Independent Electricity Market Operator

Ontario Transmission System

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1.0 Introduction

The Ontario Electricity Market Rules (Chapter 5) require that the Independent Electricity Market Operator (IMO) provide forecasts and assessments of the reliability of the existing and committed resources and transmission facilities of the Ontario Market.

These forecasts and assessments of the Ontario Electricity System are contained in the IMO 18-Month and 10-Year Outlooks.

This document is intended to complement the transmission assessments contained in both Outlooks by providing specific details on the Ontario transmission system, including the major internal transmission interfaces and interconnections with neighbouring jurisdictions.

Readers are invited to provide comments and/or suggestions on this document. To do so, please contact our Help Centre: Toll Free: 1-888-448-7777 Tel: 905-403-6900 Fax: 905-403-6921 E-mail: helpcentre@theIMO.com.

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2.0 Current Transmission System Configuration

The Ontario transmission system is generally comprised of a 500 kV transmission network, a 230 kV transmission network and several 115 kV transmission networks.

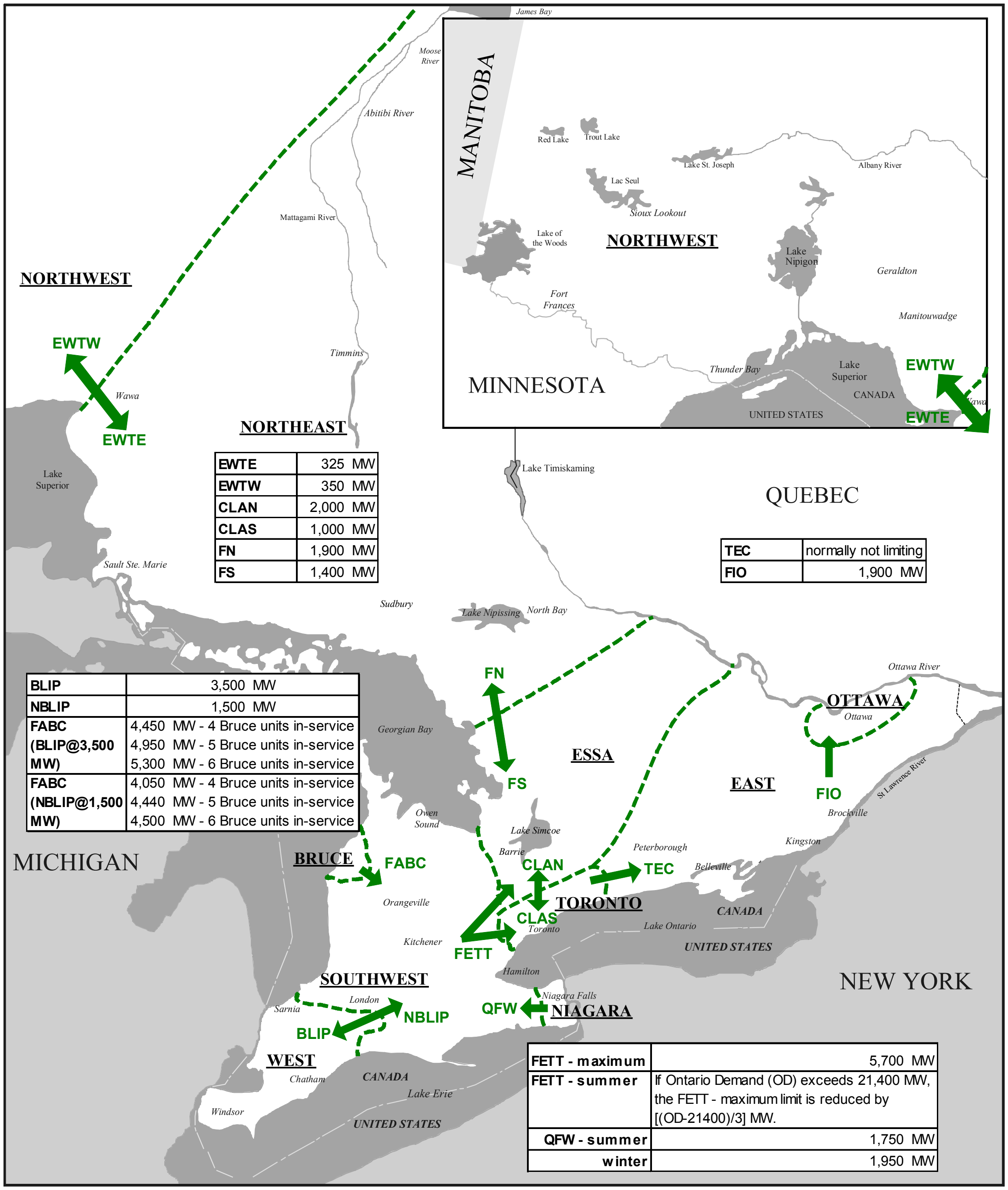
Figures 2.1.1 and 2.1.2 provide a geographic depiction of Ontario's internal transmission zones, major transmission interfaces, and transmission interconnection points with other jurisdictions.

Operating security limits for these interfaces and interconnections are also included in Figures 2.1.1 and 2.1.2. An explanation of the limit values shown in the tables is contained in Sections 3.3 and 5.3. The interconnection and interface limits are used to ensure system and/or plant stability, acceptable pre-contingency and post-contingency voltage levels and/or acceptable thermal loading levels.

Figure 2.1.3 provides a simplified depiction of Figures 2.1.1 and 2.1.2 and indicates the transmission zones that are described in more detail in Section 4.0.

Figure 2.1.4 shows Ontario with the transmission zones superimposed.

Figure 2.1.1 Ontario's Major Internal Transfer Interfaces



EWTE	325 MW
EWTW	350 MW
CLAN	2,000 MW
CLAS	1,000 MW
FN	1,900 MW
FS	1,400 MW

TEC	normally not limiting
FIO	1,900 MW

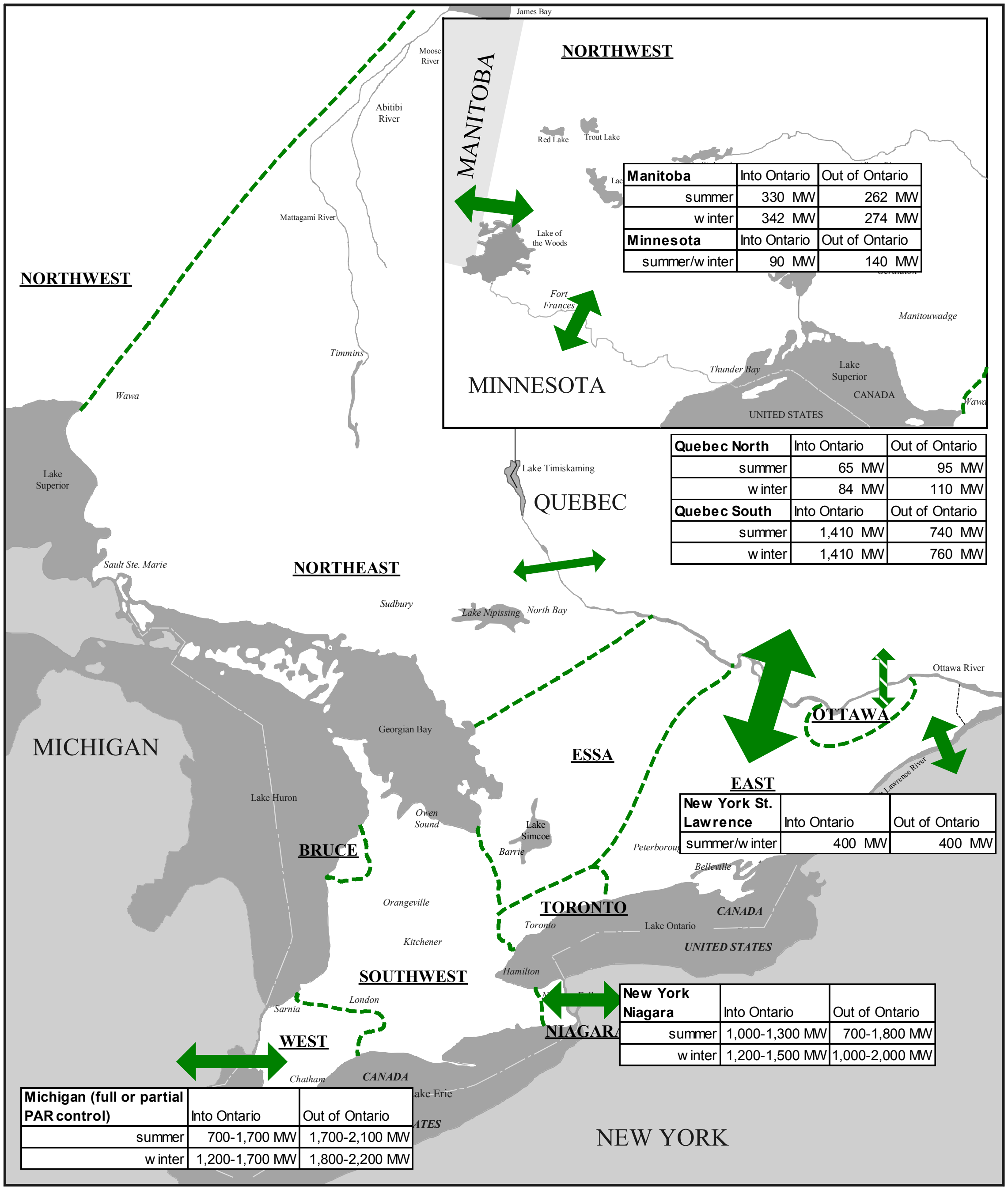
BLIP	3,500 MW
NBLIP	1,500 MW
FABC (BLIP@3,500 MW)	4,450 MW - 4 Bruce units in-service 4,950 MW - 5 Bruce units in-service 5,300 MW - 6 Bruce units in-service
FABC (NBLIP@1,500 MW)	4,050 MW - 4 Bruce units in-service 4,440 MW - 5 Bruce units in-service 4,500 MW - 6 Bruce units in-service

FETT - maximum	5,700 MW
FETT - summer	If Ontario Demand (OD) exceeds 21,400 MW, the FETT - maximum limit is reduced by [(OD-21400)/3] MW.
QFW - summer	1,750 MW
winter	1,950 MW

Notes to Figure 2.1.1:

1. Tables indicate interface base limits (all transmission elements in-service). See Section 3.0 for further details.

Figure 2.1.2 Ontario's Points of Interconnection with Neighbouring Areas



Manitoba	Into Ontario	Out of Ontario
summer	330 MW	262 MW
winter	342 MW	274 MW
Minnesota	Into Ontario	Out of Ontario
summer/winter	90 MW	140 MW

Quebec North	Into Ontario	Out of Ontario
summer	65 MW	95 MW
winter	84 MW	110 MW
Quebec South	Into Ontario	Out of Ontario
summer	1,410 MW	740 MW
winter	1,410 MW	760 MW

New York St. Lawrence	Into Ontario	Out of Ontario
summer/winter	400 MW	400 MW

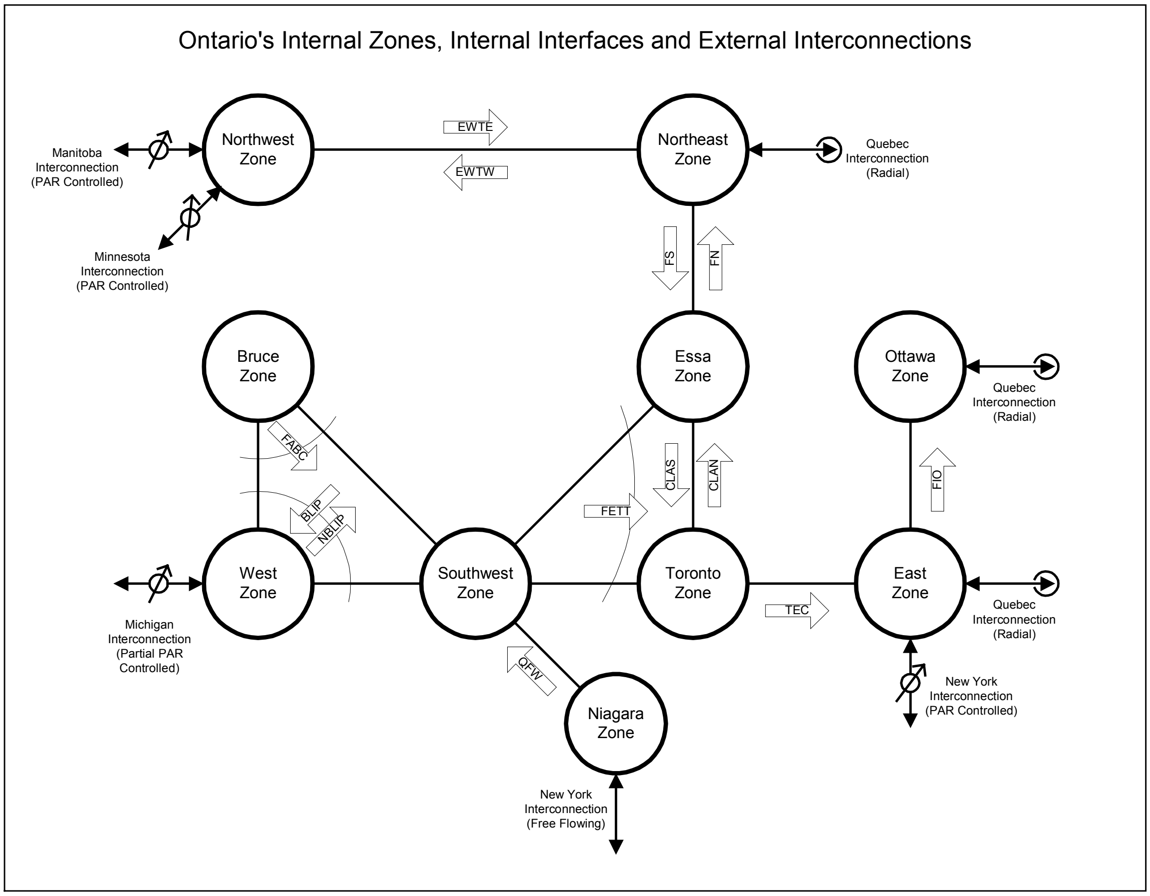
New York Niagara	Into Ontario	Out of Ontario
summer	1,000-1,300 MW	700-1,800 MW
winter	1,200-1,500 MW	1,000-2,000 MW

Michigan (full or partial PAR control)	Into Ontario	Out of Ontario
summer	700-1,700 MW	1,700-2,100 MW
winter	1,200-1,700 MW	1,800-2,200 MW

Notes to Figure 2.1.2:

1. Tables indicate flow limits for each interconnection. Note the Ontario coincident import/export capability is not necessarily the arithmetic sum of the individual flow limits. See Section 5.0 for further details.

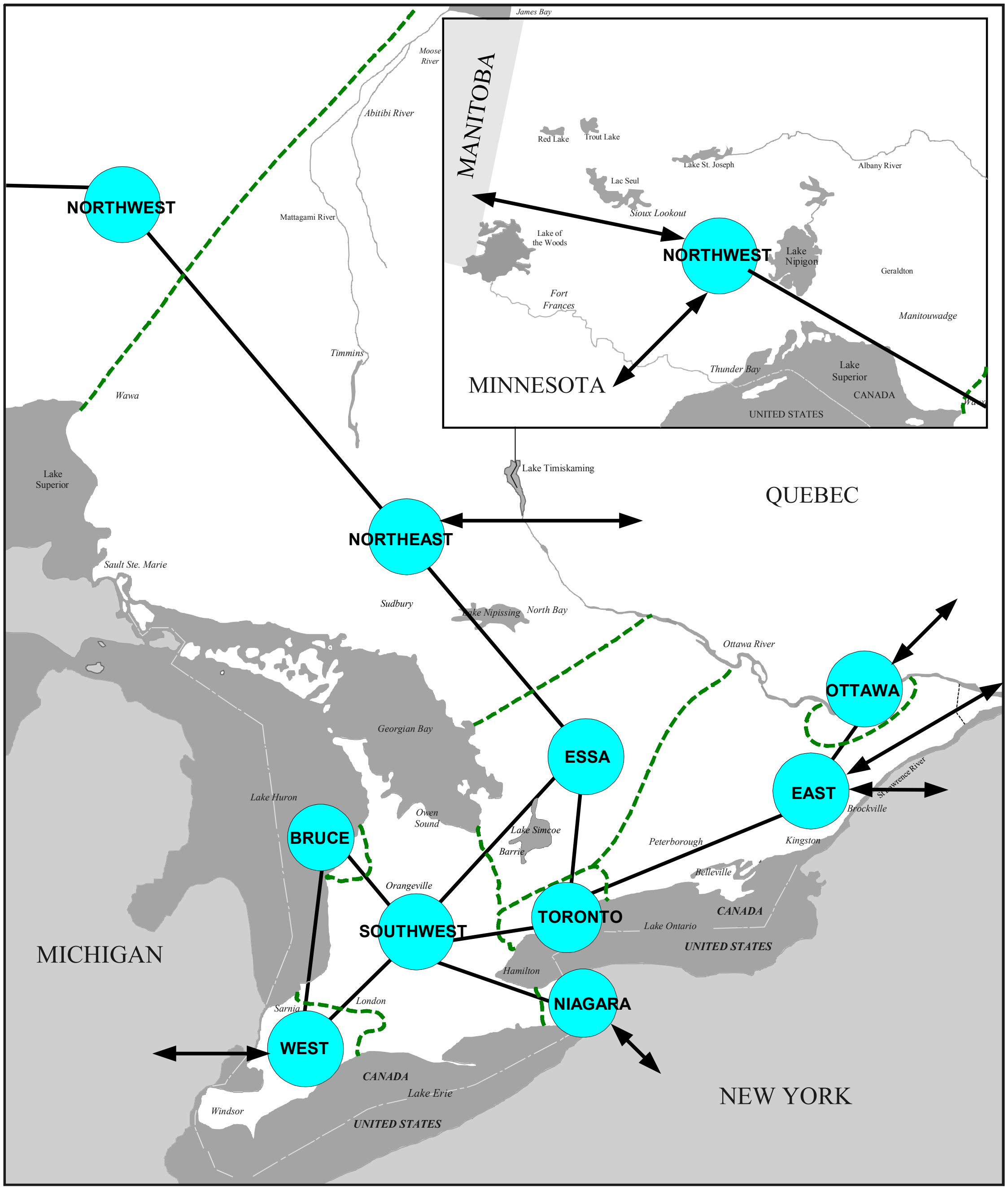
Figure 2.1.3 Ontario's Zones, Interfaces and Interconnections



Notes to Figure 2.1.3:

1. See Section 4.0 for further details on the Ontario transmission zones.

Figure 2.1.4 Ontario with Zones Superimposed



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3.0 Transmission Interfaces

There are nine major internal interfaces in the Ontario transmission system as illustrated in Figure 2.1.3. Detailed information on interface definitions and limits can be found in IMO System Control Orders (SCOs). The release of SCO limit related information to market participants will be considered by the IMO on a need to know and case by case basis. Requests for further information should be directed to the IMO Help Centre.

3.1 Interface Definitions

Interface definitions are formed by grouping one or more lines for the purpose of measuring their combined flow and enforcing a power flow limit or, as it is more commonly, called an interface limit. Interface limits are directional and interfaces may have limits imposed in one or both directions.

3.2 Interface Capability Limits

Table 3.2 summarizes the base limits for the major interfaces in Ontario; only normal system (all transmission elements in-service) limits are shown.

Note that some limits are simple constants (e.g. BLIP) whereas others are more complicated and may depend on parameters such as status of specific generator units, other transmission flows, Ontario demand, etc. (e.g. NBLIP, FETT, FABC). In cases where interface limits are based on thermal capability, separate ratings are shown for summer and winter conditions.

Table 3.2 Interface Base Limits

Interface	Operating Security Limits (MW)
BLIP	3,500
NBLIP	1,500
QFW	1,750 Summer, 1,950 Winter
FABC	4,050-4,450 with four Bruce B units in-service* 4,440-4,950 with five Bruce units in-service* 4,500-5,300 with six 500 kV Bruce units in-service*
FETT	5,700**
CLAN	2,000
CLAS	1,000
FIO	1,900
FN	1,900
FS	1,400
EWTE	325
EWTW	350

Summer Limits apply from May 1 to October 31. Winter Limits apply from November 1 to April 30.

(*) FABC limit varies according to BLIP flow. For each recognized contingency, separate voltage and stability limit ranges are defined. Published limit range is based on most restrictive contingency.

(**) In the summer period, if the Ontario Demand (OD) exceeds 21,400 MW the FETT limit is reduced by [(OD - 21400)/3] MW.

3.3 Interface Characteristics

The EWTE/EWTW Interface

The East-West Transfer East (EWTE) and East-West Transfer West (EWTW) flows are functionally related to the power flows between Ontario and Manitoba, and Ontario and Minnesota. In this relationship, the Ontario – Manitoba and Ontario – Minnesota flows can be generally thought of as the independent variables as they are under phase angle regulator control.

The maximum limits on the East-West tie are 325 MW to the east and 350 MW to the west. The EWTE and EWTW interfaces are constrained by voltage and stability limitations. A sample of historical flow distribution on the East West Interface is shown in the Figure 3.3.1.

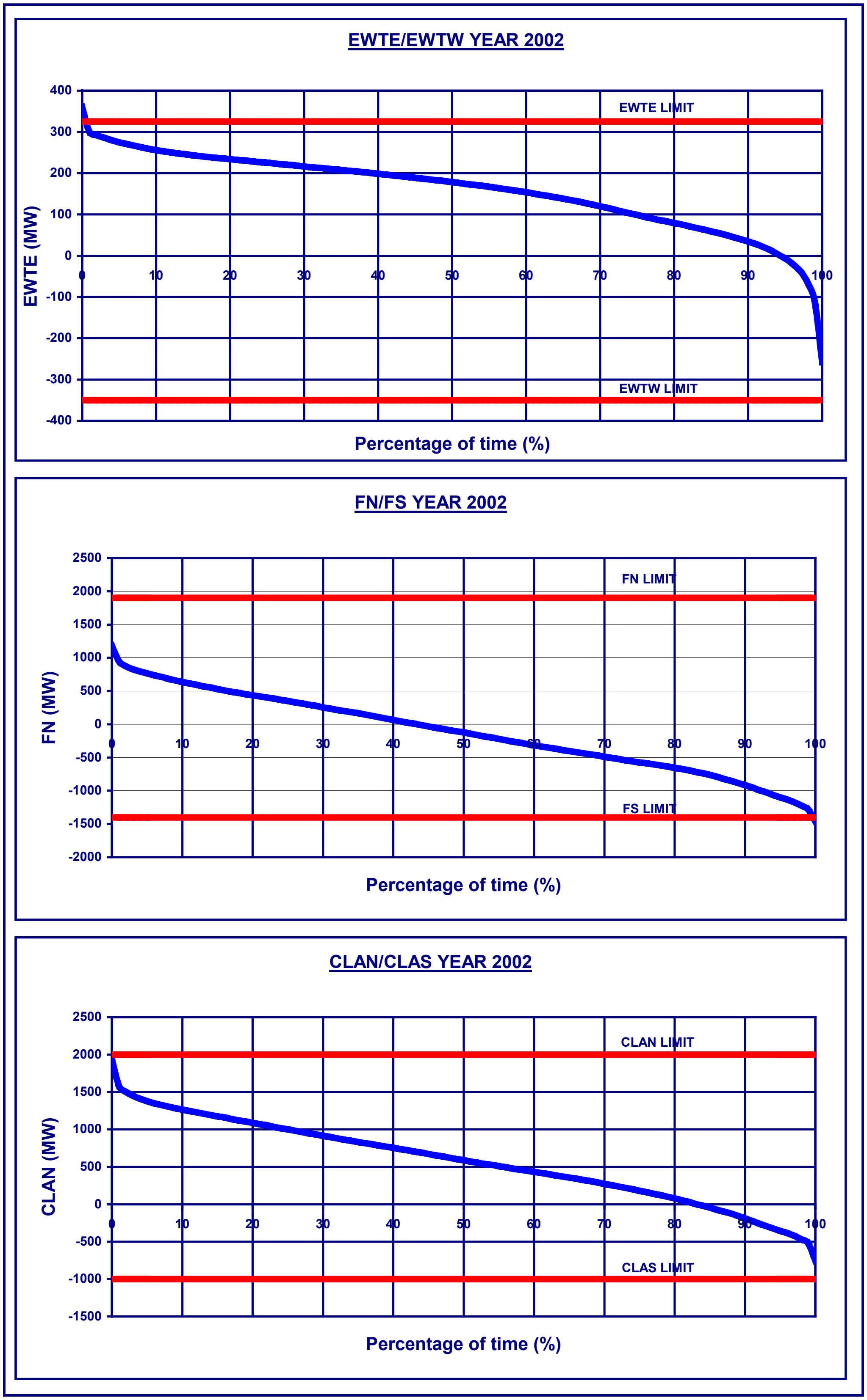
The FN/FS Interface

The Flow South (FS) limit is 1,400 MW and the Flow North (FN) limit is 1,900 MW. The Flow North and Flow South interfaces are constrained by voltage and stability limits respectively. A sample of historical flow distribution on the FN/FS interface is shown in the Figure 3.3.1.

The CLAN/CLAS Interface

The Claireville North (CLAN) limit is 2,000 MW and the Claireville South (CLAS) limit is 1,000 MW. These limits have been defined to determine the boundary conditions for which the other system limits, in particular FABC and FETT, are valid. A sample of historical flow distribution on the CLAN/CLAS interface is shown in the Figure 3.3.1.

Figure 3.3.1 Historical Flow Distribution – EWTE/EWTW, FN/FS and CLAN/CLAS Interfaces



The FABC Interface

The Flow Away from Bruce Complex (FABC) limit depends on the number of Bruce units in-service, the BLIP/NBLIP interface flow and a number of other system parameters. The FABC limit is required for preserving system and/or plant stability, and maintaining acceptable post-contingency voltages. Separate stability and voltage limits are defined for each recognized contingency. The limit ranges presented in this document are based on the most restrictive contingency.

With four Bruce B units and all transmission elements in-service, the FABC interface limit will range from 4,050 MW to 4,450 MW depending on the BLIP/NBLIP interface flow. The impact of other system parameters such as reactive support provided from other generating stations and reactor switching availability would likely result in a lower limit.

With five Bruce units and all transmission elements in-service, the FABC interface limit will range from 4,400 MW to 4,950 MW depending on the BLIP/NBLIP interface flow. With six 500 kV Bruce units and all transmission elements in-service, the FABC interface limit will range from 4,500 MW to 5,300 MW depending on the BLIP/NBLIP interface flow. For both of these cases, the impact of other system conditions would likely result in lower limits.

With four or more Bruce units in-service, the FABC limit can be improved through the use of generation rejection (G/R) of Bruce units, such that the full station output can normally be achieved. The resulting limit improvements with G/R are not specified in this document, but are described in detail in the appropriate SCO.

The BLIP/NBLIP Interface

The Buchanan Longwood Input (BLIP) interface is limited to 3,500 MW to the west due to stability and voltage limitations. The Negative Buchanan Longwood Input (NBLIP) interface limit is a function of a variety of parameters. Normally the limit is near its high end of about 1,500 MW. The interface is typically constrained by voltage limitations. A sample of historical flow distribution on the BLIP interface is shown in the Figure 3.3.2.

The QFW Interface

The Queenston Flow West (QFW) interface is limited to 1,950 MW for flows to the west in the winter. In the summer, the limit is 1,750 MW to the west. This interface is constrained by thermal limitations. There is no limit specified for flows to the east, as the level of flows expected in that direction will not cause system concerns. A sample of historical flow distribution on the QFW interface is shown in the Figure 3.3.2.

The FETT Interface

The Flow East Towards Toronto (FETT) interface limit is a function of a variety of parameters such as Ontario demand and reactive support provided from various generating stations. As a result, the limit of this interface is generally lower than its maximum limit of 5,700 MW. The interface is constrained by a combination of stability and thermal limits. There is no limit specified for flows to the west, as the current level of flows expected in that direction will not cause system concerns. A sample of historical flow distribution on the FETT interface is shown in the Figure 3.3.2.

The TEC Interface

The Transfer East from Cherrywood (TEC) interface does not have a pre-defined limit for up to any one single element out of service. The TEC interface is included to provide a boundary between the Toronto and East transmission zones. With these zones defined, specific studies can be conducted to consider the impact of varying resource dispatch scenarios on reliability.

The FIO Interface

The Flow into Ottawa (FIO) interface is limited to 1,900 MW to control post-contingency voltage declines in the Ottawa zone. There is no limit specified on this interface for flows to the East zone. The FIO limit can be improved with the use of load rejection in the Ottawa zone. A sample of the historical flow distribution on the FIO interface is shown in Figure 3.3.3.

Figure 3.3.2 Historical Flow Distribution – BLIP/NBLIP, QFW and FETT Interfaces

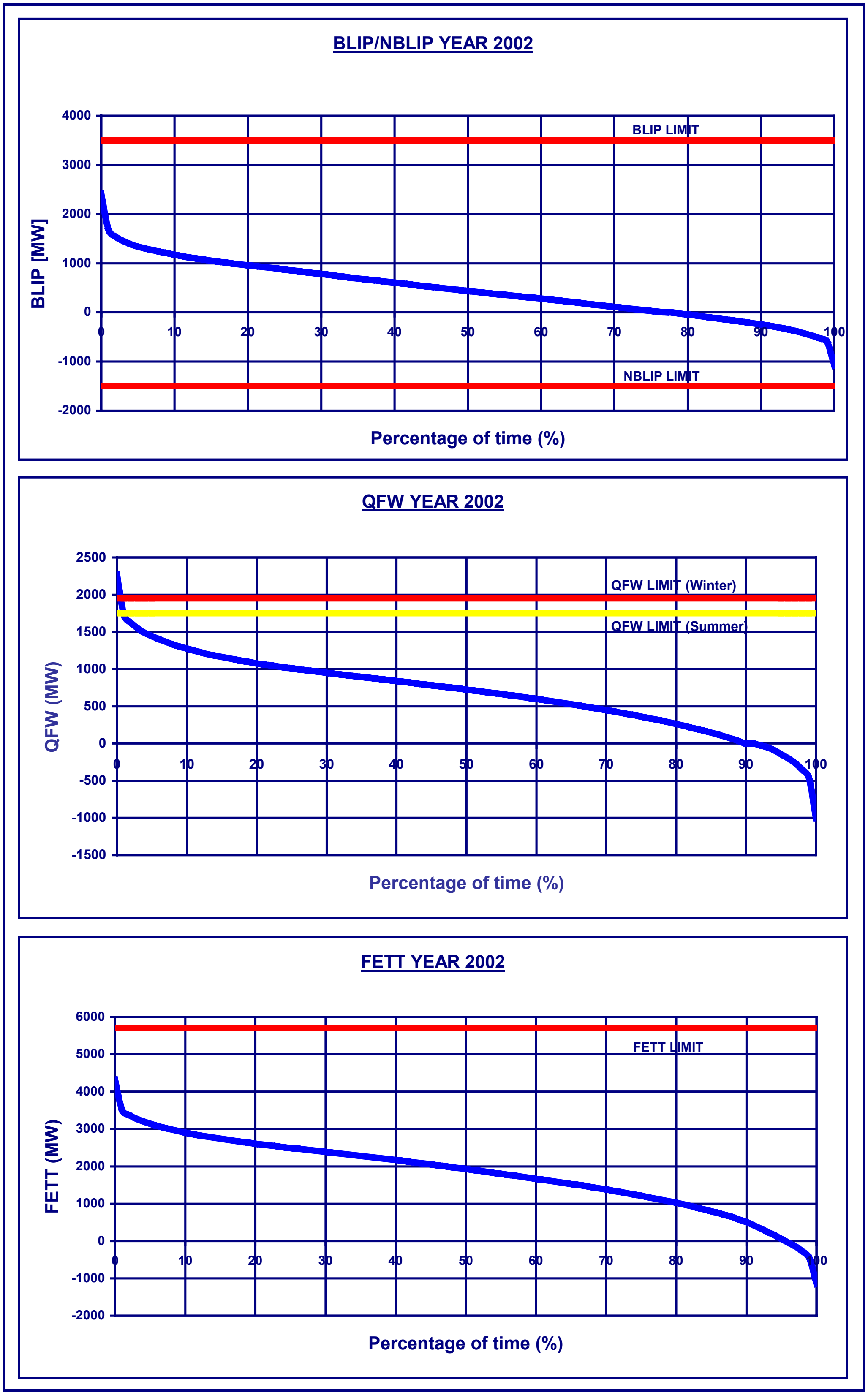
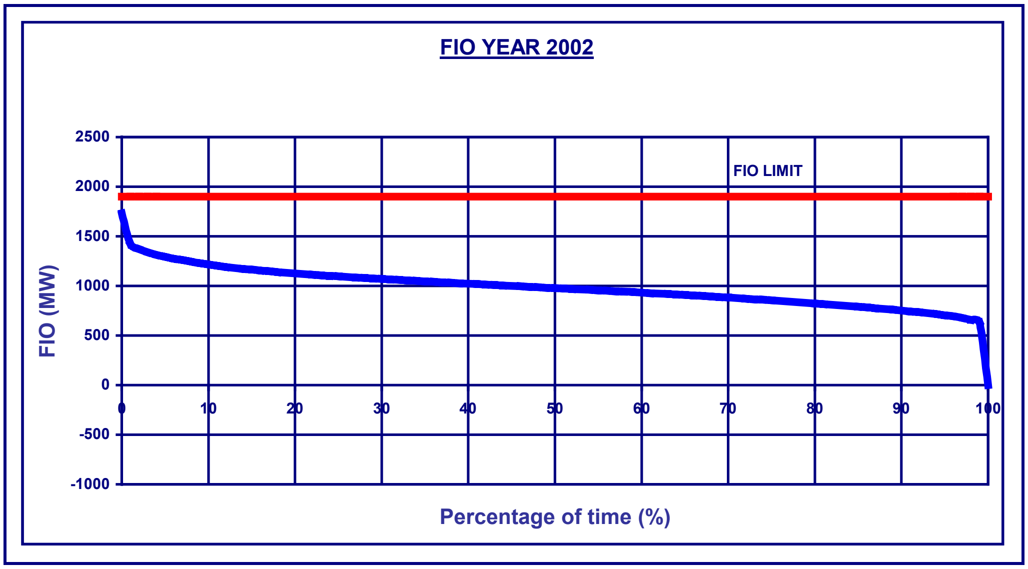


Figure 3.3.3 Historical Flow Distribution – FIO Interface



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4.0 Transmission Zones

The Ontario transmission system has been divided into ten zones as illustrated in Figure 2.1.3. Zonal boundaries have been chosen to correspond with the major interfaces described in Section 3.0.

4.1 Zone Characteristics

Bruce Zone

- The total resources are much greater than the zone peak demand.
- The generation is mostly nuclear.
- There are no external interconnections.

East Zone

- The total resources exceed the zone peak demand.
- The generation is a mix of hydroelectric, oil and gas.
- The zone is externally connected to the Quebec grid.
- The existing interconnection with Quebec is radial.
- The zone is also externally connected to the St. Lawrence interface with New York via phase angle regulator control.

Essa Zone

- The total resources are much less than the zone peak demand.
- The generation is totally hydroelectric.
- For analytical purposes, Des Joachims generation and 115 kV load, which is physically located in the East zone, has been modeled to be part of the Essa zone. The Essa zone is the primary point of receipt of Des Joachims generation.
- There are no external interconnections.

Niagara Zone

- The total resources are much higher than the zone peak demand.
- The total load consists of 25 Hz and 60 Hz loads.
- The generation consists of 25 Hz and 60 Hz units, and is predominantly hydroelectric with some cogeneration.
- There is a free-flowing interconnection with New York.

Northeast Zone

- The total resources exceed the zone peak demand.
- The generation is mainly hydroelectric with some cogeneration.
- There is some 25 Hz generation radially connected to the 60 Hz electricity system via a frequency changer.

- The zone is externally connected to the Quebec grid.
- The interconnection with Quebec is radial.

Northwest Zone

- The total resources generally exceed the zone peak demand.
- The generation is mainly hydroelectric with some coal and gas.
- The zone is externally connected to the Manitoba and Minnesota systems.
- The 230 kV Manitoba interconnections are under phase angle regulator control. The Manitoba 115 kV interconnection is radial. The Minnesota 115 kV interconnection is under phase angle regulator control.

Ottawa Zone

- The total resources are much less than the zone peak demand.
- The generation is cogeneration.
- The existing interconnection with Quebec is radial.

Southwest Zone

- The total resources are generally balanced with the zone peak demand.
- The load consists of 25 Hz and 60 Hz.
- The generation is mostly coal.
- There are no external interconnections.

Toronto Zone

- The total resources are slightly higher than the zone peak demand.
- The generation is mostly nuclear and coal.
- There are no external interconnections.

West Zone

- The total resources are slightly less than the zone peak demand.
- The generation is mostly coal with some gas.
- There is partial phase angle control on the interconnection with Michigan. At some future date, the interconnection will be under full phase angle regulator control.

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5.0 Transmission Interconnections

The term interconnection is used to describe interfaces that join Ontario to other jurisdictions (external control areas).

Ontario has interconnections with Manitoba, Minnesota, Quebec, Michigan, and New York.

5.1 Interconnection Definitions

Like transmission interfaces, interconnection definitions are formed by grouping one or more lines for the purpose of measuring their combined flow and enforcing a power flow limit. Interconnections limits are defined for flows into Ontario (imports) and out of Ontario (exports).

5.2 Interconnection Flow Limits

Table 5.2 summarizes the flow limits for the interconnections; only normal system (all transmission elements in-service) limits are shown.

For Manitoba and Minnesota, the flow limits recognize deadband margins associated with the phase angle regulator taps.

For Michigan and New York, a range of flow limits is given for summer and winter flows into and out of Ontario. The flow limits account for the automatic generation control (AGC) process required to match load and generation within Ontario. A margin of approximately 100 MW has been used for this purpose. Generally, the higher values reflect the amount of power that can be transferred with favourable generation dispatch and weather conditions. With favourable conditions, the flow capabilities of the interconnections will not be affected by internal limitations in the transmission network. The lower values reflect the amount of power that can be transferred with unfavourable dispatch and weather conditions. With unfavourable conditions, the flow capabilities will be affected by internal limitations in the transmission network, in Ontario or in external areas.

When ambient weather conditions permit, flow limits over paths restricted by thermal considerations may be increased during real-time operation.

Table 5.2 Interconnection Limits

Interconnection	Limit - Flows Out of Ontario MW	Limit - Flows Into Ontario MW
Minnesota(3)	140	90
New York St. Lawrence	400	400
Manitoba – Summer*(3)	262	330
Quebec North – Summer*	95(5)	65
Quebec South (East and Ottawa) – Summer*	740	1,410
New York Niagara (60 Hz and 25 Hz) – Summer*(1)	700-1,800**	1,000-1,300**
Michigan – Summer*(2,3)	1,700-2,100**	700-1,700**
Manitoba – Winter*(3)	274	342
Quebec North – Winter*	110(4)	84
Quebec South (East and Ottawa) – Winter*	760	1,410
New York Niagara (60 Hz and 25 Hz) – Winter*(1)	1,000-2,000**	1,200-1,500**
Michigan – Winter*(2,3)	1,800-2,200**	1,200-1,700**

* Summer Limits apply from May 1 to October 31. Winter Limits apply from November 1 to April 30.

** The higher value in the limit range represents a theoretical flow limit that could be obtained under favourable generation dispatch and weather conditions that result in no internal limitations in the transmission system. In practice, these flow limits rarely, if ever, materialize.

(1) Limits are based on thermal ratings and 75% of pre-load. Summer limits are based on 0-4 km/hr wind speed and 30 Deg.C ambient temperature. Winter limits are based on 0-4 km/hr wind speed and 10 Deg.C ambient temperature.

(2) Limits are based on thermal ratings and 75% of pre-load. Summer limits are based on 0-4 km/hr wind speed and 35 Deg.C ambient temperature. Winter limits are based on 0-4 km/hr wind speed and 10 Deg.C ambient temperature.

(3) For real-time operation of the interconnection, limits are based on ambient conditions.

(4) Limit based on 0-4 km/hr wind speed and 10 Deg.C ambient temperature.

(5) Limit based on 0-4 km/hr wind speed and 30 Deg.C ambient temperature

5.3 Interconnection Characteristics

Most of Ontario's non-radial interconnections are under phase angle regulator control, except for New York Niagara and part of Michigan.

The Ontario – Manitoba Interconnection

The Ontario – Manitoba Transfer is defined as the 230 kV interconnection involving circuits K21W and K22W. The transfers for this interconnection are the Ontario – Manitoba Transfer East (OMTE) and the Ontario – Manitoba Transfer West (OMTW), and are constrained by stability and thermal limitations. The OMTE and OMTW limits are 274 MW in the winter and 262 MW in the summer.

The Ontario – Manitoba 115 kV SK1 interconnection is limited to 68 MW for flows into Ontario in the wintertime and summertime.

The Ontario – Minnesota Interconnection

The Minnesota Power Flow North (MPFN) and Minnesota Power Flow South (MPFS) limits are 90 and 140 MW respectively and are constrained by stability and thermal limitations.

The Ontario – Michigan Interconnection

The Michigan interconnection is constrained by thermal limitations.

At the present time, there is partial phase angle regulator (PAR) control of the Ontario – Michigan interconnection. With the expected addition of a new PAR on circuit L4D by April 30, 2004, all four circuits associated with the interconnection will have phase shifting capability, allowing for full PAR control of the Ontario – Michigan interconnection.

The flow limits with partial PAR control versus full PAR control will not materially change because of the nature of contingencies under both operating conditions. For the flows out of Ontario, the winter and summer limits can vary from 1,800 to 2,200 MW and from 1,700 to 2,100 MW, respectively. The lower value of each range represents the amount of power that can be transferred when no generation rejection is armed at Lambton. For the flows into Ontario, the winter and summer limits can vary from 1,200 to 1,700 MW and from 700 to 1,700 MW, respectively. The higher value of each range reflects the amount of power that can be transferred as a result of low Lambton and TransAlta – Sarnia Regional Cogeneration Project (SRCP) generation dispatch levels within the West zone and cold or windy ambient conditions. The lower value of each range reflects the amount of power that can be transferred with the combination of high generation dispatch levels (Lambton and TransAlta – SRCP) and hot, windless ambient conditions.

The Ontario – New York Niagara Interconnection (60 Hz and 25 Hz)

The New York (NY) Niagara interconnection, in the winter, is limited from 1,200 to 1,500 MW for flows into Ontario and from 1,000 to 2,000 MW for flows out of Ontario. In the summer, the limit is 1,000 to 1,300 MW for flows into Ontario and 700 to 1,800 MW for flows out of Ontario. The interconnection is constrained by thermal limitations in the winter and summer.

The Queenston Flow West (QFW) interface is in series with the NY Niagara interconnection. All flows entering Ontario on the NY Niagara interconnection will also appear on the QFW interface; this includes imports and parallel path flows. Based on past experience and studies, the QFW interface always hits its limit before the limit is reached on the NY Niagara interconnection for flows entering Ontario; as a result, the capability of the NY Niagara interconnection is never fully utilized. The QFW interface is constrained by thermal limitations, which are very, dependent on weather conditions.

Typically, when QFW hits its limit of 1,750 MW under summer conditions, the flow across the NY Niagara interconnection is 1,000 MW. Similarly, when QFW hits its limit of 1,950 MW under winter conditions, flow across the NY Niagara interconnection is 1,200 MW. As a result of the QFW interface constraint, the summer and winter flows into Ontario of 1,000 MW and 1,200 MW, respectively, represent the lower value of the limit range shown in Table 5.2. The higher value of the summer and winter flow limits for flows into Ontario represent favourable conditions where the QFW interface is not constraining.

Similarly, at worst, internal constraints in New York can limit flows leaving Ontario to 700 MW and 1,000 MW during the summer and winter periods, respectively. These values represent the lower values of the limit ranges shown in Table 5.2. The higher value of the summer and winter flow limits for flows into New York represent favourable conditions where no New York internal constraints exist.

The Ontario – New York St. Lawrence Interconnection

The limit on this interconnection is 400 MW for flows into or out of Ontario. The interconnection is constrained by thermal limitations and is under the control of phase angle regulators.

The Ontario – Quebec North Interconnection

The Quebec North interconnection is thermally limited to 84 MW under winter conditions and 65 MW under summer conditions, for flows into Ontario from radial generation in Quebec. For flows out of Ontario, the limit is 110 MW in the wintertime and 95 MW in the summertime.

The Ontario (Ottawa and East zones combined) – Quebec South Interconnection

The Quebec South interconnection is limited to 1,410 MW for flows into Ontario due to stability limitations and available radial generation. For flows out of Ontario the limits, due to stability and thermal limitations, are 740 MW for the summer and 760 MW for the winter.

Parallel Path flows between Michigan & New York Niagara

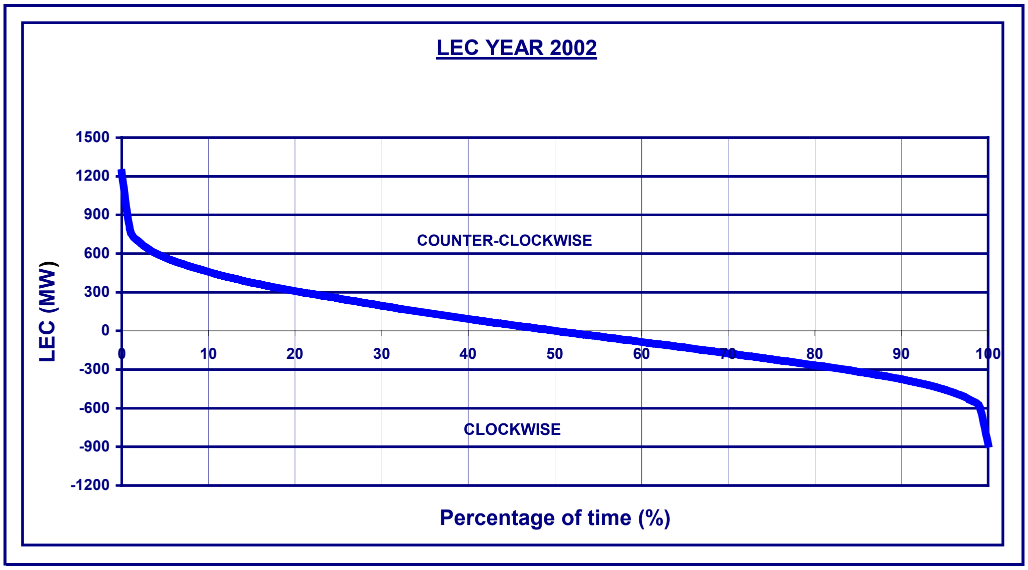
With partial phase angle regulator (PAR) control the Ontario – Michigan interconnection scheduled imports and exports between Ontario – Michigan and/or Ontario – New York Niagara are subjected to parallel path flows. These flows occur between Michigan and New York Niagara, north of Lake Erie through Ontario and south of Lake Erie through Pennsylvania, due to a combination of transmission system impedance with interconnection-wide load/generation dispatch. As a result, the actual flows on the Michigan and New York Niagara interconnections may not equal the scheduled flows. For scheduled Ontario – Michigan power flows, part of the scheduled flows may flow on the NY Niagara interconnection due to parallel path flows. Likewise, for scheduled Ontario – New York Niagara power flows, part of the scheduled flows may flow on the Ontario – Michigan interconnection.

Lake Erie Circulation (LEC) is an unscheduled, naturally occurring parallel path flow that also occurs due to a combination of transmission system impedance with interconnection-wide load/generation dispatch. It is measured as a flow across the points of interconnection with New York, at Niagara Falls, and with Michigan. The flow can circulate through Ontario in a clockwise direction, in at Michigan and out at New York Niagara, or in counterclockwise direction, in at New York Niagara and out at Michigan. The flow can circulate through Ontario in a clockwise direction, in at Michigan and out at New York Niagara, or in counterclockwise direction, in at New York Niagara and out at Michigan. LEC flows also appear on and aggravate the BLIP and QFW interfaces as they are in a direct series path. A sample of historical flow distribution for LEC is shown in the Figure 5.3.

At this present time with partial PAR control of the Ontario – Michigan interconnection, power flows across the Michigan interconnection are comprised of scheduled direct flows, scheduled New York Niagara parallel path flows and LEC. Likewise, power flows across the New York Niagara interconnection are comprised of scheduled direct flows, scheduled Michigan parallel path flows and LEC. This means that the total transfer from these two areas is usually limited to a flow that is less than the sum of the two interconnection flow limits.

When full PAR control of the Ontario – Michigan interconnection is utilized, parallel path flows of up to 600 MW in either direction are expected to be controlled. Control of parallel path flows to levels less than 600 MW should allow scheduled power flows to be maintained between Ontario, Michigan and New York, and should also greatly reduce the incidence of constrained operation of QFW interface.

Figure 5.3 Historical Flow Distribution – Lake Erie Circulation (LEC)



Ontario Coincident Import/Export Capability

With partial phase angle (PAR) control of the Ontario – Michigan interconnection, the coincident import/export capability is unlikely to equal the arithmetic sum of the individual flow limits. At best, the total transfer capability is the sum of the interconnection flow limits. At worst, the total transfer capability will equal the minimum of either the New York (St. Lawrence plus Niagara) or Michigan interconnection flow limit, plus all other interconnection flow limits. In the summer, the interconnections can carry coincident exports from 2,337 MW up to 5,537 MW, and coincident imports from 2,995 MW up to 5,295 MW. In the winter, the interconnections can carry coincident exports from 2,684 MW up to 5,884 MW, and coincident imports from 3,526 MW up to 5,526 MW.

When full PAR control is available on the Ontario – Michigan interconnection, the Ontario coincident import/export capability could equal the arithmetic sum of the individual interconnection flow limits for parallel path flow levels up to 600 MW. In the summer, the interconnections will be able to carry coincident exports from 4,037 MW up to 5,537 MW, and coincident imports from 3,995 MW up to 5,295 MW. In the winter, the interconnections will be able to carry coincident exports from 4,484 MW up to 5,884 MW, and coincident imports from 4,726 MW up to 5,526 MW.

The higher values associated with the Ontario coincident import ranges represent theoretical levels that could be achieved only with a substantial reduction in generation dispatch in the West and Niagara transmission zones. In practice, the generation dispatch required for these high import levels would rarely, if ever, materialize. Therefore, at best, due to internal constraints in the Ontario transmission network, Ontario has an expected coincident import capability of approximately 4,000 MW.

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