
IESO Staff Recommendation to Panel on Exemption Application (General)

All information submitted in this process will be used by the *IESO* 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: Hamilton Specialty Bar Corporation

Location/Site: Hamilton, Ontario

Exemption Application ID: 1321

Market Participant ID:

Description of Exemption Requested:

- Requirement to be compliant with section 7.5.1, chapter 7 of the market rules, which requires registered facilities to comply with dispatch instructions subject to the notification, pricing and penalty provisions of the market rules;
- Requirement to be compliant with section 7.5.2, chapter 7 of the market rules, which requires registered market participants to notify the *IESO* if there is an expected material difference in operations from the *IESO*'s dispatch instructions.

Date Exemption Application Received: February 28, 2006

Date all relevant application information supplied by exemption applicant: February 28, 2006

Management Approvals Obtained: Yes No

Are there any outstanding disputes, compliance actions, or pending *market rule* amendments involving the subject matter of this *exemption application*? Yes No

Are there any outstanding disputes, compliance actions, or pending *market rule* amendments involving the *exemption applicant*? Yes No

Section of the Exemption Application and Assessment Procedure under which the exemption application is made:

- Section 1.4 "Application for Exemption – General"

Market Rule(s) or related Market Manual(s) from which exemption is requested (copy of Market Rule(s) or Market Manual(s) attached): Chapter 7, Sections 7.5.1 and 7.5.2

Third Party Submissions Received: Yes No

Supplemental Assessment Information Attached: Yes No

PART 1 – GENERAL INFORMATION

Background on Electric Arc Furnaces (EAF)

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

Yes No

Note: If YES, list History of *Exemption Applications*:

Exemption Nos.. #1164 IVACO Granted; #1304 Gerdau Ameristeel Whitby Steel Mill Granted; #1305 Gerdau Ameristeel Cambridge Steel Mill Granted; and #1308 Dofasco Granted.

Role of *exemption applicant* in the market as it relates to this *exemption application*: Dispatchable load.

PART 2 – RECOMMENDATION

Recommendation: Grant with conditions.

Criteria Used in Assessment of General Exemption Applications (Section 1.4.2 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 *IESO* to direct the operations and maintain the *reliability* of the *IESO-controlled grid*;

See Part 3 Details of Assessment.

- impact the ability of the *IESO* to ensure non-discriminatory access to the *IESO-controlled grid*;

- affect the ability of the *IESO* to operate the *IESO-administered markets* in an efficient, competitive, and reliable manner;

See Part 3 Details of Assessment.

- increase costs of *market participants*; or

- increase costs of the *IESO*;

Whether the *exemption* that is the subject-matter of the *exemption application* would, if granted, give the *exemption applicant* an undue preference in the *IESO-administered markets*;

See Part 3 Details of Assessment.

PART 2 – RECOMMENDATION

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 Part 3 Details of Assessment

The adequacy of the *exemption plan* submitted by the *exemption applicant*;

Where the *exemption applicant* is the *IESO*, the identification of the benefit to *market participants* of compliance with the obligation or standard relative to the financial and other resources required to achieve compliance within such deadlines as may be applicable;

Where the *exemption applicant* is the *IESO*, the manner in which it proposes to operate in the *IESO-administered markets* or direct the operations and maintain the *reliability* of the *IESO-controlled grid* during the period in which the *exemption* would be in effect;

Whether the *facility* or equipment that is the subject-matter of the *exemption application*:

- was in service or was returned to service on the date on which the obligation or standard to which the *exemption application* relates came into force;

See Part 3 Details of Assessment.

- was ordered by the *exemption applicant* on or prior to the date on which the obligation or standard to which the *exemption 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 *exemption application* relates came into force; and

The capability of the owner of the *facility* to operate the *facility* consistent with the terms of the proposed *exemption*.

PART 3 – DETAILS OF ASSESSMENT**I. SUMMARY**

Hamilton Specialty Bar Corporation (HSB) is an electric arc furnace (EAF) specialty steel maker located in Hamilton, Ontario. The peak demand of HSB over a full cycle (approximately one hour) is usually around 40 MW. The EAF normally runs 24 hours a day, 7 days a week, approximately 52 weeks per year with the exception of regularly planned shutdowns for weekly and annual

PART 3 – DETAILS OF ASSESSMENT

maintenance. The electricity consumption of HSB's EAF operates in only two states: full consumption or minimum consumption.

Exemption Request

HSB intends to operate its EAF as a dispatchable load in the *IESO-administered markets*. Due to the nature¹ of the EAF load, HSB would be unable to comply with all energy dispatch instructions and therefore seeks an exemption from the following market rules:

- A. the requirement stated in *Subsection 7.5.1 of Chapter 7*, which requires registered facilities to comply with dispatch instructions subject to the notification, pricing and penalty provisions of the market rules; and
- B. the requirement of *Subsection 7.5.2 of Chapter 7*, which requires registered market participants to notify the IESO if there is an expected material difference in operations from the IESO's dispatch instructions. As defined in Market Manual 4.3, a difference is material if it exceeds the greater of 2% or 10 MW.

HSB has requested in their exemption application to participate in the 10-minute non-spinning operating reserve market. That request is outside the scope of the exemption process and is not addressed in this recommendation. It will be separately assessed via the facility registration process using specific qualification criteria.

NOTE: Since a deviation from dispatch of less than the greater of 2% or 10 MW is not considered as non-compliance with sections 7.5.1 and 7.5.2, it is understood that this exemption application refers to deviations from dispatch instructions in excess of the greater of 2% or 10 MW.

II. ASSESSMENT

The *IESO* assesses that granting the exemption will have minimal impact on the reliability of the *IESO-controlled grid* provided certain conditions are placed on the exemption.

1. Impact on reliability of the *IESO-controlled grid* and the operation of the *IESO-administered Markets*.

Impact on the *IESO-controlled grid*: To maintain the reliability of the *IESO-controlled grid*, the *IESO* seeks to preserve the balance between electricity supply and demand by matching the right amount of generation to the expected electricity consumption across the province. Operating as a dispatchable load requires HSB to respond to dispatch instructions and thus provide the *IESO* with more information about expected consumption and more flexibility in balancing load and generation. However, when HSB cannot comply with energy dispatch instructions, the balance between electricity supply and demand may be adversely affected and the *IESO* may need to dispatch other resources to compensate for the difference to maintain system reliability. To minimize this impact and reduce the number of intervals of non-compliance, the *IESO* requires that HSB adopt the bidding and operating strategies described in this recommendation.

Impact on the *IESO-administered markets*: In operating the *IESO-administered markets*, the *IESO* seeks to ensure an efficient, competitive and reliable market for the wholesale sale and purchase of electricity. When HSB does not comply with a dispatch instruction, other resources may need to be dispatched up or down to compensate for the difference. This action may distort the initial economic order in that dispatch interval (e.g. resources that have initially been considered economical may now

¹ See “Background on Electric Arc Furnaces” provided in the Supplemental Assessment Information.

PART 3 – DETAILS OF ASSESSMENT

become uneconomical and dispatched out of the market). To minimize this impact, the *IESO* requires that HSB adopt the bidding and operating strategies described in this recommendation, which are intended to reduce the frequency and consequence of non-compliance events.

2. Undue preference in the *IESO-administered markets*

The electricity consumption of batch-process industries, such as electric arc furnaces, is typically fluctuating and heavily dependent on the specifics of each stage of their production cycles. Therefore, the ability of these industries to comply with energy dispatch instructions is intimately related to their manufacturing process.

By granting this exemption, the *IESO* recognizes the limitations that prevent HSB from complying with all energy dispatch instructions and essentially extends the treatment given to similar loads (see the exemptions granted to IVACO, Gerdau Ameristeel (2) and Dofasco), thus providing the applicant with no undue preference within the *IESO-administered markets*.

3. Cost to Comply

The cost to comply with the market rules for which HSB seeks exemption would be the cost to change the production process of the electric arc furnace to be able to maintain a constant consumption level. This scenario is not considered realistic and the costs would be exorbitant. The denial of this exemption would result in HSB not being able to participate as a dispatchable load in the real-time energy market.

4. In service date with respect to the date on which the obligation or standard to which the *exemption application* relates came into force.

HSB's electric arc furnace facility was established in 1997 and was originally known as Slater Steels – Hamilton Specialty Bar Division. This facility was operating for five years when the obligations to which this exemption application relates came into force.

III. RECOMMENDATION

- A. GRANT HSB an exemption from the requirement to comply, subject to materiality criteria defined in Market Manual 4.3, with energy dispatch instructions as long as HSB is operating within its normal consumption pattern. The following conditions define compliance with dispatch instructions considering HSB operational characteristics.
- B. GRANT an exemption from the requirement to notify, subject to materiality criteria defined in Market Manual 4.3, the *IESO* of non-compliance with energy dispatch instructions as long as HSB is operating within its normal consumption pattern.
- C. HSB's exemption request to participate in the 10-minute non-spinning operating reserve market is outside the scope of this recommendation and HSB's eligibility to participate in the operating reserve markets will be assessed via the facility registration process using specific qualification criteria.

Conditions of the Exemption

1. HSB's EAF operates within its normal consumption pattern as defined in the next paragraph. When outside this pattern, HSB is required to notify the *IESO*.

For the purposes of this recommendation, HSB's EAF is considered to operate within its normal consumption pattern if, during a production cycle (estimated at approximately one hour), HSB is unable to comply with energy dispatch instructions for no longer than 15 minutes that may span

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- over 3 to 4 five-minute intervals. This pattern has been established on the basis of historical consumption data provided by HSB.
2. HSB will make its energy bids based on the hourly average consumption of the process while running, neglecting the periods of minimum load consumption. The associated energy ramp rate [MW/min] shall allow HSB to go from minimum load to the value of the energy bid lamination within a five-minute dispatch interval.
 3. To operate in the energy market, HSB must comply with the following operating strategy:
 - If operating within its normal consumption pattern and dispatched to a level other than full or minimum consumption, there are two possibilities:
 - a) If the energy dispatch instruction is to 50% of its bid or more, HSB will accept the energy dispatch instruction and will dispatch to or remain at full consumption.
 - b) If the energy dispatch instruction is to less than 50% of its bid, HSB will accept the energy dispatch instruction and will dispatch to or remain at minimum consumption.
 - If operating outside its normal consumption pattern, HSB will reject the energy dispatch instructions it cannot meet and notify the *IESO* accordingly. It is acceptable that such notification be an automated message.

Monitoring Information is Required as a Result of Granting this Exemption

In order for HSB to maintain its status of a dispatchable load, several factors contributing to the facility's qualifications as a dispatchable load will be reviewed semi-annually, including:

- compliance with the eligibility criteria for dispatchable loads as described in the facility registration process; and
- compliance with the bidding and operating strategy described in this recommendation.

PART 4 – TERMS AND CONDITIONS

Effective Date of Exemption (or event causing <i>exemption</i> to become effective)	Date of Panel Approval
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. 	Effective as long as HSB seeks to be dispatchable, or until the <i>IESO-administered markets</i> change to accommodate the characteristics of batch load operations.
Market Rule(s) or related Market Manual(s) from which the Exemption is granted.	Chapter 7, Subsections 7.5.1 and 7.5.2.
Restrictions on the manner of operation and/or additional obligations to be met during the term of the Exemption, if any.	Refer to the conditions of the exemption.
Monitoring Information Required Information required to be provided by the <i>exemption applicant</i> for monitoring by the <i>IESO</i> .	Factors contributing to HSB qualification as a dispatchable load will be reviewed semi-annually. These will include: <ul style="list-style-type: none"> • Compliance with the eligibility criteria for dispatchable loads as described in the facility registration process; and • Compliance with the bidding and operating strategy and notification requirements described in this recommendation.
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 repaid. 	None. Non-quantifiable workload increases for control room staff. Through monitoring of the proposed mode of operation with respect to notification, incremental cost to the <i>IESO</i> may be established. The <i>IESO</i> reserves the right to seek recovery of costs if experience proves they are significant.
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. 	Reconsideration may occur if: <ul style="list-style-type: none"> • The <i>IESO</i> determines at any time that allowing the market participant to continue to operate as described in this recommendation will have a detrimental impact on the <i>IESO</i>'s ability to maintain the reliability of the <i>IESO-controlled grid</i>. • The <i>IESO</i> determines that HSB cannot comply with the

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	<p>criteria for dispatchable loads as described in the facility registration process and with the bidding and operating strategy described in this recommendation; or</p> <ul style="list-style-type: none"> • The <i>IESO</i> develops tools, similar to those available for generators that will allow loads to de-rate or effectively change status from non-dispatchable to dispatchable on a five minute basis.
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>IESO</i> staff. 	<p>Approval to transfer this exemption 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 exemption itself and whether the transfer would affect the ability of the proposed transferee to comply with all of the terms and conditions of the exemption; • the proposed transferee is a market participant or undertakes in writing to the IESO to apply for authorization as a market participant.
Other:	Not Applicable