3GIRM: Getting it Right

Coalition for an Effective IRM
Presentation to EDA Regulatory Council
December 9, 2008

Attachment 2 of CEIRM's submission to EB-2007-0673 Consultation

December 15, 2008

3rd GIRM – how it works

Updated Performance Rankings Based on Econometric Benchmarks (26% allocation for LV charges divided by 2.35)

	Years Benchmarked	Actual/Predicted	Deviation Percentage [A-1]	P-Value	Rank
Hydro Hawkesbury	2005-2007	0.648	-0.352	0.000	1
Chatham-Kent Hydro	2005-2007	0.700	-0.300	0.001	2
Northern Ontario Wires	2005-2007	0.712	-0.288	0.001	3
Cambridge and North Dumfries Hydro	2005-2007	0.716	-0.284	0.001	4
E.L.K. Energy	2005-2007	0.743	-0.257	0.004	5
Grimsby Power	2005-2007	0.759	-0.241	0.006	6
Oshawa PUC Networks	2005-2007	0.781	-0.219	0.013	7
Hydro One Brampton Networks	2005-2007	0.792	-0.208	0.017	8
Kitchener-Wilmot Hydro	2005-2007	0.803	-0.197	0.024	9
Lakeland Power Distribution	2005-2007	0.804	-0.196	0.024	10
Renfrew Hydro	2005-2007	0.810	-0.190	0.028	11
Festival Hydro	2005-2007	0.822	-0.178	0.038	12
Barrie Hydro Distribution	2005-2007	0.826	-0.174	0.042	13
Welland Hydro-Electric System	2005-2007	0.829	-0.171	0.045	14
Horizon Utilities	2005-2007	0.865	-0.135	0.094	15
Kingston Electricity Distribution	2005-2007	0.866	-0.134	0.096	16
Hydro 2000	2005-2007	0.870	-0.130	0.103	17
Hydro Ottawa	2005-2007	0.876	-0.124	0.114	18
Waterloo North Hydro	2005-2007	0.877	-0.123	0.117	19
Niagara-on-the-Lake Hydro	2005-2007	0.880	-0.120	0.123	20
Peninsula West Utilities	2005-2007	0.886	-0.114	0.136	21
Lakefront Utilities	2005-2007	0.888	-0.112	0.141	22
Kenora Hydro Electric	2005-2007	0.895	-0.105	0.157	23
Rideau St. Lawrence Distribution	2005-2007	0.907	-0.093	0.187	24
Atikokan Hydro	2005-2007	0.908	-0.092	0.191	25
North Bay Hydro Distribution	2005-2007	0.914	-0.086	0.208	26
Innisfil Hydro Distribution Systems	2005-2007	0.915	-0.085	0.209	27
Peterborough Distribution	2005-2007	0.918	-0.082	0.219	28
Halton Hills Hydro	2005-2007	0.918	-0.082	0.219	29
Newmarket & Tay Hydro Electric	2005-2007	0.926	-0.074	0.242	30
Hearst Power Distribution	2005-2007	0.930	-0.070	0.255	31
Orangeville Hydro	2005-2007	0.949	-0.051	0.317	32
Espanola Regional Hydro Distribution	2005-2007	0.960	-0.040	0.356	33
Wellington North Power	2005-2007	0.962	-0.038	0.362	34
PUC Distribution	2005-2007	0.962	-0.038	0.364	35
Enersource Hydro Mississauga	2005-2007	0.966	-0.034	0.377	36
Middlesex Power Distribution	2005-2007	0.968	-0.032	0.384	37
Newbury Power	2005-2007	0.970	-0.030	0.391	38
Wasaga Distribution	2005-2007	0.986	-0.014	0.448	39
Veridian Connections	2005-2007	1.001	0.001	0.496	40
Tillsonburg Hydro	2005-2007	1.002	0.002	0.491	41
Burlington Hydro	2005-2007	1.006	0.006	0.478	42
Hydro One Networks	2005-2007	1.007	0.007	0.476	43
Brantford Power	2005-2007	1.008	0.008	0.472	44
Haldimand County Hydro	2005-2007	1.010	0.010	0.463	45
Toronto Hydro-Electric System	2005-2007	1.015	0.015	0.445	46
London Hydro	2005-2007	1.026	0.026	0.409	47
Westario Power	2005-2007	1.027	0.027	0.405	48
Woodstock Hydro Services	2005-2007	1.027	0.027	0.403	49
Milton Hydro Distribution	2005-2007	1.040	0.040	0.361	50
Norfolk Power Distribution	2005-2007	1.048	0.048	0.334	51
Bluewater Power Distribution	2005-2007	1.049	0.049	0.333	52
Thunder Bay Hydro Electricity Distribution	2005-2007	1.050	0.050	0.328	53
Grand Valley Energy	2005-2007	1.051	0.051	0.327	54
Ottawa River Power	2005-2007	1.051	0.051	0.325	55
West Perth Power	2005-2007	1.062	0.062	0.292	56
Cooperative Hydro Embrun	2005-2007	1.064	0.064	0.286	57
Parry Sound Power	2005-2007	1.066	0.066	0.280	58
Oakville Hydro Electricity Distribution	2005-2007	1.077	0.077	0.251	59
Brant County Power	2005-2007	1.078	0.078	0.247	60
St. Thomas Energy	2005-2007	1.080	0.080	0.244	61
COLLUS Power	2005-2007	1.084	0.084	0.232	62
Orillia Power Distribution	2005-2007	1.093	0.093	0.210	63
Dutton Hydro	2004-2006	1.096	0.096	0.201	64
Clinton Power	2005-2007	1.103	0.103	0.186	65
Fort Erie (CNP)	2005-2007	1.107	0.107	0.178	66
Powerstream	2005-2007	1.121	0.121	0.151	67
Sioux Lookout Hydro	2005-2007	1.121	0.121	0.151	68
Greater Sudbury-West Nipissing	2005-2007	1.124	0.124	0.145	69
Guelph Hydro Electric Systems	2005-2007	1.127	0.127	0.139	70
Fort Frances Power	2005-2007	1.144	0.144	0.112	71
Eastern Ontario Power (CNP)	2005-2007	1.158	0.158	0.092	72
Niagara Falls Hydro	2005-2007	1.175	0.175	0.072	73
Centre Wellington Hydro	2005-2007	1.191	0.191	0.056	74
Midland Power Utility	2005-2007	1.211	0.211	0.041	75
ENWIN Powerlines	2005-2007	1.232	0.232	0.029	76
Essex Powerlines	2005-2007	1.257	0.257	0.019	77
Whitby Hydro Electric	2005-2007	1.260	0.260	0.018	78
Chapleau Public Utilities	2005-2007	1.310	0.310	0.007	79
West Coast Huron Energy	2005-2007	1.363	0.363	0.003	80
Erie Thames Powerlines	2005-2007	1.373	0.373	0.002	81
Great Lakes Power	2005-2007	1.432	0.432	0.001	82
Port Colborne (CNP)	2005-2007	1.502	0.502	0.000	83

Updated Performance Rankings Based on Unit Cost Indexes (26% allocation for LV charges divided by 2.35)

	Average / Group Average [A]	Percentage Differences [A - 1]	Efficiency Ranking
Hydro Hawkesbury	0.399	-60.1%	1
Renfrew Hydro	0.592	-40.8%	2
Lakefront Utilities	0.610	-39.0%	3
Chatham-Kent Hydro	0.728	-27.2%	4
Hydro One Brampton Networks	0.741	-25.9%	5
Barrie Hydro Distribution	0.750	-25.0%	6
Hydro Ottawa	0.760	-24.0%	7
Hydro 2000	0.762	-23.8%	8
Festival Hydro	0.771	-22.9%	9
Northern Ontario Wires	0.772	-22.8%	10
Cambridge and North Dumfries Hydro	0.791	-20.9%	11
Parry Sound Power	0.796	-20.4%	12
Hearst Power Distribution	0.799	-20.1%	13
E.L.K. Energy	0.804	-19.6%	14
Fort Frances Power	0.820	-18.0%	15
Middlesex Power Distribution	0.836	-16.4%	16
Espanola Regional Hydro Distribution	0.838	-16.2%	17
Wellington North Power	0.846	-15.4%	18
Kitchener-Wilmot Hydro	0.848	-15.2%	19
Rideau St. Lawrence Distribution	0.852	-14.8%	20
Grimsby Power	0.872	-12.8%	21
Sioux Lookout Hydro	0.880	-12.0%	22
Peterborough Distribution	0.881	-11.9%	23
Brant County Power	0.884	-11.6%	24
Kingston Electricity Distribution	0.886	-11.4%	25
Orangeville Hydro	0.887	-11.3%	26
Norfolk Power Distribution	0.892	-10.8%	27
Welland Hydro-Electric System	0.897	-10.3%	28
North Bay Hydro Distribution	0.906	-9.4%	29
Peninsula West Utilities	0.910	-9.0%	30
Midland Power Utility	0.927	-7.3%	31
West Perth Power	0.927	-7.3%	32
Innisfil Hydro Distribution Systems	0.930	-7.0%	33
Niagara-on-the-Lake Hydro	0.938	-6.2%	34
Veridian Connections	0.944	-5.6%	35
Oshawa PUC Networks	0.948	-5.2%	36
PUC Distribution	0.969	-3.1%	37
Waterloo North Hydro	0.971	-2.9%	38
Guelph Hydro Electric Systems	0.974	-2.6%	39
Thunder Bay Hydro Electricity Distribution	0.974	-2.6%	40
Toronto Hydro-Electric System	0.981	-1.9%	41
Lakeland Power Distribution	0.983	-1.7%	42
Woodstock Hydro Services	0.988	-1.2%	43
Orillia Power Distribution	0.993	-0.7%	44
Horizon Utilities	0.997	-0.3%	45
Milton Hydro Distribution	1.014	1.4%	46
COLLUS Power	1.015	1.5%	47
Tillsonburg Hydro	1.024	2.4%	48
Westario Power	1.030	3.0%	49
PowerStream	1.038	3.8%	50
Atikokan Hydro	1.049	4.9%	51
St. Thomas Energy	1.054	5.4%	52
Burlington Hydro	1.065	6.5%	53
Oakville Hydro Electricity Distribution	1.066	6.6%	54
Haldimand County Hydro	1.069	6.9%	55
Ottawa River Power	1.071	7.1%	56
Newmarket Hydro & Tay Hydro	1.077	7.7%	57
London Hydro	1.083	8.3%	58
Bluewater Power Distribution	1.083	8.3%	59
Brantford Power	1.096	9.6%	60
Centre Wellington Hydro	1.114	11.4%	61
Clinton Power	1.115	11.5%	62
Niagara Falls Hydro	1.121	12.1%	63
Newbury Power	1.137	13.7%	64
Enersource Hydro Mississauga	1.140	14.0%	65
Wasaga Distribution	1.142	14.2%	66
Kenora Hydro Electric	1.147	14.7%	67
West Coast Huron Energy	1.149	14.9%	68
Greater Sudbury Hydro & West Nipissing	1.151	15.1%	69
Essex Powerlines	1.180	18.0%	70
Halton Hills Hydro	1.181	18.1%	71
Cooperative Hydro Embrun	1.190	19.0%	72
Fort Erie	1.206	20.6%	73
Whitby Hydro Electric	1.221	22.1%	74
Eastern Ontario Power	1.234	23.4%	75
Chapleau Public Utilities	1.237	23.7%	76
Dutton Hydro	1.309	30.9%	77
ENWIN Powerlines	1.315	31.5%	78
Erie Thames Powerlines	1.420	42.0%	79
Grand Valley Energy	1.459	45.9%	80
Port Colborne	1.531	53.1%	81
Great Lakes Power	2.016	101.6%	82

Stretch Factor Results: 2007 Data Update (26% allocation of LV charges divided by 2.35)

Company	Group	Stretch Factor
Hydro Hawkesbury	1	0.20%
Chatham-Kent Hydro	1	0.20%
Northern Ontario Wires	1	0.20%
Cambridge and North Dumfries Hydro	1	0.20%
E.L.K. Energy	1	0.20%
Hydro One Brampton Networks	1	0.20%
Kitchener-Wilmot Hydro	1	0.20%
Renfrew Hydro	1	0.20%
Festival Hydro	1	0.20%
Barrie Hydro Distribution	1	0.20%
Grimsby Power	2	0.40%
Oshawa PUC Networks	2	0.40%
Lakeland Power Distribution	2	0.40%
Welland Hydro-Electric System	2	0.40%
Horizon Utilities	2	0.40%
Kingston Electricity Distribution	2	0.40%
Hydro 2000	2	0.40%
Hydro Ottawa	2	0.40%
Waterloo North Hydro	2	0.40%
Niagara-on-the-Lake Hydro	2	0.40%
Peninsula West Utilities	2	0.40%
Lakefront Utilities	2	0.40%
Kenora Hydro Electric	2	0.40%
Rideau St. Lawrence Distribution	2	0.40%
Atikokan Hydro	2	0.40%
North Bay Hydro Distribution	2	0.40%
Innisfil Hydro Distribution Systems	2	0.40%
Peterborough Distribution	2	0.40%
Halton Hills Hydro	2	0.40%
Newmarket & Tay Hydro Electric	2	0.40%
Hearst Power Distribution	2	0.40%
Orangeville Hydro	2	0.40%
Espanola Regional Hydro Distribution	2	0.40%
Wellington North Power	2	0.40%
PUC Distribution	2	0.40%
Enersource Hydro Mississauga	2	0.40%
Middlesex Power Distribution	2	0.40%
Newbury Power	2	0.40%
Wasaga Distribution	2	0.40%
Veridian Connections	2	0.40%
Tillsonburg Hydro	2	0.40%
Burlington Hydro	2	0.40%
Hydro One Networks	2	0.40%
Brantford Power	2	0.40%
Haldimand County Hydro	2	0.40%
Toronto Hydro-Electric System	2	0.40%
London Hydro	2	0.40%
Westario Power	2	0.40%
Woodstock Hydro Services	2	0.40%
Milton Hydro Distribution	2	0.40%
Norfolk Power Distribution	2	0.40%
Bluewater Power Distribution	2	0.40%
Thunder Bay Hydro Electricity Distribution	2	0.40%
Grand Valley Energy	2	0.40%
Ottawa River Power	2	0.40%
West Perth Power	2	0.40%
Cooperative Hydro Embrun	2	0.40%
Parry Sound Power	2	0.40%
Oakville Hydro Electricity Distribution	2	0.40%
Brant County Power	2	0.40%
St. Thomas Energy	2	0.40%
COLLUS Power	2	0.40%
Orillia Power Distribution	2	0.40%
Dutton Hydro	2	0.40%
Clinton Power	2	0.40%
Fort Erie (CNP)	2	0.40%
Powerstream	2	0.40%
Sioux Lookout Hydro	2	0.40%
Greater Sudbury-West Nipissing	2	0.40%
Guelph Hydro Electric Systems	2	0.40%
Fort Frances Power	2	0.40%
Centre Wellington Hydro	2	0.40%
Midland Power Utility	2	0.40%
Eastern Ontario Power (CNP)	3	0.60%
Niagara Falls Hydro	3	0.60%
ENWIN Powerlines	3	0.60%
Essex Powerlines	3	0.60%
Whitby Hydro Electric	3	0.60%
Chapleau Public Utilities	3	0.60%
West Coast Huron Energy	3	0.60%
Erie Thames Powerlines	3	0.60%
Great Lakes Power	3	0.60%
Port Colborne (CNP)	3	0.60%

Source: PEG, "Sensitivity Analysis on Efficiency Ranking and Cohorts for the 2009 Rate Year: Update", Dec. 3, 2008.

Unit Cost ranking is derived from peer group mathematics

Table 2

Unit OM&A Cost Indexes

	2002	2003	2004	2005	2006	2007	Average of Last 3 Available Years[2]	Average / Group Average[2] [A]	Percentage Differences[2] [A - 1]	Implied Cost Surplus (Savings) per year[2]
Small Northern Low Undergrounding										
Renfrew Hydro	0.928	0.996	0.921	0.809	0.999	1.094	0.967	**0.584**	-41.6%	-$350,347
Espanola Regional Hydro Distribution	1.410	1.171	1.092	1.155	1.495	1.483	1.378	**0.832**	-16.8%	-$156,347
Northern Ontario Wires	1.375	1.223	1.369	1.192	1.270	1.374	1.279	**0.772**	-22.8%	-$395,437
Parry Sound Power	1.013	1.200	1.214	1.275	1.333	1.303	1.303	**0.787**	-21.3%	-$215,508
Fort Frances Power	1.197	1.213	1.236	1.305	1.346	1.442	1.365	**0.824**	-17.6%	-$192,252
Sioux Lookout Hydro	1.086	0.877	1.259	1.359	1.390	1.528	1.426	**0.861**	-13.9%	-$149,138
Atikokan Hydro	1.443	2.729	1.758	1.618	1.619	2.022	1.753	**1.058**	5.8%	$40,163
Chapleau Public Utilities	1.615	1.668	1.720	1.907	1.833	2.380	2.040	**1.231**	23.1%	$128,185
Great Lakes Power	2.983	2.924	3.116	3.308	3.412	3.476	3.399	**2.052**	105.2%	$8,371,020
GROUP AVERAGE							**1.657**			
Small Northern Medium Undergrounding										
Hearst Power Distribution	0.630	0.609	0.764	0.745	0.826	0.868	0.813	**0.799**	-20.1%	-$127,595
Lakeland Power Distribution	1.076	1.296	0.905	0.909	1.083	0.977	0.990	**0.972**	-2.8%	-$58,301
Ottawa River Power	0.940	1.043	1.020	0.989	1.070	1.200	1.087	**1.067**	6.7%	$141,026
Kenora Hydro Electric	1.098	1.117	1.155	1.114	1.149	1.284	1.183	**1.162**	16.2%	$208,696
GROUP AVERAGE							**1.018**			
Mid-Size Northern										
North Bay Hydro Distribution	1.126	1.005	0.991	0.878	1.147	1.007	1.010	**0.906**	-9.4%	-$487,201
PUC Distribution	0.866	0.937	1.070	1.046	1.028	1.166	1.080	**0.969**	-3.1%	-$225,144
Thunder Bay Hydro Electricity Distribution	1.087	1.178	1.130	1.016	1.070	1.179	1.088	**0.976**	-2.4%	-$262,212
Greater Sudbury Hydro & West Nippissing	1.034	0.996	1.121	1.003	1.069	1.769	1.280	**1.149**	14.9%	$1,743,696
GROUP AVERAGE							**1.115**			

1 / 2 = 3

Unit Cost Ranking Formula is:

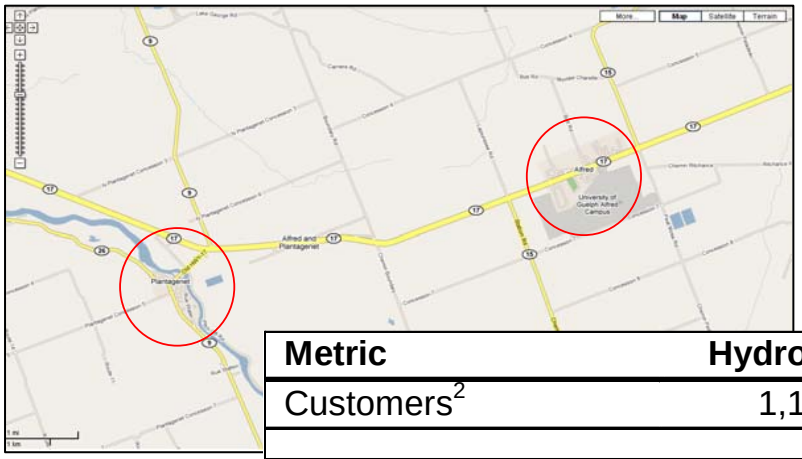
- Individual metric (1) / group average metric (2) = Unit Cost Ranking Metric (3)

Recommendations: Level Playing Field

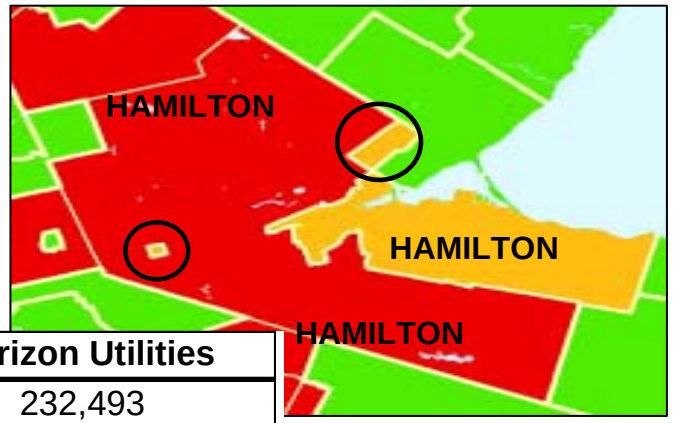
1. Treatment of LV costs
2. Exclusion of LDC HV costs
3. Recognition of Capital in benchmarking

70 of 83 LDCs pay LV to a “host” LDC

Hydro 2000



Horizon Utilities



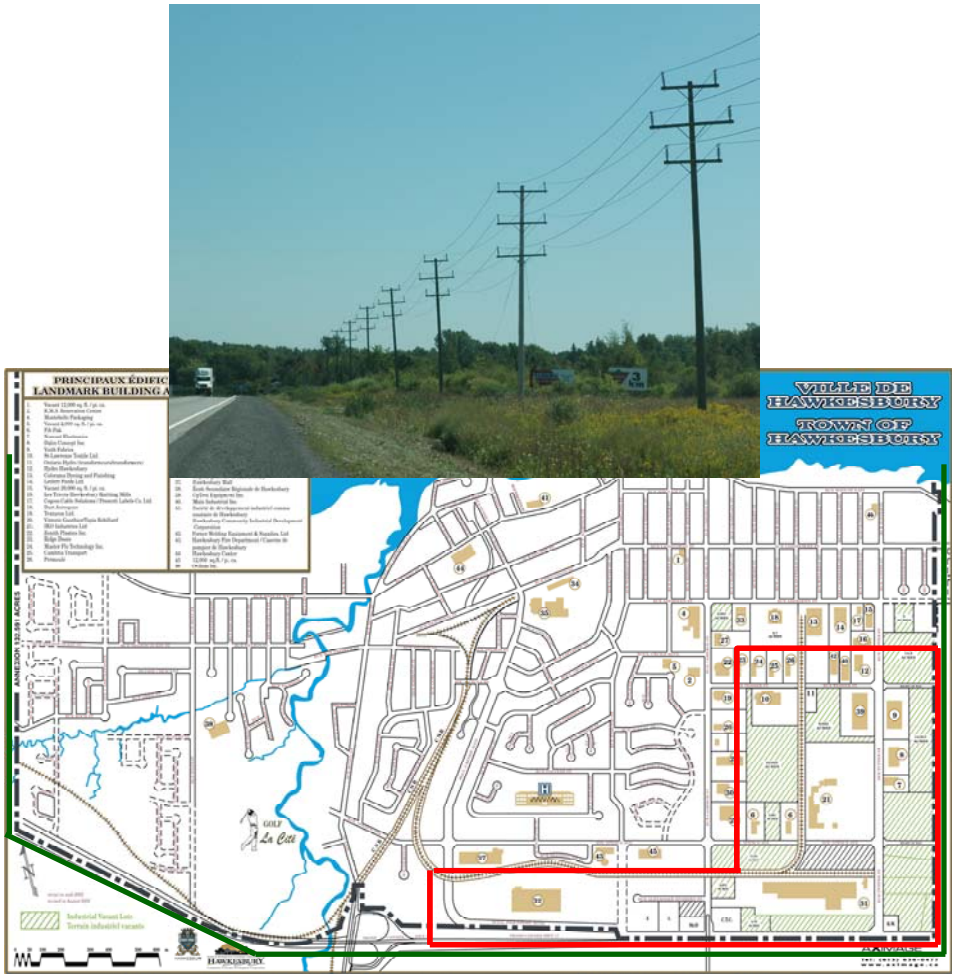
Metric	Hydro 2000	Horizon Utilities
Customers[2]	1,159	232,493
Rate Base[1]	$735,075	$362,942,366
Net PPE[2]	$375,075	$301,539,366
Rate Base / Customer	$634	$1,561
Net PPE / Customer	$324	$1,297
O&M[2]	$15,268	$12,578,876
Administration [2]	$217,311	$24,425,794[2]
OM&A[2]	$232,579	$37,004,670
LV Costs	$106,241[1]	$128,811
OMA + LV	$338,820	$37,133,481
OM&A / Customer	$201	$159
OM&A + LV / Cust.	$292	$160

[1] 2008 EDR Decisions, [2] 2007 OEB RRR filings.

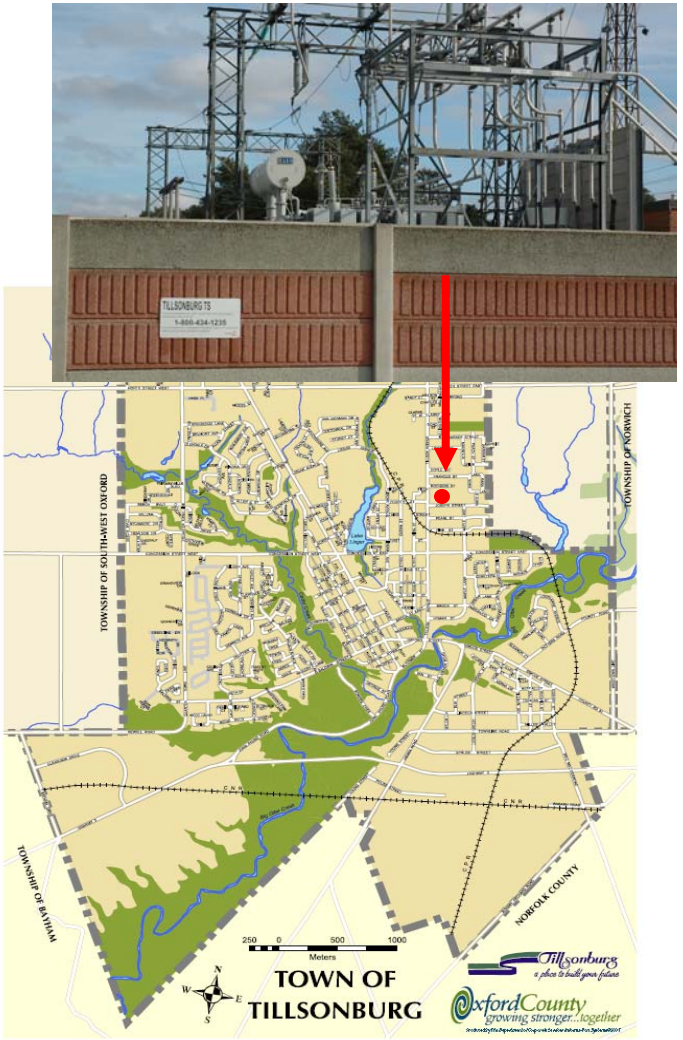
NB: Circles represent embedded territories

LV and HV connected small LDCs – comparison

LV – Hawkesbury Hydro



HV – Tillsonburg Hydro



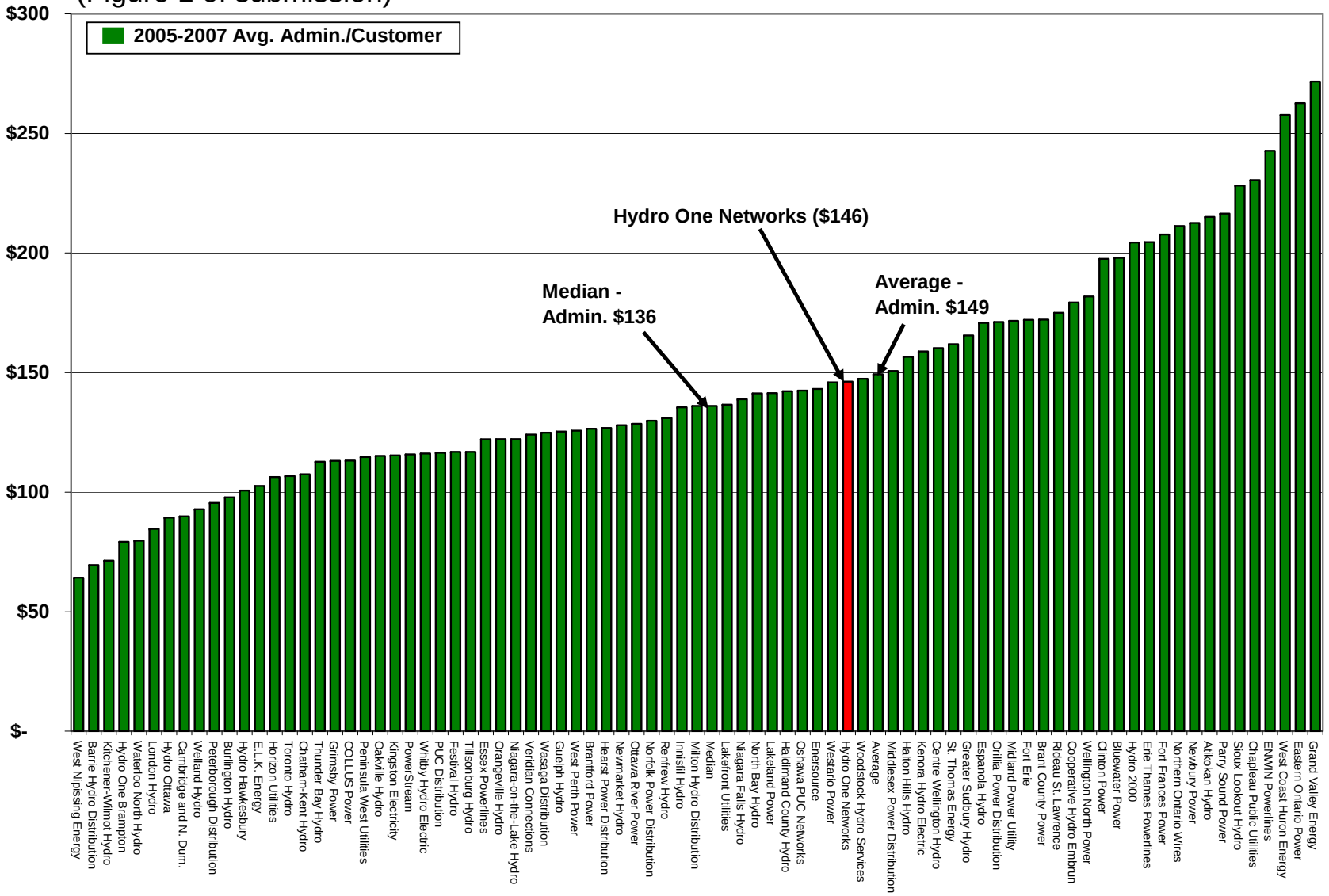
LV vs. HV impact in IRM – two small LDCs

Metric (2007 Yearbook)	Hydro Hawkesbury	Tillsonburg Hydro
Customers	5,428	6,571
Gross PPE	$3,096,612	$13,042,205
Net PPE	$1,921,495	$5,917,911
Gross PPE / customer	$570	$1,985
Net PPE / customer	$354	$901
OM&A / customer	$142	$247
O&M / Customer	$42	$122
Admin. / Customer	$100	$125
kWh billed per customer:		
Residential	11,812	8,865
GS < 50 kW	38,912	37,836
GS > 50 kW & LU	1,536,631	1,465,508

Source: 2007 OEB Yearbook

Determining LV for IRM – use OM&A or O&M?

(Figure 1 of submission)



Source: OEB, Reporting and Record-keeping Requirements (RRR), 2005-2007.

Options and assumptions in LV determination

(Table 1 of submission)

Assumptions:	**OM&A**	**OM&A w/ 1.3 cost allocation**	**O&M w/ 1.3 cost allocation**	**O&M w/ 2.35 cost allocation**
Proxy LV Payment	$100,000	$100,000	$100,000	$100,000
Capital (52%)	$52,000	$52,000	$52,000	$52,000
OM&A portion (48%)	**$48,000**	**$48,000**	$48,000	$48,000
Admin (22%)	$22,000	$22,000	$22,000	$22,000
O&M portion (26%)	$26,000	$26,000	**$26,000**	**$26,000**
LV adjustment w/ Cost Allocation:				
• OM&A	**$48,000**			
• OM&A / 1.3[1]		**$36,923**		
• O&M / 1.3			**$20,000**	
• O&M / 2.35[2]				**$11,064**

Notes: [1] 1.3 is the cost allocation for Hydro One's LV class within the ST class. [2] 2.3 represents cost allocation for Hydro One's ST class of customers, which includes LV.

(Source:http://www.hydroonenetworks.com/en/regulatory/2008_distribution_rate_application/Dx_Rate_Filing/Exhibit_G1_Cost_Allocation_and_Rate_Design/Tab_7_Schedule_3_Bill_Impacts_Sub-Transmission_Customers.pdf)

18 of 83 LDC own HV assets in their LDC*

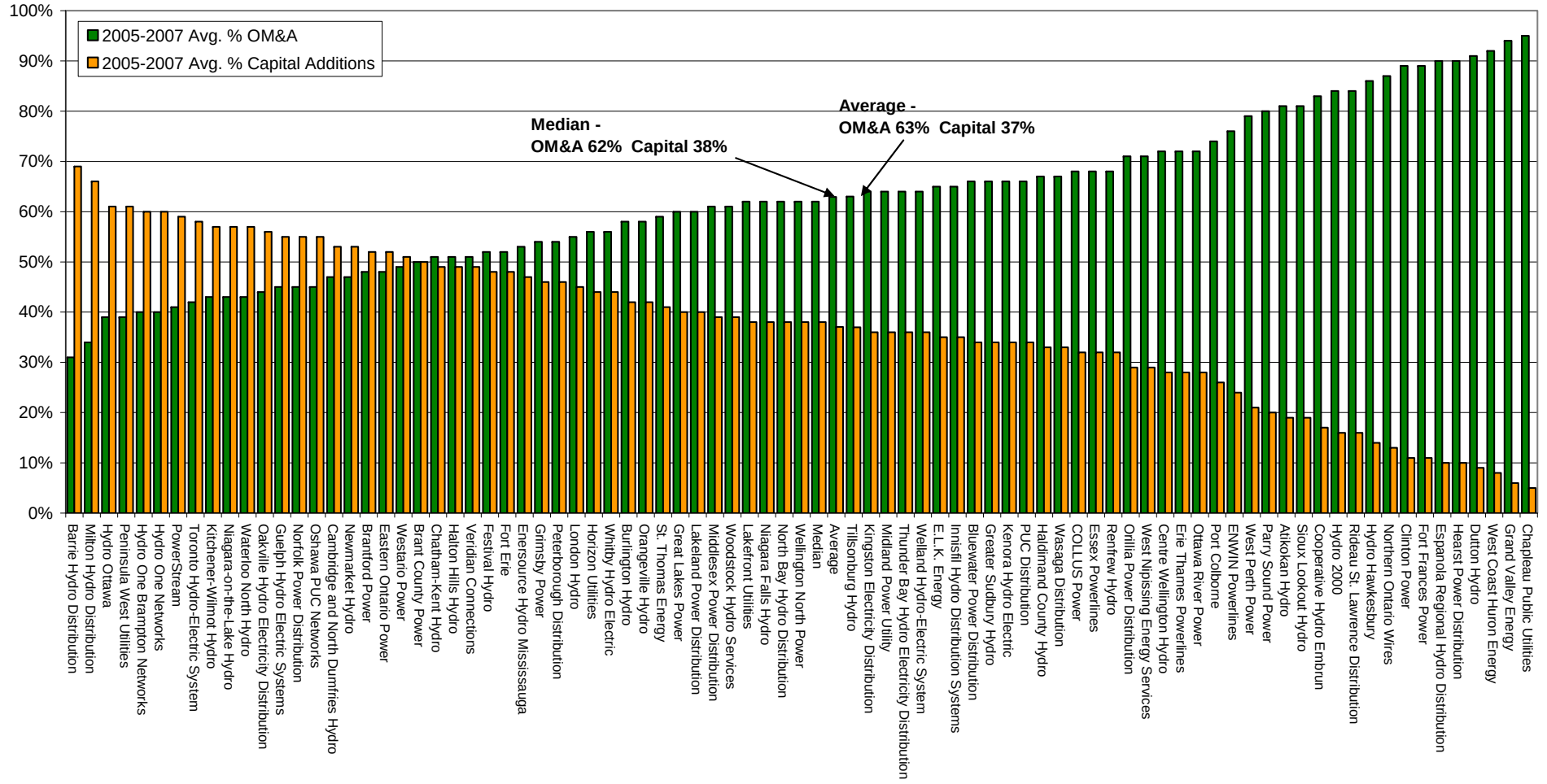
Top 5 LDCs	$ Assets of HV	HV % in LDC
Kitchener-Wilmot Hydro	$37,975,643	28%
Niagara-on-the-Lake Hydro	$5,181,654	27%
Waterloo North Hydro	$21,208,072	23%
Kenora Hydro	$1,544,361	20%
PowerStream Inc.	$88,054,589	19%

Source: OEB, Reporting and Record-keeping Requirements (RRR), 2005-2007.

* The 18 are: Brant County Power, Brantford Power, Cambridge & North Dumfries Hydro, Enwin, Hydro Hawkesbury, Hydro One Brampton Networks, Hydro One Networks Inc., Hydro Ottawa, Kenora Hydro, Kitchener-Wilmot Hydro, Niagara Falls Hydro, Niagara-on-the-Lake Hydro, Norfolk Power, Northern Ontario Wires, PUC Distribution, PowerStream, Toronto Hydro, Waterloo North Hydro.

Treatment of capital in IRM

(Figure 3 of submission)



Source: OEB, Reporting and Record-keeping Requirements (RRR), 2005-2007.

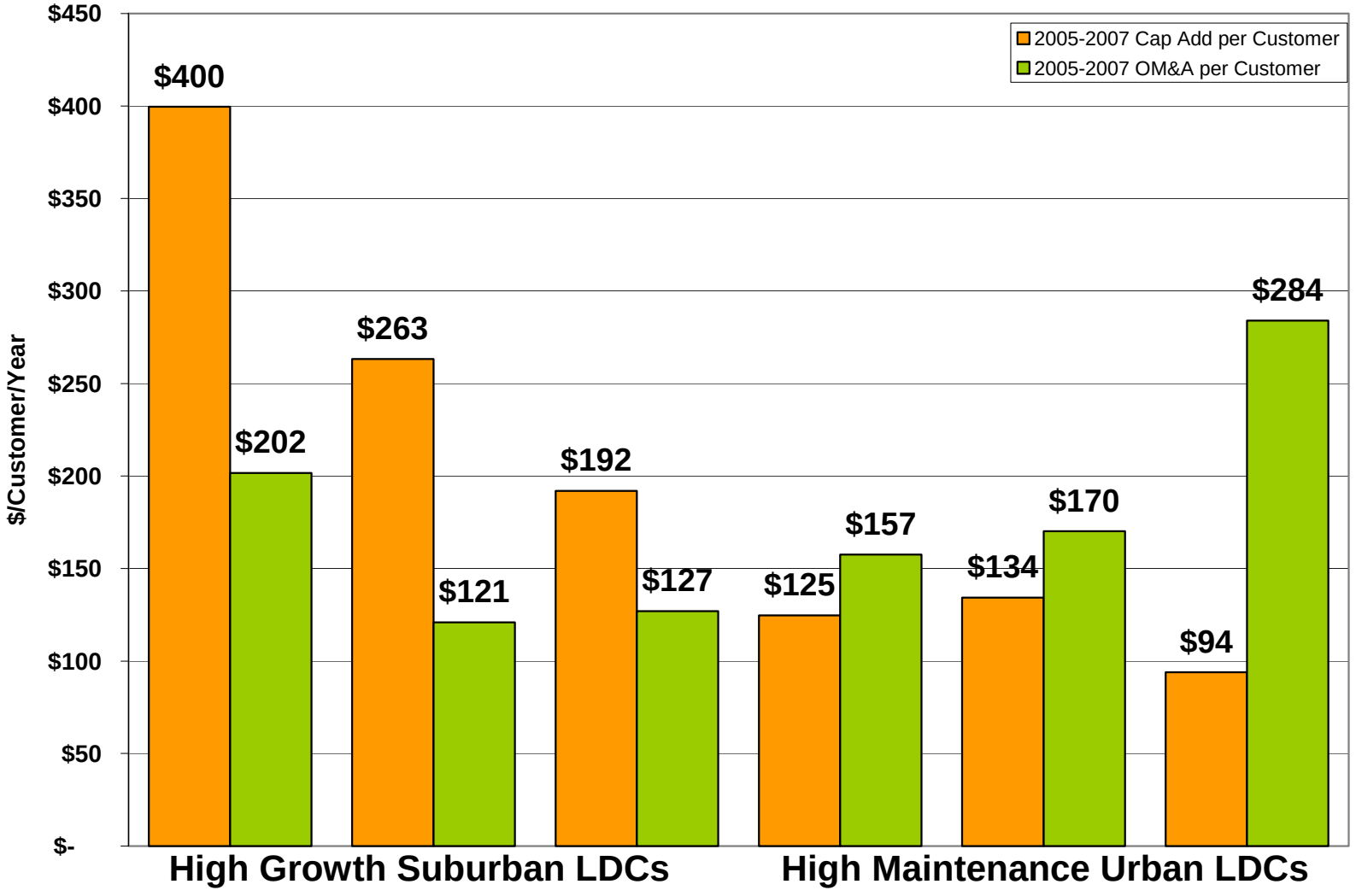
OM&A-based IRM and lifecycle of LDC capital

Emerging Development – Capital Intensive

Mature Development – Maintenance Intensive

Typical new suburban vs. old urban LDCs

(Figure 2 of submission)



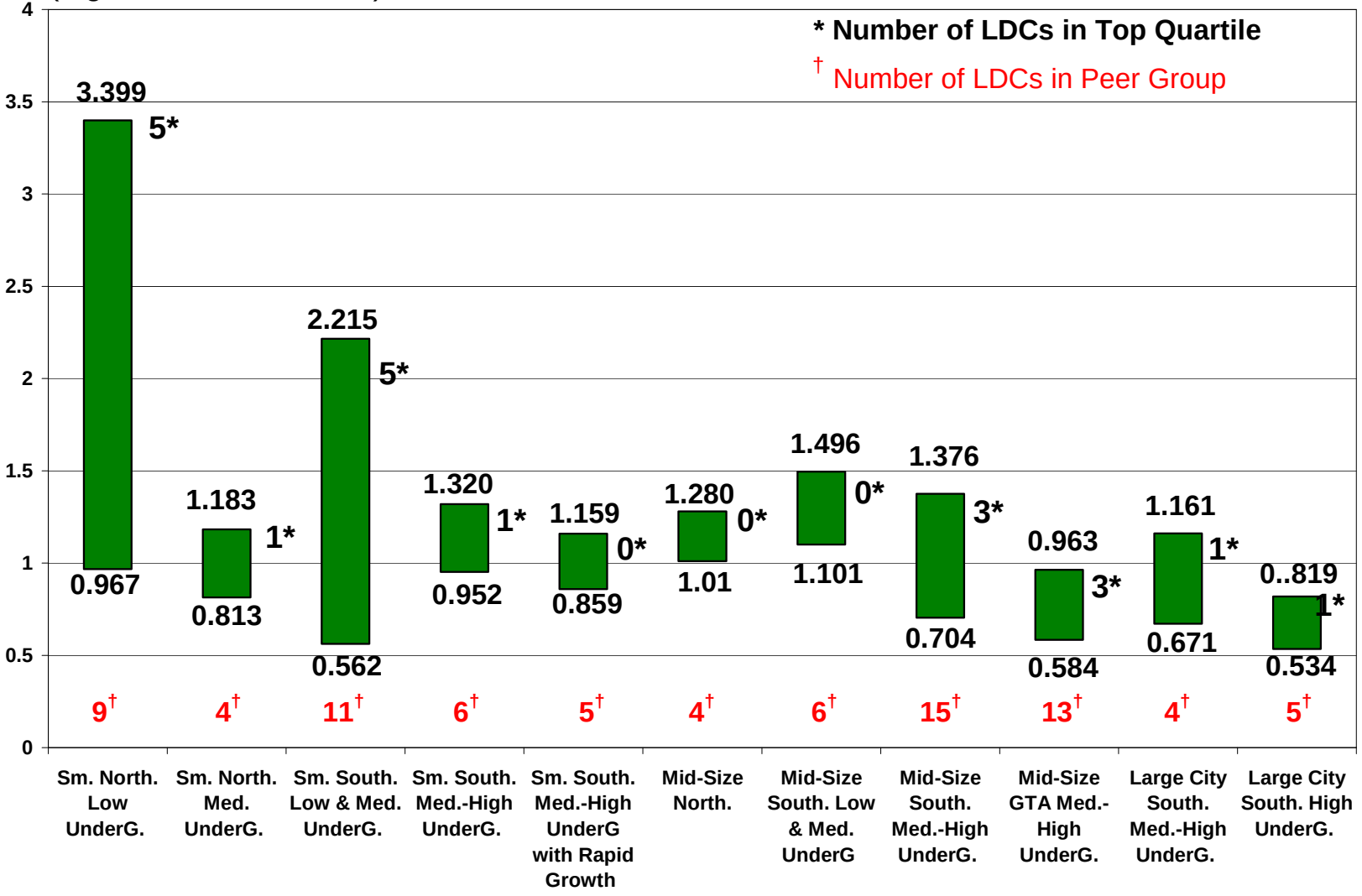
Source: OEB, Reporting and Record-keeping Requirements (RRR), 2005-2007.

Recommendations: Meaningful PEER Groups

4. Abandon scale as a criterion
5. Abandon undergrounding as a criterion
6. Adopt line density and Canadian Shield as new criteria

Current 12 peer groups – scale & undergrounding

(Figure 4 of submission)



Source: PEG, "Sensitivity Analysis on Efficiency Ranking and Cohorts for the 2009 Rate Year: Update". Dec. 3, 2008.

LDC Peer groups and peer group criterion

(Table 2 of submission)

Scale	Location	Degree of Undergrounding	LDCs
Small	Northern	Low Undergrounding (0-10%)	9*
Small	Northern	Medium Undergrounding (10-20%)	4*
Small	Southern	Low & Medium Undergrounding (0-20%)	11**
Small	Southern	Medium-High Undergrounding (20-50%)	6***
Small	Southern	Medium-High Ung. with Rapid Growth (20-50%)	5
Mid-size	Southern	Low & Medium Undergrounding (10-20%)	6
Mid-size	Southern	Medium-High Undergrounding (20-50%)	15
Mid-size	GTA [Southern]	Medium-High Undergrounding (20-50%)	13
Mid-size	Northern	N/A	4
Large	Southern	Medium-High Undergrounding (20-50%)	4
Large	Southern	High Undergrounding (>50%)	5
Large	Northern	N/A [Hydro One Networks]	1

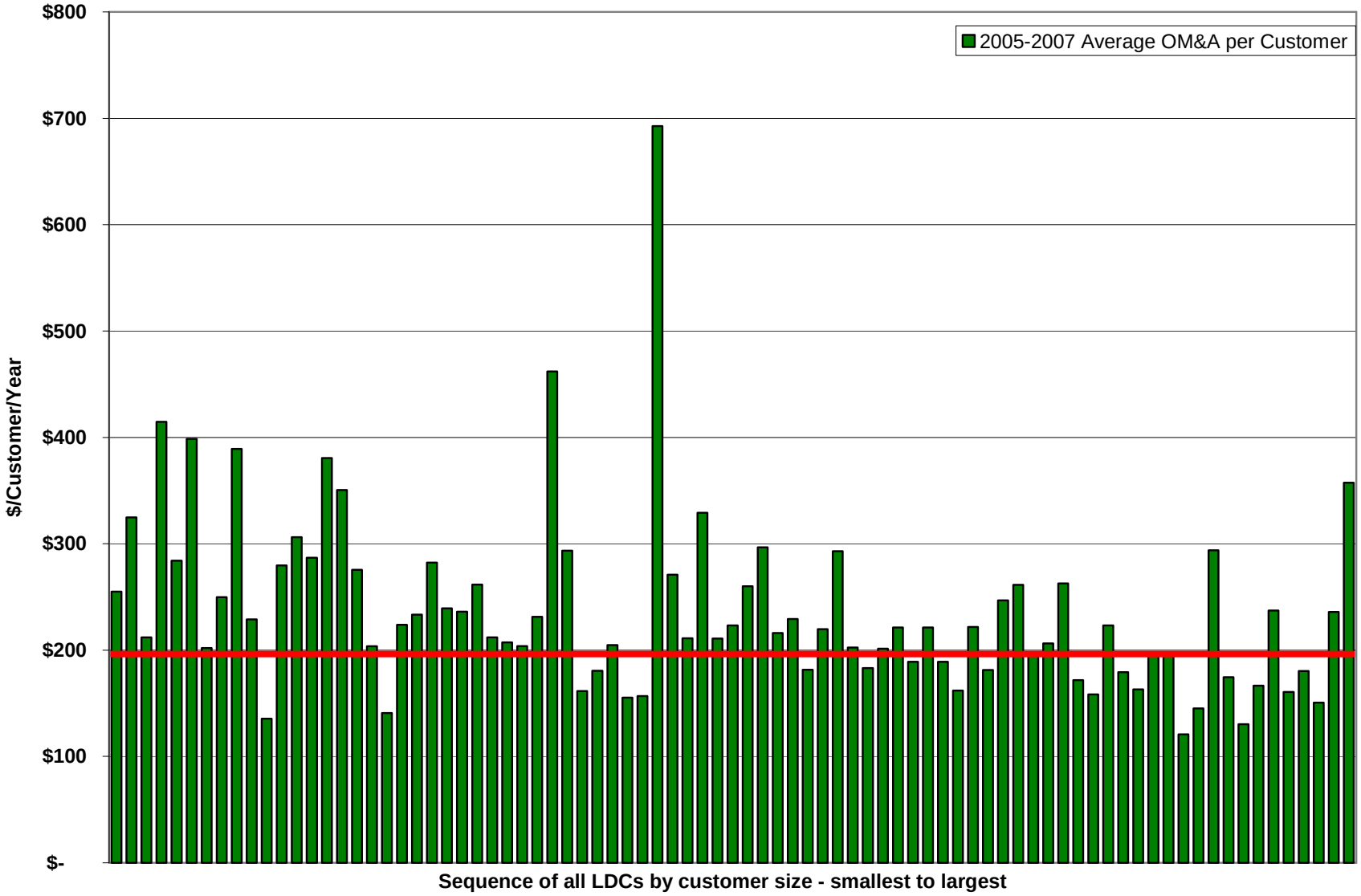
* One LDC has been included in small, but should have been in mid-size based on its number of customers

** Three of the LDCs in this group were sold or merged with others in 2007 and 2008, but are still in the 2007 data.

*** Two of these were sold or merged in 2008, but are still in the 2007 data.

NB: Numbers and descriptors based on groupings in December 3, 2008, PEG Report, which is the most recently published data.

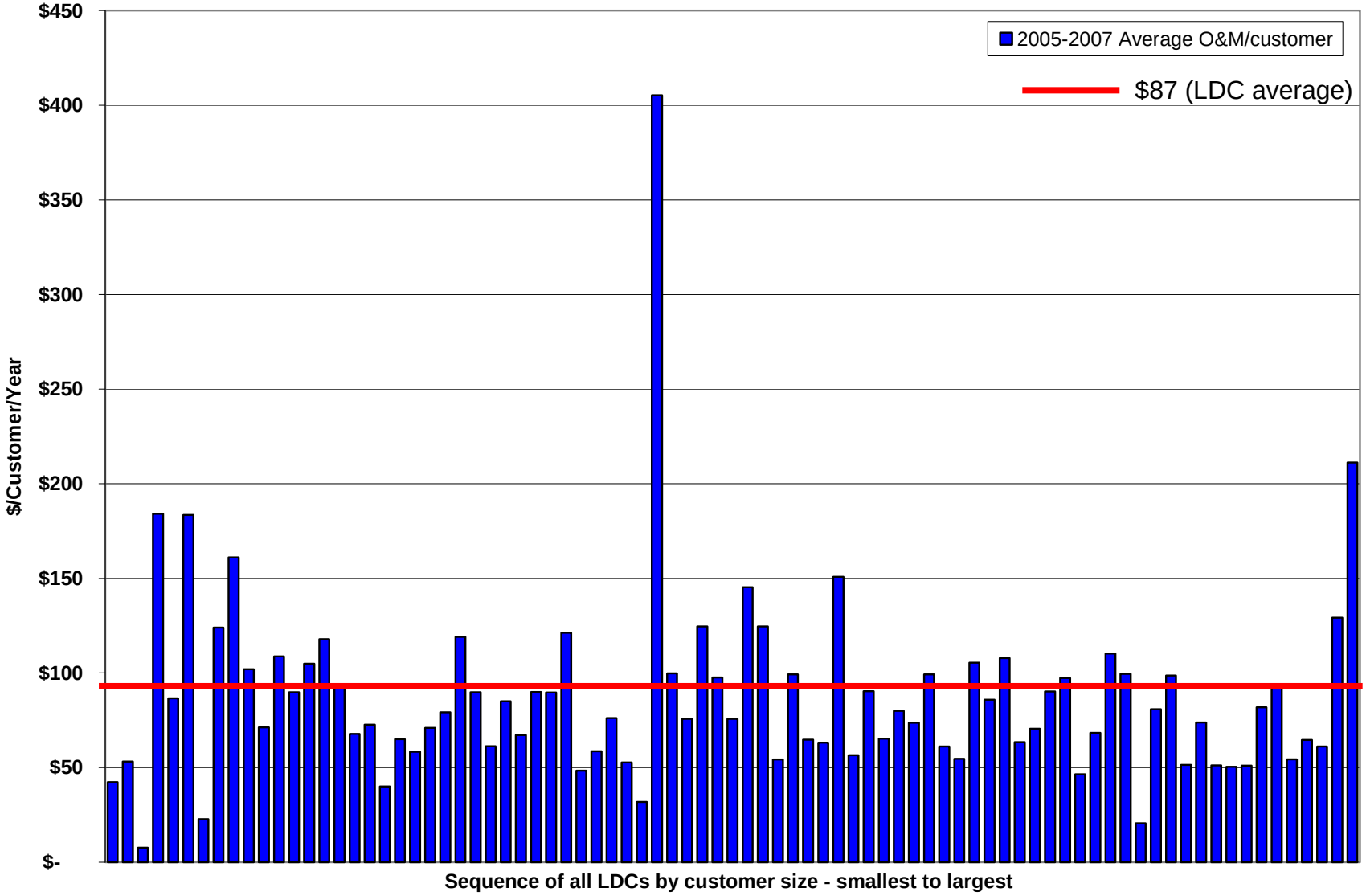
All LDCs average OM&A 2005-2007



Source: OEB, Reporting and Record-keeping Requirements (RRR), 2005-2007.

All LDCs average O&M 2005-2007

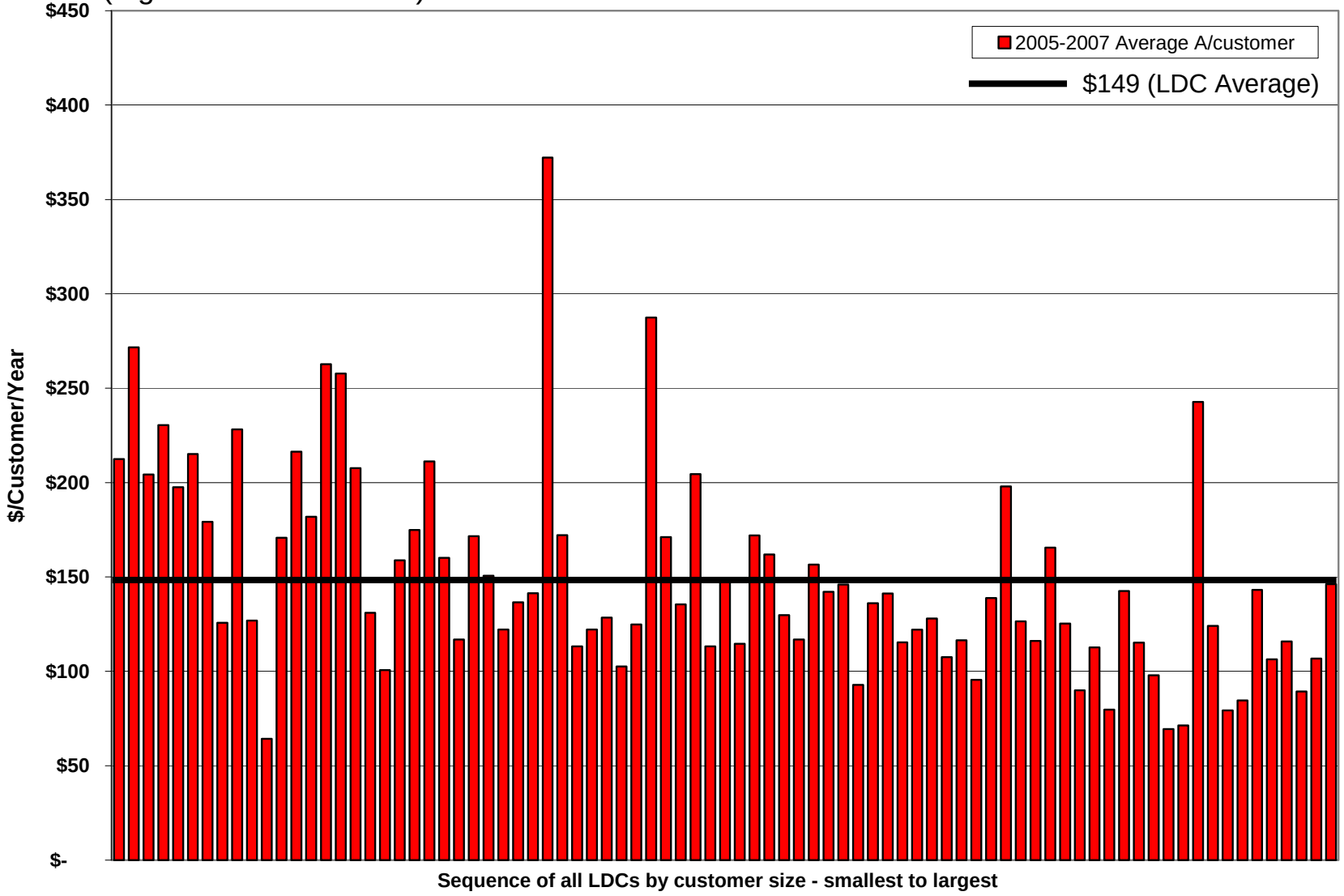
(Figure 5 of submission)



Source: OEB, Reporting and Record-keeping Requirements (RRR), 2005-2007.

All LDCs average administration 2005-2007

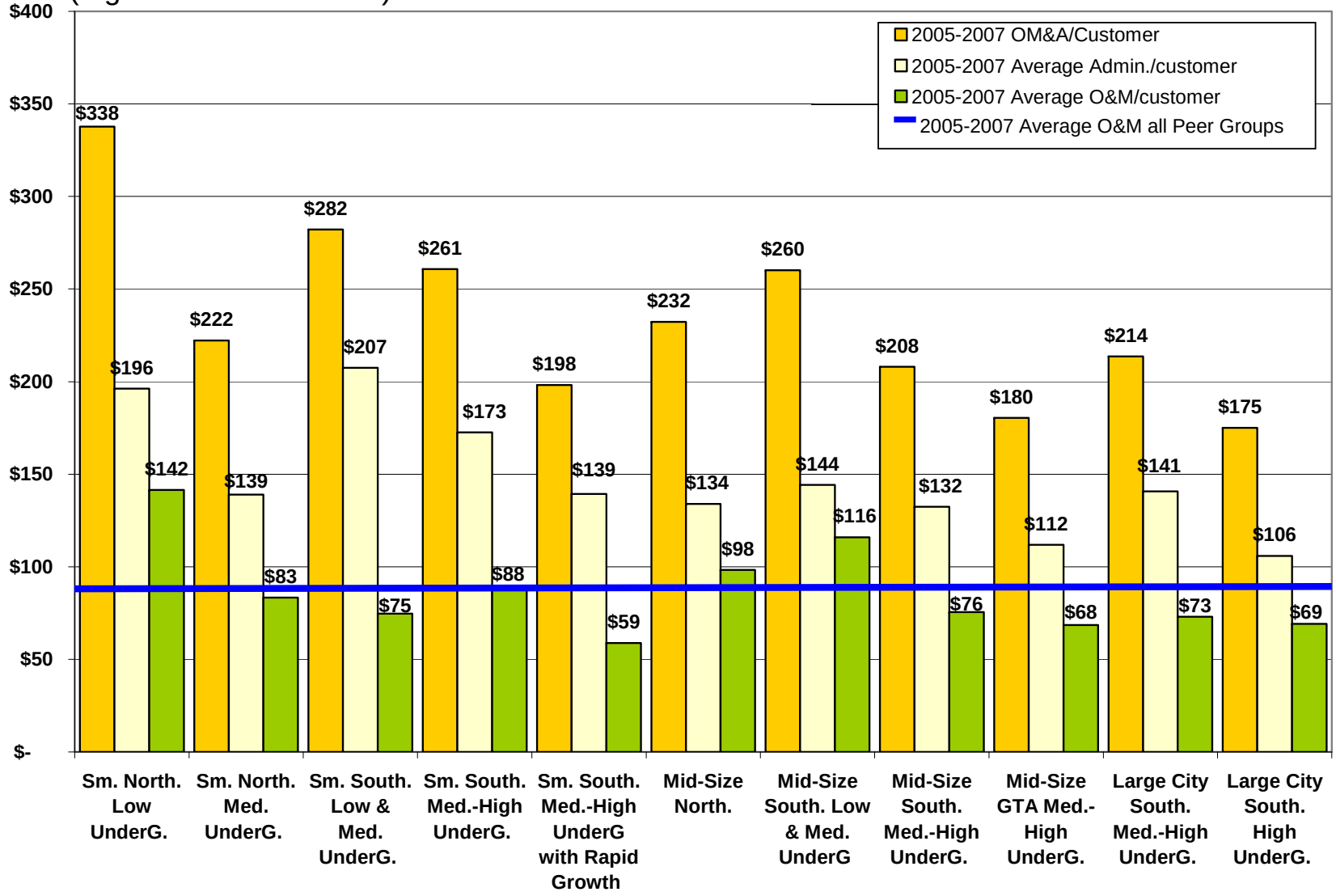
(Figure 6 of submission)



Source: OEB, Reporting and Record-keeping Requirements (RRR), 2005-2007.

Undergrounding is about O&M not Administration

(Figure 7 of submission)



Source: OEB, Reporting and Record-keeping Requirements (RRR), 2005-2007.

Peer group “rural” LDCs separately

(Table 5 of submission)

LDC Name	LDC Location	Line Density
Great Lakes Power	North	6.32
Hydro One Networks	North and South	9.76
Haldimand County Hydro	South	12.13
Sioux Lookout Hydro	North	13.05
Peninsula West Utilities	South	13.89
Halton Hills Hydro	South	15.04
Northern Ontario Wires	North	16.52
Eastern Ontario Power	South	18.12
Atikokan Hydro	North	18.60
Innisfil Hydro Distribution Systems	South	22.17
Niagara-on-the-Lake Hydro	South	23.08
Espanola Regional Hydro Distribution	North	24.20

Source: OEB, Reporting and Record-keeping Requirements (RRR), 2007.

Urban & suburban LDCs mixed in same groups

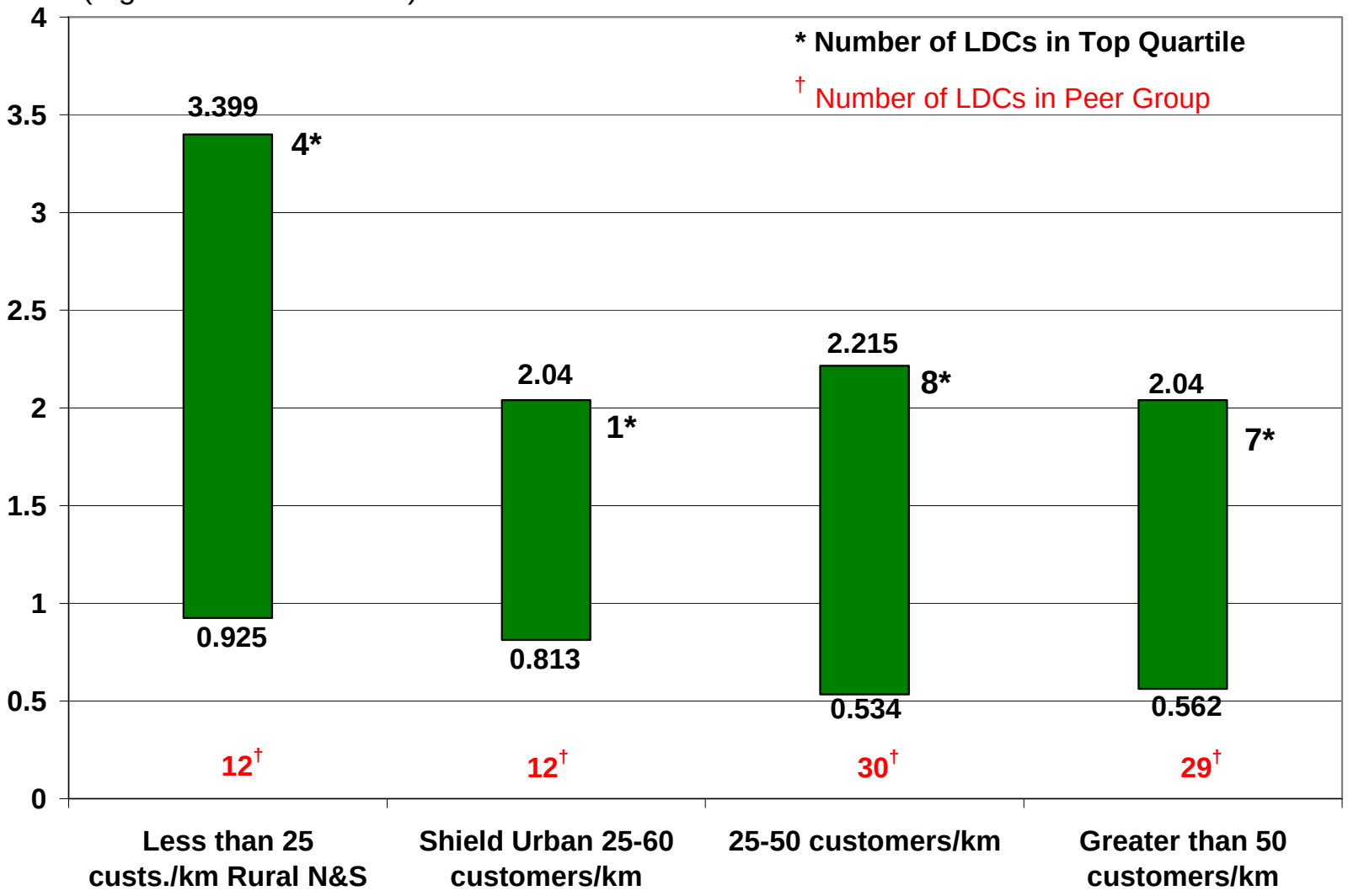
(Table 4 of submission)

LDC	Under-grounding	%	O&M / Customer	Line Density Cust./km	Growth / Output Index
ENWIN Powerlines	Med.-High	38.5%	$51	74.81	1,332
Hydro Ottawa	Med.-High	36.7%	$61	50.01	2,653
Toronto Hydro	Med.-High	45.5%	$129	69.24	457
Veridian Connections	Med.-High	31.9%	$50	52.87	2,837
Enersource Hydro	High	65.5%	$94	35.47	2,511
Horizon Utilities	High	53.3%	$54	69.55	1,302
Hydro One Brampton	High	69.8%	$51	46.64	5,800
London Hydro	High	51.0%	$82	54.47	2,265
PowerStream	High	69.0%	$65	38.10	4,617

Source: OEB, RRR, 2005-2007, and, for grouping and growth index, PEG “Update” Report, December 3, 2008, Table 1.

4 peer groups - line density (cust./km) and Shield

(Figure 8 of submission)



Source: PEG, "Sensitivity Analysis on Efficiency Ranking and Cohorts for the 2009 Rate Year: Update", Dec. 3, 2008.

Peer group results – current vs. line density

(Table 6 of submission)

Line Density Group	# LDCs	Superior Performers	%
Less than 25 Customers per Kilometre	12	3	25%
Shield Urban 25 to 60 Customers per Kilometre	12	1	8%
From 25 to 50 Customers per Kilometre	30	9	30%
Greater than 50 Customers per Kilometre	29	7	24%

(Table 7 of submission)

Scale and Undergrounding Group	# LDCs	Superior Performers	%
Small Northern Low Undergrounding	9	5	55%
Small Northern Medium Undergrounding	4	1	25%
Small Southern Low & Medium Undergrounding	11	5	45%
Small Southern Medium-High Undergrounding	6	1	17%
Small Southern Medium-High Un. with rapid growth	6	0	0%
Mid-Size Northern	4	0	0%
Mid-Size Southern Low & Medium Undergrounding	6	0	0%
Mid-Size Southern Medium-High Undergrounding	15	3	20%
Mid-Size GTA Medium-High Undergrounding	13	3	23%
Large City Southern Medium-High Undergrounding	4	1	25%
Large City Southern High Undergrounding	5	1	20%

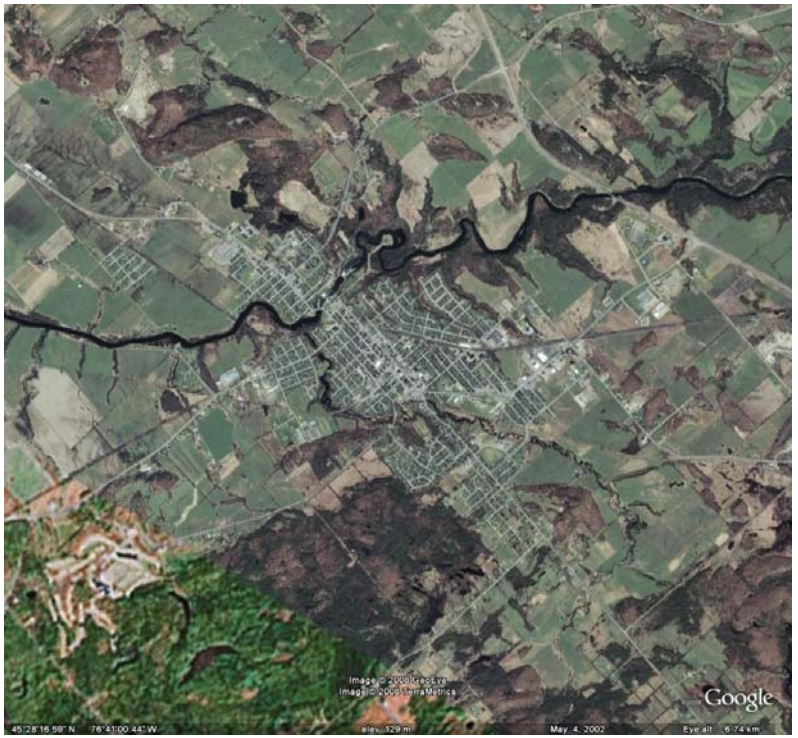
Source: PEG, “Sensitivity Analysis on Efficiency Ranking and Cohorts for the 2009 Rate Year: Update”, December 3, 2008.

Recommendations: Data Quality Issues

7. Treatment of Canadian Shield
8. Wholesale market participants and throughput
9. Correcting identified data problems

IRM criteria for “northern” LDCs

Canadian Shield – √

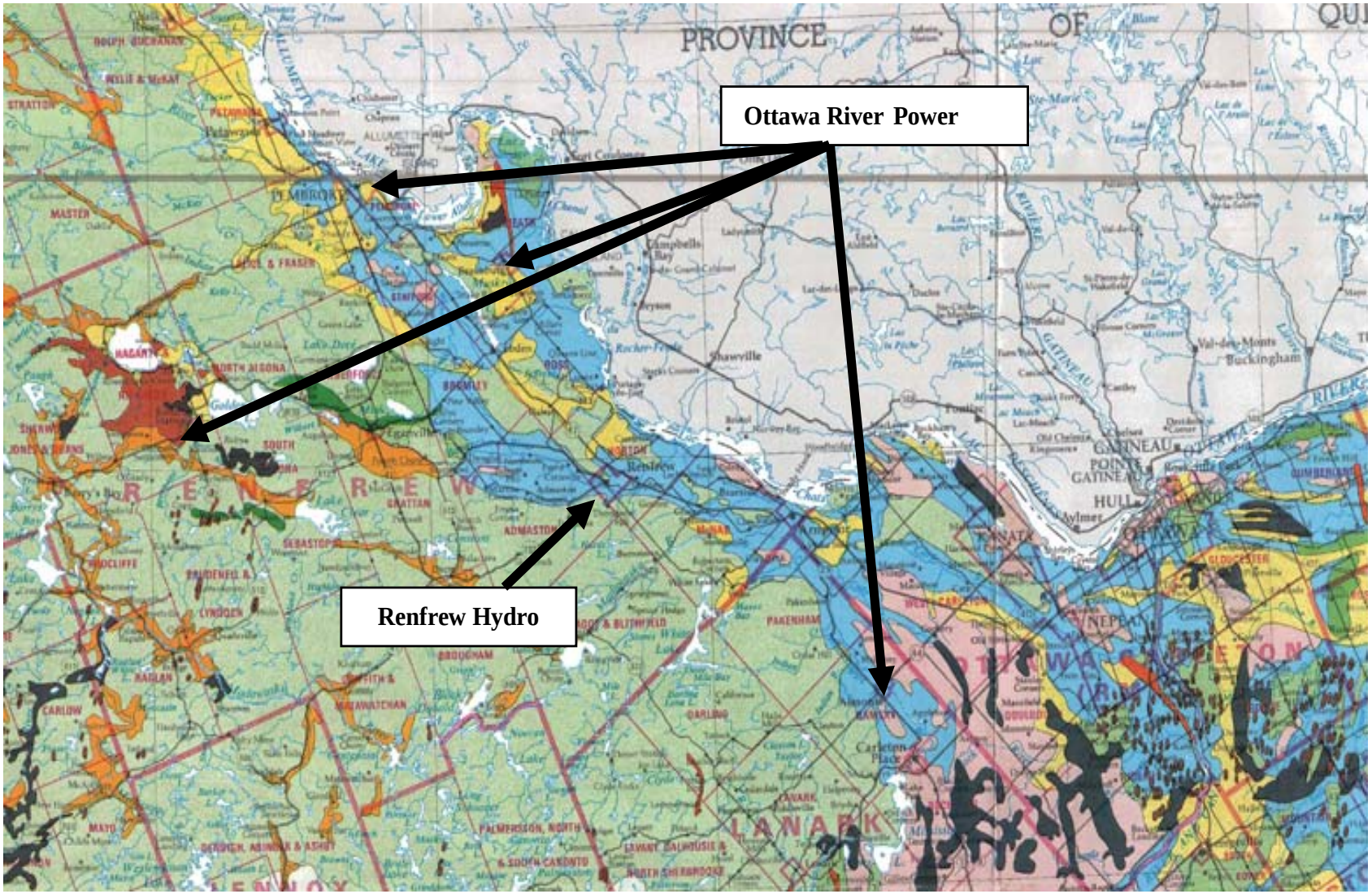


Canadian Shield – ?

“The Shield is a physiographic region characterized by shallow, rocky soils and numerous lakes. Since the land receives considerable precipitation but is unsuited for agriculture, rural areas of the Shield are typically forested. We expect OM&A expenses to be higher on the Shield.” Source: PEG Report, March 20, 2008, p. 50.

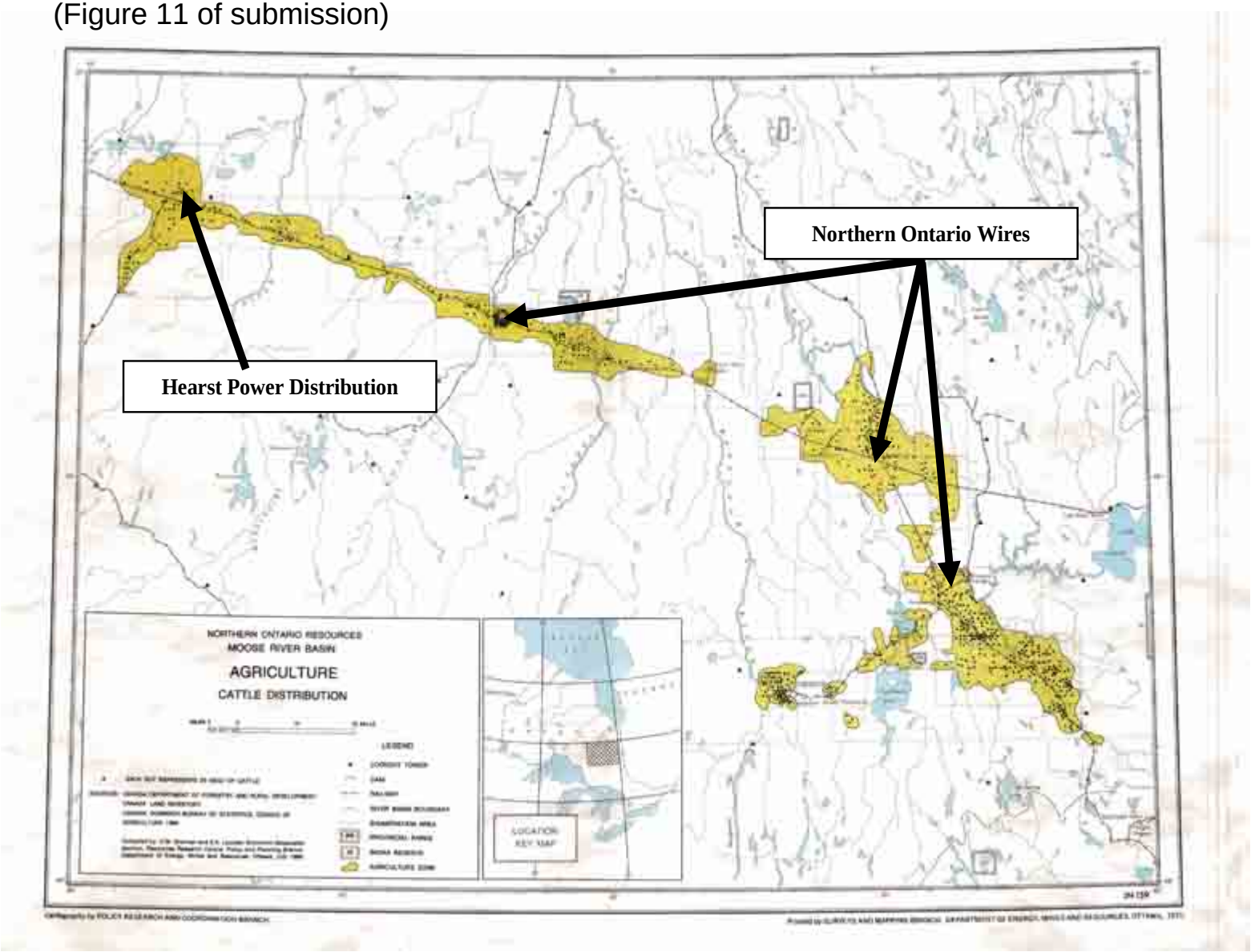
Renfrew Hydro and Ottawa River Power

(Figure 10 of submission)



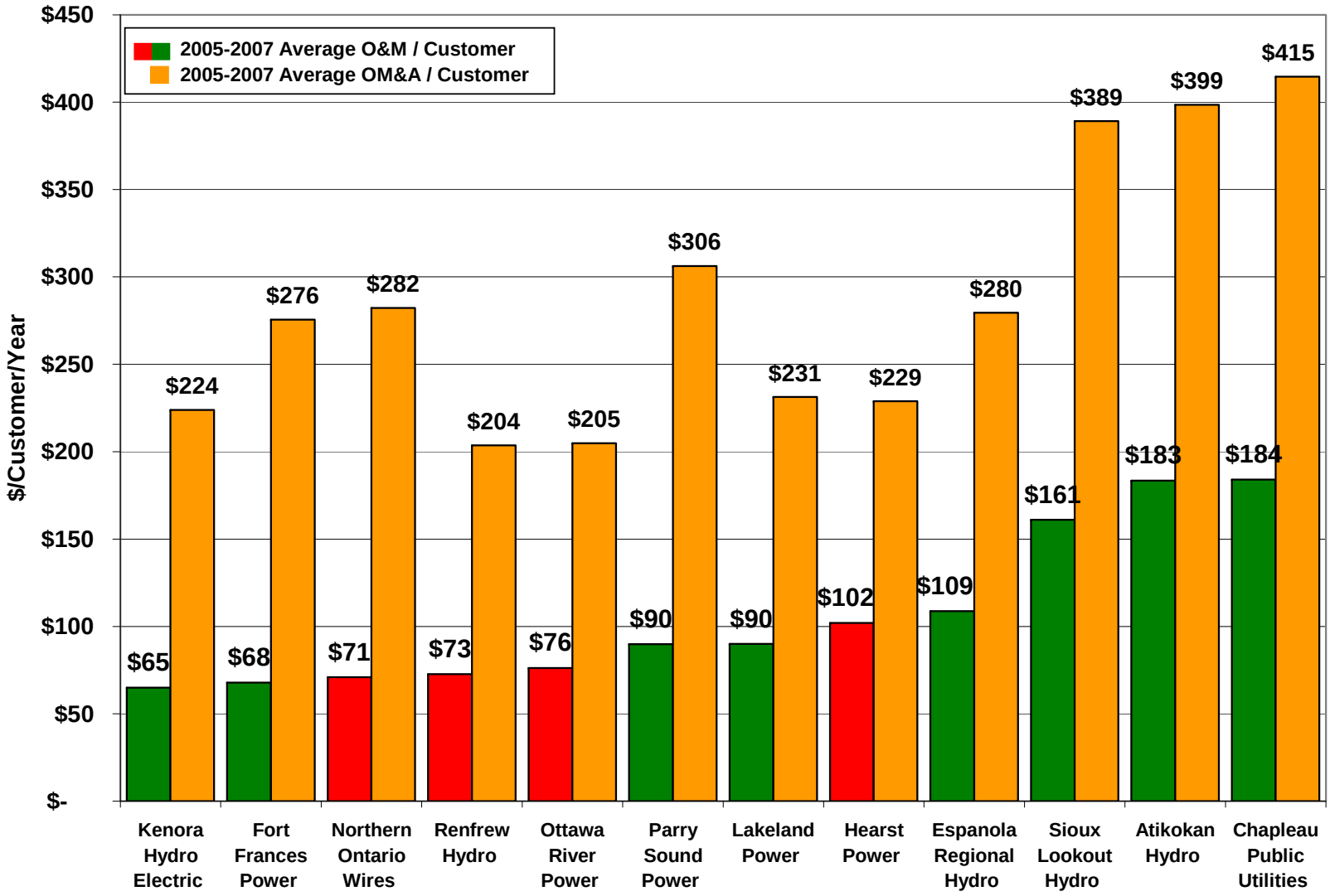
Northern Ontario Wires and Hearst Power

(Figure 11 of submission)



Misapplication of “northern” – O&M and OM&A

(Figure 9 of submission)



Source: OEB, Reporting and Record-keeping Requirements (RRR), 2005-2007.

PEG's sensitivity test to "northern"

Renfrew Hydro went up, not down, without "northern" benefit – counter-intuitive

(Table 8 of submission)

July Results*			December Results**			Change
LDC	**Metric**	**Rank**	**LDC**	**Metric**	**Rank**	**July/Dec.**
Hydro Hawkesbury	0.643	1	Hydro Hawkesbury	0.644	1	0.001
Chatham-Kent Hydro	0.691	2	Chatham-Kent Hydro	0.694	2	0.003
Northern Ontario Wires	0.711	3	Northern Ontario Wires	0.714	3	0.003
Cambridge and N. Dum.	0.715	4	Cambridge and N. Dum.	0.718	4	0.003
E.L.K. Energy	0.729	5	E.L.K. Energy	0.733	5	0.004
Grimsby Power	0.764	6	**Renfrew Hydro**	**0.752**	**6**	**-0.055**
Oshawa PUC Networks	0.787	7	Grimsby Power	0.769	7	0.005
Lakeland Power	0.789	8	Oshawa PUC Networks	0.781	8	-0.006
Hydro One Brampton	0.793	9	Lakeland Power	0.787	9	-0.002
Kitchener-Wilmot Hydro	0.805	10	Hydro One Brampton	0.792	10	-0.001
Renfrew Hydro	**0.807**	**11**	Kitchener-Wilmot Hydro	0.804	11	-0.001
Barrie Hydro	0.814	12	Barrie Hydro	0.810	12	-0.004
Festival Hydro	0.822	13	Festival Hydro	0.827	13	0.005
Welland Hydro	0.834	14	Welland Hydro	0.839	14	0.005
Hydro 2000	0.840	15	Hydro 2000	0.845	15	0.005
Kingston Electricity	0.860	16	Kingston Electricity	0.868	16	0.008
Horizon Utilities	0.864	17	Horizon Utilities	0.872	17	0.008

* PEG "Update" Report, December 3, 2008, Table 3. ** PEG "Update" Report, ibid., Table 11.

Throughput and wholesale market participants

2.1.5 Performance Based Regulation*

Wholesale kWh (kWh) is the total kWh that flows into the system from either the IESO controlled grid (either directly from the High Voltage transmission system or from host distributors) or embedded generators.

Retail kWh is the total kWh consumed within service territory.

- How to account for “Embedded Wholesale Market Participants (EWMP)”?
  - Throughput = Wholesale kWh – (Retail kWh + Losses kWh)

- Sec. 2.1.5 does see IESO subtracts EWMP’s consumption from LDCs
  - IESO indicated 19 LDCs have EWMPs
  - OEB states “approximately 9” LDCs have EWMPs

* Source: OEB, RRR Submission Quick Tips for Distributors and Transmitters”, Dec. 31, 2007. p. 8.

Data quality and rigour

- Devote addition effort and resources to reviewing data filing instructions
- Perform data sensitivity tests to ensure the highest level of data quality and rigour
- Rectify general data management issues that come to light in COS hearings
- Make use of IFRS exercise to improve data management and quality

Coalition for Effective IRM submission

- CEIRM's argument:
  - IRM has financial consequences – let's "get it right"
  - Flawed IRM framework will bog down EDR process
  - Misapplication of rewards can affect reliability
  -
- CEIRM's Objective:
  - Improve IRM's effectiveness rather than abandon IRM
  - Board to fix what it can for 2009 and move forward
  - Begin 2010 improvement process right away