering A:

Granted for life of the equipment, with conditions:

1. Pickering A governors are expected to be maintained to preserve the original design performance specifications.
2. Pickering A governors are to be made compliant if they are replaced or their components are replaced to the extent that the capability becomes available.
3. OPGI shall maintain and calibrate their shaft acceleration detection, as designed, so as to contribute to frequency control in an island.

PART 3 – DETAILS OF ASSESSMENT

4. In coordination with the *IMO*, the governors on Pickering B *generation units* shall continue to be set at 4% droop which will contribute to frequency control in an island.

Recommendation for # 1080 and #1240 Decew Falls II (NF23) GS:

Granted with conditions:

1. Governors on all units shall be compliant by October 2005 as submitted by OPGI in their 5-year Plan (2003), or when unit is replaced, whichever is earlier.
2. The deadband is to be verified during any testing or maintenance that takes place before the above time.
3. In coordination with the *IMO*, the governors on Beck 1 *generation units* should be set to compensate for the non-compliant *generation units*.

Recommendation for #1149 Lakeview GS:

Granted until the *facility* is de-registered April 30, 2005, with conditions:

1. OPGI shall operate Lakeview GS within 98 to 105% of rated terminal voltage.

Recommendation for #1160(a) Darlington GS:

Granted for life of the equipment, with conditions:

1. When directed by the *IMO*, the standby *generators* will reduce their MW output to allow for leading reactive operation, and shall not be eligible for a Congestion Management *Settlement Credit*.

PART 4 – TERMS AND CONDITIONS

Effective Date of Exemption (or event causing <i>exemption</i> to become effective)	Date <i>exemption applications</i> were received.
Date of Expiration of Exemption <ul style="list-style-type: none"> • If greater than 5 years, the Panel must be satisfied that the circumstances justify a later date. • Circumstances which will cause the <i>exemption</i> to immediately expire. 	# 1051 Pickering A: for life of equipment or when governors are replaced or their components are replaced to the extent that the capability becomes available. # 1080 and #1240 Decew Falls II (NF23) GS: by October 2005 or when unit is replaced, whichever is earlier. #1149 Lakeview GS: until <i>facility</i> de-registration April 30, 2005. #1160(a) Darlington GS: Granted for life of the

PART 4 – TERMS AND CONDITIONS

	equipment.
Market Rule(s) or related Market Manual(s) from which the Exemption is granted	Chapter 4, Appendix 4.2
Restrictions on the manner of operation and/or additional obligations to be met during the term of the Exemption, if any	<p># 1051 Pickering A:</p> <ul style="list-style-type: none"> Governors at Pickering A shall be maintained to preserve original design performance specifications; OPGI shall maintain and calibrate their shaft acceleration detection, as designed, so as to contribute to frequency control in an island; In coordination with the <i>IMO</i>, the governors on Pickering B <i>generation units</i> shall continue to be set at 4% droop which will contribute to frequency control in an island. <p>#1080 and #1240 Decew Falls II (NF23) GS:</p> <ul style="list-style-type: none"> Deadband is to be verified during any testing or maintenance occurring prior to October 2005; In coordination with the <i>IMO</i>, governors at Beck 1 shall be set to compensate for the non-compliant <i>generation units</i>. <p>#1149 Lakeview GS:</p> <ul style="list-style-type: none"> OPGI shall operate Lakeview GS within 98 to 105% of rated terminal voltage. <p># 1160(a) Darlington GS:</p> <p>Upon request by the <i>IMO</i>, OPGI shall reduce the Darlington GS standby <i>generators'</i> MW output to allow for leading reactive operation, and shall not be eligible for a Congestion Management <i>Settlement Credit</i>.</p>
Monitoring Information Required Information required to be provided by the <i>exemption applicant</i> for monitoring by the <i>IMO</i> .	None
Payment of Costs <ul style="list-style-type: none"> Processing Costs (when introduced) Incremental <i>Exemption Costs</i> <i>Settlement amounts</i> to be withheld or	N/A

PART 4 – TERMS AND CONDITIONS

repaid.	
Reconsideration/Removal <ul style="list-style-type: none"> • Date on which the <i>exemption</i> will be reconsidered (if applicable). • Circumstances under which the <i>exemption</i> will be reconsidered (if applicable) other than unforeseen future change in circumstances. 	N/A
Transferability <ul style="list-style-type: none"> • List the terms and conditions that need to be met to allow for a transfer of this <i>exemption</i> to be approved by <i>IMO</i> staff. 	<p>Approval to transfer this <i>exemption</i> may occur once the following criteria have been met:</p> <ul style="list-style-type: none"> • the transfer meets applicable terms and conditions set forth in the <i>exemption</i> itself and whether the transfer would affect the ability of the proposed transferee to comply with all of the terms and conditions of the <i>exemption</i>; • the proposed transferee is a <i>market participant</i> or undertakes in writing to the <i>IMO</i> to apply for authorization as a <i>market participant</i>; and • the extent to which the transfer of the <i>exemption</i> will impact the timely implementation of the plan to become compliant with the exempted obligation (such plan may be the <i>exemption</i> plan, modified as required by the Panel as part of the terms and conditions of the <i>exemption</i>).
Other:	N/A