

**Ontario Energy
Board**

**Commission de l'énergie
de l'Ontario**



Review of the Quality of Distributor Service Quality Data and Reporting

**Board Staff
May 27, 2009**

1. Background

This report sets out the results of an audit review conducted by Board staff in the regulatory audit group in relation to data reported by electricity distributors for the 2007 fiscal year regarding their performance in relation to the distribution service quality indicators (“SQIs”) identified in Chapter 15 of the 2006 Electricity Distribution Rate Handbook. The review was identified as a key initiative in the Board’s 2008-2011 Business Plan.

The SQIs that were in effect for the 2007 fiscal year comprise six customer service performance indicators (for example, the time to complete the connection of new services or underground cable locates) and three service reliability indices that measure system outage statistics. Distributors are required by section 2.1.4 of the Board’s Electricity Reporting and Record Keeping Requirements (“RRR”) to make annual filings in relation to the SQIs. That reported data is published by the Board as part of the annual Statistical Yearbook of Electricity Distributors, and data from the 2007 edition of the Yearbook served as the point of reference for this review. The data as reported by distributors is set out in Appendices A and B to this report.

It is noted that the Board has, since 2007, modified and codified the customer service performance indicators by means of the inclusion of service quality requirements in the Distribution System Code. Those service quality requirements came into force on January 1, 2009, and distributors will be required to report on their performance against those requirements commencing in 2010. To date, the Board has not similarly codified the service reliability indices, but these remain subject to monitoring and reporting obligations.

2. Objective of the Review

The objective of this review was to assess whether the SQI data reported to the Board under the RRR is accurate, reliable and timely, and can therefore be relied upon by the Board and interested parties.

3. Review Approach

SQI data reported to the Board through the RRR filings was tested against the utilities’ source documents and analyzed to determine if the utilities were reporting accurate and reliable SQI information on a timely basis. Board staff performed audit testing on a sample that included reported data on both the customer service performance indicators and service reliability indices. Our sample included 17 distributors ranging in size from about 1,000 to about 1,000,000 customers.

From the reported SQI information a sample was selected for the customer service performance indicators as follows:

- Distributors reporting that they met the performance standards 100% of the time
- Distributors reporting that they met the performance standards 0% of the time or with no performance reported
- Distributors reporting that they met the performance standards between 0% and 100% of the time
- Distributors reporting large variations from year to year

From the reported SQI information a sample was selected for the service reliability indices as follows:

- Distributors with inconsistent numbers of customers reported month to month
- Distributors with large variations from year to year on the System Average Interruption Duration Index (“SAIDI”)
- Distributors with large variations from year to year on the System Average Interruption Frequency Index (“SAIFI”)
- Distributors with large variations from year to year on the Customer Average Interruption Duration Index (“CAIDI”)

4. Overall Conclusion

Our review identified significant deficiencies in the record-keeping and reporting practices of a number of distributors within the sample. It is not unreasonable to expect that the record-keeping and reporting practices of at least some of the distributors outside of the sample suffer the same deficiencies.

Achieving significant improvements in the accuracy and reliability of reported SQI information will remain and become even more important in the coming years. Among other things, the data allows the Board to assess whether distributors are failing to maintain adequate service levels, which is more of a potential risk under a multi-year incentive rate regulation regime than might otherwise be the case. In addition, as noted above, some of these SQIs have now become mandatory service quality requirements obligations and the reported data will be used by the Board to assess compliance against those requirements. Finally, the Board has indicated that it intends to add system reliability standards to the Distribution System Code with associated performance standards once it has, among other things, sufficiently reliable system reliability data from distributors.¹

¹ See the Board’s March 12, 2008 “Notice of Proposal to Amend a Code: Proposed Amendments to the Distribution System Code” (EB-2008-0001).

5. Review Results

(a) Timeliness of Filings

All but a few of the distributors in our sample filed their SQI data with the Board as a part of their RRR filings for 2007 by the due date of January 31st, 2008. The remainder responded to Board staff follow-up requests.

Action required: None.

(b) Inadequate Record-Keeping Practices

Most of the distributors in our sample did not maintain adequate records to support the SQI data filed with the Board; however the records kept for the system reliability indices were of better quality than those kept for the customer service performance indicators.

For the customer service performance indicators, we found that many distributors maintain only raw data, or source documents, without having a summary of the overall SQI information. For most of the distributors in our sample, we were therefore unable to ascertain the accuracy of their SQI reporting to the Board. Furthermore, the absence of a summary is an indicator of weak internal controls over the reported data. Some of the examples provided to us as back-up documentation were time cards, work orders and lawyer's letters, without sufficient information to show how these documents related to any of the reported summary SQI results. A few smaller distributors did not keep records of phone calls. These distributors indicated that they were so small that they did not need to keep such records, stating that they knew they met their phone response metric 100% of the time.

Action required: The results of this audit review should be communicated to distributors to promote the proper creation and maintenance of records and summaries of all SQI data reported to the Board. The summary information needs to be tied to the source documents and the RRR filing.

(c) Inaccurate and Unreliable Filings

The audit review revealed that some of the sample distributors had filed inaccurate SQI information. Some of the distributors with inaccuracies in reported data have arithmetic errors in the way the reported data is summarized. In a few instances, the errors were significant. For example, in one case, the number of hours in an outage was overstated by a factor of 100 that overstated SAIDI and CAIDI for the month by 23% (i.e., the reported performance was worse than actual).

While the quality of reported service reliability data appears to have improved over the years, in the case of some distributors in our sample serious questions were raised as to whether the reported SQI data is of sufficient quality to be relied upon.

We identified a number of causes of the errors in reporting that were revealed by the review:

- Insufficient management review of summary information before reporting to the Board,
- Lack of knowledge of how to calculate the measure (for example, difficulty in distinguishing between urban and rural locations),
- Misinterpretation or misunderstanding of the SQI (for example, misinterpreting “appointments met” to mean the number of times individuals failed to show up on time in the distributor’s office and misunderstanding how to calculate the number of days for completing an activity),and
- Technical difficulties or insufficient equipment functionality to gather necessary information through phone logs.

Inaccuracies in calculating and reporting were evident in the data reported by most of the distributors in the sample, regardless of size. However, we found that the larger distributors were more organized and detailed in their record keeping practices and errors tended to be small or immaterial.

All of the distributors whose records contained errors have either already refiled corrected SQI data, or have indicated their intention to do so.

Action required: Board staff will follow-up and ensure that corrected records have been reported to the Board in the cases of those found through sampling to have errors. In addition, the results of this audit review should be communicated to distributors to increase awareness of the types of errors in reporting that were found.

(d) Information Technology System Limitation

Currently, the forms for reporting the duration of outages (for the service reliability indices) do not allow the distributors to enter decimals in the field for the number of hours of outage (whole hours only). The distributors currently round the numbers down.

Action required: The relevant forms should be amended allowing for entering fractional hours when reporting time.

6. Summary of Next Steps

The results of this audit review should be communicated to distributors for the following reasons:

- to ensure the proper creation and maintenance of records and summaries of all SQI data reported to the Board. The summary information needs to be tied to source documents and the RRR filing.
- to increase awareness of the types of errors in reporting that were found and emphasize on the need for the distributors to improve the quality of data and reporting in the future filings.

Board staff will:

- Follow-up and ensure that corrected records have been reported to the Board in the cases of those found through sampling to have errors.
- Ensure that the relevant forms are amended to allow for entering fractional hours when reporting time.
- Contact those distributors who appear to require guidance on interpretation of SQI data.

Electricity Distributor Service Reliability Indicators for 2007*

APPENDIX A

ELECTRICITY DISTRIBUTOR	SAIDI	SAIFI	CAIDI
Atikokan Hydro Inc.	4.90	2.22	2.21
Barrie Hydro Distribution Inc.	2.38	3.23	0.74
Bluewater Power Distribution Corporation	2.76	2.66	1.04
Brant County Power Inc.	2.95	2.64	1.11
Brantford Power Inc.	1.20	1.25	0.96
Burlington Hydro Inc.	1.03	0.68	1.51
COLLUS Power Corp.	2.23	4.56	0.49
Cambridge and North Dumfries Hydro Inc.	1.51	1.74	0.86
Canadian Niagara Power Inc.- Fort Erie	3.95	3.13	1.26
Centre Wellington Hydro Ltd.	0.10	0.07	1.40
Chapleau Public Utilities Corporation	10.33	8.27	1.25
Chatham-Kent Hydro Inc.	1.84	1.58	1.16
Clinton Power Corporation	0.12	8.00	0.02
Cooperative Hydro Embrun Inc.	0.08	0.02	5.32
Dutton Hydro Limited	0.22	0.09	2.45
E.L.K. Energy Inc.	1.53	1.17	1.30
ENWIN Powerlines Ltd.	1.20	2.11	0.57
Eastern Ontario Power Inc. (CNP)	10.13	5.78	1.75
Enersource Hydro Mississauga Inc.	0.64	0.78	0.83
Erie Thames Powerlines Corporation	3.16	2.09	1.51
Espanola Regional Hydro Distribution Corporation	0.63	0.18	3.40
Essex Powerlines Corporation	3.59	3.84	0.93
Festival Hydro Inc.	4.13	4.76	0.87
Fort Frances Power Corporation	0.30	0.31	0.95
Grand Valley Energy Inc.	4.05	1.23	3.30
Great Lakes Power Limited	6.50	2.55	2.55
Greater Sudbury Hydro Inc.	2.01	1.53	1.31
Grimsby Power Incorporated	1.51	1.28	1.18
Guelph Hydro Electric Systems Inc.	0.59	1.02	0.58
Haldimand County Hydro Inc.	10.84	3.95	2.75
Halton Hills Hydro Inc.	1.22	0.66	1.85
Hearst Power Distribution Company Limited	19.03	5.77	3.30
Horizon Utilities Corporation	1.01	1.59	0.64
Hydro 2000 Inc.	4.84	1.44	3.36
Hydro Hawkesbury Inc.	7.68	2.49	3.09
Hydro One Brampton Networks Inc.	1.26	1.85	0.68
Hydro One Networks Inc.	11.37	4.08	2.79
Hydro Ottawa Limited	1.40	1.21	1.15
Innisfil Hydro Distribution Systems Limited	0.76	1.25	0.60
Kenora Hydro Electric Corporation Ltd.	2.46	2.89	0.85
Kingston Electricity Distribution Limited	1.53	1.43	1.07
Kitchener-Wilmot Hydro Inc.	1.10	0.94	1.18
Lakefront Utilities Inc.	2.36	2.15	1.09
Lakeland Power Distribution Ltd.	11.75	4.32	2.72
London Hydro Inc.	1.69	2.46	0.69
Middlesex Power Distribution Corporation	0.83	0.98	0.84
Midland Power Utility Corporation	1.64	0.50	3.29
Milton Hydro Distribution Inc.	1.52	1.13	1.34
Newbury Power Inc.	4.57	0.07	68.69
Newmarket Hydro Ltd.	0.18	0.17	1.05

Electricity Distributor Service Reliability Indicators for 2007*

APPENDIX A

ELECTRICITY DISTRIBUTOR	SAIDI	SAIFI	CAIDI
Niagara Falls Hydro Inc.	2.31	2.00	1.15
Niagara-on-the-Lake Hydro Inc.	2.41	2.07	1.16
Norfolk Power Distribution Inc.	5.07	1.71	2.96
North Bay Hydro Distribution Limited	1.66	1.77	0.94
Northern Ontario Wires Inc.	4.71	3.37	1.40
Oakville Hydro Electricity Distribution Inc.	1.26	1.72	0.73
Orangeville Hydro Limited	3.00	1.65	1.82
Orillia Power Distribution Corporation	5.36	3.60	1.49
Oshawa PUC Networks Inc.	1.76	1.16	1.51
Ottawa River Power Corporation	2.19	3.00	0.73
PUC Distribution Inc.	3.28	3.90	0.84
Parry Sound Power Corporation	0.62	3.94	0.16
Peninsula West Utilities Limited	3.38	2.79	1.21
Peterborough Distribution Incorporated	1.35	1.69	0.80
Port Colborne Hydro Inc. (CNP)	3.57	4.95	0.72
PowerStream Inc.	2.17	1.54	1.40
Renfrew Hydro Inc.	2.20	1.44	1.53
Rideau St. Lawrence Distribution Inc.	0.68	0.22	3.10
Sioux Lookout Hydro Inc.	4.41	2.38	1.85
St. Thomas Energy Inc.	0.49	0.38	1.29
Thunder Bay Hydro Electricity Distribution Inc.	2.00	3.30	0.61
Tillsonburg Hydro Inc.	4.45	3.82	1.17
Toronto Hydro-Electric System Limited	1.95	2.27	0.86
Veridian Connections Inc.	1.94	1.81	1.07
Wasaga Distribution Inc.	1.90	1.87	1.02
Waterloo North Hydro Inc.	0.91	6.65	0.14
Welland Hydro-Electric System Corp.	4.91	5.31	0.92
Wellington North Power Inc.	0.32	0.33	0.97
West Coast Huron Energy Inc.	3.63	2.91	1.25
West Nipissing Energy Services Ltd.	0.24	0.15	1.61
West Perth Power Inc.	3.54	2.25	1.57
Westario Power Inc.	0.30	0.92	0.33
Whitby Hydro Electric Corporation	0.83	1.05	0.79
Woodstock Hydro Services Inc.	1.56	1.80	0.87

* Sourced from the 2007 Yearbook of Electricity Distributors posted on the Board's website.

Note:

SAIDI is the average forced sustained interruption duration per customer served per year (measured in hours). Calculation is "Total Customer Hours of Interruptions" divided by "Total Number of Customers".

SAIFI is the average number of forced sustained interruptions experienced per customer served per year (measured in outages). Calculation is the "Total Customer Interruptions" divided by "Total Number of Customers".

CAIDI is the average forced sustained interruption duration experienced by interrupted customers per year (measured in hours). Calculation is SAIDI divided by SAIFI.

Electricity Distributor Customer Service Indicators for 2007*

APPENDIX B

ELECTRICITY DISTRIBUTOR	Low Voltage Connections	High Voltage Connections	Cable Locates	Phone Calls	Annual Appointments	Annual Written Response	Emergency Urban Response	Emergency Rural Response
Atikokan Hydro Inc.	100.00	-	100.00	100.00	100.00	100.00	100.00	100.00
Barrie Hydro Distribution Inc.	98.20	100.00	99.80	69.30	100.00	100.00	93.30	-
Bluewater Power Distribution Corporation	100.00	100.00	97.40	76.30	100.00	100.00	100.00	100.00
Brant County Power Inc.	100.00	-	98.70	90.30	100.00	-	-	100.00
Brantford Power Inc.	100.00	100.00	99.50	80.70	100.00	98.80	100.00	-
Burlington Hydro Inc.	98.70	-	99.40	74.70	100.00	100.00	-	-
COLLUS Power Corp.	100.00	100.00	100.00	90.20	99.40	100.00	100.00	-
Cambridge and North Dumfries Hydro Inc.	96.60	-	99.80	73.30	100.00	100.00	97.80	91.00
Canadian Niagara Power Inc.- Fort Erie	99.30	-	100.00	83.80	100.00	100.00	100.00	100.00
Centre Wellington Hydro Ltd.	100.00	-	99.80	100.00	100.00	100.00	96.20	-
Chapleau Public Utilities Corporation	100.00	-	100.00	100.00	100.00	100.00	-	-
Chatham-Kent Hydro Inc.	95.10	-	98.80	77.30	100.00	100.00	92.40	-
Clinton Power Corporation	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-
Cooperative Hydro Embrun Inc.	100.00	-	100.00	96.80	100.00	100.00	100.00	-
Dutton Hydro Limited	100.00	-	100.00	100.00	100.00	100.00	100.00	-
E.L.K. Energy Inc.	96.10	-	95.50	96.30	97.10	92.10	88.30	-
ENWIN Powerlines Ltd.	99.40	100.00	99.70	68.10	98.80	100.00	93.50	-
Eastern Ontario Power Inc. (CNP)	100.00	-	85.90	87.80	100.00	100.00	100.00	100.00
Enersource Hydro Mississauga Inc.	97.70	100.00	99.90	83.80	100.00	99.80	99.10	-
Erie Thames Powerlines Corporation	100.00	100.00	94.30	96.30	100.00	100.00	100.00	-
Corporation	100.00	-	92.90	73.90	100.00	60.00	100.00	-
Essex Powerlines Corporation	99.10	-	99.70	78.70	99.40	96.90	100.00	-
Festival Hydro Inc.	97.50	-	99.00	92.70	97.00	100.00	-	-
Fort Frances Power Corporation	100.00	-	100.00	100.00	100.00	100.00	100.00	-
Grand Valley Energy Inc.	100.00	-	100.00	100.00	100.00	100.00	-	-
Great Lakes Power Limited	98.60	-	88.20	71.10	100.00	100.00	100.00	100.00
Greater Sudbury Hydro Inc.	100.00	-	100.00	81.70	100.00	100.00	86.40	-
Grimsby Power Incorporated	100.00	-	98.90	84.20	100.00	100.00	100.00	100.00
Guelph Hydro Electric Systems Inc.	100.00	100.00	100.00	80.70	100.00	100.00	86.40	-
Haldimand County Hydro Inc.	87.70	-	97.80	91.60	95.90	98.30	80.00	97.40
Halton Hills Hydro Inc.	100.00	100.00	99.80	87.10	100.00	99.60	100.00	100.00
Hearst Power Distribution Company Limited	100.00	-	100.00	92.30	-	100.00	100.00	-
Horizon Utilities Corporation	99.70	-	98.20	82.40	98.30	99.60	97.00	-
Hydro 2000 Inc.	100.00	-	100.00	98.60	100.00	100.00	100.00	-
Hydro Hawkesbury Inc.	100.00	100.00	100.00	100.00	99.00	100.00	100.00	-
Hydro One Brampton Networks Inc.	100.00	100.00	97.80	83.80	99.90	99.90	98.10	-
Hydro One Networks Inc.	93.00	-	92.90	78.30	92.50	99.90	-	81.70
Hydro Ottawa Limited	95.80	100.00	97.50	71.90	98.80	99.20	98.10	-
Innisfil Hydro Distribution Systems Limited	97.60	100.00	92.00	100.00	100.00	100.00	-	100.00
Kenora Hydro Electric Corporation Ltd.	100.00	-	100.00	100.00	100.00	100.00	100.00	-
Kingston Electricity Distribution Limited	94.60	100.00	100.00	77.00	95.00	100.00	97.00	-
Kitchener-Wilmot Hydro Inc.	91.00	100.00	100.00	85.10	92.00	98.00	100.00	100.00
Lakefront Utilities Inc.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-
Lakeland Power Distribution Ltd.	100.00	100.00	95.80	99.90	98.90	99.40	100.00	100.00
London Hydro Inc.	100.00	-	94.10	69.70	-	99.80	98.90	-
Middlesex Power Distribution Corporation	100.00	-	100.00	-	100.00	100.00	100.00	-
Midland Power Utility Corporation	95.50	-	94.00	99.90	95.30	100.00	100.00	-
Milton Hydro Distribution Inc.	99.90	-	98.70	80.10	100.00	100.00	100.00	94.40
Newbury Power Inc.	100.00	-	100.00	100.00	100.00	100.00	-	100.00
Newmarket Hydro Ltd.	98.00	100.00	95.30	90.80	97.20	99.50	100.00	-
Niagara Falls Hydro Inc.	82.40	100.00	98.90	99.00	100.00	100.00	-	-
Niagara-on-the-Lake Hydro Inc.	100.00	100.00	100.00	-	100.00	100.00	100.00	100.00
Norfolk Power Distribution Inc.	-	-	-	82.90	-	80.00	100.00	100.00
North Bay Hydro Distribution Limited	100.00	100.00	92.60	97.90	98.90	100.00	100.00	100.00
Northern Ontario Wires Inc.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-
Oakville Hydro Electricity Distribution Inc.	96.20	-	70.10	79.50	99.80	99.50	-	-
Orangeville Hydro Limited	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-
Orillia Power Distribution Corporation	100.00	-	100.00	98.10	100.00	100.00	100.00	-
Oshawa PUC Networks Inc.	100.00	100.00	100.00	66.80	100.00	100.00	100.00	-
Ottawa River Power Corporation	100.00	-	100.00	99.90	100.00	100.00	100.00	-
PUC Distribution Inc.	94.00	100.00	96.30	83.00	100.00	99.30	96.40	-
Parry Sound Power Corporation	100.00	-	100.00	100.00	100.00	100.00	100.00	100.00
Peninsula West Utilities Limited	98.80	100.00	95.60	-	-	-	100.00	100.00

Electricity Distributor Customer Service Indicators for 2007*

APPENDIX B

ELECTRICITY DISTRIBUTOR	Low Voltage Connections	High Voltage Connections	Cable Locates	Phone Calls	Annual Appointments	Annual Written Response	Emergency Urban Response	Emergency Rural Response
Peterborough Distribution Incorporated	99.80	100.00	100.00	70.50	-	100.00	97.50	-
Port Colborne Hydro Inc. (CNP)	100.00	-	100.00	85.70	100.00	88.90	100.00	100.00
PowerStream Inc.	97.70	-	94.60	81.70	100.00	98.30	94.80	-
Renfrew Hydro Inc.	100.00	-	100.00	87.50	100.00	100.00	100.00	-
Rideau St. Lawrence Distribution Inc.	100.00	-	100.00	99.20	97.90	100.00	-	100.00
Sioux Lookout Hydro Inc.	100.00	-	100.00	100.00	100.00	100.00	100.00	100.00
St. Thomas Energy Inc.	100.00	-	93.80	79.40	97.60	95.20	100.00	-
Inc.	95.20	100.00	92.20	94.60	100.00	100.00	98.80	100.00
Tillsonburg Hydro Inc.	100.00	-	100.00	-	-	-	100.00	-
Toronto Hydro-Electric System Limited	96.40	99.00	97.30	76.60	99.20	88.20	90.10	-
Veridian Connections Inc.	99.50	100.00	99.30	56.70	100.00	100.00	100.00	100.00
Wasaga Distribution Inc.	100.00	100.00	100.00	100.00	100.00	100.00	91.40	100.00
Waterloo North Hydro Inc.	100.00	100.00	99.10	86.80	99.80	99.40	90.30	98.00
Welland Hydro-Electric System Corp.	99.30	-	99.80	99.70	100.00	100.00	100.00	-
Wellington North Power Inc.	100.00	-	99.20	99.90	100.00	100.00	100.00	-
West Coast Huron Energy Inc.	100.00	-	100.00	100.00	100.00	99.60	100.00	-
West Nipissing Energy Services Ltd.	100.00	-	100.00	100.00	100.00	100.00	100.00	-
West Perth Power Inc.	100.00	-	100.00	100.00	-	-	100.00	-
Westario Power Inc.	96.90	-	97.00	93.20	100.00	100.00	92.10	-
Whitby Hydro Electric Corporation	100.00	100.00	95.00	94.90	100.00	100.00	100.00	100.00
Woodstock Hydro Services Inc.	99.50	-	100.00	98.90	100.00	100.00	100.00	-

* Sourced from the 2007 Yearbook of Electricity Distributors posted on the Board's website.

Note:

Low Voltage Connections is the percentage of new low voltage (<750 Volts) connection requests where the connection is made within 5 working days of all prerequisites (engineering, safety, etc.) being met.

High Voltage Connections is the percentage of new high voltage (>=750 Volts) connection requests where the connection is made within 10 working days of all prerequisites (engineering, safety, etc.) being met.

Cable Locates is the percentage of requests for cable locates that are completed within 5 working days (of the initial date of the request or, if the customer so designates, a specific requested date).

Phone Calls is the percentage of calls to the utility's general inquiry number that are answered in person within 30 seconds.

Annual Appointments is the percentage of appointments involving a customer premises visit where the appointment date and time (morning or afternoon) is met.

Annual Written Response is the percentage of customer inquiries relating to a customer's account and requiring a written response where the response is provided within 10 working days of receipt of the inquiry.

Emergency Urban Response is the percentage of emergency (fire, police, etc.) trouble calls where a qualified service person is on site within 60 minutes of the call. Urban areas are defined by the respective municipality.

Emergency Rural Response is the percentage of emergency (fire, police, etc.) trouble calls where a qualified service person is on site within 120 minutes of the call. Rural areas are defined by the respective municipality.