

## Waiver Application (General Process)

Submit this form by registered mail, courier or fax to the following address:

The IMO  
655 Bay Street, Suite 410  
P.O. Box 1  
Toronto, ON M5G 2K4

Fax No.: (905) 212-3498

**Subject: Waiver Application (General Process)**

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 information submitted will be assigned the appropriate confidentiality level upon receipt.

### PART 1 – WAIVER APPLICANT - GENERAL INFORMATION

Organization Name: <u>OPG Inc. - Pickering B</u> Waiver #3 <u>01-1057</u>	
Market Participant/Metering Service Provider No. (if applicable): _____	IMO Help Centre (IHC) Ticket No. (if applicable): <u>N.A.</u>
Address: <u>700, University Avenue</u>	
City/Town: <u>Toronto</u>	Province/State: <u>Ontario</u>
Postal/Zip Code: <u>M5G 1X6</u>	Country: <u>Canada</u>
Fax No.: <u>N.A.</u>	
Email Address: <u>N.A.</u>	
<b>Main Contact</b>	
Name: <u>Brian Gooder</u>	
Telephone No.: <u>416 592 7712</u>	Fax No.: <u>416 592 8519</u>
E-mail Address: <u>brian.gooder@ontariopowergeneration.com</u>	
Web Site (URL): _____	

## PART 1 – GENERAL INFORMATION (CONTINUED)

### Alternative Contact

Name: Wolfgang Burmester

Telephone No.: 416 592 7913

Fax No.: 416 592 8519

E-mail Address: wolfgang.burmester@ontariopowergeneration.com

## PART 2 – INFORMATION ABOUT THE WAIVER APPLICATION

1. This waiver form is for the general waiver process. Are you also requesting an interim waiver?

☐ Yes

☒ No

2. Is this waiver application being submitted for existing facilities or equipment pursuant to Section 14.12 of Chapter 1 of the *Market Rules*?

☒ Yes

☐ No

3. Please specify the duration for which you would like the waiver granted in days, months or years:

Life of existing equipment and any replacement components

4. Are you requesting priority sequencing of your waiver application?

☐ Yes

☒ No

Please cite the Market Rules Section Number(s) to which this Waiver Application relates:

Chapter 4, Appendix 4.2, Reference 16

Please cite policy, standard or procedure to which this Waiver Application relates (including section number(s)):

### **PART 3 – SUBMISSIONS IN SUPPORT OF WAIVER APPLICATION**

#### **Attach a waiver applicant's plan detailing:**

- The manner and time within which the waiver applicant will become compliant with the obligation or standard to which the waiver application relates;
- The manner in which the waiver applicant proposes to modify its equipment or facilities or otherwise conduct its operations during the period of time for which the waiver would be in effect; and
- The waiver applicant's estimate of any costs that may be imposed on the IMO or on other Market Participants, if the waiver were granted;

#### **The following submissions must be included, either as attachments or in the space provided below:**

- The waiver applicant's assessment as to whether or not the waiver, if granted would:
  - ◆ Materially threaten the ability of the IMO to direct the operations and maintain the reliability of the IMO-controlled grid;
  - ◆ Materially threaten the ability of the IMO to ensure non-discriminatory access to the IMO-controlled grid;
  - ◆ Unless the waiver applicant is the IMO, materially affect the ability of the IMO to operate the IMO-administered markets in an efficient, competitive and reliable manner;
  - ◆ Provide the waiver applicant with an undue preference within the IMO-administered markets;
- An assessment of the costs or delay to the waiver applicant of complying with the obligation or standard to which the waiver application relates;
- Where the waiver applicant is the IMO, identification of the benefit to Market Participants of compliance with the obligation or standard to which the waiver application relates relative to the financial and other resources required to achieve compliance within such deadlines as may be applicable;
- Where the waiver applicant is the IMO, the manner in which it proposes to operate the IMO-administered markets or direct the operations and maintain the reliability of the IMO-controlled grid during the period in which the waiver would be in effect;
- Identification as to whether the facility or equipment that is the subject-matter of the waiver application:
  - ◆ Was in service or was returned to service on the date on which the obligation or standard to which the waiver application relates came into force;
  - ◆ Was ordered by the waiver applicant on or prior to the date on which the obligation or standard to which the waiver application relates came into force; or
  - ◆ Was in the process of construction on or prior to the date on which the obligation or standard to which the waiver application relates came into force.

#### **Submission Information:**

##### **Pickering B NGS Waiver Plan**

Chapter 4, Appendix 4.2, Reference 16 sets out the requirements for speed governors. The Pickering B governors meet these requirements. However, the governor load reference motor is driven by a Boiler Pressure Control/Unit Power Regulator output which seeks to match the generator output to the power production in the reactor. This control can inhibit the capability of the governor to reduce its power output and hence the system frequency in an over generated island. It is disabled by an acceleration greater than 2.5 %/second, but not by a set speed deviation.

The plan is to operate with the waiver in place and rely on manual power reductions in the event of over generated islands.

### **PART 3 – SUBMISSION IN SUPPORT OF WAIVER APPLICATION (CONTINUED)**

The reactor is operated such as to produce constant power output. This optimizes the reactor output. The governing system acts on the steam valves to maintain the frequency. On frequency excursions, the Boiler Pressure Control Program and the Unit Power Regulator will eventually override the governor action so as to maintain constant power output. This is not in accordance with the last portion of the requirements which states, "Control system that inhibit governor response shall be automatically disabled by frequency deviations not larger than +/-100 mHz". In the short term (first few seconds after a disturbance) the governor response will be as required.

In the event of an undergenerated or low frequency situation, when the unit is operating normally at full output, it will remain at full power to supply the system and assist in restoring frequency within the permissible frequency variations identified in Waiver # 2.

In an over generated situation the unit will initially respond to the governor signals to reduce the electrical output. The Boiler Pressure Control/Unit Power Regulator will slowly (at about 1%/second) restore the output to utilize all the power being produced by the reactor. If the overgenerated situation persists, the power set point can be reduced by the operator under IMO direction. If the load in the island is less than approximately 60% of the generation, the control system which inhibits the governor action will be disabled automatically.

The Generators at Pickering B existed before the new IMO controlled market was introduced and the system has operated with these constraints on the Pickering B units for about 20 years. Another mode of operation which would meet the requirements completely would result in a small reduction in plant output and small variations in reactor power. These variations result in less stable reactor operation and could degrade system reliability.

Reliability of Grid/non-discriminatory access/impact on IMO-administered market/undue preference:--

In OPGI's opinion, the waiver if granted would not threaten the ability of the IMO to direct operations or maintain reliability of the IMO controlled GRID.

It would not threaten the ability of the IMO to ensure non-discriminatory access to the IMO controlled GRID, nor would it impact on the ability of the IMO to operate the IMO administered market in an efficient, competitive and reliable manner, nor would it provide the waiver applicant with an undue preference within the IMO administered markets.

Impact on OPG of waiver not being granted:--

If OPGI was not granted waivers for non complying equipment, it would be necessary to change the mode of operation of the Pickering B units with a potential for adverse impact on system reliability.

#### **PART 4 – SUMMARY OF SUBMISSIONS IN SUPPORT OF THE WAIVER APPLICATION**

Please summarize the information provided in Part 3. This summary will be posted on the IMO public Web site.

**Summary:**

The waiver request is for a relaxation of the obligation on control systems that inhibit governor response shall be automatically disabled by frequency deviations not larger than +/- 100 mHz as required by Chapter 4, Appendix 4.2 of the Market Rules. This waiver will only have an impact when these units are part of an over generated island.

## **PART 5 – SUPPORTING DOCUMENTATION TO BE ATTACHED BY WAIVER APPLICANT**

Please list below all supporting documents attached to this waiver application.

1. Waiver Applicant's Plan (must be attached)
- 2.
- 3.
- 4.
- 5.

## **PART 6 – CERTIFICATION**

The undersigned hereby declares that the information contained in and submitted in support of this document is, to the best of the waiver applicant's knowledge, complete and accurate. By signature the waiver applicant agrees that information may be posted on the IMO public Web site in accordance with the provisions of *Market Manual 2: Market Administration – Part 2.2: Waiver Application and Assessment*.

\_\_\_\_\_  
Name (Please Print)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## **PART 7 – FOR IMO USE ONLY**

Received by: \_\_\_\_\_

Date Received: \_\_\_\_\_

Application Completion Date: \_\_\_\_\_

Waiver ID #: \_\_\_\_\_

\_\_\_\_\_  
Date Requested: \_\_\_\_\_