

Attachment PEG-HOSSM-5h(a)

# PEG's Alternative Econometric Model of Total Transmission Cost

2004-2016 Sample Period

**VARIABLE KEY**

YM = Miles of Transmission line  
 D = Ratched Maximum Peak Demand  
 MVA = Substation Capacity per Line Mile in 2010  
 VOLT = Average voltage of transmission line  
 CS = Construction standards index  
 PCTPOH = Percent of transmission plant overhead  
 PCTPTX = Percent of transmission plant in total plant  
 Trend = Time Trend

EXPLANATORY VARIABLE	PARAMETER ESTIMATE	T-STATISTIC	P-VALUE
YM	0.490	40.234	0.000
YM * YM	0.217	8.480	0.000
YM * D	-0.093	-5.358	0.000
D	0.544	49.074	0.000
D * D	0.159	8.809	0.000
MVA	0.033	4.703	0.000
VOLT	0.164	12.083	0.000
CS	0.230	13.686	0.000
PCTPOH	-0.666	-16.464	0.000
PCTPTX	0.315	15.159	0.000
Trend	0.012	7.238	0.000
Constant	11.658	403.173	0.000

Adjusted R<sup>2</sup> 0.956

Sample Period 2004-2016

Number of Observations 732

Attachment PEG-HOSSM-5h(b)

## Hydro One's Total Transmission Performance Using PEG's Model

2004-2016 Sample Period

[Actual - Predicted Cost (%) ]<sup>1</sup>

Year	Cost Benchmark Score
2004	-45.00%
2005	-49.60%
2006	-50.30%
2007	-47.00%
2008	-51.10%
2009	-46.30%
2010	-45.60%
2011	-46.50%
2012	-44.10%
2013	-43.00%
2014	-44.20%
2015	-42.40%
2016	-44.30%
2017	-44.40%
2018	-44.10%
2019	-43.30%
2020	-42.10%
2021	-41.00%
2022	-39.80%
<b>Average 2004-2016</b>	<b>-46.11%</b>
<b>Average 2014-2016</b>	<b>-43.63%</b>
<b>Average 2019-2022</b>	<b>-41.55%</b>

<sup>1</sup> Formula for benchmark comparison is  $\ln(\text{Cost}^{\text{HOSSM}}/\text{Cost}^{\text{Bench}})$ .

## Attachment PEG-HOSSM-5i(a)

# PEG's Alternative Econometric Model of Total Transmission Cost

Miscellaneous, Load Dispatching, and Rents Included

### VARIABLE KEY

YM = Miles of Transmission line  
 D = Ratched Maximum Peak Demand  
 MVA = Substation Capacity per Line Mile in 2010  
 VOLT = Average voltage of transmission line  
 CS = Construction standards index  
 PCTPOH = Percent of transmission plant overhead  
 PCTPTX = Percent of transmission plant in total plant  
 Trend = Time Trend

EXPLANATORY VARIABLE	PARAMETER ESTIMATE	T-STATISTIC	P-VALUE
YM	0.470	34.658	0.000
YM * YM	0.266	9.884	0.000
YM * D	-0.142	-7.099	0.000
D	0.552	45.294	0.000
D * D	0.203	9.374	0.000
MVA	0.014	1.955	0.051
VOLT	0.148	8.372	0.000
CS	0.278	13.517	0.000
PCTPOH	-0.619	-15.011	0.000
PCTPTX	0.303	15.124	0.000
Trend	0.012	7.475	0.000
Constant	11.684	388.454	0.000

Adjusted R<sup>2</sup> 0.954

Sample Period 2004-2016

Number of Observations 732

Attachment PEG-HOSSM-5i(b)

## Hydro One's Total Transmission Cost Performance Using PEG's Model

Miscellaneous, Load Dispatching, and Rents Included

[Actual - Predicted Cost (%) ]<sup>1</sup>

Year	Cost Benchmark Score
2004	-45.00%
2005	-49.90%
2006	-50.80%
2007	-47.60%
2008	-52.10%
2009	-47.60%
2010	-46.80%
2011	-47.40%
2012	-44.70%
2013	-43.90%
2014	-45.30%
2015	-43.70%
2016	-45.60%
2017	-45.60%
2018	-45.30%
2019	-44.50%
2020	-43.60%
2021	-42.50%
2022	-41.30%
<b>Average 2004-2016</b>	<b>-46.95%</b>
<b>Average 2014-2016</b>	<b>-44.87%</b>
<b>Average 2019-2022</b>	<b>-42.98%</b>

<sup>1</sup> Formula for benchmark comparison is  $\ln(\text{Cost}^{\text{HOSSM}}/\text{Cost}^{\text{Bench}})$ .