EB-2008-0272
2009-10 Transmission Rate Application
Hydro One Networks' Miscellaneous Exhibits

Miscellaneous Exhibits	Description	Filed Date
K3.1	Attachments A & B	February 26, 2009
K3.2	Asset Need Assessment	February 26, 2009
K3.4	Filed in Confidence - Schedule A to HONI Business Plan dated August.14, 2008	February 26, 2009
K3.5	Filed in Confidence - Submission to HONI board of directors dated November 13, 2008	February 26, 2009

ATTACHMENT A
ATTACHMENT B

ATTACHMENT A

Considerations in Determining Asset Sustaining Requirements

2009/2010
Transmission Rate Application
Stakeholder Consultation 1

June 4th, 2008

Joe Toneguzzo

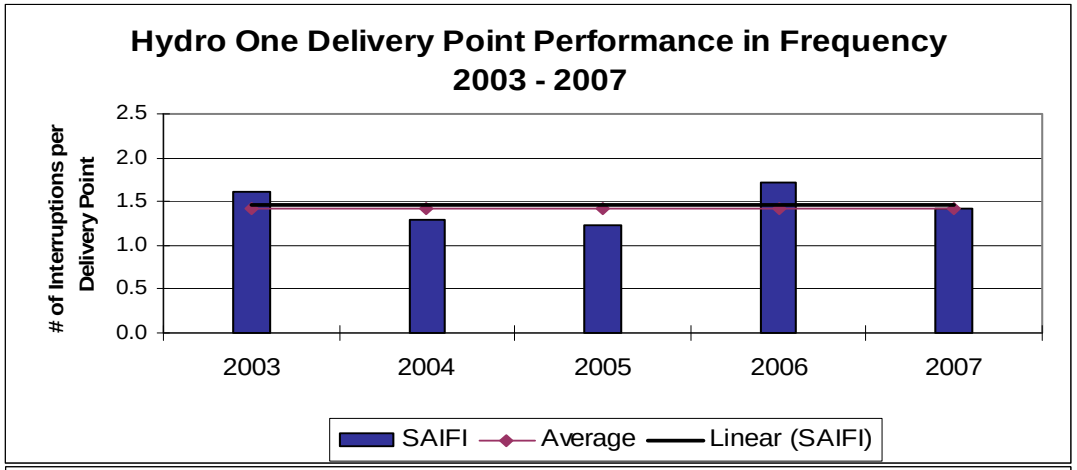
Director,
Asset Management
Processes & Polices

hydro one

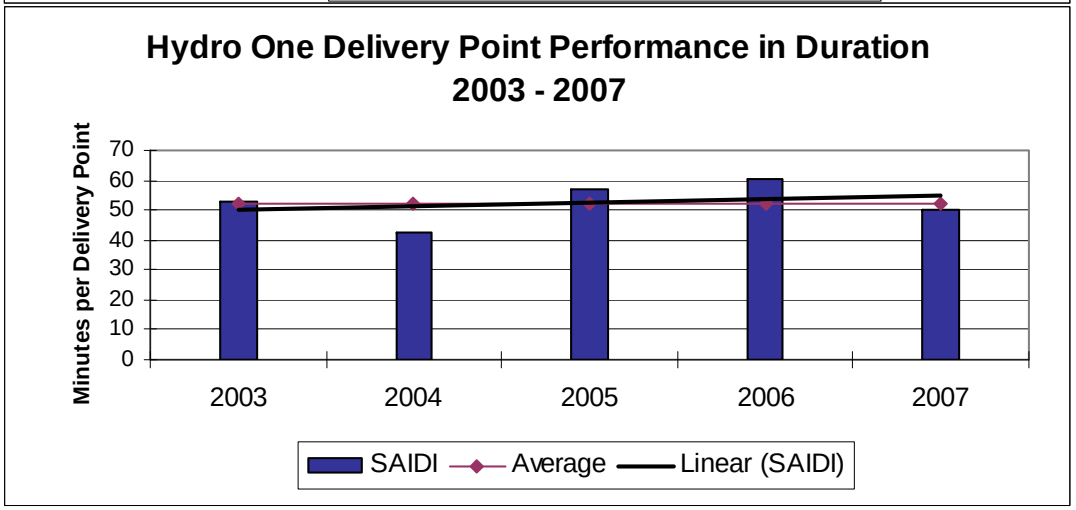
Sustaining Programs
Key Objectives

- First Quartile Performance within CEA Utilities
- Delivery Point Standards – Historic Level or better
- Safety must not be compromised by asset degradation
- Compliance with Environmental and Security Requirements

Delivery Point Performance



Historic (1991 – 2000) Average Number of Interruptions per Delivery Point =1.8

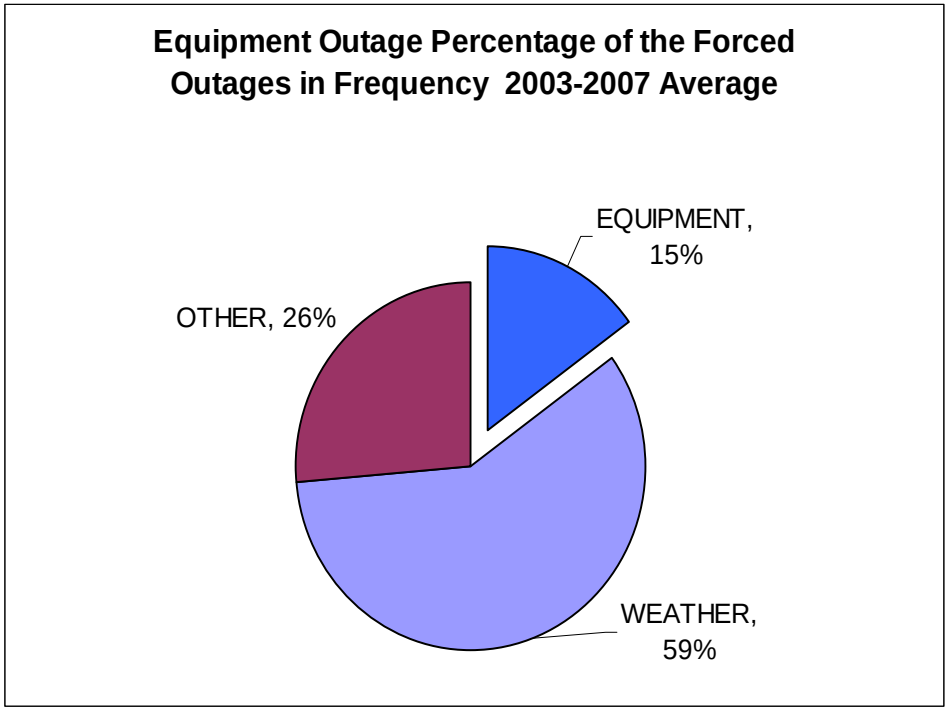


Historic (1991 – 2000) Average Interruption Minutes per Delivery Point = 54.8

Hydro One's Delivery Point Performance is based on maintaining Historical Levels (1991 – 2000) for the Frequency and Duration of forced outages.

The above graphs indicate that both the Frequency and Duration measures have slightly improved over the last five years.

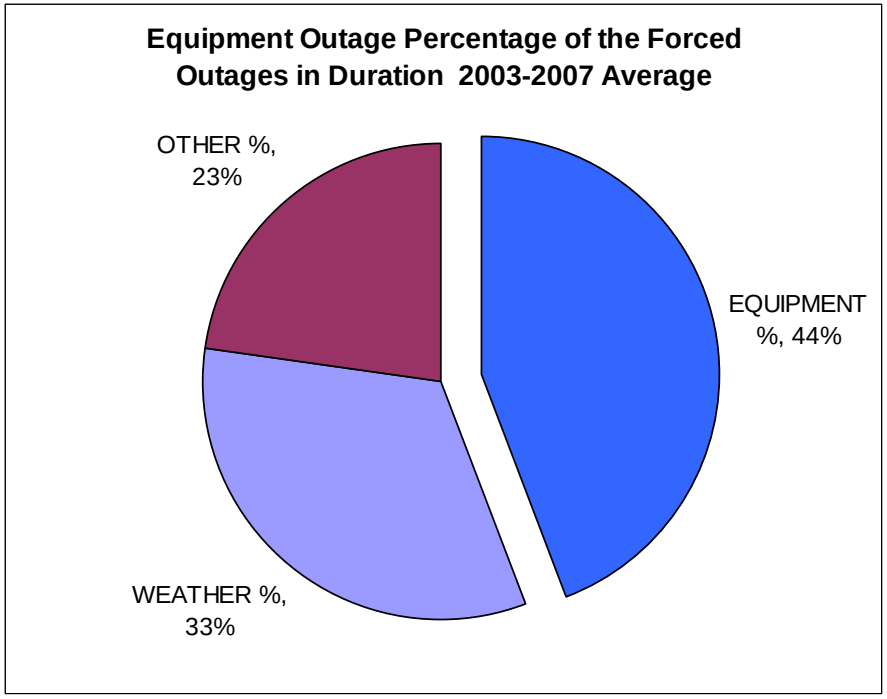
Transmission Reliability
Frequency of Forced Equipment Outages



The related Historic (1991 – 2000) value = 17%

Equipment Performance is a leading indicator of Delivery Point Performance and Hydro One has managed to keep equipment related Forced Outages impacting the Frequency measure below the historic level over the last five years, despite the aging of the Transmission System

Transmission Reliability
Duration of Forced Equipment Outages



The related Historic (1991 – 2000) value = 49%

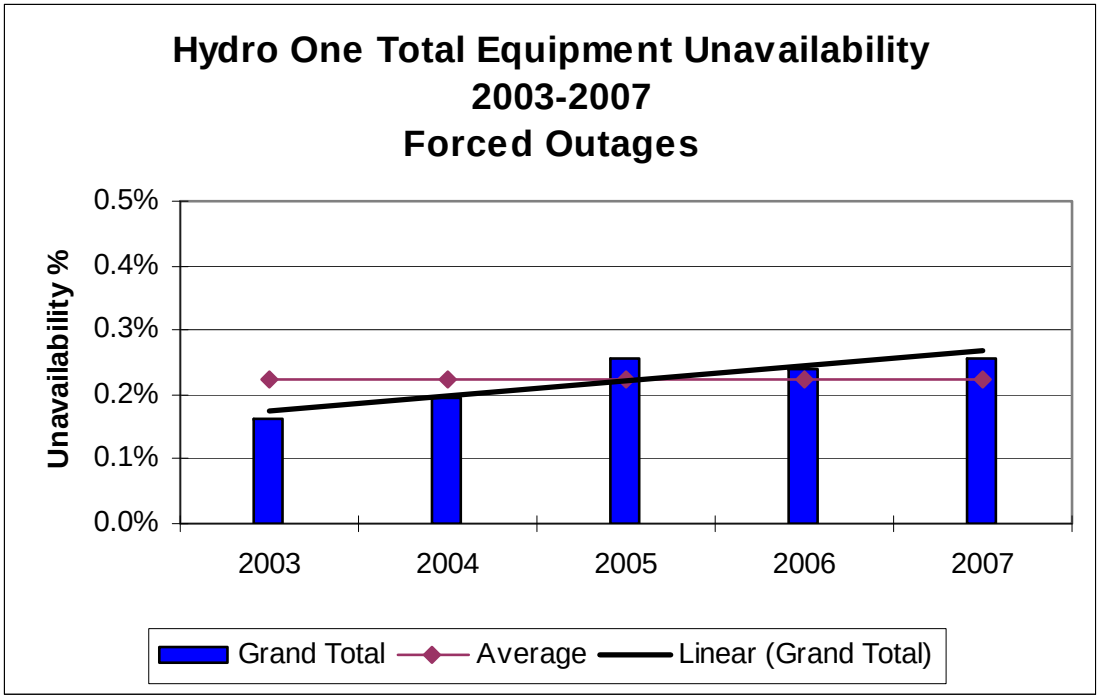
Equipment Performance is a leading indicator of Delivery Point Performance and Hydro One has managed to keep equipment related Forced Outages impacting the Duration measure below the historic level over the last five years, despite the aging of the Transmission System

Performance Improvement

Due to:

- Targeted investment in equipment
- Consolidated operation (OGCC)
- Prioritized response to forced outages
- Expert and competent staff
- Effective preventative Maintenance Programs

Equipment Unavailability

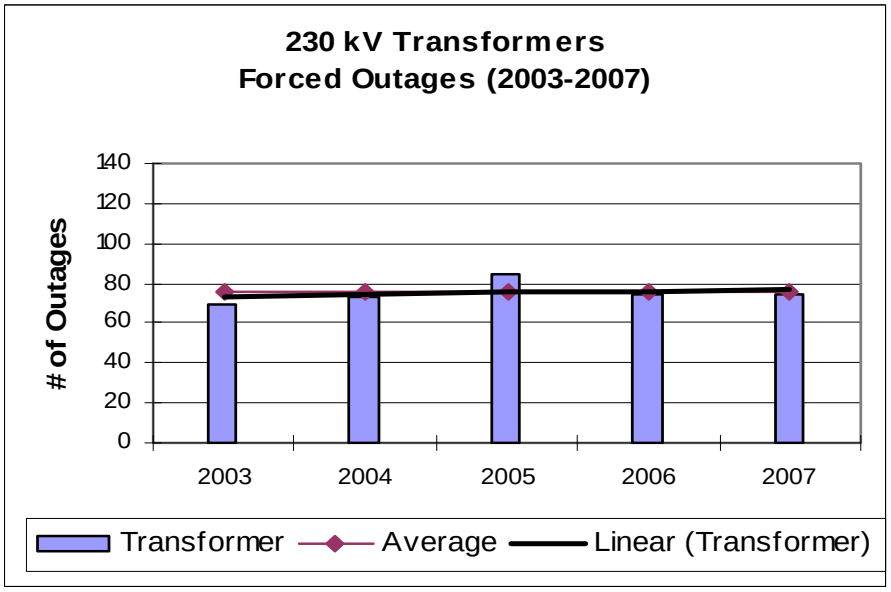


The related Historic (1991 – 2000) value = 0.27%

Overall Equipment Unavailability is another key leading indicator of Delivery Point Performance and Hydro One has managed to keep it's key equipment available for service more often over the last five years than during the historical period, despite the aging of the Transmission System.

The overall trend however shows some concern.

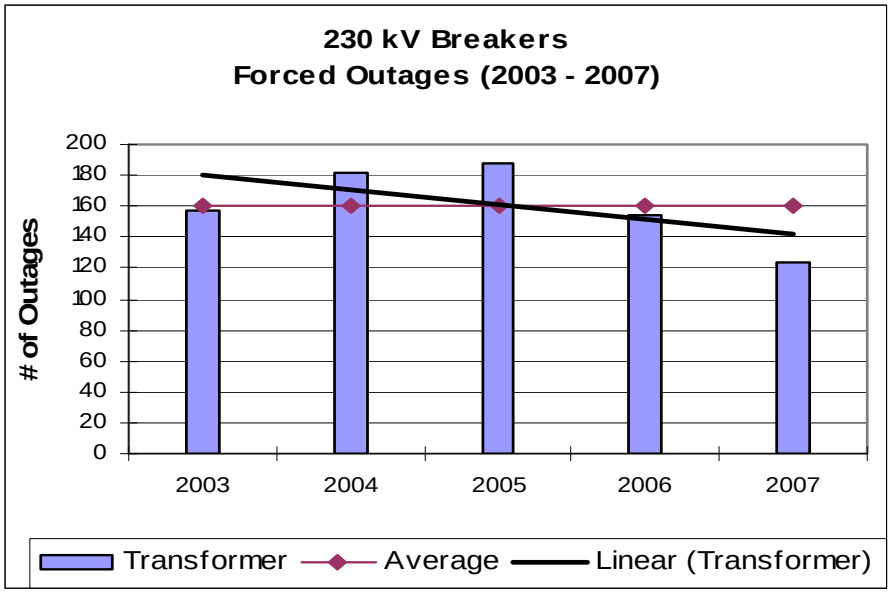
Transmission Reliability
230 kV Transformer Equipment Outages



The related Historic (1991 – 2000) value = 96

Transformers are critical assets which can affect Delivery Point performance, when Forced outages occur. Hydro One has managed to reduce the number of outages caused by Transformers over the last five years, relative to the historic period, on which our Delivery Point Performance is based.

Transmission Reliability
230 kV Breaker Equipment Outages

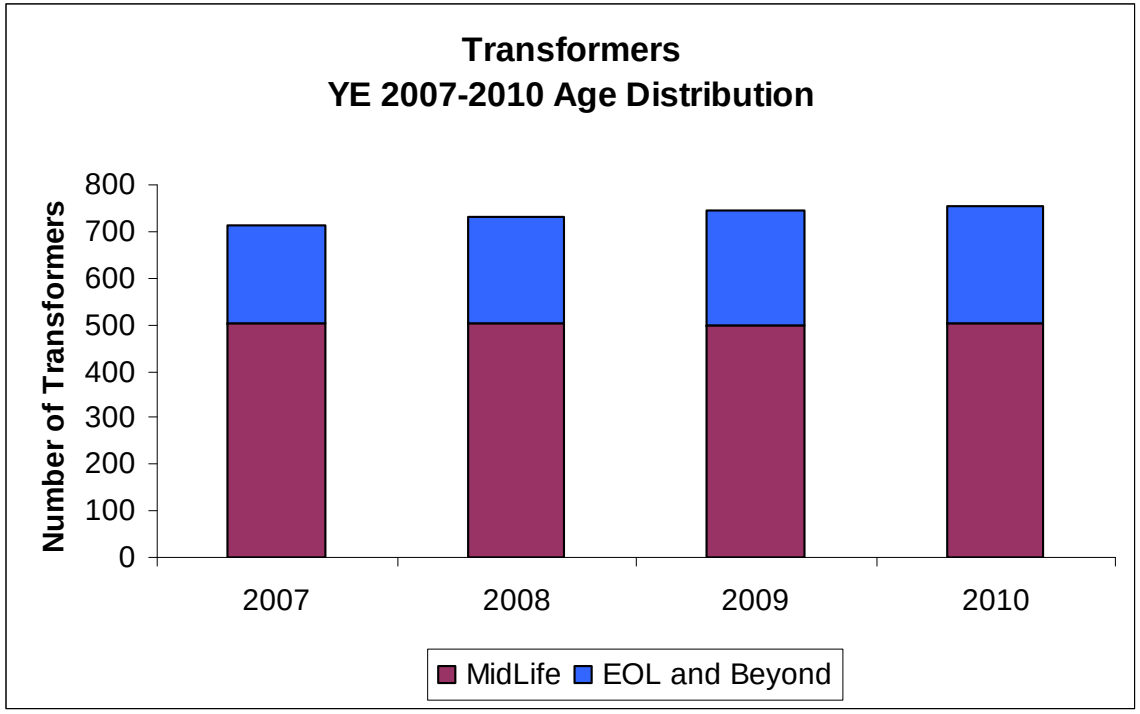


The related Historic (1991 – 2000) value = 137

There has been a slight degradation from the historical performance of our 230 kV Breakers over the last five years, however the trend indicates that we have found methods to improve this performance.

Due to the redundancy, in the majority of the 230 kV system, imposed by international and local reliability standards, this has not resulted in a reduction in Delivery Point reliability performance.

Asset Demographics

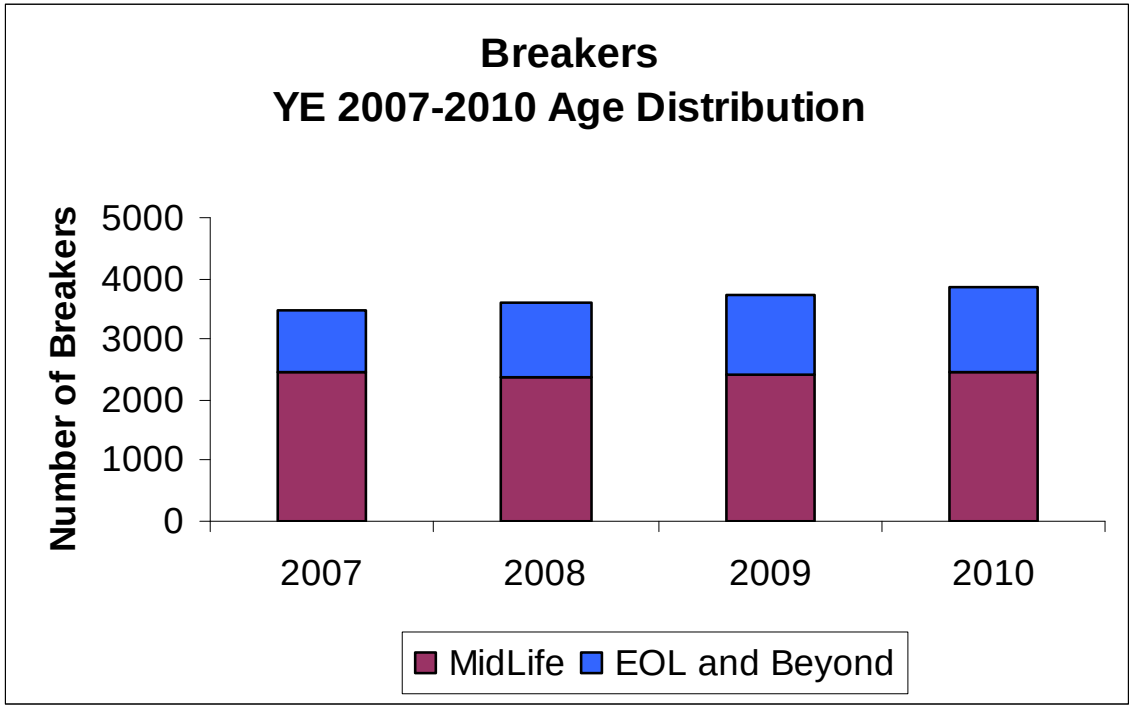


Mid-Life represents a point in an assets life-cycle where the reliability of the equipment begins to deteriorate and OM&A costs begin to escalate. The number of transformers in this higher risk / higher cost region are expected to remain essentially constant over the Historic and Test Year Period.

End of Life (EOL) represents a point where reliability deteriorates and it is no longer economical to repair / refurbish the asset. The equipment is therefore a candidate for Capital replacement.

The trend indicates that we may need to replace more transformers over the Test Year Period.

Asset Demographics

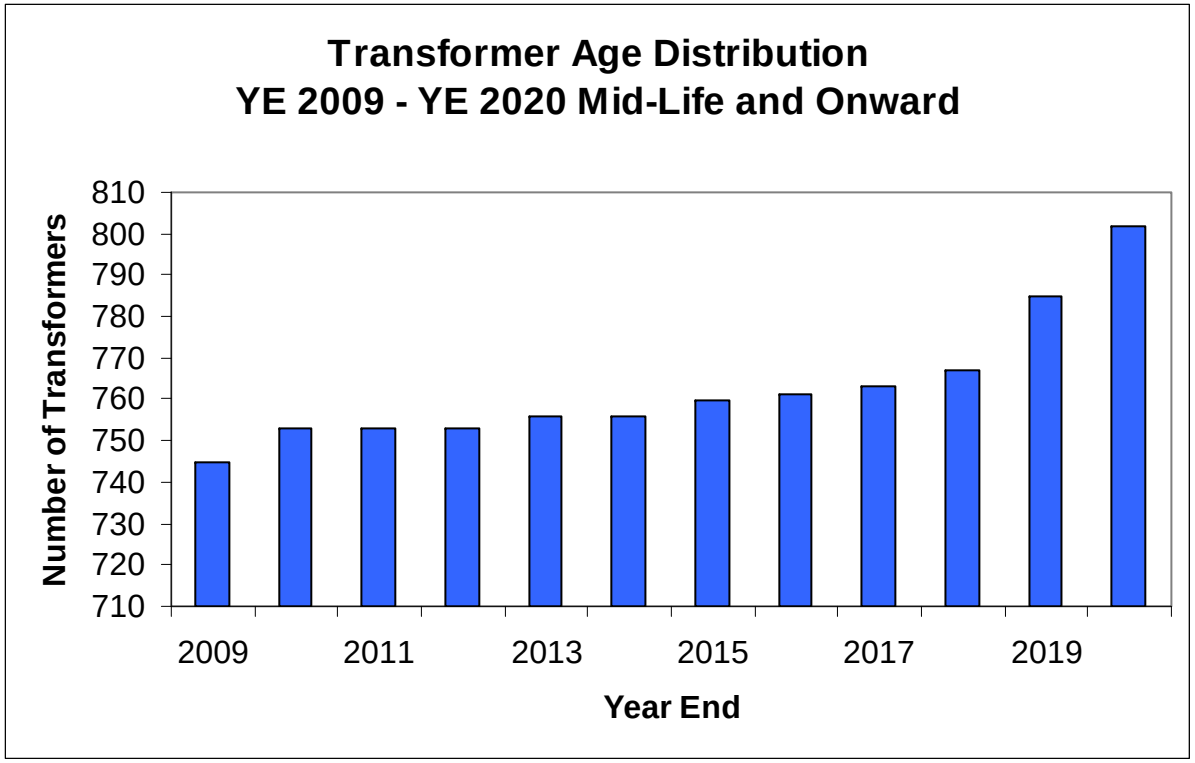


Mid-Life represents a point in an assets life-cycle where the reliability of the equipment begins to deteriorate and OM&A costs begin to escalate. The number of breakers in this higher risk / higher cost region are expected to remain essentially the same over the period of the Historic and Test Years.

End of Life (EOL) represents a point where reliability deteriorates and it is no longer economical to repair / refurbish the asset. The equipment is therefore a candidate for Capital replacement.

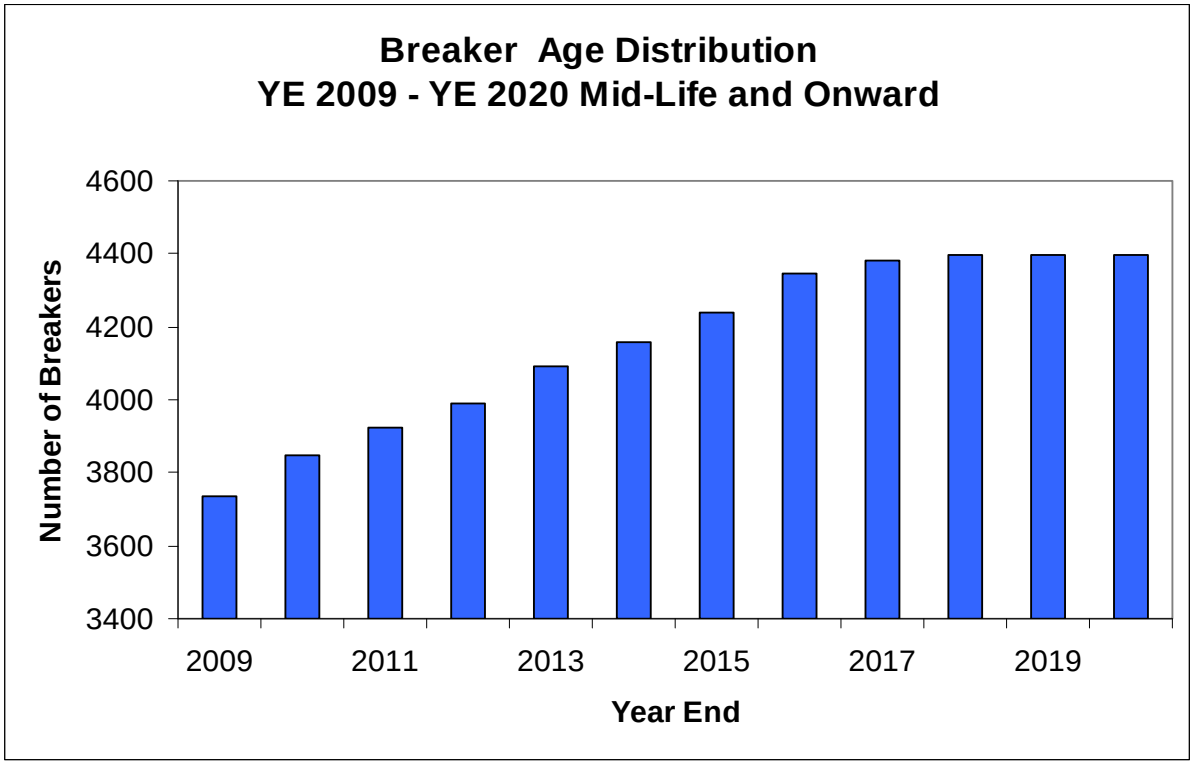
The trend indicates that we may need to replace more breakers over the Test Year Period.

Asset Demographics



Looking at the demographics of mid-life and end-of-life for Transformers, over the long term, provides an indication of how overall O&M and Capital related work may need to increase to keep our equipment and Delivery Point Performance at the required levels. The demographics indicate that work on Transformers is likely to increase gradually over the longer term.

Asset Demographics

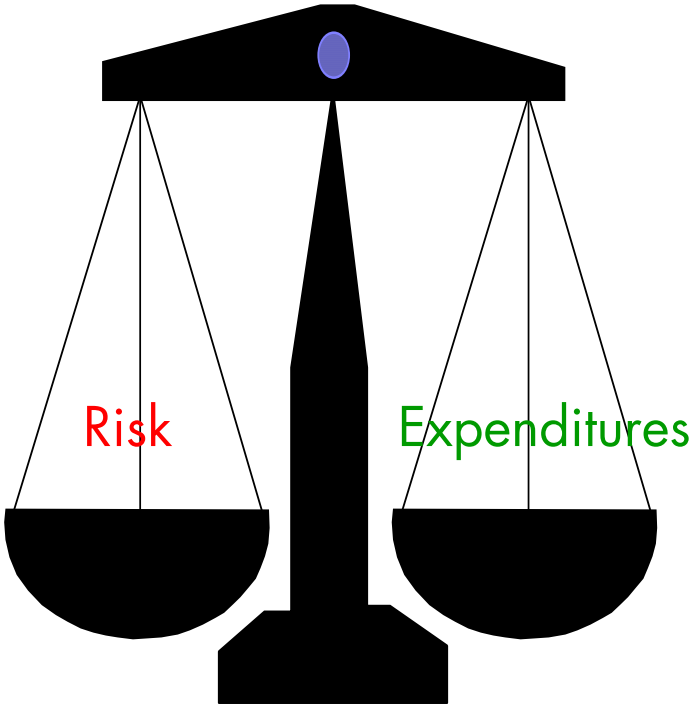


Demographics are not the same for all of Hydro One's assets.
The previous graph showed transformation assets where the demographics are primarily driven by load growth.
This graph shows transmission system Breakers, which are driven more by a change in historical system reliability standards, than load growth. The demographics indicate that work on Breakers is likely to increase more rapidly than Transformers over the same period.

Process Overview

- Asset Condition Assessments
- Demographic Information
- Performance/Reliability
- Safety
- Environmental
- Security
- Operating History
- Risk vs. Investment

Formulate and Prioritize Plans



The objective is to balance risk and expenditures.

Various levels of work are identified for each asset.

Dollars and risk are determined for these levels.

The asset investment plans are prioritized through a process that considers Asset Condition Assessment, age, performance and system criticality…

Results are assessed and judgement is applied to settle on investments and investment levels.

Thank You

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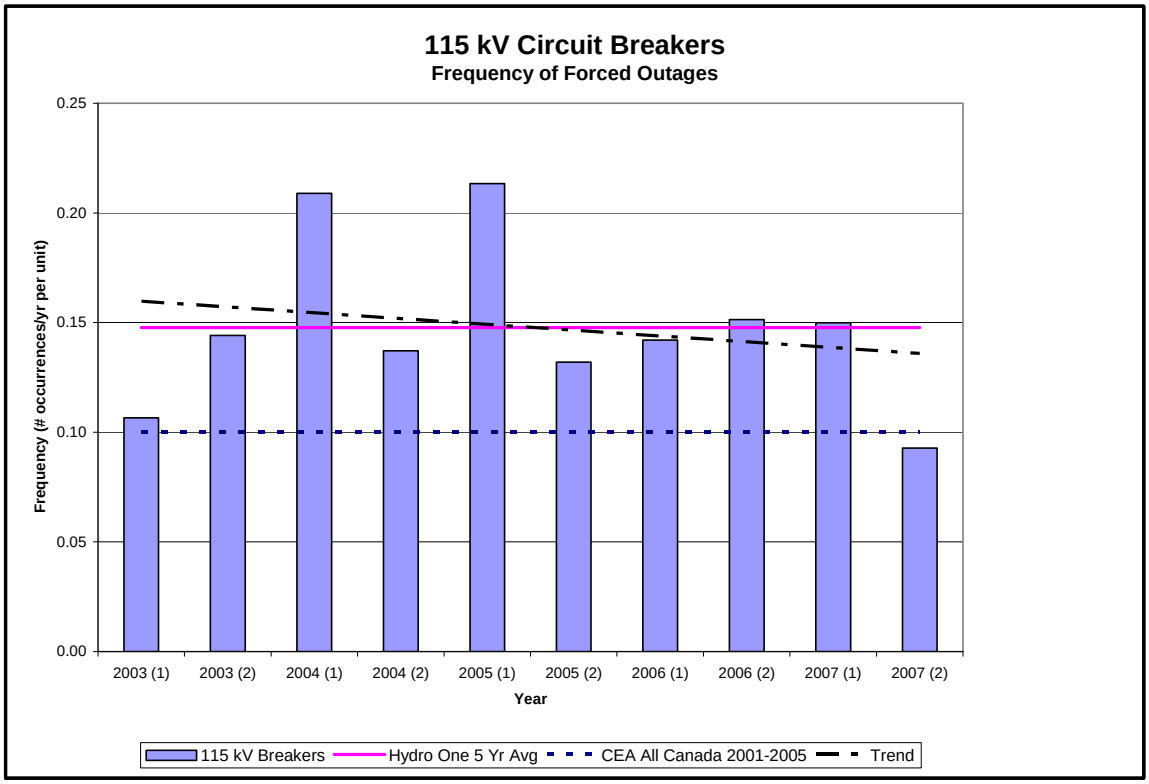
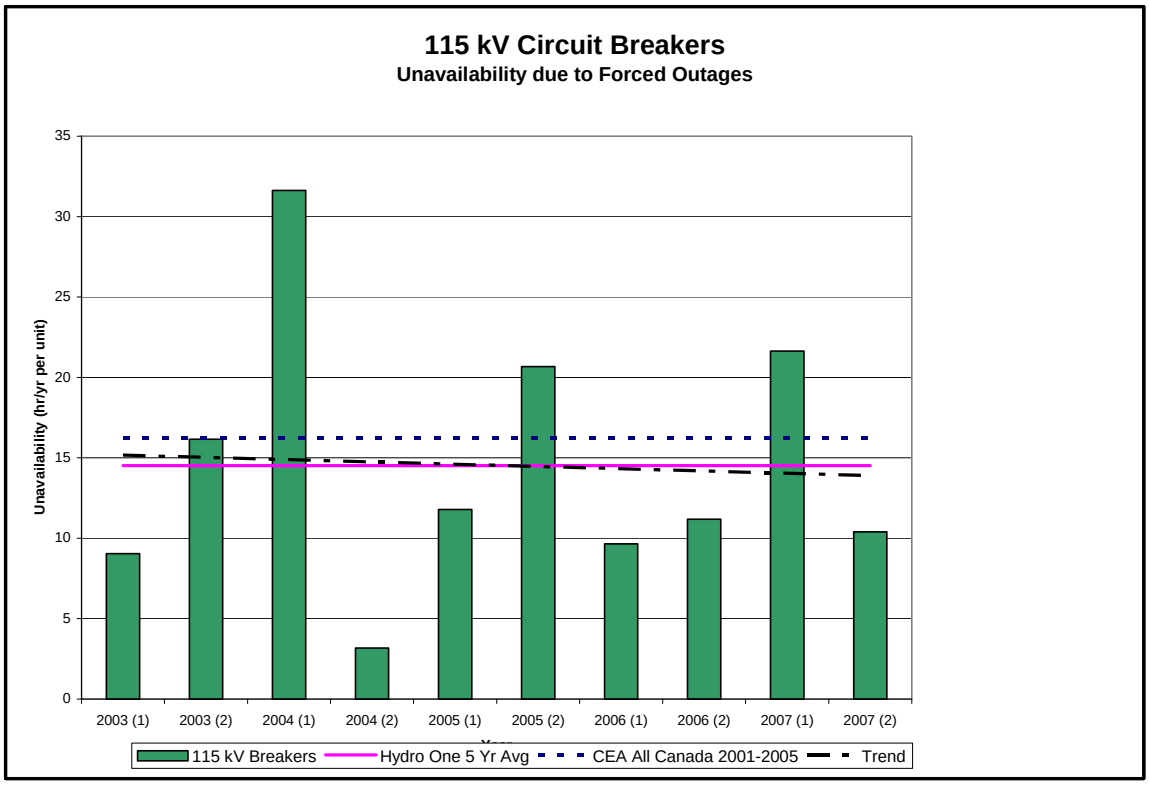
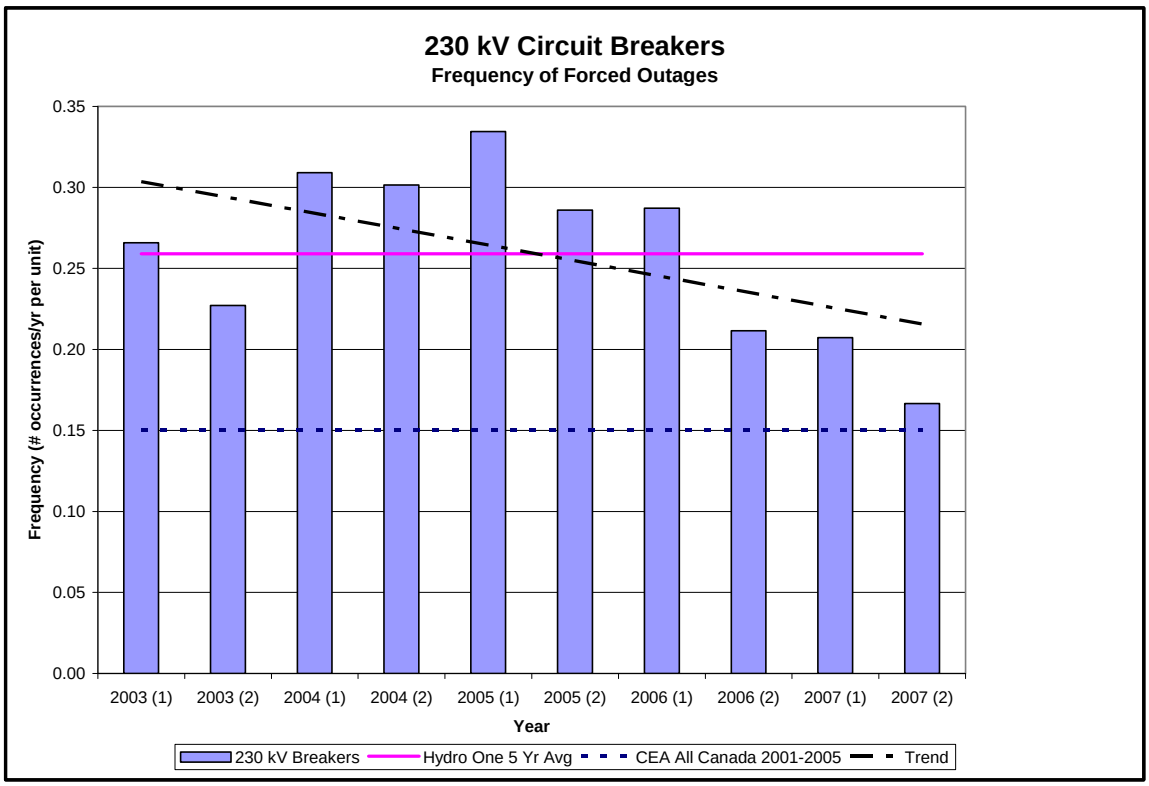
115 kV Breaker Performance

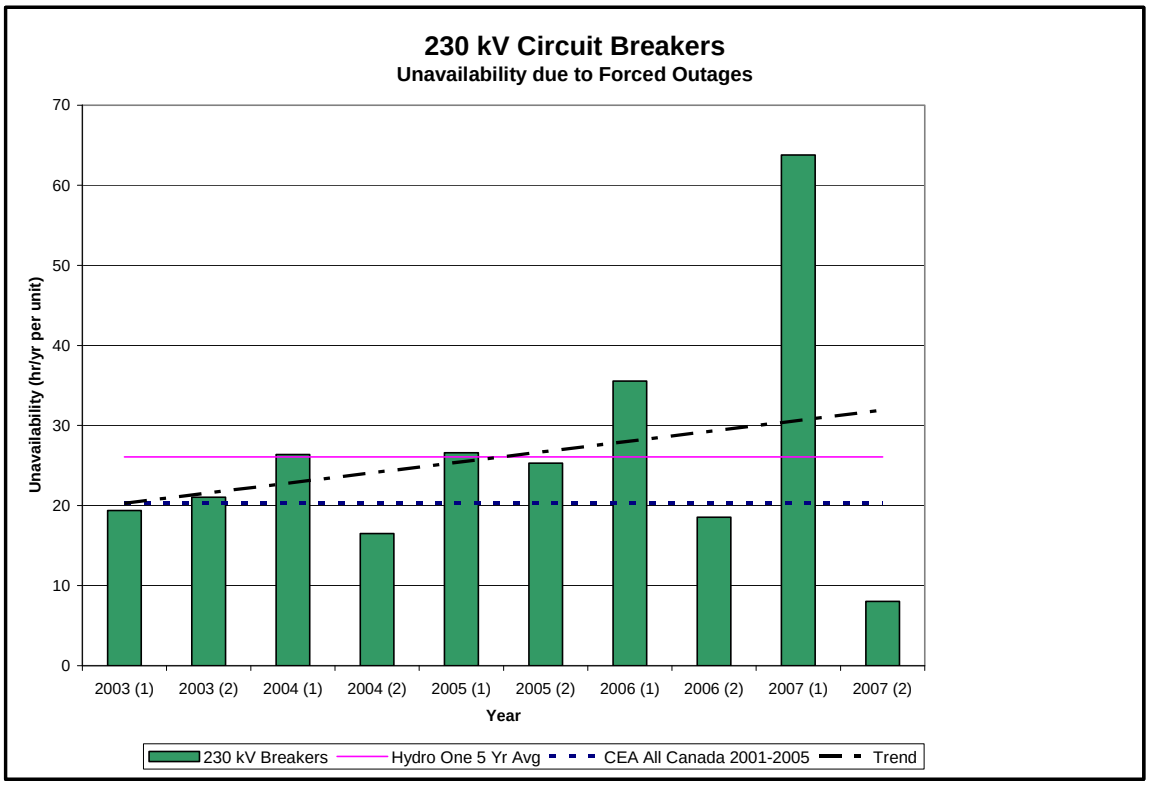




Note: On axis labels, (1) represents first half of year and (2) represents second half of year.

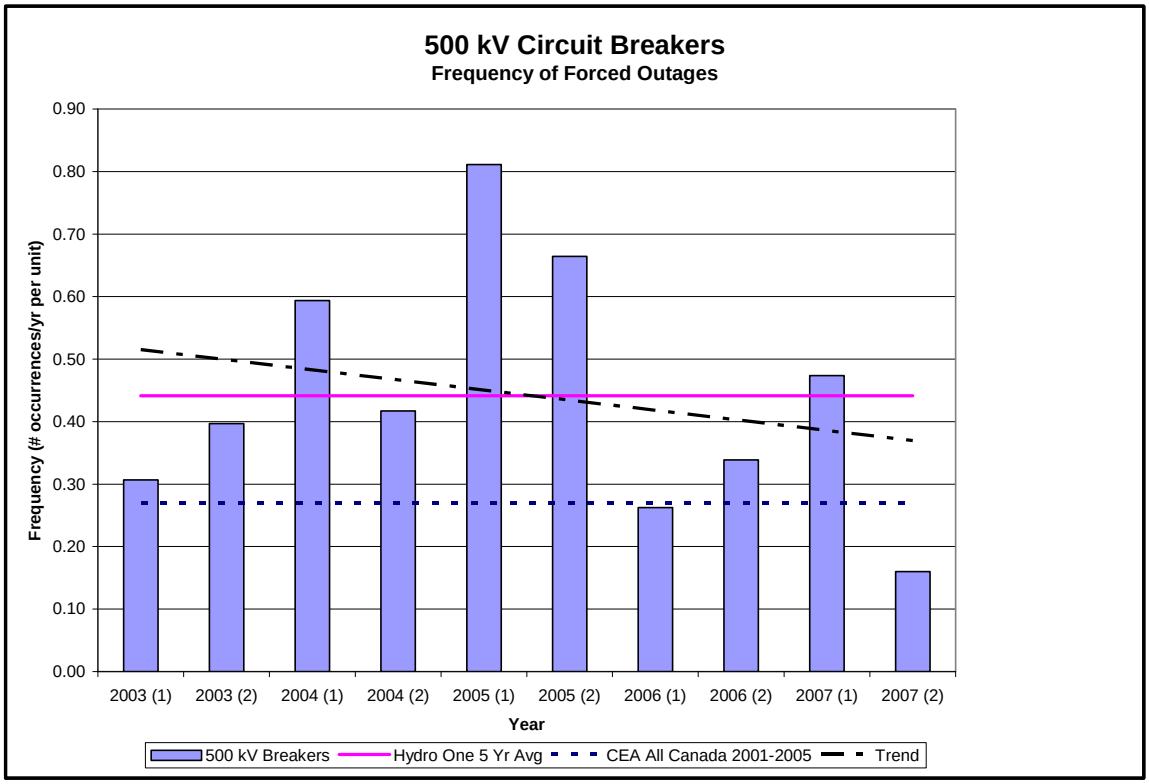
230 kV Breaker Performance

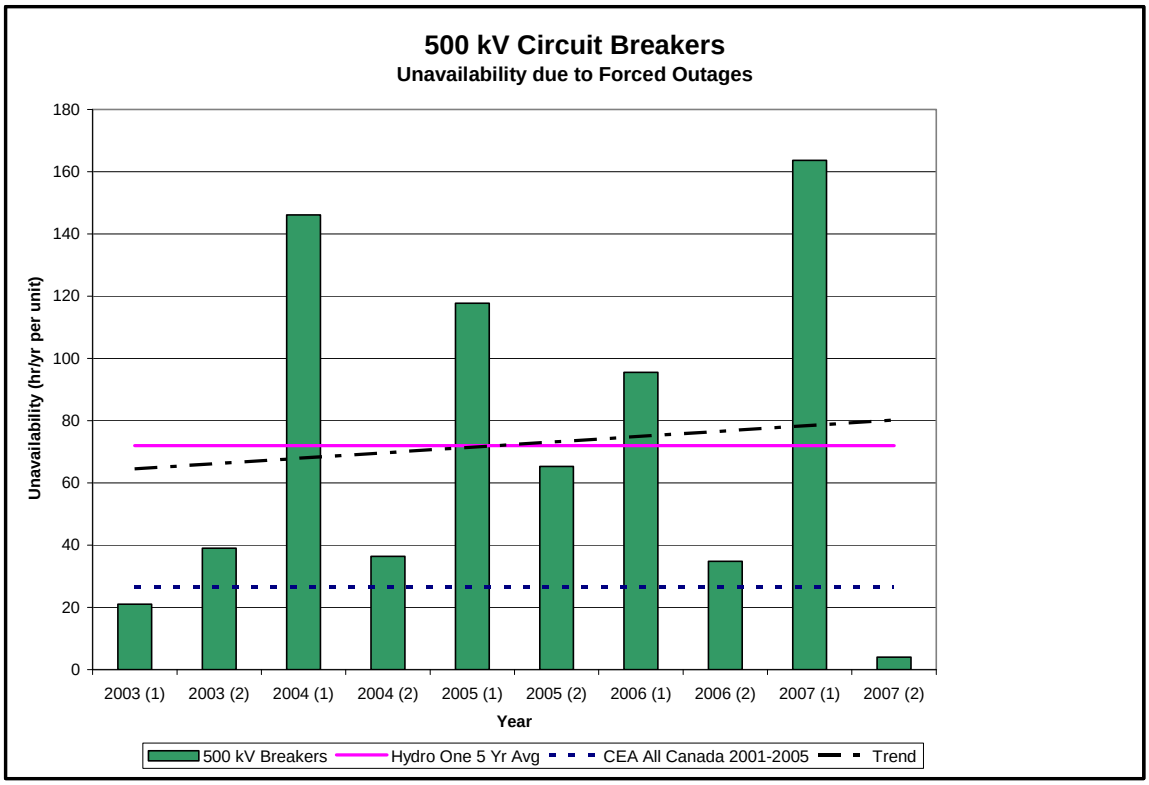




Note: On axis labels, (1) represents first half of year and (2) represents second half of year.

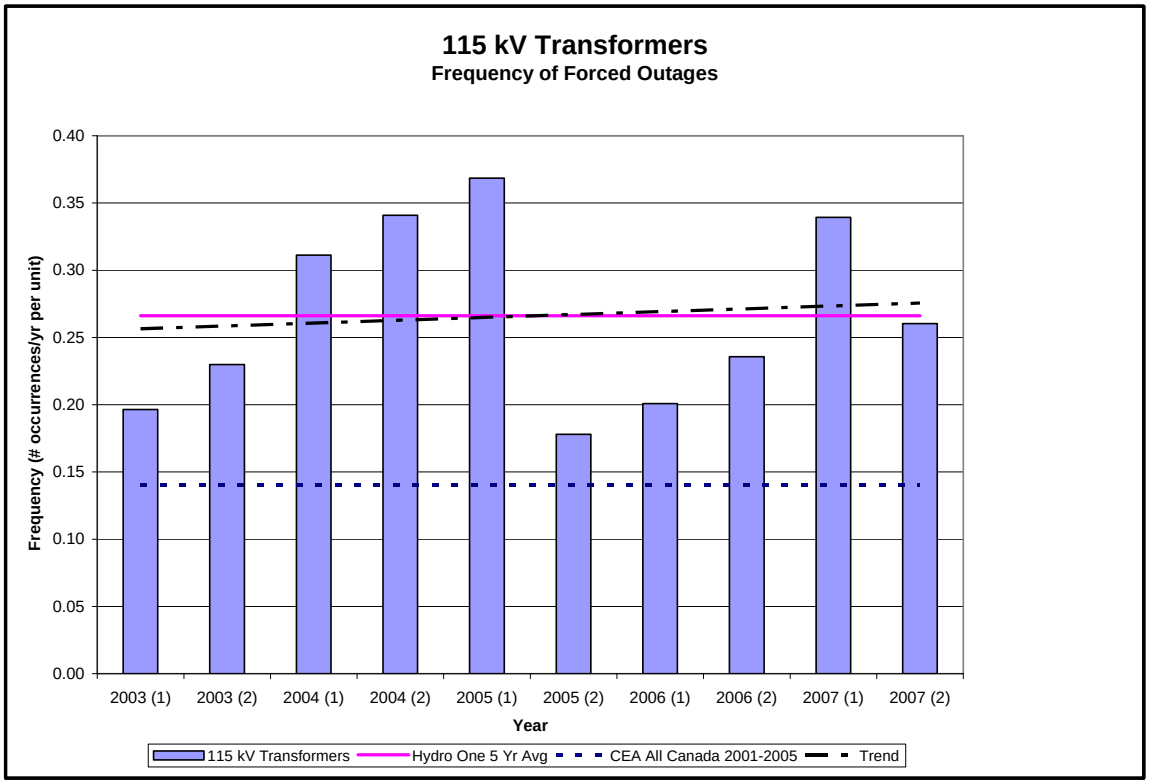
500 kV Breaker Performance

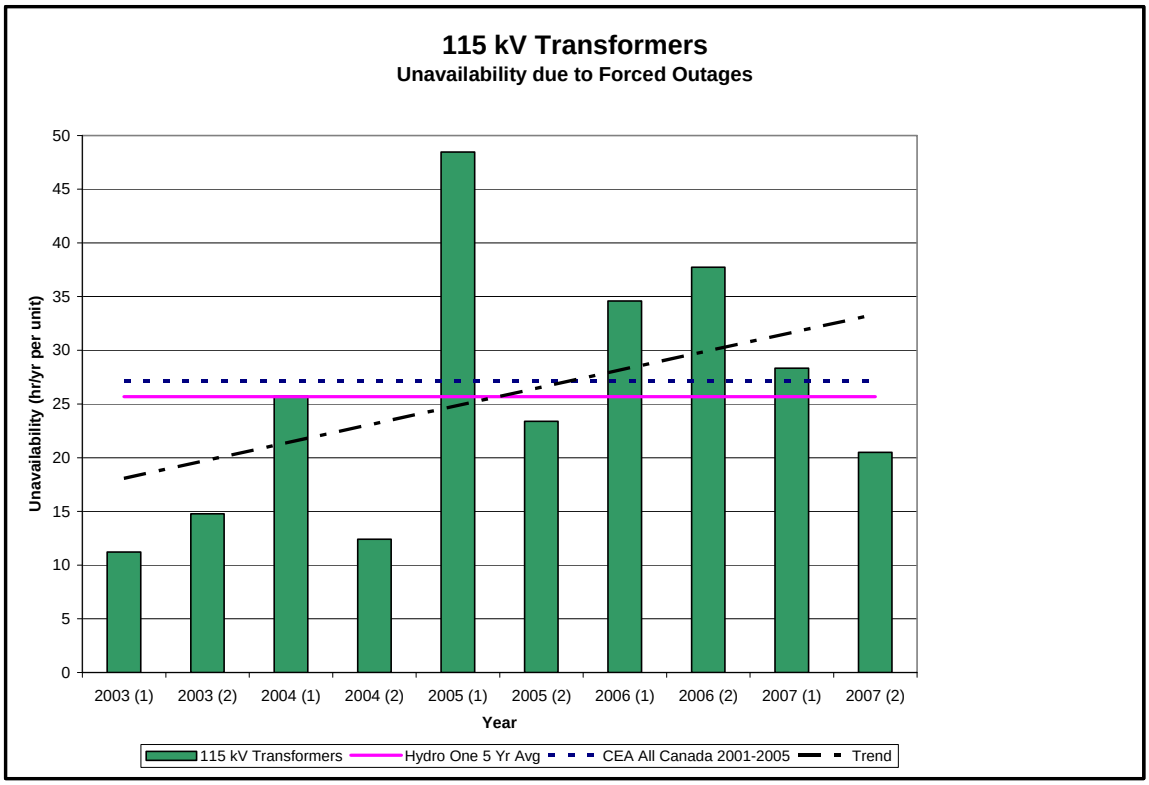




Note: On axis labels, (1) represents first half of year and (2) represents second half of year.

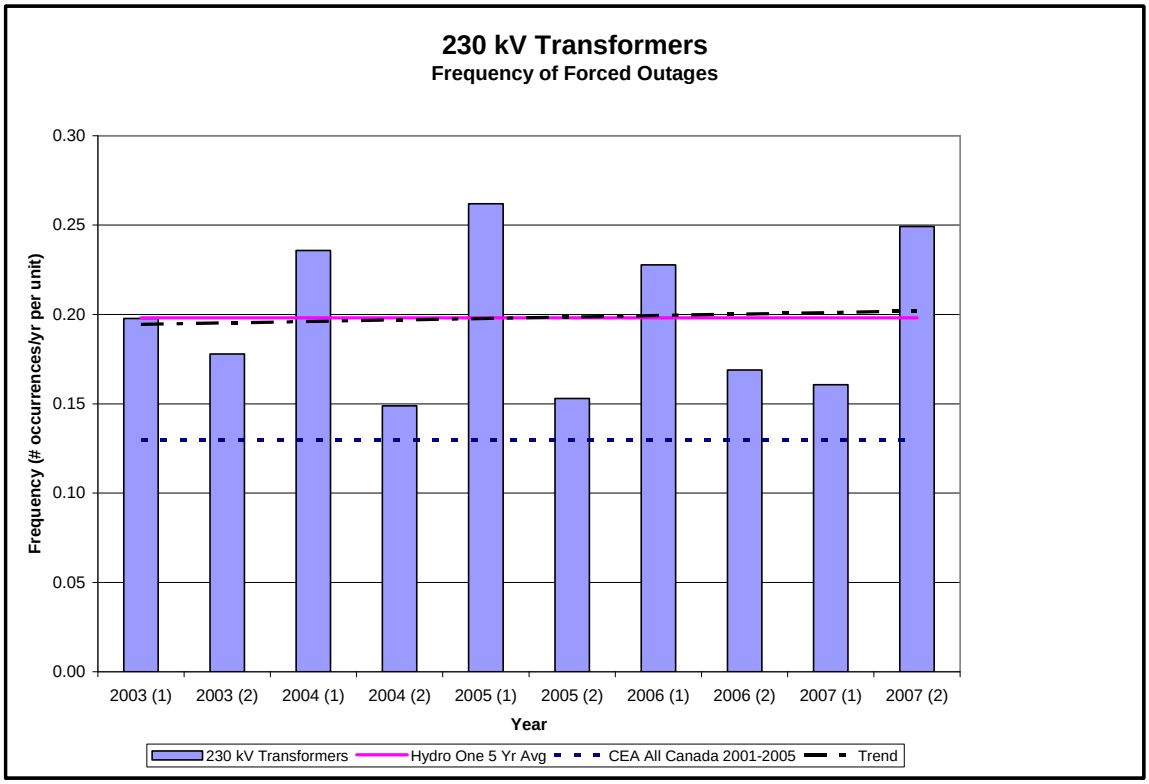
115 kV Transformer Performance

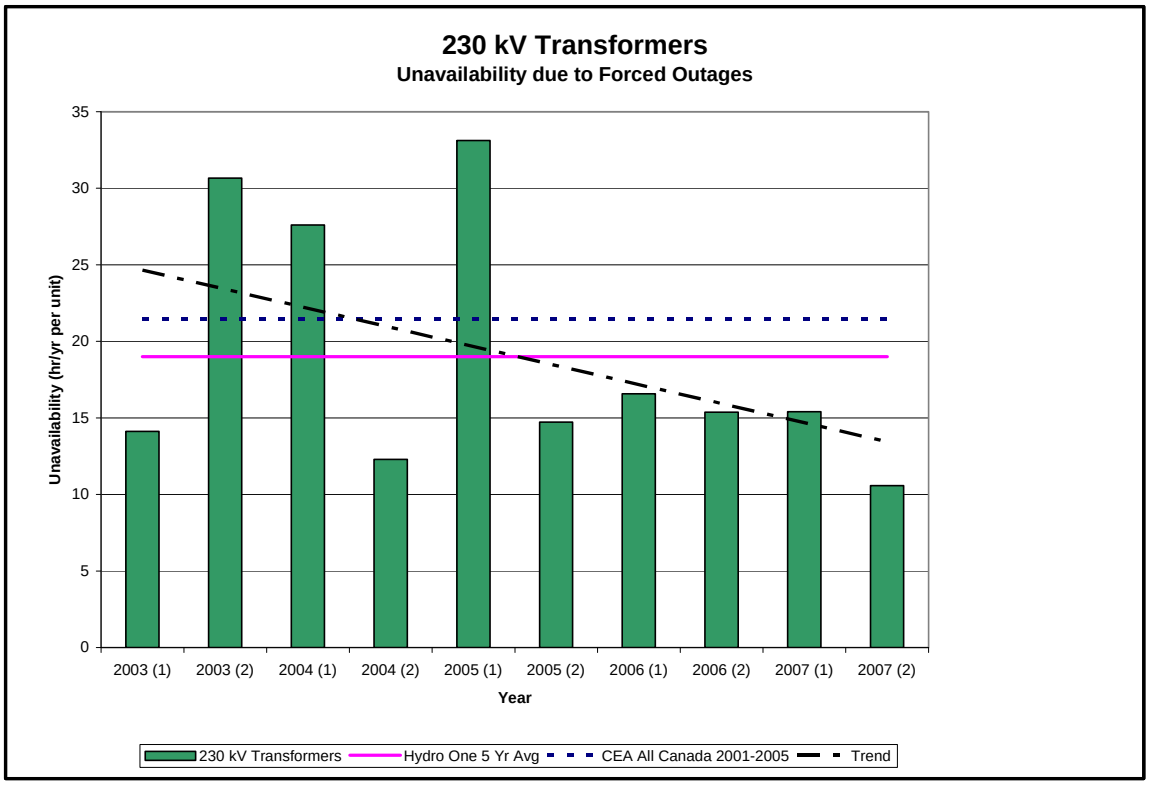




Note: On axis labels, (1) represents first half of year and (2) represents second half of year.

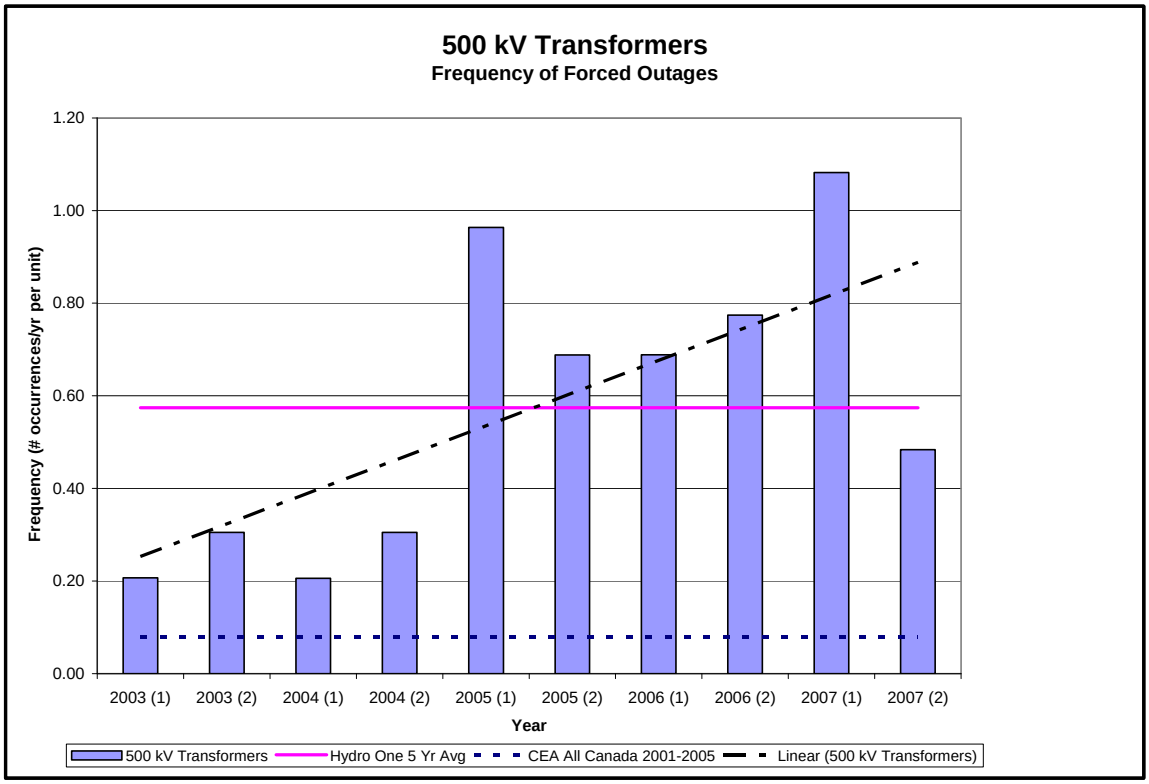
230 kV Transformer Performance

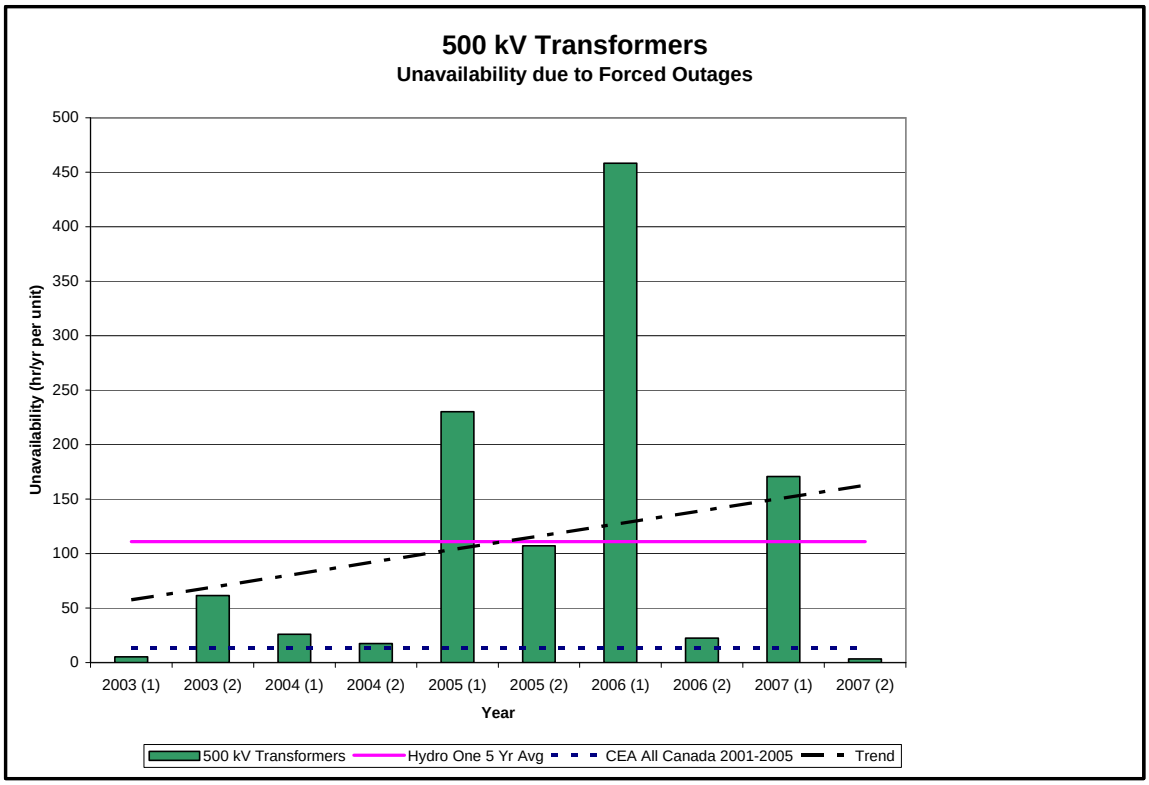




Note: On axis labels, (1) represents first half of year and (2) represents second half of year.

500 kV Transformer Performance





Note: On axis labels, (1) represents first half of year and (2) represents second half of year.

The following two tables provide a historical summary of the progression from the Asset Need Level of investment to Asset Plan for OM&A and Capital.

Although the table shows this process as being completed in 3 steps there were actually many iterations. The points of reference shown below represent the major marks in the process.

Transmission Capital										
$ millions	2009					2010				
	S	D	O	Other Shared	Total	S	D	O	Other Shared	Total
Asset Need (Sunnybrook 1)	563	831	43	92	1529	490	715	35	46	1287
Sunnybrook 2	277	618	17	98	1011	333	602	28	72	1036
Asset Plan (Final)	280	553	18	92	944	322	659	29	65	1074

Transmission OM&A										
$ millions	2009					2010				
	S	D	O	Other Shared*	Total	S	D	O	Other Shared*	Total
Asset Need (Sunnybrook 1)	250	26	53	100	428	233	28	54	109	424
Sunnybrook 2	235	22	52	145	453	235	28	54	129	444
Asset Plan (Final)	227	14	52	143	435	240	16	54	140	450

*** Due to the substantial reduction in Transmission Capital between Sunnybrook 1 and Sunnybrook 2 Other Shared OM&A increases as the overheads capitalized credit declines.**

Asset Need was presented at the Sunnybrook Planning Summit 1 on April 17, 2008. In addition to the rate impacts associated with the Asset Needs level of investment, a prime focus of this summit was on work execution. Several factors were identified as constraining Hydro One's ability to carryout the full work program required for Asset Need. These factors included outage limitations, resources shortages, material acquisition issues and approvals challenges. The summit concluded with guidance provided with respect to adjusting planned work to account for the constraints as well as direction to continue efforts to mitigate such constraints.

This guidance and direction at the first Sunnybrook Summit on both customer rate impacts and the other constraints were incorporated in a draft Asset Plan which was presented at Sunnybrook Planning Summit 2 on May 6, 2008. A risk assessment associated with the decreased work programs (by way of deferrals) was presented and further direction was provided to adjust planned work in certain high risk areas as well as work driven by external factors – while still taking into account the planning constraints identified above.

This guidance was incorporated into the final Asset Plan which was presented to the Executive Committee on June 18 and subsequently to the Hydro One Board of Directors on August 14, 2008. The resulting Asset Plan reflected a rate increase of 6.4% in 2009 and 12.1% in 2010. The 2009 rate impact also factored in a July 1, 2009 implementation date vs. a January 1st, 2009 implementation date as a form of rate mitigation to the transmission customers.