

IN THE MATTER OF section 119.03 of the *National Energy Board Act* (the “Act”), and in accordance with section 9 of the *National Energy Board Electricity Regulation* made thereunder; and

AND IN THE MATTER OF an application by the Ontario Independent Electricity System Operator (“the IESO”) for renewal of its permit authorizing the IESO to export electricity at points on the international boundary between Canada and the United States for the purpose of providing emergency assistance to neighbouring jurisdictions in the United States.

EMERGENCY POWER AND ENERGY EXPORT PERMIT RENEWAL APPLICATION

1. The Independent Electricity System Operator (“the IESO”) hereby respectfully requests that the National Energy Board (the “Board”) renew its permit (EPE-177) for the sale transfer of emergency power and energy at points on the international boundary between Canada and the United States, subject to the following amended terms and conditions:
 - i. The term of the sale transfer emergency power and energy permit shall commence on the date of issuance and shall extend for a period of 10 years;
 - ii. The quantity of energy that may be exported hereunder shall not exceed 5, 184 GWh in any consecutive twelve-month period.

Permit EPE-177 is attached as **Exhibit B, Tab 1, Schedule 1**.

2. The IESO (formerly the IMO) was established as part of the restructuring of the electricity sector in Ontario pursuant to Part II of the *Electricity Act, 1998*, as amended. The choices made in Ontario for restructuring its electricity sector included the separation of transmission from generation at the wholesale level and the distribution and merchant functions at the retail level. The restructuring

also recognized the necessity for an independent organization to perform the integrated functions of directing the operation and maintaining the reliability of the bulk power system, and administration of the competitive wholesale markets.

3. The IESO is a non-profit, non-share capital corporation independent of all other participants in the electricity industry. The IESO does not own any electric power generation or transmission or distribution facilities but it has operational control¹ over the transmission and generation facilities, including interconnections² that are situated in Ontario, except for distribution systems operating at a nominal voltage of less than 50 kV. The power and duties of the IESO are established by legislation, its Ontario Energy Board license, and the Ontario Market Rules (the “Market Rules”) and include:

- entering into agreements with transmitters giving the IESO authority to direct operation of their transmission systems;
- establishing, directing the operation of and maintaining the reliability of the IESO-controlled grid and acting as an impartial manager of the IESO-administered markets to promote the purposes of the *Electricity Act*;
- managing the operation of Ontario's integrated power system;
- collecting and providing to the Ontario Power Authority and the public information relating to the current and short-term electricity needs of Ontario and the adequacy and reliability of the integrated power system to meet those needs;
- working with the responsible authorities outside Ontario to coordinate the IESO's activities with their activities; and

¹ Operational control includes: security monitoring, adjustment of generation and transmission resources, coordinating and approval of changes in transmission status for maintenance, determination of changes in transmission status for reliability, coordination with other control areas, and voltage reductions and load shedding.

² Interconnection means the interconnection facilities owned by licensed transmission companies.

- operations planning, security assessment, scheduling, and real-time co-ordination of the integrated power system.

4. As noted earlier the IESO currently holds Board Permits Nos. EPE-177 for sale transfer of emergency power and energy, and EPE-22 for the transfer of circulating power and energy which expire July 9, 2006 and December 31, 2025, respectively. The Board's renewal of the emergency power and energy sale transfer permit being applied for herein will enable the IESO to operate in parallel with its neighbours and to continue to fulfill its reliability obligations. When commercial remedies cannot be exercised in a timely manner, this will enable the IESO to provide emergency assistance to jurisdictions in the United States, to the extent practical, as might be required of the IESO by the Market Rules, its license issued by the Ontario Energy Board, reliability standards and interconnection agreements that are applicable to the IESO. In particular, Chapter 5, Section 4.4A.1 of the Market Rules provides:

Notwithstanding any other provision of the *market rules*, when a *transmission system* in another *control area* is in a state identical or comparable to an *emergency operating state*, the *IESO* may, in accordance with all applicable *reliability standards* and any applicable *interconnection agreement*, provide *emergency energy* to the *control area* within which such other *transmission system* is located in order to maintain the *reliability* of such *transmission system*. The *IESO* shall only provide *emergency energy* to another *control area* in circumstances where *energy* could not be obtained by that *control area* using the *offer*³ and *bid*⁴ processes described in Chapter 7. The compensation associated with the provision of such *emergency energy* that is received by the *IESO* pursuant to the applicable *interconnection agreement* shall be distributed in accordance with section 4.8 of Chapter 9.

5. Whenever situations render it necessary, in coordination with neighbouring control areas, the IESO will facilitate electricity transfer to those jurisdictions requiring emergency assistance. The emergency energy quantities that the IESO may be required to export to other jurisdictions are included in the

³ "Offer" means a statement of the quantity of energy that a seller will provide at different prices.

⁴ "Bid" means a statement of the quantities of energy a buyer will purchase at different market prices.

determination of the five-minute total Ontario market demand, and are established based on, among other things, the needs of the entity or utility outside of Ontario and the capability of the system to deliver the energy reliably. Generators within the IESO-administered market are called upon to produce additional output and selected to supply the required quantities based on the most economic offerings. Generators are compensated based on the actual energy quantities they inject into the market, including any emergency energy export quantities that the IESO required.

6. The actual rates, terms and conditions for emergency services provided are consistent with non-discriminatory access principles and are outlined in the interconnection agreements with neighbouring jurisdictions. In general, the importing entity or utility in the U.S. pays the IESO for emergency energy based on the Hourly Ontario Energy Price to which a 10 percent mark-up is applied, in addition to all applicable transmission and administrative charges. All monies received by the IESO for emergency energy exports are credited to the applicable market participant account.

7. In support of this Application, the IESO submits the following information as required by Section 9 of the National Energy Board Electricity Regulation and the Board's Memorandum of Guidance.

(a) the names of the applicant and any authorized representative of the applicant and their mailing address, address for personal service, telephone number and any other telecommunications numbers of the applicant or the authorized representative of the applicant.

Applicant:

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Authorized Representative of the IESO:

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- (b) a description of the applicant's power system, a copy of the applicant's latest annual report and, if applicable, the applicant's most recent publicly available generation or development plan.**

The IESO is the control area operator of the bulk power system (or the IESO-controlled grid) comprising the entire province of Ontario. A more detailed description of the IESO-controlled grid, including the major interconnections with the United States is at **Exhibit B, Tab 2, Schedule 1**. The IESO's annual report for year end 2004 is at **Exhibit B, Tab 2, Schedule 2**.

The IESO-controlled grid is generally comprised of the 500 kV, 230 kV and several 115 kV transmission networks, interconnection facilities and certain other lower voltage facilities as approved by the Ontario Energy Board. It also has major interconnections with New York, Michigan, Minnesota, Manitoba and Quebec. Ontario reached an hourly summer peak of 26,160 MW for electricity demand on July 13, 2005.

The IESO does not own any electric transmission or generation facilities but it directs the operation of the transmission system. Transmission facilities owners (i.e., transmitters) are separate entities who are licensed by the Ontario Energy Board. However, transmitters are required to operate under the direction of the IESO—which is facilitated by way of an Operating Agreement. The Operating Agreement with transmitters gives the IESO authority to direct the operation of their transmission system in accordance with their Ontario Energy Board license,

the Market Rules, and applicable reliability standards. All generation within the IESO control area footprint are owned by Ontario Power Generation, Independent Power Producers and Non-Utility Generators. Generation is dispatched into the IESO-administered markets using an open bid/offer process.

(c) a proof of publication of the notice.

A copy of the Notice of Application and Directions on Procedure (NOA/DOP) to be published on the first business day or as soon as practical after the filing of this application is at **Exhibit B, Tab 3, Schedule 1**. In accordance with the Memorandum of Guidance, a copy of the tear sheet with the NOA/DOP as published will be sent promptly to the Board or in accordance with any Board Directive thereof.

(d) the name of each person or agency outside Canada to be supplied with electricity and the nature of the business carried on by the person or agency or, if that information is unknown at the time of the application, a brief description of the markets to be served.

The agencies and utilities outside Canada that the IESO is obliged to provide with emergency power and energy assistance, to the extent practical, whenever a state of emergency is declared in their jurisdiction and when commercial remedies cannot be brought to bear in a timely manner (e.g., during suspension of their market) are as follows:

(i) New York Independent System Operator (NYISO)—The NYISO a not-for-profit corporation established pursuant to the laws of New York State. The NYISO is responsible for maintaining the reliability of the electric power system and facilitating an efficient market for energy and ancillary services in NY State in accordance with its Federal Energy Regulatory Commission (FERC) Tariffs. NYISO does not own or control any electric power generation facilities, nor does it have a franchised electric service area. However, NYISO does have operational control over the transmission and generation facilities within New York State. NYISO is

the IESO's counterpart in New York that is authorized by U.S. Department of Energy to transmit emergency power and energy and inadvertent energy to Canada.

- (ii) Midwest Independent Transmission System Operator (MISO)**—MISO is responsible for monitoring the electric transmission system that delivers power from generating plants to wholesale power transmitters, ensuring equal access to the transmission system and maintaining electric system reliability in the Midwest U.S. MISO is also responsible for the secure operation of the Michigan-Ontario Interconnection in accordance with certain agreement between International Transmission Company and MISO and the Minnesota-Ontario Interconnection, all in compliance with and subject to the terms and conditions of the respective Presidential and Export Permits issued by the U.S. Department of Energy.⁵
- (iii) Minnesota Power (Allele Inc.)**—Minnesota Power is the owner and operator of electric generation and transmission facilities in Minnesota and other States and is engaged in the generation, transmission, distribution and sale of electric power and energy. Minnesota Power is also a transmission owning member of the Midwest Independent System Operator (MISO).
- (iv) Detroit Edison**—Detroit Edison is an investor-owned electric utility that generates, transmits and distributes electricity to 2.1 million customers in Southeastern Michigan.
- (e) in the case of a sale transfer, the period for which the permit is sought and, for each year in that period, an estimate of the following quantities, namely.**

⁵ MISO is the IESO's counterpart covering a number of Mid-Western States, including Michigan and Minnesota. MISO has certain rights and obligations for maintaining reliability of the integrated power system, in accordance with its charter, FERC Tariffs and transfer agreements with incumbent utilities in its control area. MISO is in the process of obtaining a DOE export permit which will enable it to assume full responsibility for emergency power and energy exports to Canada. Until such time that the permit is issued by DOE, MISO will continue to facilitate emergency power and energy exports to Ontario pursuant to long-standing interconnection agreements between Ontario and utilities in Michigan and Minnesota.

(i) the maximum quantity of firm power export and import,

The IESO is seeking a 10-year permit to facilitate emergency power and energy exports. To the extent practical, the IESO seeks to provide emergency assistance across any and all international power lines under its control and for which the Board has, or will issue a Certificate of Public Convenience and Necessity, or Permit. Over a wide range of operating conditions, the estimated simultaneous firm power that may be export is 4000 MW.

(ii) the maximum quantity of combined firm power and interruptible power export and import,

The estimated maximum simultaneous quantity of firm and interruptible power export would be 4000 MW, the same as in (i) above.

(iii) the maximum monthly and annual quantities of firm energy exports and imports, and

The estimated maximum simultaneous monthly and annual quantities of firm energy export are 432 GWh and 5,184 GWh, respectively.

(iv) the maximum monthly and annual quantities of interruptible energy exports and imports;

The estimated maximum simultaneous monthly and annual quantities of firm energy export are 432 GWh and 5,184 GWh, the as in (iii) above.

(f) in the case of an equichange transfer, storage transfer, adjustment transfer or carrier transfer, a statement of the annual quantities of energy for exportation and for importation for each class of transfer for the period for which the permit is sought;

Not applicable.

(g) a copy of any electricity transfer agreement that covers the proposed exportation of electricity;

The agreements covering emergency power and energy export assistance are as follows:

1. IMO-New York ISO Interconnection Agreement;
2. IMO-MISO Interim Coordination Agreement;
3. IMO-Minnesota Power (Allete Inc.) Interconnection Agreement; and
4. IESO-DECO Emergency Energy Transaction Agreement.

Since these agreements contain confidential information, the IESO has not filed copies of them with this Application. Instead, the IESO respectfully requests that the Board grant an order pursuant to section 16.1 of the *National Energy Board Act* permitting the IESO to file the agreements with the Board on a confidential basis. The reasons for the request are as follows:

1. The interconnection operating agreements contain confidential technical information and protocols relating to the operation of the interconnections between Ontario and its neighbouring control areas. Public disclosure of such information could put at risk the security of the interconnections.
2. By their terms the interconnection operating agreements state that they shall be treated as confidential documents and should not be made public except in response to an order or direction of a court or tribunal of competent jurisdiction.
3. As a result, the IESO does not make the interconnection operating agreements available for public inspection.
4. The FERC issued a policy statement in Docket No. PL02-1-000 on October 11, 2001 (66 FR 52917, October 18, 2001), removing from easy public access previously public documents that detail the specifications of energy facilities licensed or certificated by the Commission. The policy statement directed requesters seeking this information to follow the Freedom of Information Act procedures. In addition, the IESO understands that the United States Department of Energy does not post the agreements on its public website and has directed the counterparties

to the interconnection operating agreements (New York ISO, Midwest ISO, Minnesota Power (Allete Inc. and Consumers Power Company/Detroit Edison) to refrain from posting the documents on their public websites.

5. The IESO has disclosed in section 7(d) of this Application that the interconnection operating agreements obligate the IESO to provide emergency export power and energy assistance to neighbouring control areas whenever a state of emergency on the power grids in those jurisdictions. The IESO thinks that this information is sufficient for a public understanding of the nature of the application and that the remaining provisions of the agreements are not relevant to this Application.

(h) where no agreement exists, a statement of

(i) the estimated maximum duration of specific exports and the basis for that estimation, and

Not applicable.

(ii) the period of time for which the permit is sought and the basis for the selection of that period of time;

Not Applicable.

(j) a list of the international power lines over which the applicant proposes to export or import electricity, setting forth in respect of each line

(i) the number of the certificate or permit issued by the Board,

(ii) the name of the holder of the certificate or permit,

(iii) the name of the owner of the power line outside Canada,

(iv) the voltage level and operating designation of each circuit, and

(v) the maximum power transfer capability of each circuit and the basis for that limit;

The IESO seeks to provide emergency assistance and seeks flexibility to export electricity and power across any and all international power lines under its control

and for which the Board has issued, or will issue a Certificate of Public Convenience and Necessity, or Permit. Since all of the major power lines between Ontario and United States are operated in parallel, it is appropriate to consider a single emergency power and energy sale transfer permit for this logical grouping of lines. A description of the international power lines, and transfer capability of the major interconnection are provided at **Exhibit B, Tab 2, Schedule 3** and at **Exhibit B, Tab 2, Schedule 1, pg. 5, 19-24**, respectively.

- (j) the total simultaneous power transfer capability under normal operating conditions for all of the international power lines listed in accordance with paragraph (i) and the basis for that limit;**

The estimated total normal simultaneous transfer capability of the major power lines interconnecting Ontario and United States is approximately 5000 MW. The transfer capability of the lines is not necessarily the arithmetic sum of the individual flow limits. Total transfer capability of the lines is normally a function of, among other things, their security operating limits and ambient conditions. This is discussed in more detail in **Exhibit B, Tab 2, Schedule 1, page 5, 19-24**.

- (k) a description of the approvals required for the importation of electricity into the United States, and a statement respecting the current status of the approvals;**

Not applicable.

- (l) a description of the provincial approvals that are required to be obtained by the applicant, and a statement respecting the current status of the approvals;**

The IESO is not required to obtain any additional approvals for the provision of emergency assistance to neighbouring jurisdictions beyond the Board's emergency power and energy sale transfer permit. The IESO's authorization to engage in such activities is enshrined in legislation, its licence which was issued by the Ontario Energy Board and provisions in the Market Rules. A copy of the IESO's licence and Chapter 5 of the Market Rules are provided at **Exhibit B, Tab 4, Schedule 1** and **Exhibit B, Tab 4, Schedule 2**, respectively.

- (m) a description of the review process applicable to each provincial approval that must be obtained, including**
- (i) a description of any public consultation provided for under the review process, and**
See the IESO's response to part (c) above.
 - (ii) a schedule for the review process;**
See the IESO's response to part (c) above.
- (n) whether new or modified facilities will be required to effect the proposed exportation of electricity and, if applicable, a detailed description of those facilities;**

No. The IESO does not own, nor is it licensed to own or operate transmission, generation, or distribution facilities. Transmitters, generators, and distributors, as defined in the Electricity Act, are responsible for the design, construction or reinforcement, operation and ongoing maintenance of their transmission, generation and distribution facilities, respectively. The responsibilities of transmitters, generators and distributors include the carrying out of requisite environmental assessments and seeking the appropriate approvals, permits or licenses as might be required by law to effect the operation or modification to their facilities.

Operational control or security actions taken by the IESO to maintain the reliability of the integrated power system will not surpass the capacity transfer limits of any international power lines for which the Board has issued, or will issue, a permit or a Certificate of Public Convenience and Necessity. Therefore, no modifications to those international power lines will be required in respect of the IESO's application to renew the emergence export sale transfer permit.

- (o) the adverse environmental effects resulting from the proposed exportation of electricity, and the measures to be taken to mitigate any of those environmental effects;**

Emergency power and energy exports facilitated by the IESO will not adversely impact the environment. As noted earlier, transmitters, generators and distributors are responsible for seeking the appropriate approvals, permits or licenses as might be required by law for the construction and operation of their facilities, include the carrying out and adherence to requisite environmental assessments and performance. Furthermore, the IESO is prohibited from undertaking any activities that will be in breach of its license, the Market Rules or any relevant laws, including applicable environmental requirements and standards.

(p) a description of any adverse effects that the proposed exportation of electricity could have on the operation of any power system in neighbouring provinces;

Power flows on the interconnected transmission network follow the path of least resistance between the point of injection into the grid and the point of withdrawal. Flows through and out of interconnected power systems are generally restricted at one interface before another is fully loaded. Emergency exports from Ontario to the U.S. will have no adverse affects on the operation of the power system in Quebec given that these systems are not synchronously interconnected. Power flows from Ontario into Minnesota could impact the Manitoba-Ontario intertie transfer limits due to physical laws governing how electricity flows. However, the potential for such action to cause adverse effects is diminished significantly by adhering to strict operating security limits for the interfaces and interconnections, mandatory reliability standards and operating protocols, and close coordination between respective control area operators. As such, the IESO submits that emergency power and energy exports from Ontario will have no adverse impacts on the operation of the power system in neighbouring provinces.

(q) where the application specifies the terms and conditions of the proposed exportation of electricity, a description detailing the manner in which the applicant;

- (i) has informed those persons who have declared an interest in buying electricity for consumption in Canada of the quantities and classes of service available for sale, and**
- (ii) has given those persons who have demonstrated an intention to buy electricity for consumption in Canada after having been so informed, an opportunity to purchase electricity on terms and conditions, including price, as favourable as the terms and conditions specified in the application;**

Fair market access is one of the key cornerstones in the design and operation of the IESO-administered markets, including real-time and operating reserve energy for export purposes. The IESO, as well as its counterparts in other control areas publishes real-time information on the operating state of their respective markets and transmission systems. As noted earlier, the emergency energy quantities that the IESO may be required to export to other jurisdictions are included in the determination of the five-minute total Ontario market demand. All registered market participants have equal opportunity to participate in normal bids and offers for export energy regardless of their jurisdiction. The rates, terms and conditions for the provision of emergency energy are consistent with open access and non-discriminatory principles.

The emergency states for which the permit will apply are those in which the requirement for power and energy cannot be satisfied by normal commercial transactions, but rather through emergency procedures available only to the IESO. Emergency procedures of this nature do not require commercial sale transfer contracts, relate to a particular class of service or any pre-arranged or negotiated fixed quantity of electricity. These are proactive or reactive responses by the IESO to critical system conditions, and are executed in accordance with the Market Rules, applicable reliability standards, interconnection and operating agreements and control area operating protocols. Consistent with long standing practice in Ontario, the IESO will cease to provide emergency assistance when the emergency state no longer exists or commercial remedies can be brought to bear through the normal bid and offer process, whichever occurs first.

Information pertaining to any emergency state, request for and the provision of

emergency assistant will be published on the IESO and North American Reliable Council (NERC) Websites pursuant to applicable information disclosure guidelines.

(r) where the application does not specify the terms and conditions of the proposed exportation of electricity a description, including supporting documentation, detailing the manner in which the applicant

(i) will inform those persons who declare an interest in buying electricity for consumption in Canada of the quantities and classes available for sale, and

Not applicable.

(ii) will give those persons who demonstrate an intention to buy electricity for consumption in Canada after having been so informed, an opportunity to purchase electricity on terms and conditions, including price, as favourable as the terms and conditions of the export. SOR/98-475, s. 2.

Not applicable.

**ADDITIONAL INFORMATION REQUIREMENT PURSUANT TO APPENDIX III
OF THE MEMORANDUM OF GUIDANCE**

- 1(a) whether any new facilities are required in regard to the Applicant's proposed electricity exports, and a detailed description of those facilities;**

See the IESO's response to (n) above.

- (b) whether modifications to existing facilities would be undertaken in regard to the Applicant's proposed electricity exports, and a detailed description of those modifications;**

See the IESO's response to (n) above.

- (c) whether there would be any changes to the operation of existing facilities in regard to the Applicant's proposed electricity exports, and a detailed description of those changes;**

The IESO does not anticipate that there will be a need to make any changes to the operation of existing transmission facilities to facilitate future emergency power and energy exports.

- (d) the adverse environmental effects of the new facilities, modifications or changes in operation described in (a), (b) and (c); and**

Not applicable.

- (e) any measures to be taken to mitigate the adverse environmental effects described in (d).**

Not applicable.

- 2 If the Applicant is unable to provide information in response to any of 1 (a) to (c) the Applicant should explain why not, and if it will be**

able to provide this information at any time in the future, and if so, when.

Not applicable.

WHEREFORE, in consideration of the forgoing, the IESO respectfully requests that the Board consider this renewal application expeditiously and approve the request for the emergency sale transfer export permit.

**RESPECTFULLY SUBMITTED ON THIS 30TH DAY
OF MARCH, 2006**

Original signed by

Carl Burrell
Senior Regulatory Analyst
Independent Electricity System Operator

cc. David M. Brown, Counsel to the Independent
Electricity System Operator