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**IMO Staff Recommendation to Panel on  
Exemption Application (Specified  
facilities and equipment prior to market  
opening)**

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**PART 1 – GENERAL INFORMATION**

Market Participant Name: **Fort Frances Power Corporation**

Location/Site: Fort Frances Municipal Transformer Station

Exemption Application ID: 01-1195

Market Participant ID:

**PART 1 – GENERAL INFORMATION**

Description of Exemption Requested: **Exemption from need to provide voltage reduction capability.**

Date Exemption Application Received: November 23, 2001

Date all relevant application information supplied by applicant: November 23, 2001

IMO Management Approvals Obtained (YES or NO): YES

Are there any outstanding disputes, compliance actions, or pending market rule amendments involving the subject matter of this exemption application? (YES or NO): NO  
(if YES, see attachments)

Are there any outstanding disputes, compliance actions, or pending market rule amendments involving the exemption applicant? (YES or NO): NO  
(if YES, see attachments)

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

- *Section 1.5.1 (Application for Exemptions for Facilities and Equipment prior to Market Opening)*

Market Rule(s) or related Market Manual(s) from which exemption is requested (copy of Market Rule(s) or related Market Manual(s) attached): Appendix 4.3 " Requirements for Connected Wholesale Customers and Distributors Connected to the IMO Controlled Grid", item 4 "Voltage Reduction".

Third Party Submissions Received (YES or NO):

Supplemental Assessment Information Attached (YES or NO): NO

**Related Historical Exemption Application(s) or Related Exemption Application(s) in Process (YES or NO): YES, exemption application # 01-1155.**

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

## Part 2 - Recommendation

**Recommendation:** GRANT exemption from the requirement to provide voltage reduction capability, with conditions:

- The applicant shall respond *promptly* to a direction from the IMO to reduce voltage manually
- The exemption shall remain in effect until such time as the facilities undergo expansion, or a new facility is connected, or the yearly peak aggregated demand exceeds 20 MVA; and
- The applicant shall provide the IMO with the total demand when requested.

### **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” section for details
- affect the ability of the IMO to operate the IMO-administered markets in an efficient, competitive and reliable manner;

*Granting an exemption from the requirement to provide voltage reduction facilities does not impact on the operation of the IMO-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.

See “Cost to Comply” section for details

## **PART 3 – DETAILS OF ASSESSMENT**

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**PART 3 – DETAILS OF ASSESSMENT**

**Exemption Request:**

Fort Frances Power Corporation is requesting an exemption from the requirement to provide voltage reduction capability at Fort Frances Municipal Transformer Station (MTS).

Fort Frances Power Corporation presents the following reasons to support their application:

Their facilities and forecasted demand load of between 12 to 14 MW have negligible impact on the IMO-controlled grid;

Over the past 10 years the customer base is holding steady or marginally declining. A recent census taken within the city of Fort Frances has indicated a decline in population. As a result the load on the Fort Frances MTS is not expected to grow in the foreseeable future.

Due to the size of Fort Francis Power Corporation the estimated cost to provide these facilities and operate within 5 minutes, when requested by the IMO, presents a substantial financial burden which cannot be absorbed without a substantial increase in rates.

The exemption application cites the Market Rules Chapter 4, Appendix 4.3 as the document to which it relates.

**Market Rule Requirements:**

**The market rule requirement for which Fort Francis is seeking an exemption was effective November 2001.**

This Exemption pertains to Appendix 4.3 (Distributor Requirements) of Chapter 4 (Grid Connection Requirements), and in particular:

Item 4, Voltage Reduction: Distributors connected to the IMO controlled grid with directly connected load facilities of aggregated transformer rating above 20 MVA and with the capability to regulate distribution voltages under load, shall install and maintain facilities and equipment to provide voltage reduction capability.

In addition Section 10.3.3 of Chapter 5 in the Market Rules states “each *market participant* that receives a direction from the IMO to reduce demand shall achieve the reduction in demand within 5 minutes of receipt of the direction.....”

**Assessment:**

Voltage reduction is a demand control method used to reduce the amount of power to be consumed by non-dispatchable loads during times of insufficient supply of generation, to forestall the need to directly reduce non-dispatchable load by manual load shedding.

Fort Frances Power Corporation is restricted in achieving voltage reduction with their existing installation for the following reasons:

- Fort Frances MTS is an unmanned station and without remote control facilities to initiate voltage reduction promptly or remotely. As a result, the station is unable to respond to an order to reduce voltage from IMO within the 5 minutes as stipulated in the Market Rules.

### **PART 3 – DETAILS OF ASSESSMENT**

In addition, the size of the demand at Fort Frances is very small. The yearly average peak for the last 10 years was estimated to be 13 MW (14.5 MVA) and the expected load demand in the foreseeable future is expected to hold steady or marginally declining due to the declining population in the city.

The overall impact of voltage reduction being carried out by Fort Frances would be minimal. Automatic voltage reduction facilities have never existed at this site since the station was built in early 70's. It is calculated that a 5% voltage reduction conducted at Fort Frances would achieve a demand reduction to Ontario of less than 0.4 MW.

#### **Cost to Comply:**

The cost of installing voltage reduction facilities at Fort Frances MTS and the implementation of a full SCADA system (supervisory control) to enable the voltage reduction initiation within five minutes following the IMO request is estimated by Fort Frances Power Corporation to be approximately \$243,000.

The cost of Staffing for three additional employees is estimated to be about \$150,000 annually. This additional cost is a 15% increase to Fort Frances operating expenses. Without extra staff it would take approximately 20 minutes during regular working hours and 40 minutes after regular working hours to respond to an order to operate.

#### **Recommendation:**

It is recommended that the exemption request for voltage reduction capability be GRANTED with conditions on the basis of:

- Small size. The aggregated yearly peak load of 14.5 MVA is, well below the transformer rating cut-off of 20 MVA. The load is expected to remain relatively constant or decline slightly for the foreseeable future;
- Inability to carry out voltage reduction within the time-frame required because of lack of supervisory control of the facilities;

It is recommended that monitoring information be provided by the applicant as a condition of this exemption:

- Install voltage reduction capability when Fort Frances MTS undergoes expansion, a new facility is connected, or the aggregated yearly peak average demand exceeds 20 MVA; The aggregated yearly peak average demand is defined as the aggregated averaged daily peaks for one year.
- Provide the IMO with the total demand met by the Fort Frances MTS, when requested.

It is recommended that the manner of operation be revised to require:

- The applicant shall respond *promptly* to a direction from the IMO to reduce voltage manually

**PART 4 – TERMS AND CONDITIONS**

<p><b>Effective Date of Exemption</b> (or event causing exemption to be become effective)</p>	<p>Date Exemption application received</p>
<p><b>Date of Expiration of Exemption</b></p> <ul style="list-style-type: none"> <li>• If greater than 5 years, the Panel must be satisfied that the circumstances justify a later date</li> <li>• Circumstances which will cause the exemption to immediately expire</li> </ul>	<p>Date of expiration is for the life of the existing transformers (estimated to be 25-30 years )</p> <p>Area load growth that results in aggregated yearly peak average demand exceeding 20 MVA.</p>
<p><b>Market Rule (s) or related Market Manual(s) from which the Exemption is granted</b></p>	<p>Chapter 4, Appendix 4.3, Item 4 Chapter 5, Section 10.3 in relation to voltage reduction only</p>
<p><b>Restrictions on the manner of operation and/or additional obligations to be met during the term of the Exemption, if any</b></p>	<p>The applicant shall respond <i>promptly</i> to a direction from the IMO to reduce voltage manually.</p>
<p><b>Monitoring Information Required</b></p> <ul style="list-style-type: none"> <li>• Information required to be provided by the Exemption Applicant for monitoring by the IMO</li> </ul>	<p>Notify IMO when the facilities undergo expansion, or new facility is connected, or the aggregated yearly peak average demand exceeds 20 MVA.</p> <p>Provide the IMO the total load when requested.</p>
<p><b>Payment of Costs</b></p> <ul style="list-style-type: none"> <li>• Processing Costs (when introduced)</li> <li>• Incremental Exemption Costs</li> <li>• Settlement amounts to be withheld or repaid</li> </ul>	<p>None</p>

**PART 4 – TERMS AND CONDITIONS**

<p><b>Reconsideration/ Removal</b></p> <ul style="list-style-type: none"> <li>• Date on which the Exemption will be reconsidered (<i>if applicable</i>)</li> <li>• Circumstances under which the Exemption will be reconsidered (<i>if applicable</i>) other than unforeseen future change in circumstances</li> </ul>	<p>Circumstances under which this exemption should be reconsidered:</p> <ul style="list-style-type: none"> <li>• The addition of any new transformer facilities to Fort Frances MTS 's existing or new connections;</li> <li>• If the aggregated yearly peak average demand exceeds 20 MVA.</li> </ul>
<p><b>Transferability</b></p> <ul style="list-style-type: none"> <li>• List the terms and conditions that need to be met to allow for a transfer of this exemption to be approved by IMO staff</li> </ul>	<p>Approval to transfer this exemption may occur once the following criteria have been met:</p> <ol style="list-style-type: none"> <li>1. 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>; and</li> <li>2. the proposed transferee is a <i>market participant</i> or undertakes in writing to the IMO to apply for authorisation as a <i>market participant</i>.</li> </ol>
<p><b>Other:</b></p>	<p>Not Applicable</p>