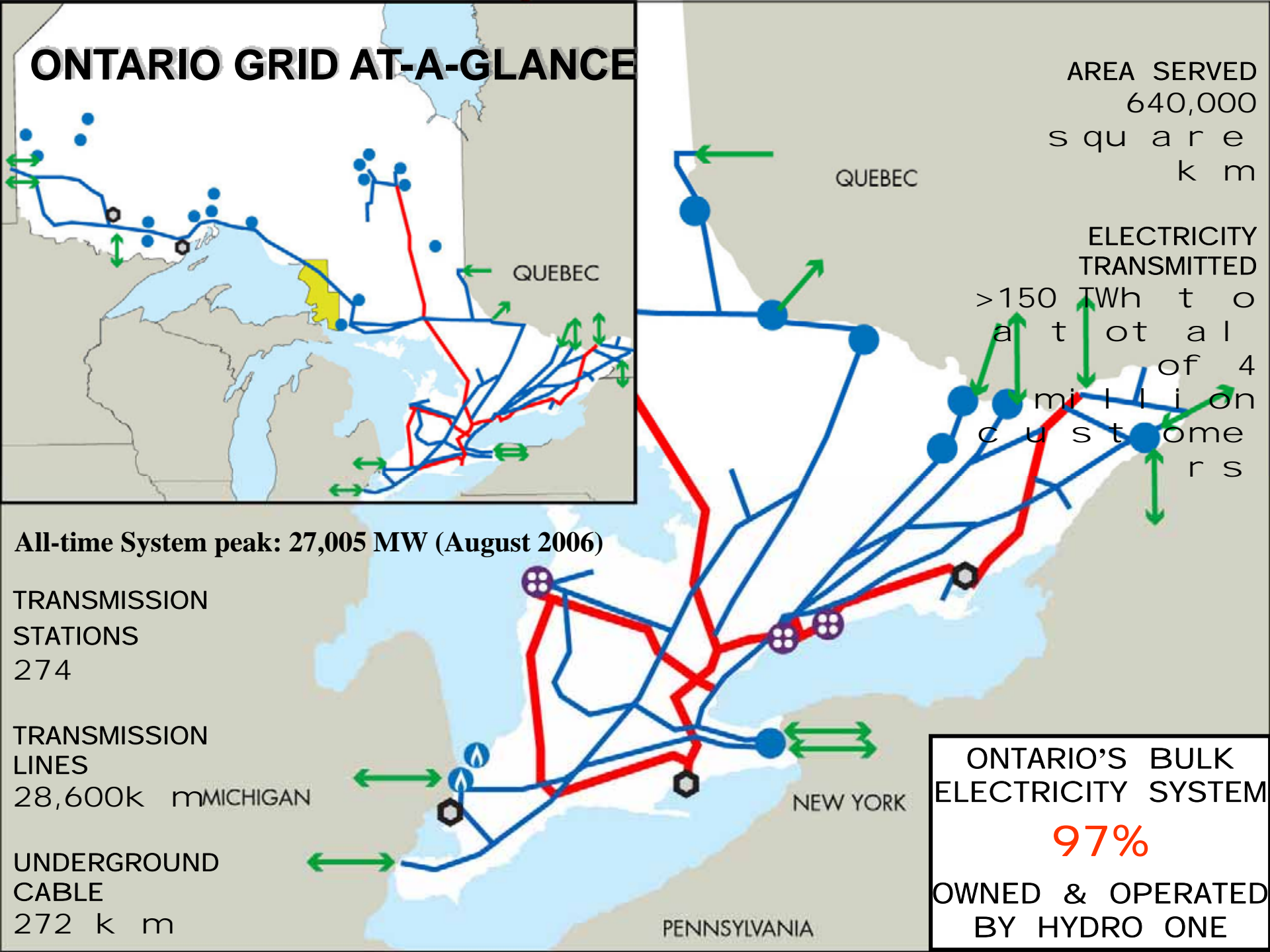


# MC Temporary Permission for use of Legacy Hydro One IT's in the IESO Market

Presented to: RMSC

Date: Apr, 2010

# ONTARIO GRID AT-A-GLANCE



AREA SERVED  
640,000  
square  
km

ELECTRICITY  
TRANSMITTED  
>150 TWh to  
a total  
of 4  
million  
customers

All-time System peak: 27,005 MW (August 2006)

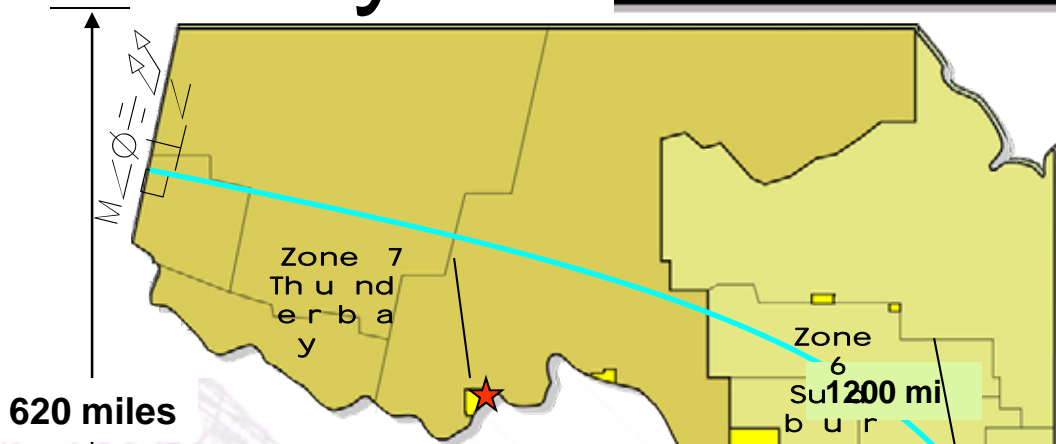
TRANSMISSION  
STATIONS  
274

TRANSMISSION  
LINES  
28,600 km

UNDERGROUND  
CABLE  
272 km

ONTARIO'S BULK  
ELECTRICITY SYSTEM  
**97%**  
OWNED & OPERATED  
BY HYDRO ONE

# Hydro One Service Area



- 77,670 miles of Distribution Line
- 1024 Stations
- 1.6 million poles
- 1.3 million retail customers
- 112 large industry
- 20 remote communities
- 415,000 square miles customer
- 5.6 miles per square mile customer
- Same size as Texas and California together
- Equal to 12% of the US population
- 12 million people live in Ontario
- Toronto to Manhattan 1200 miles
- Same as Miami to Chicago

Zone	Customer Count	MW (daily avg)
1	184,680	550
2	118,218	355
3A	173,801	520
3B	178,129	530
4	180,619	540
5	168,044	505
6	131,066	390
7	54,634	165
Total	1,189,191	3,555
LDC(s)	3,300,000	9,500

930 mi

1200 miles

# IT Temporary Use Background

- 2001 MC granted Hydro One Temporary Permission for use of 6012 non approved IT's expiring 2004
- 2004 MC granted Temporary Permission for use of 4100 remaining IT's based on seal year ending 2006 – 2011. With emphasis that no further extensions would be granted

# Background

- 2008 - RMSC Working Group – Meter Installation Upgrade Lead Times – members include:
  - Mark Simpson – Brantford Power (regrets)
  - Matt Wenninger – Guelph Hydro
  - Vito Genovese – Horizon Utilities
  - Dave Sharpe – Peterborough Utilities
  - Selina Chang – Rodan
  - Doug Thomas, John Antonakos, Richard Zaworski – IESO
  - David Grant – Toronto Hydro
  - Dominic Consorti, Terry Court – Hydro One

# Background

- Working group supported Hydro One making application for Temporary Use based on:
  - Existing Temporary Use terminated in 2011 leaving many MP's in non compliance.
  - As HONI is constructor in most cases regulated - existing Resource constraints as a result of
    - Green Energy initiatives
    - major capital programs (>\$1B)
    - MMP engagement
    - Contractor availability

# Background

- Working group supported Hydro One making application for Temporary Use based on:
  - Inaccessibility:
    - Footprint
    - Outages
  - New Information
    - Data comparisons of Upgraded to existing IT's at 17 locations identified an average of 0.20% accuracy based on MC error equation

# Background

New VS existing Data Comparison	Percentage Error /Averaged Interval	Percentage Error /Total Energy
B BUS	-0.26%	<b>-0.31%</b>
Y BUS	-0.14%	<b>-0.14%</b>
Total	-0.24%	<b>-0.24%</b>
Total	-0.67%	<b>-0.67%</b>
T3 & T4	-0.37%	<b>-0.37%</b>
T5 & T6	-0.29%	<b>-0.29%</b>
J1 & J2	0.21%	<b>0.22%</b>
T3 & T4	-0.89%	<b>-0.88%</b>
T3 & T4	-1.77%	<b>-1.71%</b>
T5 & T6	0.21%	<b>0.22%</b>
D9HS &D10S	-0.38%	<b>-0.38%</b>
B BUS	0.08%	<b>0.09%</b>
Y BUS	-0.08%	<b>-0.07%</b>
T1 & T2	-0.66%	<b>-0.66%</b>
B & Y BUS		<b>1.13%</b>
T1		<b>0.41%</b>
T2		<b>0.26%</b>
		<b>-0.20%</b>

# Background

- 2009 HONI presented MC Ontario Specialists with information and request for 25 year or end of life Temporary Use of remaining 1,472 IT's
- October 2009 all outstanding questions where resolved and HONI made formal application to MC Directorate
- January 5 2010 MC granted an incremental extension based on specific criteria being met

# Incremental Extension Criteria

- IT's removed from service are not reused for revenue metering
- A minimum number of sites must be upgraded on an annual basis. This number will be communicated to MC.
- HONI will notify participants of their obligations and corrective actions being undertaken
- Applicable only to those IT's in use at Market Opening
- HONI will report the corrective action implementation status on an ongoing basis

# Incremental Extension Criteria

- Continued acceptance until 2013 will be based on an annual review
- Further acceptance beyond 2013 will be at the discretion of the MC Regional Manager
- MC's expectation is a linear replacement of approximately 4% of total annually. Approximately 10 MP per year

# MMP Communications



- March 2010 - HONI issued a communication to MMP's

## Temporary Permission for Hydro One Networks Instrument Transformers

Further to a request by Hydro One Networks to extend temporary permission for Instrument Transformers on the IT Temporary Permission List, Measurement Canada (MC) has advised that temporary permission for continued use of non-approved instrument transformers (IT's) has been extended to December 31, 2013.

In addition, MC has directed Hydro One to:

1. Remove non-complying IT's (from service) after IT upgrades have been completed.
2. Communicate to MC the planned number of upgrades to be completed by December 31, 2013. This communication will be provided to MC by June 15th of every year.
3. Notify all MMP's/MP's, that are currently using non-compliant IT's, of the extended permission and request their action plans regarding non-compliant IT upgrades.
4. Continued use of the listed IT's, past December 31, 2013, will be reviewed on an annual basis thereafter. A key criterion in MC's annual review and decision to continue permission will be based on a minimum number of site upgrades completed each year.

Our records indicate that you are using IT's for wholesale revenue metering (listed in attached table) that are on the temporary permission list. Please review the attached list and forward to Lee Collins your action plan for IT upgrades, with planned in-service dates, for the meter points listed. This will assist in Hydro One responding to MC for the ongoing temporary permission of the IT's.

MMP	Facility Name	MP Description	Meter ID	Alt. Meter ID	Upgrade	Summed Meter Point <sup>1</sup>	Forecast Year
	Sample Customer Name		Modeland TS	Q BUS		1000000000	
	Sample Customer Name		Modeland TS	J BUS		1000000000	

If you have any concerns or questions please contact us at: [tx.meterexitprogram@hydroone.com](mailto:tx.meterexitprogram@hydroone.com).

# Moving Forward

- MC has made it very clear that the “Permission” will be removed if the conditions are not followed.
- HONI plans to complete it’s “Upgrade” program by 2012 as planned.
- It is important MMP’s continue with their upgrades.
- It is important MMP’s notify HONI ASAP in regards to updates as we are required to report to MC every June.