

HAND DELIVERED

December 19, 2018

Board of Commissioners
of Public Utilities
P.O. Box 21040
120 Torbay Road
St. John's, NL A1A 5B2

Attention: G. Cheryl Blundon
Director of Corporate Services
and Board Secretary

Ladies and Gentlemen:

Re: Peer Group Performance Measures for Newfoundland Power

On February 28, 2005, Newfoundland Power submitted a report entitled *Peer Group Performance Measures for Newfoundland Power*. The report committed Newfoundland Power to reporting annually on the measures presented therein until otherwise directed by the Board.

Enclosed herewith are the original and 10 copies of a report provided in fulfillment of that commitment.

We trust this is satisfactory. However, if there are any questions or concerns, they should be directed to the undersigned.

Yours very truly,



Gerard M. Hayes
Senior Counsel

c. Shirley Walsh
Newfoundland and Labrador Hydro

Dennis Browne, QC
Browne Fitzgerald Morgan & Avis

Newfoundland Power Inc.

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**Peer Group Performance Measures
For Newfoundland Power**

December 19, 2018

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1.0 Introduction

In Order No. P.U. 19 (2003), the Board of Commissioners of Public Utilities (the “Board”) ordered that Newfoundland Power Inc. (“Newfoundland Power” or “the Company”) file with the Board in 2004 a report suggesting a “peer group” of utilities and performance measures upon which to evaluate the Company’s performance.

In 2004, the Company submitted a draft report entitled *A Report on Peer Group Performance Measures for Newfoundland Power* which reviewed the Company’s initial findings in relation to utility performance measures and benchmarking initiatives. Subsequently, Newfoundland Power submitted a report entitled *A Supplementary Report on Peer Group Performance Measures for Newfoundland Power* addressing questions from the Board and recommending certain additional measures.

On February 28, 2005, the Company submitted a report entitled *Peer Group Performance Measures for Newfoundland Power* (the “February 2005 Report”), which provided comparative statistical data together with an assessment of the appropriateness of the recommended performance measures. The February 2005 Report committed the Company to report annually on the measures presented until otherwise directed by the Board.

This report is provided in fulfillment of the Company’s commitment to report annually on the measures presented in the February 2005 Report. The performance information is updated to 2017.

2.0 Performance Measures

This report provides a comparison of Newfoundland Power performance measures against the performance measures of a composite of Canadian and U.S. utilities.

2.1 Canadian Utility Measures

The following measures are presented for comparing the Company’s performance against a composite of Canadian utilities:

1. System Average Interruption Frequency Index (SAIFI);
2. System Average Interruption Duration Index (SAIDI); and
3. All-injury Frequency Rate (Injuries per 200,000 hours worked).

As with previous reports, this report uses data compiled by the Canadian Electricity Association (“CEA”). In particular, the report includes data from the CEA’s *Annual Service Continuity Report on Distribution System Performance in Electrical Utilities* and *Safety Incident Statistics Reports*.

The number of composite performance measures available from the CEA for publication is limited. As of this date, no cost-related CEA composite indicators have become available for the Company to use in the context of regulatory reporting of peer group performance measures.

Appendix A shows comparisons of the available Canadian utility composite measures and the equivalent Newfoundland Power data.

2.2 U.S. Utility Measures

The following measures are presented for comparing the Company's performance to a peer group of U.S. utilities:

1. Total Distribution Operating Expense per Customer;
2. Total Distribution Operating Expense per MWh;
3. Total Customer Service Expense per Customer;
4. Total Administration and Other Operating Expense per Total Operating Expense (excluding fuel and purchased power);
5. Total Operating Expense per Energy Sold (excluding fuel and purchased power); and
6. Total Operating Expense per Customer (excluding fuel and purchased power).

Appendix B contains comparisons of the composite measures for U.S. utilities and the equivalent Newfoundland Power data. The U.S. composite measures are based on data from 20 utilities. For each measure, the range of individual utility results is provided.

The U.S. measures are based on information filed with the Federal Energy Regulatory Commission ("FERC"). FERC requires major electric utilities under its jurisdiction to annually file prescribed information regarding their operations based on a FERC-defined system of accounts. The FERC filings are public information.

The measures for the U.S. data are presented without any adjustment for exchange rates. With the significant shifting in exchange rates over time, converting U.S. dollar figures to Canadian values would greatly distort cost trends.

Appendix C is a list of the U.S. utilities from which the composite measures in Appendix B were compiled.

3.0 Summary and Conclusion

Ongoing concerns with data availability and quality, coupled with observed differences in the operating profiles of participating utilities, makes it difficult to draw meaningful conclusions regarding the Company's performance relative to other utilities.

Newfoundland Power maintains that year-over-year trending of the Company's own data provides a more useful indication of performance than any comparison with data available in relation to other utilities.

Based on the measures reported herein:

1. Newfoundland Power's reliability performance has fluctuated substantially over the period 2008 to 2017. The fluctuations have been the result of a greater incidence of major system events.
2. Newfoundland Power's cost performance during the period from 2008 to 2017 indicate an overall stable trend. Overall operating costs increased from 2009 onward driven principally by increased pension and benefit costs. Pension and benefit costs were

significantly impacted by the 2011 change in the accounting treatment of Other Post Employment Benefits (“OPEBs”) costs.

3. Comparisons are subject to the limitations noted above; however, Newfoundland Power’s performance generally compares favourably to that indicated by trends in the composite data for Canadian and U.S. utilities presented in this report.

Appendix A

CEA Composite Comparisons

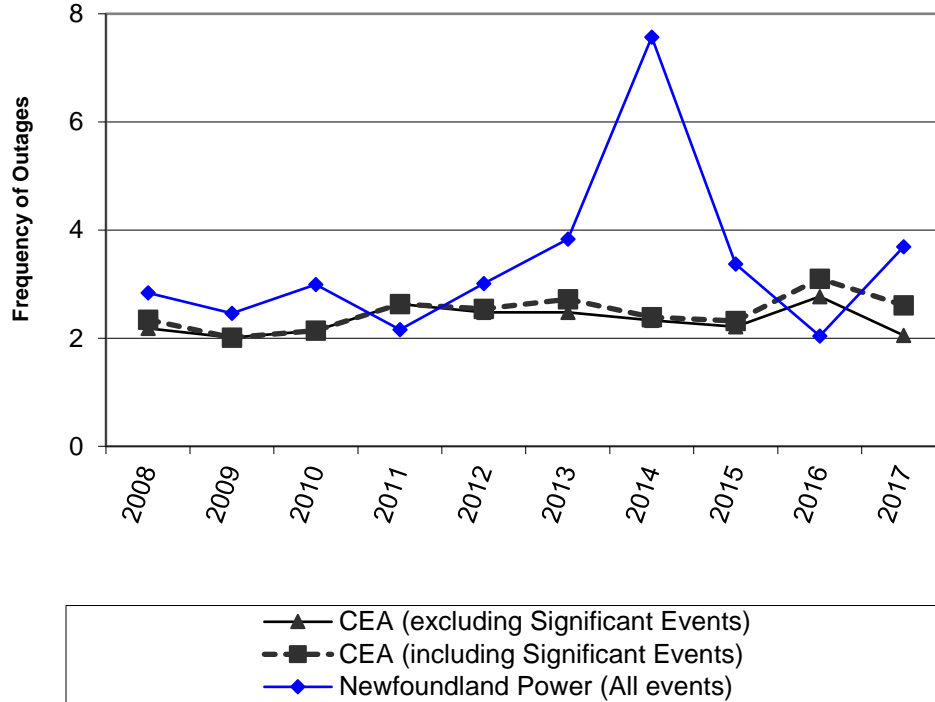
Appendix A

CEA Composite Comparisons

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System Average Interruption Frequency Index (SAIFI)



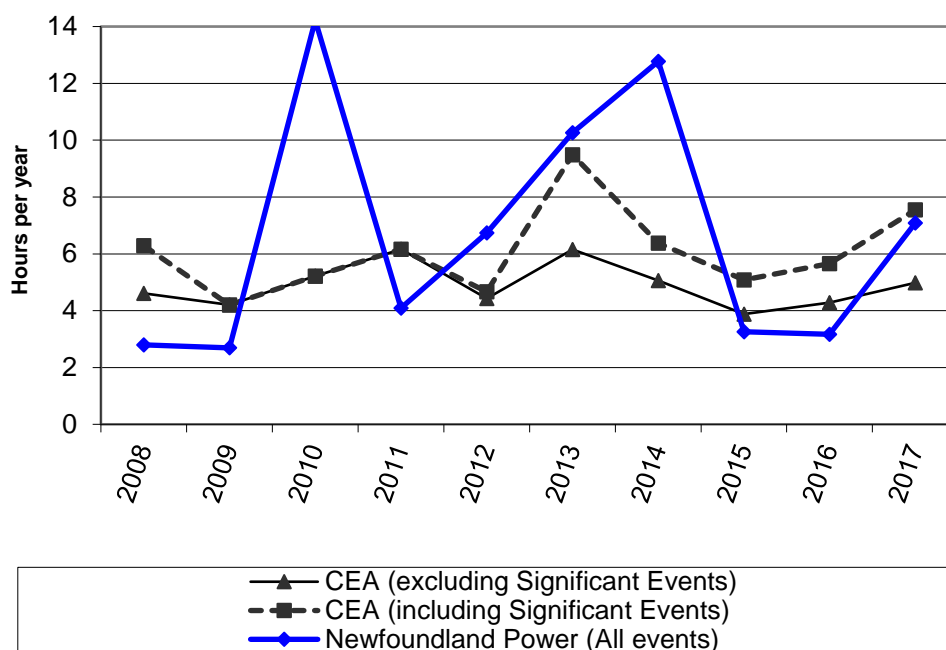
Year	CEA (Excluding Significant Events)	CEA (Including Significant Events)	Newfoundland Power
2008	2.18	2.34	2.84
2009	2.01	2.01	2.46
2010	2.14	2.14	2.99
2011	2.63	2.63	2.16
2012	2.48	2.54	3.01
2013	2.48	2.72	3.83
2014	2.33	2.39	7.57
2015	2.21	2.32	3.37
2016	2.77	3.10	2.04
2017	2.05	2.61	3.69

SAIFI is a standard industry index representing the average number of interruptions per customer served per year.

The CEA trend line reflects the composite performance of participating Canadian utilities (42 participants in 2017). The trend line shows that the frequency of service interruptions to customers has been relatively stable over the period 2008 to 2017.

For Newfoundland Power, the data trend indicates a stable trend in the frequency of customer outages from 2008 to 2011. The increase in 2010 was due to a significant weather event in March and Hurricane Igor in September. Subsequent to 2011, the data reflects the impact of Tropical Storm Leslie in September 2012, and the loss of supply events of January 2013 and January 2014. The increase in 2017 was a result of severe weather events in March and December.

System Average Interruption Duration Index (SAIDI)



Year	CEA (excluding Significant Events)	CEA (including Significant Events)	Newfoundland Power
2008	4.61	6.29	2.80
2009	4.20	4.20	2.69
2010	5.22	5.22	14.22
2011	6.16	6.16	4.09
2012	4.43	4.66	6.74
2013	6.15	9.49	10.26
2014	5.06	6.38	12.77
2015	3.88	5.08	3.26
2016	4.28	5.66	3.17
2017	4.98	7.55	7.09

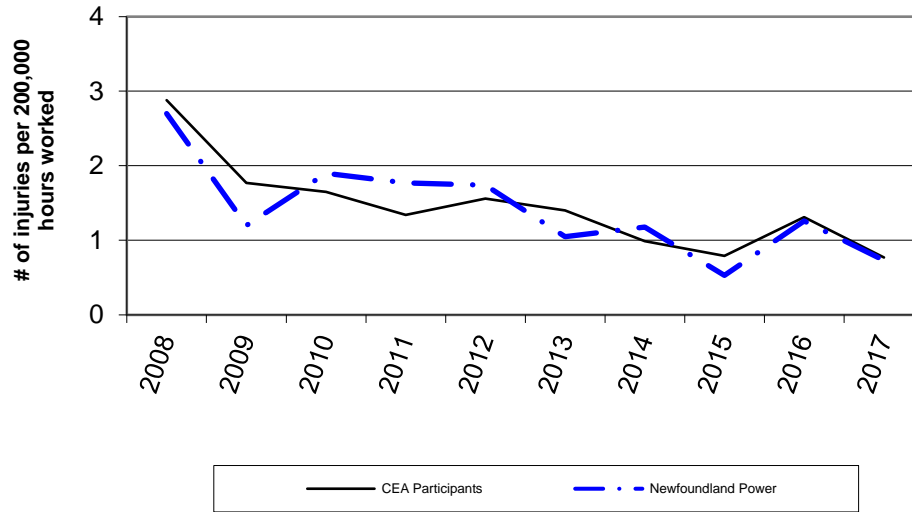
SAIDI is a standard industry index representing the average interruption duration per customer served per year.

The CEA trend line reflects the composite performance of participating Canadian utilities (42 participants in 2017). The trend lines show significant variability year over year. The fluctuations are principally due to the inclusion of outages caused by significant weather events. When significant events are excluded, there is a relatively stable trend line for the CEA composite.

The anomalous results evident in the “CEA including Significant Events” trend line reflect storms in Ontario in 2008, 2011 and 2013.

For Newfoundland Power, the data trend reflects a greater incidence of major events. The increases in 2010, 2012 and 2017 were a result of significant weather events. Those events include severe winter storms in March 2010, Hurricane Igor in September 2010, Tropical Storm Leslie in September 2012 and the severe winter storms in March and December of 2017. The increases in 2013 and 2014 were due to loss of supply.

All-injury Frequency Rate (Injuries per 200,000 hours worked)



Year	CEA Composite	Newfoundland Power
2008	2.88	2.70
2009	1.77	1.20
2010	1.65	1.90
2011	1.34	1.77
2012	1.56	1.74
2013	1.40	1.05
2014	0.99	1.18
2015	0.79	0.53
2016	1.31	1.26
2017	0.77	0.73

This measure represents the rate of disabling injuries and medical aid injuries per 200,000 exposure hours (hours worked).

The CEA data is a composite of 10 participating Canadian utilities. Both the CEA and Newfoundland Power trend lines show a comparable level of improvement.

Appendix B

American (U.S.) Peer Group Composite Comparisons

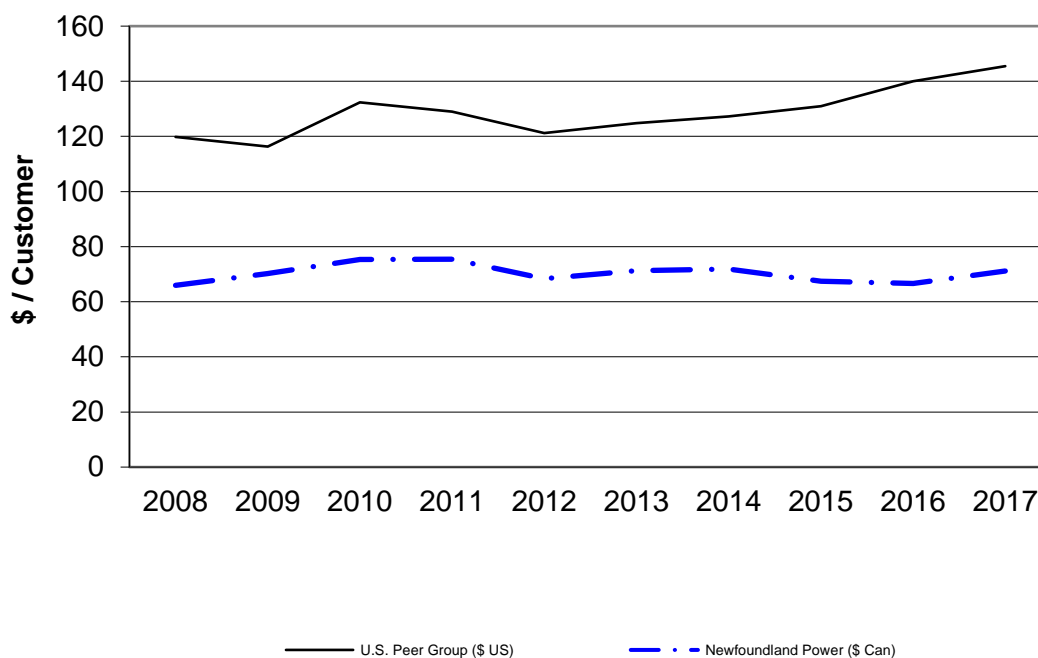
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American (U.S.) Peer Group Composite Comparisons

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Total Distribution Operating Expense per Customer (2017\$)



Year	U.S. Peer Group Composite	Newfoundland Power
2008	119.8	65.9
2009	116.3	70.2
2010	132.4	75.3
2011	128.9	75.4
2012	121.1	68.4
2013	124.8	71.2
2014	127.2	71.8
2015	130.9	67.5
2016	140.0	66.6
2017	145.5	71.2

This measure represents the total cost of operating and maintenance for the distribution function, as defined under the FERC code of accounts, expressed on a per customer account basis and adjusted for inflation. It measures the total direct cost of operating labour and materials,

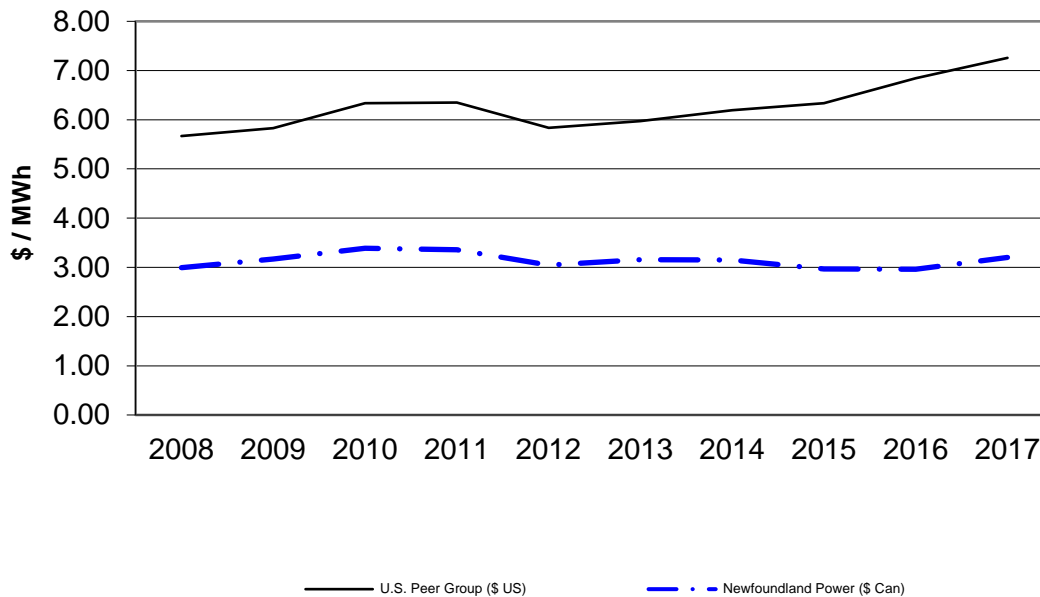
excluding allocated corporate shared services, involved in the operation and maintenance of the distribution portion of the electrical system, expressed on a per customer basis.¹

The graph shows a stable trend for Newfoundland Power over the period from 2008 to 2017.

While the numbers fluctuated, the U.S. utility data shows the distribution operating cost per customer to be increasing steadily. The U.S. utilities' individual 2017 measures range from approximately \$70 to approximately \$258 per customer.

¹ The distribution system is the portion of the electrical system that links the transmission system to customer facilities.

Total Distribution Operating Expense per MWh (2017\$)



Year	U.S. Peer Group Composite	Newfoundland Power
2008	5.67	2.99
2009	5.83	3.17
2010	6.34	3.39
2011	6.35	3.36
2012	5.83	3.04
2013	5.97	3.16
2014	6.19	3.15
2015	6.34	2.97
2016	6.84	2.96
2017	7.26	3.20

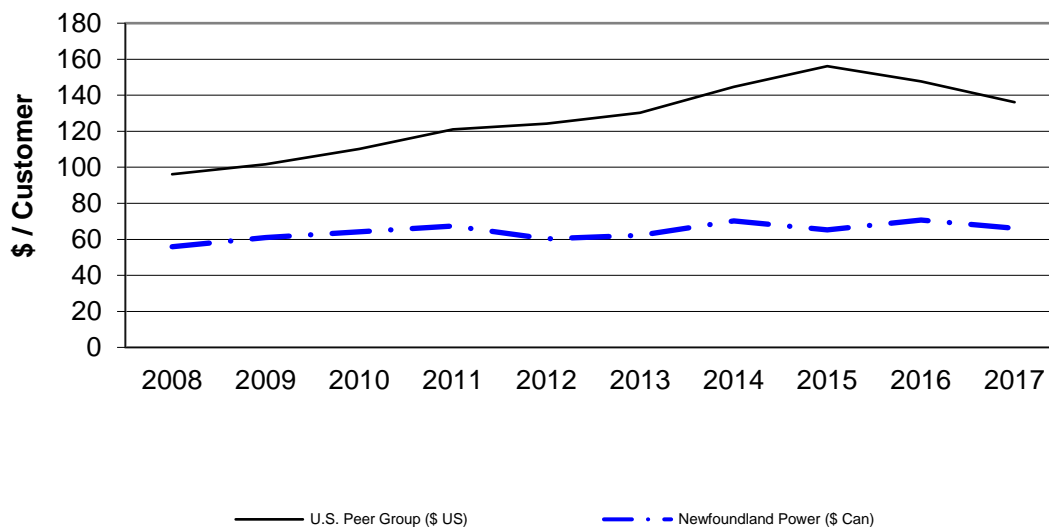
This measure represents the total cost of operating and maintenance for the distribution function, as defined under the FERC code of accounts, expressed on a per MWh of retail sales basis and adjusted for inflation. It measures the total direct cost of operating labour and materials, excluding allocated corporate shared services, involved in the operation and maintenance of the distribution portion of the electrical system, expressed on a per MWh basis.

The MWh of retail sales includes the total MWh sales of electricity as per retail rate schedules. It does not include sales for resale such as those to other distribution companies and retailers, nor energy interchanged through the power system (usually through transmission facilities).

The U.S. peer group trend has steadily increased over the reporting period; the increase is largely due to reduced sales. The U.S. utilities' individual 2017 measures range from approximately \$2 to approximately \$20 per MWh.

The graph shows a stable trend for Newfoundland Power from 2008 to 2017.

Total Customer Service Expense per Customer (2017\$)



Year	U.S. Peer Group Composite	Newfoundland Power
2008	96.1	55.9
2009	101.7	61.0
2010	110.2	64.1
2011	121.1	67.4
2012	124.2	60.3
2013	130.3	62.2
2014	144.7	70.2
2015	156.1	65.3
2016	147.6	70.7
2017	136.2	66.1

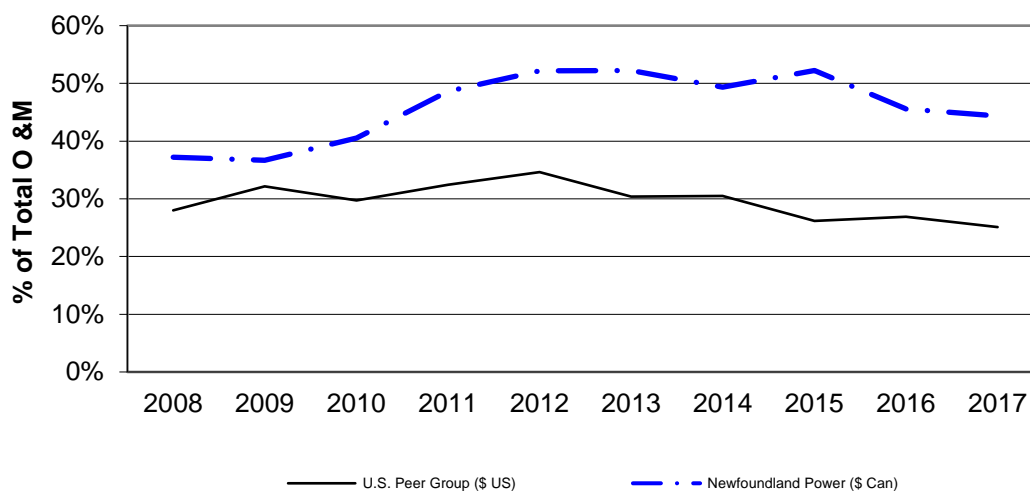
This measure represents the total cost of operating and maintenance for the customer accounting and customer service functions, as defined under the FERC code of accounts, expressed on a per customer account basis and adjusted for inflation. It measures the total direct cost of operating labour and materials, excluding allocated corporate shared services, associated with the management of customer relations and billing functions, expressed on a per customer account basis.

Newfoundland Power's data indicates a relatively stable trend over the 10 year period from

2008 - 2017.

The U.S. peer group composite increased between 2008 and 2015 and shows a decline since then. The U.S. utilities' individual 2017 measures range from approximately \$30 to approximately \$301 per customer.

**Total Administration and Other Operating Expense
per Total Operating Expense
(excluding fuel and purchased power)**



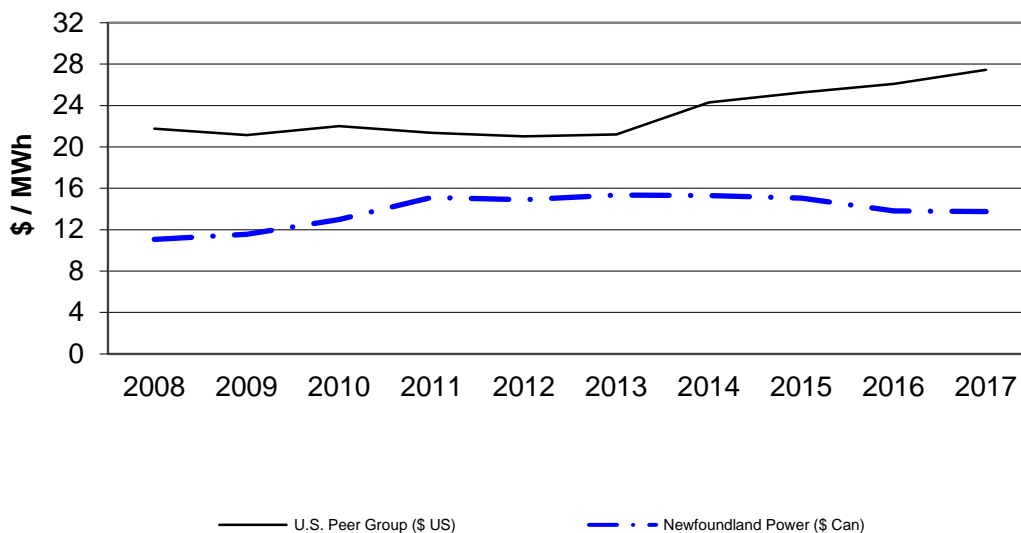
Year	U.S. Peer Group Composite	Newfoundland Power
2008	28.0%	37.2%
2009	32.2%	36.7%
2010	29.7%	40.5%
2011	32.5%	48.6%
2012	34.6%	52.1%
2013	30.4%	52.2%
2014	30.5%	49.3%
2015	26.2%	52.2%
2016	26.9%	45.6%
2017	25.6%	44.3%

This measure is a ratio of the total administration and general expense to the overall corporate electrical operating and maintenance expense (excluding fuel and purchased power) as defined by the FERC code of accounts.

The trend line for the U.S. utilities shows a general decline since 2012. The U.S. utilities' individual 2017 measures varied from approximately 5% to 49%.

The Newfoundland Power data for 2008 through 2017 reflects material changes in pension and benefit costs, including an increase in costs due to the 2011 change in the accounting treatment of OPEBs costs.

**Total Operating Expense
per Energy Sold
(excluding fuel and purchased power, 2017\$)**



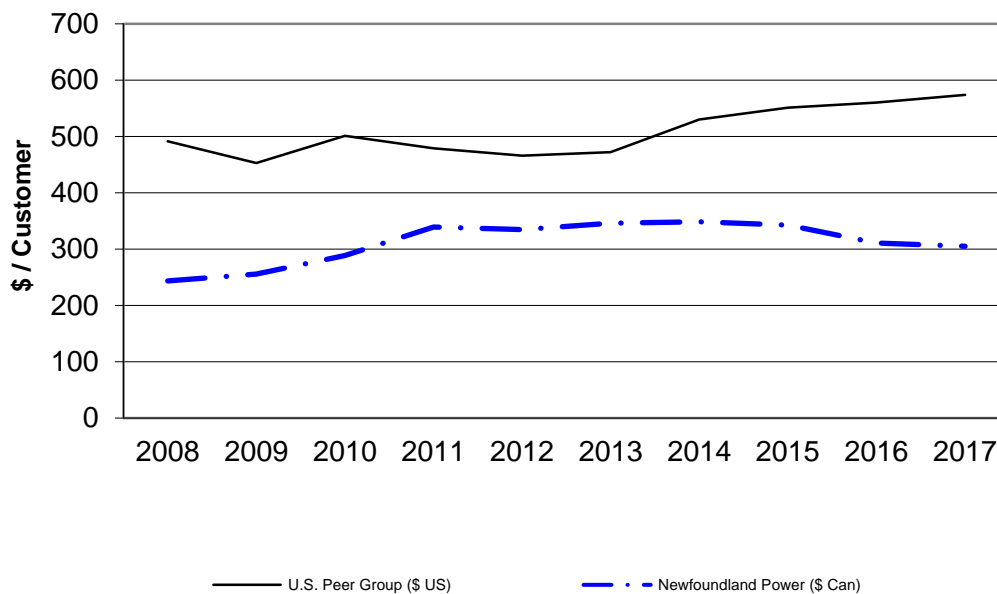
Year	U.S. Peer Group Composite	Newfoundland Power
2008	21.8	11.1
2009	21.1	11.6
2010	22.0	13.0
2011	21.4	15.1
2012	21.0	14.9
2013	21.2	15.3
2014	24.3	15.3
2015	25.3	15.1
2016	26.1	13.8
2017	26.9	13.7

This measure represents the electrical operating and maintenance expense (excluding fuel and purchased power), as defined by the FERC code of accounts, expressed on a per MWh of total energy sold basis and adjusted for inflation. Total energy sold includes sales according to retail rate schedules, and sales for resale, such as sales to other distribution companies, sales to retailers, and energy interchanged through the power system (usually through transmission facilities).

The trend line for the U.S. utilities is upward over the period 2008 to 2017. The U.S. utilities' individual 2016 measures varied from approximately \$5 to \$122 per MWh.

The graph shows a relatively stable trend for Newfoundland Power since 2011. For 2011 through 2017, the measure reflects the effect of material changes in pension and benefit costs, including an increase in costs due to the 2011 change in the accounting treatment of OPEBs costs.

**Total Operating Expense
per Customer
(excluding fuel and purchased power, 2017\$)**



Year	U.S. Peer Group Composite	Newfoundland Power
2008	491.76	243.64
2009	452.94	256.06
2010	501.40	288.64
2011	479.24	339.14
2012	465.79	334.69
2013	472.11	345.97
2014	530.14	348.66
2015	551.45	342.63
2016	560.57	311.17
2017	563.18	305.49

This measure represents the electrical operating and maintenance expense (excluding fuel and purchased power), as defined by the FERC code of accounts, expressed on a customer account basis and adjusted for inflation.

The trend line for the U.S. utilities is upward over the reporting period. The U.S. utilities' individual measures in 2017 varied from approximately \$219 to approximately \$4,057.

The graph shows a stable trend for Newfoundland Power since 2011. For this period, the measure reflects material changes in pension and benefit costs, including an increase in costs due to the 2011 change in the accounting treatment of OPEBs costs.

Appendix C

**Companies Included in
U.S. Utility Peer Group**

**Companies Included in U.S. Utility Peer Group
(2017 Information)**

Company	Number of Customers	Sales (MWh)	% Production of Total O & M	% Transmission of Total O & M
Ameren Illinois Company	1,221,130	35,241,466	8.5%	9.9%
Atlantic City Electric Company	551,332	8,584,533	7.1%	6.9%
Central Hudson Gas & Electric	257,812	2,560,833	2.1%	5.3%
Delmarva Power & Light Company	520,657	11,876,306	4.7%	8.9%
Duke Energy Kentucky, Inc.	141,274	3,957,490	68.7%	8.5%
Duquesne Light Company	594,106	12,672,936	0.8%	5.4%
Emera Maine	162,912	1,936,940	0.1%	10.9%
Green Mountain Power Corporation	263,528	4,146,862	13.1%	45.8%
Jersey Central Power & Light Company	1,122,087	20,319,843	0.0%	7.3%
Kingsport Power Company	47,840	1,971,080	0.0%	7.6%
Madison Gas and Electric Company	152,601	3,240,863	42.8%	22.2%
Metropolitan Edison Company	566,695	13,776,593	1.4%	8.5%
New York State Electric & Gas Corporation	893,783	15,363,789	6.7%	7.6%
Orange and Rockland Utilities, Inc.	231,066	3,872,536	0.2%	8.5%
Rockland Electric Company	73,345	1,538,962	0.0%	3.8%
The Narragansett Electric Company	422,165	3,868,162	0.0%	19.3%
Unitil Energy Systems, Inc.	78,722	1,193,912	0.5%	53.9%
West Penn Power Company	724,589	19,585,829	0.0%	27.4%
Western Massachusetts Electric Company	210,928	3,441,445	0.2%	15.2%
Wheeling Power Company	41,427	3,916,764	67.9%	19.3%