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Economic and Litigation Consulting

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## **EFFICIENCY RANKING AND COHORTS FOR THE 2009 RATE YEAR**

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Pacific Economics Group (PEG) has updated its benchmarking evaluations of the operations, maintenance and administrative (OM&A) costs of Ontario's electricity distributors to include 2007 data. These benchmarking evaluations were used to divide the Ontario industry into three efficiency "cohorts." These efficiency cohorts were established using two comparative cost measures computed by PEG: an econometric benchmark and a unit cost benchmark. The methodology for setting the three efficiency cohorts using these two benchmarking evaluations is described in the July 15, 2008 Report of the Board on 3<sup>rd</sup> Generation Incentive Regulation (pp. 21-23). Distributors in each efficiency cohort will be assigned a productivity stretch factor for the 2009 rate year based on their OM&A cost evaluations for the 2005-2007 period. The assigned stretch factors will be the same for all companies in a given cohort but will differ between cohorts.

PEG's initial benchmarking evaluations were presented in our March 20, 2008 report to the Staff. Our updated evaluations use benchmarking methods and model specifications that are identical to those described in our March 2008 report. The updated results therefore reflect the impact of new data that became available since our original report and not any changes in benchmarking techniques. Interested parties can review the March 2008 PEG report for a description of these benchmarking methods.

Our updated results are summarized in the first two tables below. The first table is titled "Updated Performance Rankings Based on Econometric Benchmarks." This table updates the cost evaluations based on PEG's econometric model, which were previously presented in Table 4 in the March 2008 PEG report. The next table is titled "Updated Performance Rankings Based on Unit Cost Indexes." This table updates the cost evaluations based on PEG's unit cost rankings (relative to selected peers), which were

previously presented in Table 7 in the March 2008 PEG report. Because three mergers took place in the industry in 2007, the updated tables below present rankings for 83 distributors whereas the tables in the March 2008 report presented rankings for 86 companies. For the firms merging in 2007, PEG aggregated data on each of the merged companies, and the combined data for the successor, merged entity was used as the basis for updated benchmarking evaluations in all previous years as well as in 2007.<sup>1</sup>

A comparison of the first two tables below to the comparable tables in our March 2008 report reveals that performance rankings are very similar on both the econometric and unit cost benchmarking models. Any differences in rankings will be overwhelmingly due to differences in the OM&A costs reported by a distributor in 2007 relative to the costs reported for 2004-2006, which were the basis for PEG's previous benchmark rankings.<sup>2</sup> This is not in principle a cause for concern, because changes in a company's actual costs can in fact be indicative of a change in relative cost performance (compared, for example, to the expected costs for the entire industry or the average costs of peer firms). Accordingly, changes in company costs from year to year can, and often will, be appropriately reflected in changes in cost performance rankings.

The final table below is titled "Efficiency Cohort Rankings: 2007 Data Update." This table presents the firms that are identified to be in each of the three efficiency cohorts. A company will be in efficiency cohort 1 if it is statistically superior on the econometric benchmarking model and in the top quartile on the unit cost benchmarking model. A company will be in efficiency cohort 3 if it is statistically inferior on the econometric benchmarking model and in the bottom quartile on the unit cost benchmarking model. All other companies will be in efficiency cohort 2. PEG's analysis

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<sup>1</sup> The "Updated Performance Rankings Based on Unit Cost Indexes" table actually presents results for 82 companies; Hydro One is not presented here since PEG's analysis did not identify any peers for the company in Ontario. Given the methodology developed and described in PEG's March 2008 comparative cost report, Hydro One would have a default value of 1.0 in column [A] of the updated unit cost rankings table, but this value would not be comparable to the unit cost comparisons developed for the other distributors. Because it has no identified peers, the stretch factor for Hydro One (and only for Hydro One) will be based entirely on its econometric benchmark.

<sup>2</sup> In some cases, rankings may also be affected by changes in a distributor's business condition variables, such as customer numbers and kWh deliveries, which could impact the company's predicted OM&A costs or the comprehensive output quantity measure used to compute unit costs. Results are not materially impacted by PEG's benchmarking techniques which, as discussed, have not been changed from the March 2008 report.

of distributors' OM&A cost performance over the 2005-2007 period indicates that there are 11 firms in cohort 1, 61 firms in cohort 2, and 11 firms in cohort 3.

## Updated Performance Rankings Based on Econometric Benchmarks

	Years Benchmarked	Actual/Predicted <sup>1</sup>	Deviation		Cost surplus (savings) in \$ <sup>1</sup>	Rank <sup>1</sup>
			Percentage [A-1] <sup>1</sup>	P-Value		
Hydro Hawkesbury	2005-2007	<b>0.643</b>	-0.357	0.000	-416,444	1
Chatham-Kent Hydro	2005-2007	<b>0.691</b>	-0.309	0.001	-2,313,018	2
Northern Ontario Wires	2005-2007	<b>0.711</b>	-0.289	0.001	-705,028	3
Cambridge and North Dumfries Hydro	2005-2007	<b>0.715</b>	-0.285	0.002	-3,034,920	4
E.L.K. Energy	2005-2007	<b>0.729</b>	-0.271	0.003	-601,804	5
Grimsby Power	2005-2007	<b>0.764</b>	-0.236	0.008	-478,794	6
Oshawa PUC Networks	2005-2007	<b>0.787</b>	-0.213	0.017	-2,221,025	7
Lakeland Power Distribution	2005-2007	<b>0.789</b>	-0.211	0.018	-559,491	8
Hydro One Brampton Networks	2005-2007	<b>0.793</b>	-0.207	0.020	-4,101,822	9
Kitchener-Wilmot Hydro	2005-2007	<b>0.805</b>	-0.195	0.027	-2,839,410	10
Renfrew Hydro	2005-2007	<b>0.807</b>	-0.193	0.028	-199,849	11
Barrie Hydro Distribution	2005-2007	<b>0.814</b>	-0.186	0.034	-1,850,592	12
Festival Hydro	2005-2007	<b>0.822</b>	-0.178	0.041	-750,153	13
Weiland Hydro-Electric System	2005-2007	<b>0.834</b>	-0.166	0.054	-773,255	14
Hydro 2000	2005-2007	<b>0.840</b>	-0.160	0.060	-45,934	15
Kingston Electricity Distribution	2005-2007	<b>0.860</b>	-0.140	0.090	-811,765	16
Horizon Utilities	2005-2007	<b>0.864</b>	-0.136	0.098	-5,820,769	17
Hydro Ottawa	2005-2007	<b>0.873</b>	-0.127	0.113	-6,195,021	18
Lakefront Utilities	2005-2007	<b>0.874</b>	-0.126	0.115	-261,407	19
Peninsula West Utilities	2005-2007	<b>0.878</b>	-0.122	0.123	-545,719	20
Waterloo North Hydro	2005-2007	<b>0.880</b>	-0.120	0.127	-1,194,434	21
Niagara-on-the-Lake Hydro	2005-2007	<b>0.894</b>	-0.106	0.158	-188,315	22
Rideau St. Lawrence Distribution	2005-2007	<b>0.899</b>	-0.101	0.173	-152,325	23
Kenora Hydro Electric	2005-2007	<b>0.904</b>	-0.096	0.185	-136,616	24
Innisfil Hydro Distribution Systems	2005-2007	<b>0.908</b>	-0.092	0.194	-298,822	25
Halton Hills Hydro	2005-2007	<b>0.914</b>	-0.086	0.212	-405,785	26
Peterborough Distribution	2005-2007	<b>0.914</b>	-0.086	0.213	-575,293	27
North Bay Hydro Distribution	2005-2007	<b>0.919</b>	-0.081	0.226	-456,910	28
Atikokan Hydro	2005-2007	<b>0.927</b>	-0.073	0.250	-54,498	29
Hearst Power Distribution	2005-2007	<b>0.932</b>	-0.068	0.265	-46,238	30
Newmarket & Tay Hydro Electric	2005-2007	<b>0.933</b>	-0.067	0.268	-417,294	31
Orangeville Hydro	2005-2007	<b>0.938</b>	-0.062	0.283	-120,406	32
Enersource Hydro Mississauga	2005-2007	<b>0.958</b>	-0.042	0.351	-1,889,630	33
Espanola Regional Hydro Distribution	2005-2007	<b>0.962</b>	-0.038	0.367	-35,985	34
PUC Distribution	2005-2007	<b>0.966</b>	-0.034	0.378	-254,775	35
Wellington North Power	2005-2007	<b>0.967</b>	-0.033	0.384	-33,540	36
Middlesex Power Distribution	2005-2007	<b>0.970</b>	-0.030	0.392	-45,568	37
Newbury Power	2005-2007	<b>0.977</b>	-0.023	0.416	-1,174	38
Wasaga Distribution	2005-2007	<b>0.984</b>	-0.016	0.445	-27,030	39
Veridian Connections	2005-2007	<b>0.991</b>	-0.009	0.469	-167,074	40
Hydro One Networks	2005-2007	<b>0.996</b>	-0.004	0.485	-1,767,914	41
Burlington Hydro	2005-2007	<b>1.008</b>	0.008	0.472	94,562	42
Brantford Power	2005-2007	<b>1.011</b>	0.011	0.461	78,433	43
Haldimand County Hydro	2005-2007	<b>1.016</b>	0.016	0.444	93,330	44
Westario Power	2005-2007	<b>1.017</b>	0.017	0.441	70,084	45
Tillsonburg Hydro	2005-2007	<b>1.019</b>	0.019	0.435	27,681	46
Toronto Hydro-Electric System	2005-2007	<b>1.021</b>	0.021	0.427	3,272,771	47
London Hydro	2005-2007	<b>1.028</b>	0.028	0.404	628,023	48
Woodstock Hydro Services	2005-2007	<b>1.037</b>	0.037	0.373	114,010	49
Ottawa River Power	2005-2007	<b>1.044</b>	0.044	0.350	88,132	50
Milton Hydro Distribution	2005-2007	<b>1.047</b>	0.047	0.342	190,225	51
Norfolk Power Distribution	2005-2007	<b>1.050</b>	0.050	0.332	200,408	52
Bluewater Power Distribution	2005-2007	<b>1.050</b>	0.050	0.331	443,693	53
Thunder Bay Hydro Electricity Distribution	2005-2007	<b>1.053</b>	0.053	0.324	553,335	54
Grand Valley Energy	2005-2007	<b>1.056</b>	0.056	0.314	11,676	55
Parry Sound Power	2005-2007	<b>1.063</b>	0.063	0.293	60,267	56
West Perth Power	2005-2007	<b>1.064</b>	0.064	0.290	29,879	57
COLLUS Power	2005-2007	<b>1.073</b>	0.073	0.265	204,362	58
Oakville Hydro Electricity Distribution	2005-2007	<b>1.077</b>	0.077	0.255	803,639	59
Cooperative Hydro Embrun	2005-2007	<b>1.080</b>	0.080	0.248	27,310	60
Clinton Power	2005-2007	<b>1.083</b>	0.083	0.238	35,164	61
Brant County Power	2005-2007	<b>1.087</b>	0.087	0.230	205,733	62
Orillia Power Distribution	2005-2007	<b>1.087</b>	0.087	0.229	271,369	63
St. Thomas Energy	2005-2007	<b>1.088</b>	0.088	0.228	270,810	64
Dutton Hydro	2004-2006	<b>1.096</b>	0.096	0.208	14,706	65
Sioux Lookout Hydro	2005-2007	<b>1.101</b>	0.101	0.197	97,927	66
Fort Erie (CNP)	2005-2007	<b>1.115</b>	0.115	0.167	468,542	67
Powerstream	2005-2007	<b>1.121</b>	0.121	0.155	4,428,320	68
Greater Sudbury-West Nipissing	2005-2007	<b>1.123</b>	0.123	0.151	1,238,979	69
Guelph Hydro Electric Systems	2005-2007	<b>1.131</b>	0.131	0.137	1,059,702	70
Fort Frances Power	2005-2007	<b>1.158</b>	0.158	0.097	148,566	71
Eastern Ontario Power (CNP)	2005-2007	<b>1.173</b>	0.173	0.079	198,188	72
Niagara Falls Hydro	2005-2007	<b>1.183</b>	0.183	0.068	1,290,947	73
Midland Power Utility	2005-2007	<b>1.202</b>	0.202	0.051	290,757	74
Centre Wellington Hydro	2005-2007	<b>1.203</b>	0.203	0.051	248,414	75
ENWIN Powerlines	2005-2007	<b>1.232</b>	0.232	0.032	4,620,731	76
Essex Powerlines	2005-2007	<b>1.247</b>	0.247	0.025	1,207,693	77
Whitby Hydro Electric	2005-2007	<b>1.261</b>	0.261	0.020	1,595,027	78
Chapleau Public Utilities	2005-2007	<b>1.328</b>	0.328	0.006	135,844	79
Erie Thames Powerlines	2005-2007	<b>1.365</b>	0.365	0.003	1,217,684	80
West Coast Huron Energy	2005-2007	<b>1.385</b>	0.385	0.002	369,873	81
Great Lakes Power	2005-2007	<b>1.441</b>	0.441	0.001	2,435,383	82
Port Colborne (CNP)	2005-2007	<b>1.515</b>	0.515	0.000	1,433,842	83

<sup>1</sup> Lower values imply better performance.

# Updated Performance Rankings Based on Unit Cost Indexes

	Average / Group Average <sup>1</sup> [A]	Percentage Differences <sup>1</sup> [A - 1]	Implied Cost Surplus (Savings) per year <sup>1</sup>	Efficiency Ranking <sup>1</sup>
Hydro Hawkesbury	0.401	-59.9%	-\$448,661	1
Renfrew Hydro	0.584	-41.6%	-\$350,347	2
Lakefront Utilities	0.601	-39.9%	-\$723,598	3
Hydro 2000	0.697	-30.3%	-\$73,406	4
Chatham-Kent Hydro	0.724	-27.6%	-\$1,430,095	5
Barrie Hydro Distribution	0.739	-26.1%	-\$2,122,675	6
Hydro One Brampton Networks	0.742	-25.8%	-\$4,061,887	7
Hydro Ottawa	0.760	-24.0%	-\$10,197,050	8
Northern Ontario Wires	0.772	-22.8%	-\$395,437	9
Festival Hydro	0.773	-22.7%	-\$786,046	10
Parry Sound Power	0.787	-21.3%	-\$215,508	11
E.L.K. Energy	0.787	-21.3%	-\$351,499	12
Cambridge and North Dumfries Hydro	0.791	-20.9%	-\$1,595,692	13
Hearst Power Distribution	0.796	-20.4%	-\$128,996	14
Fort Frances Power	0.824	-17.6%	-\$192,252	15
Espanola Regional Hydro Distribution	0.832	-16.8%	-\$156,347	16
Middlesex Power Distribution	0.846	-15.4%	-\$225,673	17
Kitchener-Wilmot Hydro	0.852	-14.8%	-\$1,746,291	18
Sioux Lookout Hydro	0.861	-13.9%	-\$149,138	19
Rideau St. Lawrence Distribution	0.867	-13.3%	-\$180,902	20
Norfolk Power Distribution	0.877	-12.3%	-\$518,041	21
Peterborough Distribution	0.883	-11.7%	-\$719,374	22
Kingston Electricity Distribution	0.883	-11.7%	-\$586,027	23
Grimsby Power	0.884	-11.6%	-\$179,706	24
Orangeville Hydro	0.885	-11.5%	-\$207,564	25
Wellington North Power	0.896	-10.4%	-\$102,491	26
Welland Hydro-Electric System	0.907	-9.3%	-\$365,060	27
Midland Power Utility	0.918	-8.2%	-\$142,474	28
West Perth Power	0.935	-6.5%	-\$32,468	29
Veridian Connections	0.937	-6.3%	-\$1,188,751	30
Niagara-on-the-Lake Hydro	0.949	-5.1%	-\$80,200	31
Oshawa PUC Networks	0.954	-4.6%	-\$373,735	32
North Bay Hydro Distribution	0.960	-4.0%	-\$209,226	33
Orillia Power Distribution	0.963	-3.7%	-\$124,435	34
Innisfil Hydro Distribution Systems	0.965	-3.5%	-\$103,620	35
Waterloo North Hydro	0.975	-2.5%	-\$219,762	36
Guelph Hydro Electric Systems	0.976	-2.4%	-\$222,619	37
Toronto Hydro-Electric System	0.987	-1.3%	-\$2,126,898	38
Lakeland Power Distribution	0.988	-1.2%	-\$25,346	39
Woodstock Hydro Services	0.997	-0.3%	-\$10,211	40
Horizon Utilities	0.997	-0.3%	-\$118,001	41
Clinton Power	1.000	0.0%	\$219	42
PUC Distribution	1.000	0.0%	\$3,509	43
COLLUS Power	1.005	0.5%	\$16,290	44
Haldimand County Hydro	1.010	1.0%	\$59,424	45
Milton Hydro Distribution	1.014	1.4%	\$61,191	46
Greater Sudbury Hydro & West Nipissing	1.016	1.6%	\$188,737	47
Peninsula West Utilities	1.021	2.1%	\$81,456	48
Westario Power	1.021	2.1%	\$88,499	49
Thunder Bay Hydro Electricity Distribution	1.024	2.4%	\$261,013	50
PowerStream	1.039	3.9%	\$1,584,657	51
Ottawa River Power	1.050	5.0%	\$104,566	52
Newbury Power	1.052	5.2%	\$2,555	53
Atikokan Hydro	1.058	5.8%	\$40,163	54
St. Thomas Energy	1.063	6.3%	\$212,927	55
Oakville Hydro Electricity Distribution	1.065	6.5%	\$728,822	56
Burlington Hydro	1.067	6.7%	\$800,166	57
Newmarket Hydro & Tay Hydro	1.082	8.2%	\$473,992	58
London Hydro	1.084	8.4%	\$1,967,037	59
Bluewater Power Distribution	1.093	9.3%	\$865,158	60
Brantford Power	1.095	9.5%	\$687,149	61
Tillsonburg Hydro	1.104	10.4%	\$158,344	62
Cooperative Hydro Embrun	1.128	12.8%	\$47,366	63
Niagara Falls Hydro	1.135	13.5%	\$1,124,784	64
Enersource Hydro Mississauga	1.138	13.8%	\$5,958,042	65
Wasaga Distribution	1.142	14.2%	\$242,816	66
West Coast Huron Energy	1.146	14.6%	\$195,280	67
Centre Wellington Hydro	1.153	15.3%	\$226,005	68
Fort Erie	1.164	16.4%	\$747,951	69
Kenora Hydro Electric	1.166	16.6%	\$213,753	70
Halton Hills Hydro	1.171	17.1%	\$736,389	71
Essex Powerlines	1.173	17.3%	\$1,055,798	72
Brant County Power	1.180	18.0%	\$488,090	73
Whitby Hydro Electric	1.219	21.9%	\$1,687,533	74
Eastern Ontario Power	1.219	21.9%	\$295,968	75
Chapleau Public Utilities	1.231	23.1%	\$128,185	76
ENWIN Powerlines	1.316	31.6%	\$7,859,542	77
Port Colborne	1.329	32.9%	\$1,390,606	78
Dutton Hydro	1.358	35.8%	\$61,475	79
Erie Thames Powerlines	1.415	41.5%	\$1,892,875	80
Grand Valley Energy	1.451	45.1%	\$99,372	81
Great Lakes Power	2.052	105.2%	\$8,371,020	82

<sup>1</sup> Lower values imply better performance.

<sup>2</sup> Hydro One Networks has no peer group and is not included in this analysis.

## Efficiency Cohort Results: 2007 Data Update

Company	Cohort
Hydro Hawkesbury	1
Chatham-Kent Hydro	1
Northern Ontario Wires	1
Cambridge and North Dumfries Hydro	1
E.L.K. Energy	1
Hydro One Brampton Networks	1
Kitchener-Wilmot Hydro	1
Renfrew Hydro	1
Barrie Hydro Distribution	1
Festival Hydro	1
Hydro 2000	1
Grimsby Power	2
Oshawa PUC Networks	2
Lakeland Power Distribution	2
Welland Hydro-Electric System	2
Kingston Electricity Distribution	2
Horizon Utilities	2
Hydro Ottawa	2
Lakefront Utilities	2
Peninsula West Utilities	2
Waterloo North Hydro	2
Niagara-on-the-Lake Hydro	2
Rideau St. Lawrence Distribution	2
Kenora Hydro Electric	2
Innisfil Hydro Distribution Systems	2
Halton Hills Hydro	2
Peterborough Distribution	2
North Bay Hydro Distribution	2
Atikokan Hydro	2
Hearst Power Distribution	2
Newmarket & Tay Hydro Electric	2
Orangeville Hydro	2
Enersource Hydro Mississauga	2
Espanola Regional Hydro Distribution	2
PUC Distribution	2
Wellington North Power	2
Middlesex Power Distribution	2
Newbury Power	2
Wasaga Distribution	2
Veridian Connections	2
Hydro One Networks	2
Burlington Hydro	2
Brantford Power	2
Haldimand County Hydro	2
Westario Power	2
Tillsonburg Hydro	2
Toronto Hydro-Electric System	2
London Hydro	2
Woodstock Hydro Services	2
Ottawa River Power	2
Milton Hydro Distribution	2
Norfolk Power Distribution	2
Bluewater Power Distribution	2
Thunder Bay Hydro Electricity Distribution	2
Grand Valley Energy	2
Parry Sound Power	2
West Perth Power	2
COLLUS Power	2
Oakville Hydro Electricity Distribution	2
Cooperative Hydro Embrun	2
Clinton Power	2
Brant County Power	2
Orillia Power Distribution	2
St. Thomas Energy	2
Dutton Hydro	2
Sioux Lookout Hydro	2
Fort Erie (CNP)	2
Powerstream	2
Greater Sudbury-West Nipissing	2
Guelph Hydro Electric Systems	2
Fort Frances Power	2
Midland Power Utility	2
Eastern Ontario Power (CNP)	3
Niagara Falls Hydro	3
Centre Wellington Hydro	3
ENWIN Powerlines	3
Essex Powerlines	3
Whitby Hydro Electric	3
Chapleau Public Utilities	3
Erie Thames Powerlines	3
West Coast Huron Energy	3
Great Lakes Power	3
Port Colborne (CNP)	3