

Empirical Research in Support of Incentive Rate-Setting: 2013 Benchmarking Update

Report to the Ontario Energy Board

July 2014



Pacific Economics Group Research, LLC

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1. Introduction

In 2013 the Ontario Energy Board (“OEB”) issued a report titled “Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario’s Electricity Distributors”¹ (“Board Report”) in which it set forth the framework for setting rate adjustment formulas for local distribution companies (“LDCs”). According to the Board Report, rates will be indexed by a formula “which is used to adjust the distribution rates to reflect expected growth in the distributors’ input prices (the inflation factor) less allowance for appropriate rates of productivity and efficiency gains (the X-factor).”² The productivity part of the X-Factor is the same for all LDCs. The efficiency gains part of the X-Factor is called the stretch factor and can vary by company. This stretch factor reflects the potential for incremental productivity gains by a given LDC under incentive regulation which in turn depends on an individual distributor’s level of cost efficiency.

These stretch factor assignments are based on the results of a statistical cost benchmarking study designed to make inferences on individual distributors’ cost efficiency. An econometric model is used to predict the level of cost associated with each distributor’s operating conditions. Distributors that had actual cost that was lower than that predicted by the model were assigned lower stretch factors than those that did not. The October 18, 2013 report by Pacific Economics Group (“PEG”) study titled “Productivity and Benchmarking Research in Support of Incentive Rate Setting in Ontario” describes the model used to produce the benchmarking results. The purpose of this project is to update the stretch factors using 2013 data and the methodology for assigning stretch factors detailed in the Board Report and the PEG benchmarking study.

Section 2 of this report discusses the methodology used for the 2013 update. Section 3 discusses the data used. Section 4 presents the benchmarking results and updated stretch factors.

¹ Issued on November 21, 2013 and corrected on December 4, 2013.

² Board Report, page 5.



2. Benchmarking Methodology

The model used to determine the cost efficiency of distributors is based on econometrics. Distributor cost in this model is estimated as a function of business conditions faced by each distributor. These business conditions include the number of customers served and the price of inputs such as labor and capital. The parameters of this model establish the relationship between each business condition and distributor cost. These parameters were estimated using Ontario LDC data from 2002-2012.

The model can make a prediction of each distributor's cost given its business conditions by multiplying the company's business condition variables by the model parameters and summing the results³. The distributor's actual cost is then compared to that predicted by the model. The percentage difference between actual and predicted cost is the measure of cost performance. Companies with larger negative differences between actual and predicted costs are considered to be better cost performers and therefore eligible for lower stretch factors. A detailed description of the econometric model including estimation technique and other technical details are contained in sections 6 and A2.1 of the PEG report.

The econometric model used to obtain the updated stretch factors is identical to the model described in the PEG report. The Board intentionally decided not to update the parameters of the econometric model to include 2013 data. The goal was to establish a fixed benchmark that would allow companies a fair opportunity to demonstrate improved cost performance and earn a lower stretch factor. The parameters from the previous model were combined with each company's data – including 2013 data - to produce 2013 predicted cost. The rationale for this decision is discussed in the Board Report and in a memorandum by PEG that also makes some

³ The table of parameters published in the PEG report was for the full sample. When making predictions of cost for each company, the econometric program estimated the model without including the subject of benchmarking in the sample. Therefore, there exist 73 different sets of parameters which are very similar to each other. For ease of presentation, the PEG report did not present the parameters specific to each distributor. These company-specific parameters are necessary for the 2013 calculations and are contained within the working papers associated with this report.



corrections to the 2012 results.⁴ The PEG memorandum contains the corrected final results of the 2010-2012 benchmarking model used in this update.

In order to apply the 2013 values to the model parameters, the data must be transformed to be consistent with how the data were specified for the estimated econometric model. One example of a transformation is that many of the explanatory variables were expressed as logarithms prior to the model being estimated. The PEG report describes the details of the estimation process in section A2.1. The working papers associated with this report contain an excel spreadsheet that contains the all the necessary transformations.

The purpose of the benchmarking work is to evaluate the total cost incurred by each distributor. Table One shows the formulas used to calculate the measure of total cost used in PEG's benchmarking analysis. As described in the PEG benchmarking report, adjustments were undertaken with the purpose of standardizing cost in order to facilitate more accurate cost comparisons among distributors. These adjustments included the treatment of high voltage and low voltage costs.

The variables used to explain total cost are the same as in the previous PEG report. They include outputs such as customers, kWh deliveries, and capacity. Prices for capital and OM&A along with other business conditions such as customer growth and average length of lines are also included. A complete discussion of the explanatory variables can be found in section 6 of the PEG report. The explanatory variables are used to explain the level of cost incurred by each LDC. Cost that is not explained by the variables is deemed to be due to management performance.

3. Benchmarking Data

The source of the cost and output data used in the calculations is from the distributors as reported in RRR filings. The study assumes that the data as reported by the distributors conforms to guidelines described in the Accounting Procedures Handbook and other instructions contained within the RRR filing system. It is also assumed that the LDCs have taken ownership

⁴ Available on the OEB website in the file "PEG_Memorandum_OEB_on_corrections_20131220.pdf"+



Table 1

Calculation of 2013 Total Cost

Variable	Reference	Formula	Source
Total Cost		= OM&A + Capital Cost	Formula
OM&A		= A+B+C+D+E+F+G+I+J	Formula
2013 Operation	A		RRR
2013 Maintenance	B		RRR
2013 Billing and Collection	C		RRR
2013 Community Relations	D		RRR
2013 Administrative and General Expenses	E		RRR
2013 Insurance Expense	F		RRR
2013 Advertising Expenses	G		RRR
Adjustments to OM&A			
2013 Smart Meter	H	Not Applicable for 2013	OEB Staff
2013 HV Adjustment	I		RRR
2013 LV Adjustment	J		Hydro One Networks
Capital			
2012 Asset Price Index	K		PEG Report Working Papers
2012 Capital Price	L		PEG Report Working Papers
2012 Capital Quantity	M		PEG Report Working Papers
2012 Capital cost	N		PEG Report Working Papers
2013 Asset Price Index	O	=K x (EUCPI 2013 / EUCPI 2012)	Formula, Statistics Canada
2013 Capital Additions	P		RRR
2013 HV Capital Additions	Q		RRR
2013 Quantity of Capital Additions	R	=(P-Q) / O	Formula
Depreciation Rate	S	Fixed at 4.59% for All Years	PEG Report
2013 Capital Quantity	T	= M - S x M + R	Formula
2013 Rate of Return	U	= 4 months @ 5.91 + 8 months @ 5.98 = 5.96	OEB Staff
2013 Capital Price	V	=U x K + S x O	Formula
2013 Capital Cost	W	= V x T	Formula

of the data provided to the Board and significant revisions are not anticipated.⁵ The source of the input price data was Statistics Canada. The input price indexes used were the same as those used in PEG's original study.

The update was done in the same manner as the original work with a two exceptions. The first is that the Board has improved the quality of the capital additions data requested from the distributors. PEG has accordingly relied upon these newly-available capital additions data instead of inferring these data from changes in gross plant⁶. The second exception is related to the treatment of deferred smart meter OM&A expenses. In the previous report, an adjustment was made for the estimated amount of amortization that was included in the reported OM&A expenses as a result of clearing amounts from account 1555. Board staff has advised that due to improved reporting requirements, this adjustment is no longer necessary.

Table One describes the calculation of total cost. Table Two shows each distributor's growth in total cost from 2012 to 2013. As can be seen, the majority of distributors had cost growth or cost reductions in 2013 of 5% or less. All but five showed changes in within 10% of 2012 values. On average, the growth in cost was 2.6%, median cost growth was slightly higher at 2.9%. OM&A cost grew by an average of 6.0% while capital cost did not grow on average.

The econometric model estimates LDCs' costs as a function of distributor output, input price growth, and other business condition variables beyond management control. It will also produce a prediction of the level of cost consistent with these business conditions and thus

⁵ The Ontario Energy Board (the "Board") released the Report of the Board on Scorecard (EB-2010-0379) on March 5, 2014 (the "Scorecard Report") states that: *'While the Board will create consistent Scorecard reports for distributors, ownership of the data and Scorecard resides with the distributor.'*

⁶ This improvement in data quality also extends to the collection of smart meter capital additions. The previous study estimated capital additions for distribution capital exclusive of meters for the period 2006-2012 in order to be able to isolate the accounting treatment of smart meters. The capital expenditures on smart meters were gathered for each company via a supplemental data request. These capital expenditures were then used as a proxy for capital additions and added to the total. Board staff have reviewed the filing requirements and have determined that the 2013 additions reported by the companies should be suitable for use in benchmarking. Therefore, additional data collection of smart meter cost is no longer necessary.



Table 2

Total Cost by Distributor: 2012 vs. 2013

	OM&A Cost			Capital Cost			Total Cost		
	2012	2013	Percent Change	2012	2013	Percent Change	2012	2013	Percent Change
Algoma Power Inc.	9,344,954	10,672,392	13.3%	11,637,041	12,061,469	3.6%	20,981,995	22,733,861	8.0%
Atikokan Hydro Inc.	1,276,679	1,031,675	-21.3%	477,698	479,889	0.5%	1,754,377	1,511,565	-14.9%
Bluewater Power Distribution Corporation	10,898,384	11,982,293	9.5%	11,463,901	11,260,638	-1.8%	22,362,285	23,242,931	3.9%
Brant County Power Inc.	4,034,570	3,899,113	-3.4%	3,362,550	3,307,373	-1.7%	7,397,120	7,206,486	-2.6%
Brantford Power Inc.	7,799,196	8,727,540	11.2%	11,178,510	10,801,397	-3.4%	18,977,706	19,528,936	2.9%
Burlington Hydro Inc.	15,294,577	16,773,837	9.2%	23,080,181	22,349,707	-3.2%	38,374,757	39,123,544	1.9%
Cambridge And North Dumfries Hydro Inc.	13,013,048	14,096,634	8.0%	17,804,176	18,493,432	3.8%	30,817,223	32,590,066	5.6%
Canadian Niagara Power Inc.	7,763,192	8,474,686	8.8%	11,533,897	12,266,383	6.2%	19,297,089	20,741,069	7.2%
Centre Wellington Hydro Ltd.	2,177,203	2,048,511	-6.1%	1,802,203	2,069,458	13.8%	3,979,406	4,117,969	3.4%
Chapleau Public Utilities Corporation	631,919	629,802	-0.3%	188,477	184,934	-1.9%	820,396	814,736	-0.7%
Collus Power Corporation	4,546,539	4,438,351	-2.4%	3,802,246	3,693,997	-2.9%	8,348,785	8,132,348	-2.6%
Cooperative Hydro Embrun Inc.	527,731	634,625	18.4%	513,689	480,314	-6.7%	1,041,420	1,114,938	6.8%
E.L.K. Energy Inc.	2,301,329	2,251,429	-2.2%	2,490,380	2,351,659	-5.7%	4,791,709	4,603,088	-4.0%
Enersource Hydro Mississauga Inc.	50,243,869	52,980,754	5.3%	86,084,985	85,379,945	-0.8%	136,328,854	138,360,699	1.5%
Entegrus Powerlines	7,989,410	9,380,758	16.1%	11,923,935	12,062,450	1.2%	19,913,345	21,443,208	7.4%
Enwin Utilities Ltd.	25,470,629	21,511,933	-16.9%	34,865,142	34,602,624	-0.8%	60,335,771	56,114,557	-7.3%
Erie Thames Powerlines Corporation	4,853,651	5,504,432	12.6%	5,556,482	5,546,493	-0.2%	10,410,133	11,050,924	6.0%
Espanola Regional Hydro Distribution Corporation	1,305,451	1,295,367	-0.8%	738,721	725,251	-1.8%	2,044,172	2,020,618	-1.2%
Essex Powerlines Corporation	6,034,095	5,885,995	-2.5%	7,787,166	7,807,709	0.3%	13,821,261	13,693,704	-0.9%
Festival Hydro Inc.	4,528,911	4,923,387	8.4%	7,745,876	7,739,859	-0.1%	12,274,788	12,663,246	3.1%
Fort Frances Power Corporation	1,519,108	1,428,272	-6.2%	888,315	869,730	-2.1%	2,407,423	2,298,002	-4.7%
Greater Sudbury Hydro Inc.	12,803,057	11,080,580	-14.4%	15,543,973	15,268,858	-1.8%	28,347,030	26,349,437	-7.3%
Grimsby Power Incorporated	2,862,102	2,653,353	-7.6%	3,090,197	3,043,922	-1.5%	5,952,300	5,697,275	-4.4%
Guelph Hydro Electric Systems Inc.	13,183,392	14,769,960	11.4%	17,068,444	17,048,266	-0.1%	30,251,836	31,818,226	5.0%
Haldimand County Hydro Inc.	8,017,287	7,405,150	-7.9%	6,724,771	7,053,403	4.8%	14,742,058	14,458,553	-1.9%
Halton Hills Hydro Inc.	5,536,317	4,821,336	-13.8%	8,747,736	8,973,989	2.6%	14,284,052	13,795,325	-3.5%
Hearst Power Distribution Company Limited	823,872	830,789	0.8%	341,018	323,871	-5.2%	1,164,890	1,154,661	-0.9%
Horizon Utilities Corporation	46,250,267	53,770,377	15.1%	65,205,021	65,449,395	0.4%	111,455,288	119,219,771	6.7%
Hydro 2000 Inc.	488,455	504,541	3.2%	150,312	143,051	-5.0%	638,767	647,592	1.4%
Hydro Hawkesbury Inc.	964,306	1,084,232	11.7%	496,545	482,818	-2.8%	1,460,851	1,567,050	7.0%
Hydro One Brampton Networks Inc.	19,523,282	22,922,932	16.1%	61,432,767	62,611,816	1.9%	80,956,049	85,534,748	5.5%
Hydro One Networks Inc.	509,039,133	561,763,830	9.9%	762,026,378	714,915,315	-6.4%	1,271,065,511	1,276,679,145	0.4%
Hydro Ottawa Limited	69,443,905	70,831,893	2.0%	106,561,196	111,356,553	4.4%	176,005,102	182,188,446	3.5%
Innisfil Hydro Distribution Systems Limited	4,715,318	4,983,184	5.5%	6,122,720	6,251,667	2.1%	10,838,037	11,234,850	3.6%
Kenora Hydro Electric Corporation Ltd.	1,805,783	1,854,498	2.7%	1,126,235	1,105,187	-1.9%	2,932,019	2,959,685	0.9%
Kingston Hydro Corporation	5,873,203	6,643,269	12.3%	7,322,822	7,354,110	0.4%	13,196,025	13,997,379	5.9%
Kitchener	13,712,945	15,004,498	9.0%	26,337,710	26,935,883	2.2%	40,050,655	41,940,381	4.6%
Lakefront Utilities Inc.	2,112,426	2,511,656	17.3%	2,085,756	2,068,176	-0.8%	4,198,182	4,579,831	8.7%
Lakeland Power Distribution Ltd.	3,094,802	3,727,137	18.6%	3,123,894	3,105,555	-0.6%	6,218,697	6,832,692	9.4%
London Hydro Inc.	29,512,195	30,754,942	4.1%	39,793,289	39,627,172	-0.4%	69,305,485	70,382,114	1.5%
Midland Power Utility Corporation	2,282,499	2,235,312	-2.1%	2,414,878	2,405,395	-0.4%	4,697,377	4,640,707	-1.2%
Milton Hydro Distribution Inc.	6,718,637	8,382,166	22.1%	14,087,319	13,885,854	-1.4%	20,805,956	22,268,020	6.8%

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Total Cost by Distributor: 2012 vs. 2013

	OM&A Cost			Capital Cost			Total Cost		
	2012	2013	Percent Change	2012	2013	Percent Change	2012	2013	Percent Change
Newmarket	6,631,888	7,255,412	9.0%	11,530,459	11,542,366	0.1%	18,162,347	18,797,778	3.4%
Niagara Peninsula Energy Inc.	14,194,450	13,580,949	-4.4%	20,816,934	20,834,453	0.1%	35,011,383	34,415,402	-1.7%
Niagara-On-The-Lake Hydro Inc.	1,956,396	2,146,011	9.3%	3,928,108	3,890,131	-1.0%	5,884,503	6,036,142	2.5%
Norfolk Power Distribution Inc.	5,957,976	5,932,696	-0.4%	7,508,848	7,396,521	-1.5%	13,466,824	13,329,218	-1.0%
North Bay Hydro Distribution Limited	5,223,313	5,533,893	5.8%	9,119,327	9,174,129	0.6%	14,342,640	14,708,022	2.5%
Northern Ontario Wires Inc.	2,463,137	2,685,165	8.6%	1,342,023	1,484,059	10.1%	3,805,160	4,169,224	9.1%
Oakville Hydro Electricity Distribution Inc.	13,122,738	16,795,534	24.7%	31,424,569	30,499,177	-3.0%	44,547,307	47,294,711	6.0%
Orangeville Hydro Limited	3,031,389	3,315,703	9.0%	3,417,045	3,325,594	-2.7%	6,448,434	6,641,298	2.9%
Orillia Power Distribution Corporation	4,587,513	4,440,795	-3.3%	3,207,920	3,370,879	5.0%	7,795,433	7,811,673	0.2%
Oshawa PUC Networks Inc.	10,665,324	10,496,484	-1.6%	16,555,731	16,742,890	1.1%	27,221,055	27,239,374	0.1%
Ottawa River Power Corporation	2,683,611	3,114,733	14.9%	2,314,816	2,297,662	-0.7%	4,998,427	5,412,395	8.0%
Parry Sound Power Corporation	1,362,933	1,616,081	17.0%	1,067,975	1,170,226	9.1%	2,430,908	2,786,307	13.6%
Peterborough Distribution Incorporated	6,408,729	7,788,114	19.5%	12,682,146	12,364,177	-2.5%	19,090,875	20,152,291	5.4%
Powerstream Inc.	72,205,853	77,277,917	6.8%	147,329,585	149,127,719	1.2%	219,535,438	226,405,635	3.1%
PUC Distribution Inc.	9,300,318	11,448,896	20.8%	11,039,503	11,484,981	4.0%	20,339,820	22,933,877	12.0%
Renfrew Hydro Inc.	1,193,548	1,238,889	3.7%	1,170,325	1,130,662	-3.4%	2,363,873	2,369,550	0.2%
Rideau St. Lawrence Distribution Inc.	1,743,359	1,830,016	4.9%	1,051,280	1,035,425	-1.5%	2,794,639	2,865,441	2.5%
Sioux Lookout Hydro Inc.	1,382,139	1,383,941	0.1%	861,423	836,234	-3.0%	2,243,561	2,220,174	-1.0%
St. Thomas Energy Inc.	4,701,996	3,817,984	-20.8%	4,747,094	4,635,216	-2.4%	9,449,090	8,453,200	-11.1%
Thunder Bay Hydro Electricity Distribution Inc.	12,111,748	13,010,456	7.2%	16,272,496	16,336,816	0.4%	28,384,244	29,347,271	3.3%
Tillsonburg Hydro Inc.	2,366,184	2,971,581	22.8%	2,157,231	2,078,980	-3.7%	4,523,415	5,050,561	11.0%
Toronto Hydro-Electric System Limited	211,458,815	232,504,073	9.5%	435,592,634	446,117,008	2.4%	647,051,449	678,621,081	4.8%
Veridian Connections Inc.	24,873,631	24,791,293	-0.3%	38,871,421	36,716,863	-5.7%	63,745,052	61,508,156	-3.6%
Wasaga Distribution Inc.	2,626,599	2,710,686	3.2%	2,471,818	2,510,806	1.6%	5,098,417	5,221,492	2.4%
Waterloo North Hydro Inc.	9,445,450	12,543,732	28.4%	26,490,219	26,910,118	1.6%	35,935,669	39,453,850	9.3%
Welland Hydro-Electric System Corp.	5,879,790	5,889,642	0.2%	4,755,958	4,653,232	-2.2%	10,635,748	10,542,875	-0.9%
Wellington North Power Inc.	1,524,561	1,724,131	12.3%	1,176,698	1,177,200	0.0%	2,701,259	2,901,330	7.1%
West Coast Huron Energy Inc.	1,660,820	1,830,008	9.7%	1,137,326	1,253,215	9.7%	2,798,146	3,083,223	9.7%
Westario Power Inc.	4,568,604	5,723,054	22.5%	6,900,093	6,774,353	-1.8%	11,468,698	12,497,407	8.6%
Whitby Hydro Electric Corporation	8,762,358	10,650,328	19.5%	15,802,170	15,817,326	0.1%	24,564,528	26,467,655	7.5%
Woodstock Hydro Services Inc.	3,717,435	4,080,997	9.3%	7,452,651	7,394,128	-0.8%	11,170,086	11,475,125	2.7%
Average			6.06%			-0.03%			2.60%
Median			8.00%			-0.59%			2.95%

“explain” some of the observed cost level. As described in the PEG benchmarking report, changes not accounted for by these factors are deemed to be due to management performance. The parameter estimates measure the cost impact of the different business conditions and are presented on Table 16 of the PEG benchmarking report.

The first of the cost drivers is output quantity. The model uses three measures for the quantity of distributor output. The first is the number of customers served and the second is kWh delivered. The third is a proxy for the capacity of the distribution system. The capacity variable is described in the PEG report and is equal to the largest peak load experienced as of the current year of data. For example, the 2012 value for the capacity variable is equal to largest reported system summer or winter kW in all the years 2002-2012. Therefore, for 2013, this capacity variable only increased if the distributor’s kW demand in that year exceeded kW demand in every year between 2002 and 2012. Of the three output variables, the model estimates that the number of customers has the largest impact on cost, followed by the system capacity variable. The kWh delivered was the least important of the output variables. For the average company, the number of customers was found to be a more important cost driver than the other two combined. For each 1% change in number of customers, cost was estimated to change by 0.44%.

The second group of cost drivers were input prices for capital and OM&A. For the average company, the cost impact of changes in the capital price was found to be almost twice as important as that for OM&A. For every 1% change in capital price, the impact on total cost was about 0.63%. The corresponding impact for changes in the OM&A price was 0.37%. The relevant indexes were updated to include 2013 data. For the OM&A price, the growth in average weekly earnings and that for the GDP price index for final domestic demand (“GDPIPI FDD”) were calculated. The 2013 growth in the OM&A price index is calculated as 70% times average weekly earnings growth plus 30% times GDPIPI FDD growth. The 2012 values for the OM&A price index from the previous report were escalated by the growth that occurred in 2013. The capital price calculation is based upon an asset price index, an economic depreciation rate, and a rate of return. The depreciation rate is fixed at 4.59% consistent with the previous work. The rate of return is a weighted average of the rates for return on equity, long term debt, and short term debt as per the OEB. Because these values are available for January and May of 2013, a weighted average was taken of the two values. The weight given to the January value (4/12)



assumes that the first value was in effect from January 1 to April 30. The weight given to the May (8/12) assumes that it was in effect starting May 1. The asset price index was the Electric Utility Construction Price Index as calculated by Statistics Canada. The formula used to update the capital price index is shown on Table One.

The last group of cost drivers consists of other business condition variables. The first was the percentage of customers added over the last ten years. The second was the average km of distribution line. In each case these variables were updated to include 2013 data. For each 1% change in line length, total cost was estimated to increase by 0.29%. The model also contains a time trend that accounts for changes in cost over time that are not accounted for by the other cost drivers. This variable estimates that cost should rise by 1.7% per year for reasons not identified by other variables in the model.

4. Benchmarking Results and Updated Stretch Factors

Table Three presents benchmarking results for each distributor. The first column contains the three year, 2010-2012 average difference between actual and predicted costs from the December 2013 PEG Memorandum. The next column presents the same results for the year 2013. Most companies had 2013 benchmarking results within 5% of their average, measured benchmarking performance in 2010-2012. All but six distributors had cost performance within 10% of their 2010-2012 average results.

The third column presents the 2011-2013 average benchmarking results for all distributors. All but four distributors had average cost performance that changed by less than 5%. Average 2011-2013 performance deteriorated by 0.7% relative to 2010-2012 levels. This decline in average performance is due to the exclusion of 2010 from the three year average because average performance in 2010 was superior to that of 2011-2012.

Updated stretch factors are assigned based on a three-year average of actual less predicted cost over the 2011-2013 period. As discussed in the Board Report, distributors that averaged 25% or more below cost received the lowest stretch factor of 0%. Those that averaged between 10% and 25% below cost received a stretch factor of 0.15%. Those within 10% of predicted cost received a stretch factor of 0.30%. Those distributors that had cost in excess of 10% to 25% of



Table 3

Summary of Benchmarking Results

	Actual Cost less Predicted Cost			Difference from 2010- 2012
	2010-2012 Final Results	2013	2011-2013	
Algoma Power Inc.	65.5%	71.1%	68.5%	3.0%
Atikokan Hydro Inc.	18.5%	12.0%	17.5%	-1.0%
Bluewater Power Distribution Corporation	1.6%	5.8%	4.6%	3.0%
Brant County Power Inc.	16.5%	5.0%	13.0%	-3.5%
Brantford Power Inc.	2.0%	0.5%	0.9%	-1.1%
Burlington Hydro Inc.	-7.9%	-7.9%	-8.0%	-0.1%
Cambridge And North Dumfries Hydro Inc.	-7.0%	0.0%	-3.7%	3.4%
Canadian Niagara Power Inc.	14.0%	13.9%	13.2%	-0.8%
Centre Wellington Hydro Ltd.	-4.4%	0.0%	-1.5%	2.9%
Chapleau Public Utilities Corporation	18.8%	20.7%	19.8%	1.0%
Collus Power Corporation	-6.3%	-12.5%	-7.7%	-1.5%
Cooperative Hydro Embrun Inc.	-20.9%	-20.1%	-21.2%	-0.3%
E.L.K. Energy Inc.	-26.6%	-33.2%	-28.3%	-1.7%
Enersource Hydro Mississauga Inc.	-11.7%	-11.3%	-12.3%	-0.6%
Entegrus Powerlines	-12.5%	-12.6%	-12.3%	0.2%
Enwin Utilities Ltd.	19.5%	10.0%	16.9%	-2.6%
Erie Thames Powerlines Corporation	11.1%	7.9%	8.7%	-2.3%
Espanola Regional Hydro Distribution Corporation	-20.0%	-19.3%	-18.9%	1.1%
Essex Powerlines Corporation	-15.5%	-17.5%	-15.7%	-0.2%
Festival Hydro Inc.	19.6%	19.5%	19.2%	-0.3%
Fort Frances Power Corporation	12.3%	6.5%	9.6%	-2.8%
Greater Sudbury Hydro Inc.	9.5%	4.9%	11.9%	2.4%
Grimsby Power Incorporated	-17.1%	-17.4%	-15.2%	1.9%
Guelph Hydro Electric Systems Inc.	8.3%	-0.1%	4.2%	-4.2%
Haldimand County Hydro Inc.	-23.5%	-23.8%	-22.2%	1.3%
Halton Hills Hydro Inc.	-26.5%	-36.2%	-29.5%	-3.0%

Table 3

Summary of Benchmarking Results

	Actual Cost less Predicted Cost			Difference from 2010- 2012
	2010-2012 Final Results	2013	2011-2013	
Hearst Power Distribution Company Limited	-28.3%	-33.1%	-30.6%	-2.3%
Horizon Utilities Corporation	-11.2%	-5.7%	-8.8%	2.4%
Hydro 2000 Inc.	-9.3%	-1.0%	-4.7%	4.6%
Hydro Hawkesbury Inc.	-59.0%	-51.2%	-55.5%	3.5%
Hydro One Brampton Networks Inc.	-7.4%	-6.9%	-7.8%	-0.4%
Hydro One Networks Inc.	58.2%	27.4%	47.8%	-10.4%
Hydro Ottawa Limited	1.7%	8.2%	4.5%	2.8%
Innisfil Hydro Distribution Systems Limited	-5.2%	-3.0%	-3.9%	1.3%
Kenora Hydro Electric Corporation Ltd.	-7.1%	-10.5%	-6.8%	0.3%
Kingston Hydro Corporation	1.6%	3.7%	2.8%	1.2%
Kitchener	-22.2%	-19.8%	-21.1%	1.0%
Lakefront Utilities Inc.	-15.3%	-7.6%	-12.9%	2.4%
Lakeland Power Distribution Ltd.	-10.4%	-6.5%	-10.05%	0.3%
London Hydro Inc.	-12.7%	-11.2%	-10.8%	1.9%
Midland Power Utility Corporation	17.7%	18.1%	18.2%	0.5%
Milton Hydro Distribution Inc.	-14.9%	-6.6%	-15.7%	-0.8%
Newmarket	-18.3%	-19.8%	-20.1%	-1.7%
Niagara Peninsula Energy Inc.	6.9%	0.8%	5.4%	-1.5%
Niagara-On-The-Lake Hydro Inc.	5.6%	-1.0%	2.7%	-2.9%
Norfolk Power Distribution Inc.	0.5%	1.1%	1.5%	1.0%
North Bay Hydro Distribution Limited	5.0%	5.2%	5.5%	0.5%
Northern Ontario Wires Inc.	-33.3%	-21.4%	-27.6%	5.7%
Oakville Hydro Electricity Distribution Inc.	10.2%	13.2%	12.0%	1.8%
Orangeville Hydro Limited	-0.1%	-0.2%	0.7%	0.8%
Orillia Power Distribution Corporation	-3.1%	-4.9%	-3.5%	-0.5%
Oshawa PUC Networks Inc.	-18.1%	-17.6%	-16.7%	1.4%

Table 3

Summary of Benchmarking Results

	Actual Cost less Predicted Cost			Difference from 2010- 2012
	2010-2012 Final Results	2013	2011-2013	
Ottawa River Power Corporation	-0.1%	4.3%	2.3%	2.4%
Parry Sound Power Corporation	3.9%	14.1%	7.0%	3.1%
Peterborough Distribution Incorporated	14.3%	14.5%	14.4%	0.2%
Powerstream Inc.	-4.2%	2.2%	-1.0%	3.2%
PUC Distribution Inc.	-0.1%	22.6%	10.2%	10.4%
Renfrew Hydro Inc.	17.3%	15.5%	17.4%	0.1%
Rideau St. Lawrence Distribution Inc.	-10.4%	-7.3%	-9.3%	1.1%
Sioux Lookout Hydro Inc.	2.1%	2.9%	2.9%	0.8%
St. Thomas Energy Inc.	-1.4%	-0.5%	0.6%	2.0%
Thunder Bay Hydro Electricity Distribution Inc.	4.9%	8.1%	4.4%	-0.5%
Tillsonburg Hydro Inc.	12.2%	19.3%	14.1%	1.9%
Toronto Hydro-Electric System Limited	44.8%	48.3%	47.0%	2.2%
Veridian Connections Inc.	-2.3%	-4.8%	-2.3%	-0.1%
Wasaga Distribution Inc.	-43.6%	-42.1%	-42.1%	1.6%
Waterloo North Hydro Inc.	2.5%	10.1%	7.0%	4.4%
Welland Hydro-Electric System Corp.	-15.4%	-15.3%	-14.0%	1.4%
Wellington North Power Inc.	12.7%	17.5%	16.1%	3.4%
West Coast Huron Energy Inc.	21.7%	41.2%	30.7%	9.0%
Westario Power Inc.	-1.5%	2.0%	0.2%	1.7%
Whitby Hydro Electric Corporation	-3.2%	-2.2%	-4.1%	-0.9%
Woodstock Hydro Services Inc.	31.8%	28.1%	30.0%	-1.8%
Average	-0.89%	-0.08%	-0.17%	0.73%

that predicted received a stretch factor of 0.45%. The few distributors that had cost in excess of 25% were assigned the highest stretch factor of 0.60%.

Table Four presents a summary of previous and updated performance and stretch factors. The stretch factors for most companies were not influenced by the 2013 update. Seven companies did have different stretch factors and they are highlighted in bold type on the table. Of those companies that have new stretch factors, six have increased and two have decreased. Of the seven changes, five had performance changes of 3% or less. Table Five presents the 2013 stretch factor assignments in the format of Appendix D of the Board report.



Table 4

Summary of Stretch Factor Assignments

	2010-2012		2011-2013		Change in Stretch Factor
	Benchmarking Performance	Stretch Factor	Benchmarking Performance	Stretch Factor	
Algoma Power Inc.	65.5%	0.60	68.5%	0.60	NO
Atikokan Hydro Inc.	18.5%	0.45	17.5%	0.45	NO
Bluewater Power Distribution Corporation	1.6%	0.30	4.6%	0.30	NO
Brant County Power Inc.	16.5%	0.45	13.0%	0.45	NO
Brantford Power Inc.	2.0%	0.30	0.9%	0.30	NO
Burlington Hydro Inc.	-7.9%	0.30	-8.0%	0.30	NO
Cambridge And North Dumfries Hydro Inc.	-7.0%	0.30	-3.7%	0.30	NO
Canadian Niagara Power Inc.	14.0%	0.45	13.2%	0.45	NO
Centre Wellington Hydro Ltd.	-4.4%	0.30	-1.5%	0.30	NO
Chapleau Public Utilities Corporation	18.8%	0.45	19.8%	0.45	NO
Collus Power Corporation	-6.3%	0.30	-7.7%	0.30	NO
Cooperative Hydro Embrun Inc.	-20.9%	0.15	-21.2%	0.15	NO
E.L.K. Energy Inc.	-26.6%	0.00	-28.3%	0.00	NO
Enersource Hydro Mississauga Inc.	-11.7%	0.15	-12.3%	0.15	NO
Entegrus Powerlines	-12.5%	0.15	-12.3%	0.15	NO
Enwin Utilities Ltd.	19.5%	0.45	16.9%	0.45	NO
Erie Thames Powerlines Corporation	11.1%	0.45	8.7%	0.30	YES
Espanola Regional Hydro Distribution Corporation	-20.0%	0.15	-18.9%	0.15	NO
Essex Powerlines Corporation	-15.5%	0.15	-15.7%	0.15	NO
Festival Hydro Inc.	19.6%	0.45	19.2%	0.45	NO
Fort Frances Power Corporation	12.3%	0.45	9.6%	0.30	YES
Greater Sudbury Hydro Inc.	9.5%	0.30	11.9%	0.45	YES
Grimsby Power Incorporated	-17.1%	0.15	-15.2%	0.15	NO
Guelph Hydro Electric Systems Inc.	8.3%	0.30	4.2%	0.30	NO
Haldimand County Hydro Inc.	-23.5%	0.15	-22.2%	0.15	NO
Halton Hills Hydro Inc.	-26.5%	0.00	-29.5%	0.00	NO
Hearst Power Distribution Company Limited	-28.3%	0.00	-30.6%	0.00	NO
Horizon Utilities Corporation	-11.2%	0.15	-8.8%	0.30	YES
Hydro 2000 Inc.	-9.3%	0.30	-4.7%	0.30	NO
Hydro Hawkesbury Inc.	-59.0%	0.00	-55.5%	0.00	NO

Table 4

Summary of Stretch Factor Assignments

	2010-2012		2011-2013		Change in Stretch Factor
	Benchmarking Performance	Stretch Factor	Benchmarking Performance	Stretch Factor	
Hydro One Brampton Networks Inc.	-7.4%	0.30	-7.8%	0.30	NO
Hydro One Networks Inc.	58.2%	0.60	47.8%	0.60	NO
Hydro Ottawa Limited	1.7%	0.30	4.5%	0.30	NO
Innisfil Hydro Distribution Systems Limited	-5.2%	0.30	-3.9%	0.30	NO
Kenora Hydro Electric Corporation Ltd.	-7.1%	0.30	-6.8%	0.30	NO
Kingston Hydro Corporation	1.6%	0.30	2.8%	0.30	NO
Kitchener	-22.2%	0.15	-21.1%	0.15	NO
Lakefront Utilities Inc.	-15.3%	0.15	-12.9%	0.15	NO
Lakeland Power Distribution Ltd.	-10.4%	0.15	-10.1%	0.15	NO
London Hydro Inc.	-12.7%	0.15	-10.8%	0.15	NO
Midland Power Utility Corporation	17.7%	0.45	18.2%	0.45	NO
Milton Hydro Distribution Inc.	-14.9%	0.15	-15.7%	0.15	NO
Newmarket	-18.3%	0.15	-20.1%	0.15	NO
Niagara Peninsula Energy Inc.	6.9%	0.30	5.4%	0.30	NO
Niagara-On-The-Lake Hydro Inc.	5.6%	0.30	2.7%	0.30	NO
Norfolk Power Distribution Inc.	0.5%	0.30	1.5%	0.30	NO
North Bay Hydro Distribution Limited	5.0%	0.30	5.5%	0.30	NO
Northern Ontario Wires Inc.	-33.3%	0.00	-27.6%	0.00	NO
Oakville Hydro Electricity Distribution Inc.	10.2%	0.45	12.0%	0.45	NO
Orangeville Hydro Limited	-0.1%	0.30	0.7%	0.30	NO
Orillia Power Distribution Corporation	-3.1%	0.30	-3.5%	0.30	NO
Oshawa PUC Networks Inc.	-18.1%	0.15	-16.7%	0.15	NO
Ottawa River Power Corporation	-0.1%	0.30	2.3%	0.30	NO
Parry Sound Power Corporation	3.9%	0.30	7.0%	0.30	NO
Peterborough Distribution Incorporated	14.3%	0.45	14.4%	0.45	NO
Powerstream Inc.	-4.2%	0.30	-1.0%	0.30	NO
PUC Distribution Inc.	-0.1%	0.30	10.2%	0.45	YES
Renfrew Hydro Inc.	17.3%	0.45	17.4%	0.45	NO
Rideau St. Lawrence Distribution Inc.	-10.4%	0.15	-9.3%	0.30	YES
Sioux Lookout Hydro Inc.	2.1%	0.30	2.9%	0.30	NO

Table 4

Summary of Stretch Factor Assignments

	2010-2012		2011-2013		Change in Stretch Factor
	Benchmarking Performance	Stretch Factor	Benchmarking Performance	Stretch Factor	
St. Thomas Energy Inc.	-1.4%	0.30	0.6%	0.30	NO
Thunder Bay Hydro Electricity Distribution Inc.	4.9%	0.30	4.4%	0.30	NO
Tillsonburg Hydro Inc.	12.2%	0.45	14.1%	0.45	NO
Toronto Hydro-Electric System Limited	44.8%	0.60	47.0%	0.60	NO
Veridian Connections Inc.	-2.3%	0.30	-2.3%	0.30	NO
Wasaga Distribution Inc.	-43.6%	0.00	-42.1%	0.00	NO
Waterloo North Hydro Inc.	2.5%	0.30	7.0%	0.30	NO
Welland Hydro-Electric System Corp.	-15.4%	0.15	-14.0%	0.15	NO
Wellington North Power Inc.	12.7%	0.45	16.1%	0.45	NO
West Coast Huron Energy Inc.	21.7%	0.45	30.7%	0.60	YES
Westario Power Inc.	-1.5%	0.30	0.2%	0.30	NO
Whitby Hydro Electric Corporation	-3.2%	0.30	-4.1%	0.30	NO
Woodstock Hydro Services Inc.	31.8%	0.60	30.0%	0.60	NO

Table 5

Stretch Factor Assignments by Group

Group I	Group II	Group III	Group IV	Group V
Stretch Factor = 0%	Stretch Factor = 0.15%	Stretch Factor = 0.30%	Stretch Factor = 0.45%	Stretch Factor = 0.60%
E.L.K. Energy Inc.	Cooperative Hydro Embrun Inc.	Bluewater Power Distribution Corporation	Atikokan Hydro Inc.	Algoma Power Inc.
Halton Hills Hydro Inc.	Enerource Hydro Mississauga Inc.	Brantford Power Inc.	Brant County Power Inc.	Hydro One Networks Inc.
Hearst Power Distribution Company Limited	Entegrus Powerlines	Burlington Hydro Inc.	Canadian Niagara Power Inc.	Toronto Hydro-Electric System Limited
Hydro Hawkesbury Inc.	Espanola Regional Hydro Distribution Corporation	Cambridge And North Dumfries Hydro Inc.	Chapleau Public Utilities Corporation	West Coast Huron Energy Inc.
Northern Ontario Wires Inc.	Essex Powerlines Corporation	Centre Wellington Hydro Ltd.	Enwin Utilities Ltd.	Woodstock Hydro Services Inc.
Wasaga Distribution Inc.	Grimsby Power Incorporated	Collus Power Corporation	Festival Hydro Inc.	
	Haldimand County Hydro Inc.	Erie Thames Powerlines Corporation	Greater Sudbury Hydro Inc.	
	Kitchener	Fort Frances Power Corporation	Midland Power Utility Corporation	
	Lakefront Utilities Inc.	Guelph Hydro Electric Systems Inc.	Oakville Hydro Electricity Distribution Inc.	
	Lakeland Power Distribution Ltd.	Horizon Utilities Corporation	Peterborough Distribution Incorporated	
	London Hydro Inc.	Hydro 2000 Inc.	PUC Distribution Inc.	
	Milton Hydro Distribution Inc.	Hydro One Brampton Networks Inc.	Renfrew Hydro Inc.	
	Newmarket	Hydro Ottawa Limited	Tillsonburg Hydro Inc.	
	Oshawa PUC Networks Inc.	Innisfil Hydro Distribution Systems Limited	Wellington North Power Inc.	
	Welland Hydro-Electric System Corp.	Kenora Hydro Electric Corporation Ltd.		
		Kingston Hydro Corporation		
		Niagara Peninsula Energy Inc.		
		Niagara-On-The-Lake Hydro Inc.		
		Norfolk Power Distribution Inc.		
		North Bay Hydro Distribution Limited		
		Orangeville Hydro Limited		
		Orillia Power Distribution Corporation		
		Ottawa River Power Corporation		
		Parry Sound Power Corporation		
		Powerstream Inc.		
		Rideau St. Lawrence Distribution Inc.		
		Sioux Lookout Hydro Inc.		
		St. Thomas Energy Inc.		
		Thunder Bay Hydro Electricity Distribution Inc.		
		Veridian Connections Inc.		
		Waterloo North Hydro Inc.		
		Westario Power Inc.		
		Whitby Hydro Electric Corporation		