- $1\quad \ \mbox{Q.} \quad \mbox{Please provide for the record a copy of the most recent Peer Group Report.}$
- 3 A. A copy of the 2016 Peer Group Report is provided as Attachment A.

2016 Peer Group Performance Measures For Newfoundland Power January 24, 2018

Peer Group Performance Measures For Newfoundland Power

January 24, 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 2016.

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 improved over the period 2007 to 2009. Since 2009, reliability performance was negatively impacted by a greater incidence of major system events.
- 2. Newfoundland Power's cost performance during the period from 2007 to 2008 indicated an overall stable or improving trend. The 2009 through 2016 cost indices show increases 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

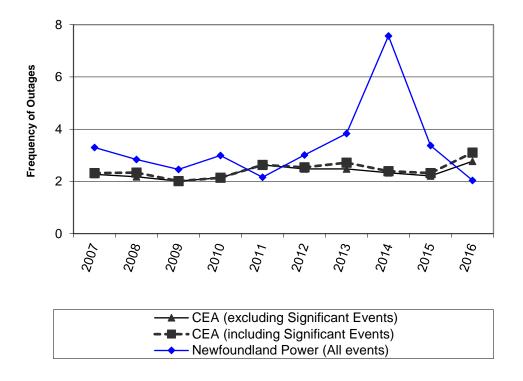
Appendix A

CEA Composite Comparisons

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System Average Interruption Frequency Index (SAIFI)	A-1
System Average Interruption Duration Index (SAIDI)	A-3
All-injury Frequency Rate (Injuries per 200,000 hours worked)	A-5

System Average Interruption Frequency Index (SAIFI)



	CEA (Excluding	CEA (Including	Newfoundland
Year	Significant Events)	Significant Events)	Power
2007	2.27	2.32	3.30
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

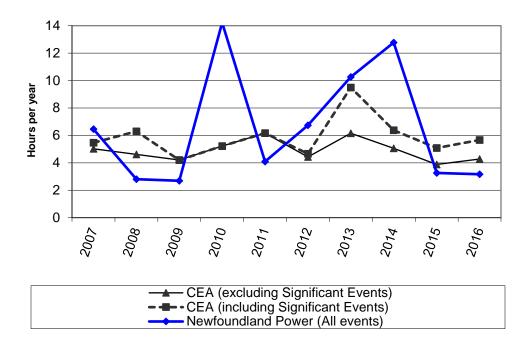
SAIFI is a standard industry index representing the average number of interruptions per customer served per year.

The CEA trend line reflects the composite performance of participating Canadian utilities (40 participants in 2016). The trend line shows that the frequency of service interruptions to customers has been relatively stable over the period 2007 to 2016.

For Newfoundland Power, the data trend reflects a general decline in the frequency of customer outages from 2007 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.

System Average Interruption Duration Index (SAIDI)



	CEA (excluding	CEA (including	Newfoundland
Year	Significant Events)	Significant Events)	Power
2007	5.02	5.47	6.46
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

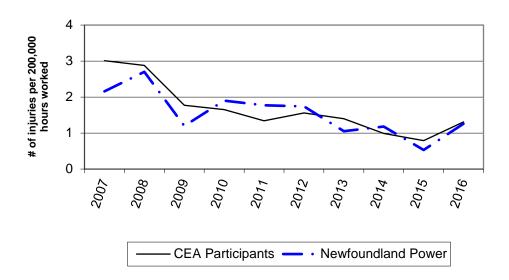
SAIDI is a standard industry index representing the average interruption duration per customer served per year.

The CEA trend line reflects the composite performance of participating Canadian utilities (40 participants in 2016). 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 2007, 2010 and 2012 were a result of significant weather events. Those events include severe winter storms in December 2007 and March 2010, Hurricane Igor in September 2010 and Tropical Storm Leslie in September 2012. The increases in 2013 and 2014 were due to loss of supply.

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



	CEA	Newfoundland
Year	Composite	Power
2007	3.01	2.16
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

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

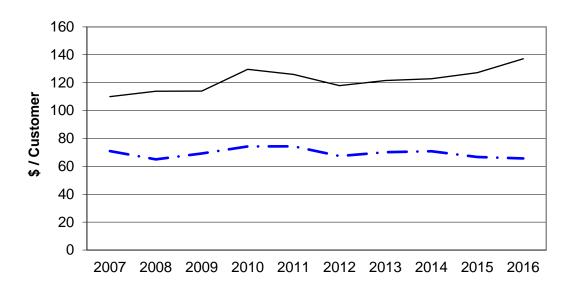
Appendix B

American (U.S.) Peer Group Composite Comparisons

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Total Operating Expense per Energy Sold (excluding fuel and purchased power)	B-9
Total Operating Expense per Customer (excluding fuel and purchased power)	.B-11

Total Distribution Operating Expense per Customer (2016\$)



—— U.S. Peer Group (\$ US) — · Newfoundland Power (\$ Can)

Year	U.S. Peer Group Composite	Newfoundland Power
2007	110.0	71.0
2008	113.9	65.0
2009	114.0	69.2
2010	129.5	74.3
2011	125.9	74.4
2012	117.9	67.4
2013	121.6	70.2
2014	122.9	70.8
2015	127.2	66.7
2016	137.2	65.7

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,

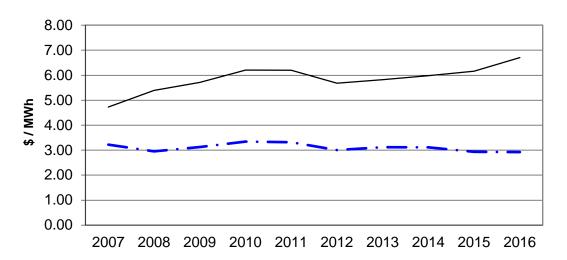
excluding allocated corporate shared services, involved in the operation and maintenance of the distribution portion of the electrical system, expressed on a per customer basis.¹

The graph shows a stable trend for Newfoundland Power over the period from 2007 to 2016.

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 2016 measures range from approximately \$67 to approximately \$257 per customer.

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

Total Distribution Operating Expense per MWh (2016\$)



—— U.S. Peer Group (\$ US) — · Newfoundland Power (\$ Can)

Year	U.S. Peer Group Composite	Newfoundland Power
2007	4.73	3.22
2008	5.39	2.95
2009	5.71	3.13
2010	6.20	3.34
2011	6.20	3.31
2012	5.68	3.00
2013	5.82	3.11
2014	5.98	3.11
2015	6.16	2.93
2016	6.70	2.92

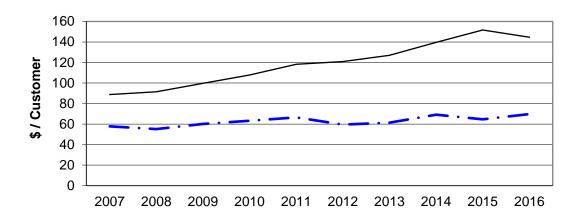
This measure represents the total cost of operating and maintenance for the distribution function, as defined under the FERC code of accounts, expressed on a per MWh of retail sales basis and adjusted for inflation. It measures the total direct cost of operating labour and materials, excluding allocated 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 2016 measures range from approximately \$2 to approximately \$17 per MWh.

The graph shows a stable trend for Newfoundland Power from 2007 to 2016.

Total Customer Service Expense per Customer (2016\$)



— U.S. Peer Group (\$ US)	Newfoundland Power (\$ Can)
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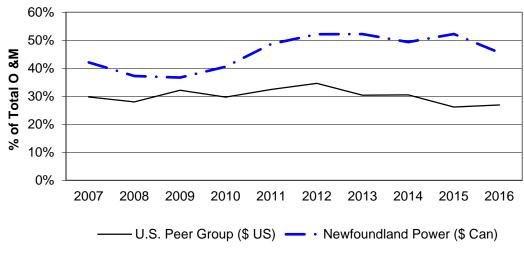
Year	U.S. Peer Group Composite	Newfoundland Power
2007	88.8	57.7
2008	91.4	55.1
2009	99.7	60.2
2010	107.8	63.3
2011	118.3	66.5
2012	120.9	59.5
2013	126.9	61.3
2014	139.7	69.2
2015	151.7	64.6
2016	144.6	69.7

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 2007 - 2016.

The U.S. peer group composite has been increasing since 2007. The U.S. utilities' individual 2016 measures range from approximately \$34 to approximately \$312 per customer.

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



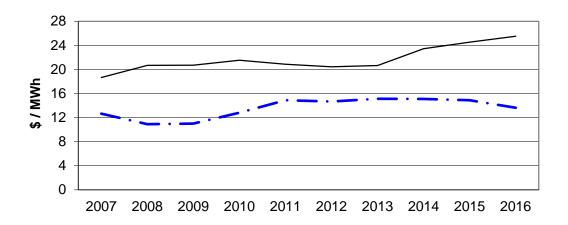
Year	U.S. Peer Group Composite	Newfoundland Power
2007	29.8%	42.1%
2008	28.0%	37.2%
2009	32.2%	36.7%
2010	29.7%	40.5%
2011	32.5%	48.6%
2012	34.6%	52.1%
2013	30.4%	52.2%
2014	30.5%	49.3%
2015	26.2%	52.2%
2016	26.9%	45.6%

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 was generally stable over the reporting period. The U.S. utilities' individual 2016 measures varied from approximately 6% to 67%.

The Newfoundland Power data for 2007 through 2016 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, 2016\$)



—— U.S. Peer Group (\$ US) — · Newfoundland Power (\$ Can)

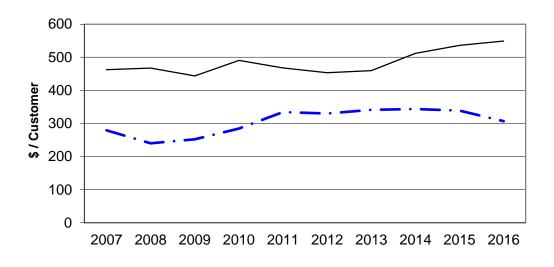
Year	U.S. Peer Group Composite	Newfoundland Power
2007	18.7	12.7
2008	20.7	10.9
2009	20.7	11.0
2010	21.6	12.8
2011	20.9	14.9
2012	20.5	14.7
2013	20.7	15.1
2014	23.5	15.1
2015	24.5	14.9
2016	25.5	13.6

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 2007 to 2016. The U.S. utilities' individual 2016 measures varied from approximately \$5 to \$74 per MWh.

The graph shows a relatively stable trend for Newfoundland Power prior to 2011. For 2011 through 2016, 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, 2016\$)



— U.S. Peer Group (\$ US) — · Newfoundland Power (\$ Can)

Year	U.S. Peer Group Composite	Newfoundland Power
2007	462.50	279.29
2008	467.47	240.25
2009	443.87	252.49
2010	490.66	284.62
2011	468.09	334.42
2012	453.49	330.03
2013	459.82	341.15
2014	511.93	343.80
2015	535.76	338.64
2016	548.99	306.84

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 2016 varied from approximately \$147 to approximately \$3,987.

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 (2016 Information)

Company	Number of Customers	Sales (MWh)	% Production of Total O & M	% Transmission of Total O & M
Ameren Illinois Company	1,224,649	36,353,294	2.0%	9.6%
Atlantic City Electric Company	548,442	9,058,873	1.0%	%0.9
Central Hudson Gas & Electric	261,411	2,638,019	2.0%	2.9%
Delmarva Power & Light Company	516,709	12,141,119	4.6%	%8.9
Duke Energy Kentucky, Inc.	140,014	4,099,199	70.3%	9.4%
Duquesne Light Company	587,954	13,153,540	0.5%	4.4%
Emera Maine	162,805	1,929,137	0.2%	18.5%
Green Mountain Power Corporation	262,003	4,222,833	12.3%	45.9%
Jersey Central Power & Light Company	1,113,459	20,943,313	1.4%	4.7%
Kingsport Power Company	47,489	2,038,552	%0.0	%0.7
Madison Gas and Electric Company	150,491	3,327,047	47.6%	18.9%
Metropolitan Edison Company	562,850	13,903,969	6.5%	13.1%
New York State Electric & Gas Corporation	890,260	15,511,979	7.9%	9.3%
Orange and Rockland Utilities, Inc.	229,532	4,081,518	0.2%	8.4%
Rockland Electric Company	73,117	1,601,861	%0.0	2.9%
The Narragansett Electric Company	430,887	3,954,763	%0.0	14.3%
Unitil Energy Systems, Inc.	78,402	1,188,025	0.5%	52.8%
West Penn Power Company	723,352	19,965,957	%0.0	24.9%
Western Massachusetts Electric Company	209,939	3,546,101	0.3%	9.5%
Wheeling Power Company	41,269	3,781,371	75.3%	12.2%