
**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: Fort Chicago District Energy Ltd.

Location/Site: Fort Chicago District Energy Cogeneration Plant

Exemption Application ID: 1332

Market Participant ID:

Description of Exemption Requested: Reactive Power Capability

Date Exemption Application Received: May 5, 2008

Date all relevant application information supplied by exemption applicant: May 5, 2008

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 1.4.1 "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 4, Appendix 4.2 Reference 1

Third Party Submissions Received: Yes No

Supplemental Assessment Information Attached: Yes No

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

Yes No

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

PART 1 – GENERAL INFORMATION

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

PART 2 – RECOMMENDATION

Recommendation: Grant the exemption for the life of the facility subject only to reconsideration as set out in Part 4.

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*;
- 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;
- 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*;

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;

PART 2 – RECOMMENDATION

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;
- 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****1. Exemption Request:**

Fort Chicago District Energy Ltd. is requesting an exemption from the requirement of having the reactive power capability, as specified in Market Rules, Chapter 4, Appendix 4.2 Reference 1, for their Fort Chicago District Energy Cogeneration Plant. The request is for the exemption to be for the lifetime of the facility.

2. Market Rule Requirements:

Chapter 4, Appendix 4.2, Reference 1, Requirement 1 requires that an embedded generator whose

PART 3 – DETAILS OF ASSESSMENT

embedded generation facility includes a generation unit rated at 10 MVA or higher ensure that its synchronous generation unit has the capability to supply, at its terminal, reactive power within the range of 90% lagging to 95% leading power factor based on rated active power at rated voltage.

3. Background

Fort Chicago District Energy Ltd. is developing a cogeneration plant in London, Ontario under a power purchase contract with the Ontario Power Authority (OPA). Fort Chicago District Energy Ltd. does not intend to participate in the Ontario Electricity Markets and will operate independently from dispatch instructions from the IESO.

The embedded generation facility will consist of a gas turbine synchronous unit with a maximum output of 15.7 MW at 13.8 kV and three steam turbine induction generators for a total of 3.3 MW at 4.6kV each, giving the plant a maximum output of 19 MW at 26.28 kV.

The synchronous unit is unable to meet the 95% leading reactive power requirement measured at its terminal as required by the Market Rules. When running in the underexcited mode, the synchronous unit is required to have the ability to absorb 5.16 Mvar at rated active power but, based on the capability curves provided by Fort Chicago District Energy Ltd., this unit can only absorb 1.93 Mvar.

II. ASSESSMENT

Although the synchronous unit is unable to absorb the required 5.16 Mvar measured at its terminal, the System Impact Assessment determined that, when running at full capability in the underexcited mode, this generation facility can absorb approximately 7.3 Mvar as measured at the low voltage side of the main transformer station. Thus it is concluded that because, as observed from the transmission system, the synchronous unit meets the leading reactive power requirement there would be no impact to the IESO's ability to direct the operation and maintain the reliability of the IESO-controlled grid.

Embedded generation facilities connected at voltages less than 50 kV that are able to meet the requirement of reducing their reactive power flow to zero pose no reliability concerns to the IESO Controlled Grid. This facility has the ability to reduce its reactive power flow to zero.

If this exemption were granted, it would not give Fort Chicago District Energy Ltd. an undue preference in the IESO market. It is under contract with the OPA and do not intend to become Market Participants.

There will be no increased costs to market participants or to the IESO as a result of granting this exemption, nor will it affect the ability of the IESO to direct the IESO grid or operate the IESO-administered markets in an efficient, competitive and reliable manner. They have no intention of becoming a Market Participant and will not receive dispatch instructions from the IESO.

IESO RECOMMENDATION AND CONDITIONS

The IESO recommends approval of this exemption for the lifetime of the facility

PART 4 – TERMS AND CONDITIONS

Effective Date of Exemption (or event causing <i>exemption</i> to become effective)	Fort Chicago District Energy Cogeneration Plant In Service Date
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. 	Lifetime of the facility
Market Rule(s) or related Market Manual(s) from which the Exemption is granted.	Chapter 4, Appendix 4.2, Reference 1
Restrictions on the manner of operation and/or additional obligations to be met during the term of the Exemption, if any.	Restrictions in active power output may be required if the facility does not have the capability to reduce reactive power flow at its connection point to zero
Monitoring Information Required Information required to be provided by the <i>exemption applicant</i> for monitoring by the <i>IESO</i> .	
Payment of Costs <ul style="list-style-type: none"> • Processing Costs (when introduced) • Incremental <i>Exemption</i> Costs • <i>Settlement amounts</i> to be withheld or 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. 	The exemption will be reconsidered if the facility either increases its maximum active power injection capability or changes its connection point

PART 4 – TERMS AND CONDITIONS

<p>Transferability</p> <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 exemptionThe proposed transferee is a market participant or undertakes in writing to the IESO to apply for authorization as a market participant
<p>Other:</p>	