

In a Shocking State

Small business perspectives on electricity in Newfoundland and Labrador

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The Muskrat Falls development project is expected to become operational by 2020. It will contribute 824 MW of electricity (approximately 10 percent of current generating capacity) to the provincial system for domestic use and export to other markets. However, the cost of the Muskrat Falls project is forecast to essentially double electricity rates for some customers in the province. If this forecast is met, it could mean an additional cost of \$179 million annually for small- and medium-sized enterprises (SMEs), resulting in reduced profits and/or increased prices for consumers. With rate mitigation efforts, electricity rates should not double when Muskrat Falls power generation begins; however, this will likely mean the taxpayer pays.

Introduction

According to a 2016 CFIB report on energy conservation, the primary source of energy for small- and medium-sized enterprises (SMEs) is electricity, although some use furnace oil and other sources to reduce their reliance on electricity. Nalcor expects the Muskrat Falls development project to double electricity rates for all users in the province. However, the public discourse has been largely focused on the effects of the increased rates only on residents. The conversation is neglecting the impact the doubling of electricity rates will have on SMEs in Newfoundland and Labrador. Analysis done by the Canadian Federation of Independent Business (CFIB) indicates a doubling of electricity rates will mean at least \$179 million annually in increased costs for SMEs.

Notwithstanding, small business owners are almost evenly split on their support for the project. Those opposed are concerned about the rising cost of electricity, while those who are supportive see the environmental (eg. a replacement for the Holyrood generating station) and economic benefits. Nonetheless, there are serious questions being raised about the project and what it will mean for the future of Newfoundland and Labrador. This report will outline CFIB member views and provide recommendations concerning the costs of electricity in Newfoundland and Labrador. CFIB represents over 2,000 small- and medium-sized businesses

in Newfoundland and Labrador from all sectors of the economy. Policy positions are taken at the direction of our membership through surveys and discussions with members. This submission was completed using data gathered from our membership as well as primary sources.

Methodology

CFIB surveyed its Newfoundland and Labrador members to understand how small business owners view the electricity system in the province, including the Muskrat Falls development project. The Electricity Survey was distributed to Newfoundland and Labrador members by password protected e-mail. The survey period was from February 7 to 23, 2017 and a total of 167 owners of small- and medium-sized businesses participated.

Since not all members receive electricity bills (the cost of electricity may be included in a lease, for example), the survey identified those who do with the first question: “Does your business receive an electricity bill from a power utility?” Nearly 89 per cent responded “yes” and continued on with the survey. Those who answered “no” and “don’t know” skipped to question 5 concerning the Muskrat Falls development project (please see Appendix B for survey results). Unless otherwise stated, the survey data presented in this report are based on 148 responses.

In addition, at CFIB’s request, 112 members provided copies of electricity bills from Newfoundland Power and NL Hydro for the period January 2016 to December 2016. To determine the total cost of electricity for the SME sector in 2017, all approved rates for 2017 were applied to consumption and demand at 2016 levels. This data was extrapolated to the entire population of small- and medium-sized firms in Newfoundland and Labrador, using data from the Newfoundland and Labrador Statistics Agency. In estimating the costs associated with the Muskrat Falls development, it was assumed all applicable electricity rates in 2017 were doubled. The results of this analysis can be found in Appendix A.

Small Business Views on Electricity

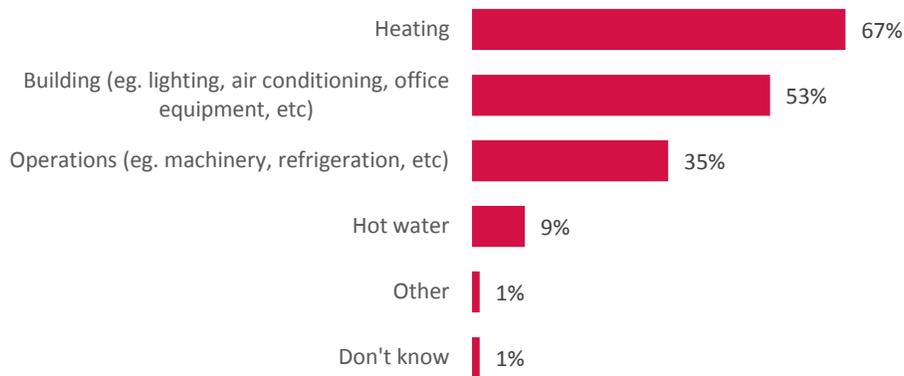
Small Business Context

Electricity is transmitted by Newfoundland Power and Newfoundland and Labrador Hydro (NL Hydro, also the generator). Newfoundland Power customers are found on the island of Newfoundland, while NL Hydro customers are in rural, isolated parts of the island and in Labrador (electricity for coastal Labrador communities is generated by diesel). The power utilities must seek approval for any changes in electricity rates through an annual application to the Board of Commissioners of Public Utilities (PUB).

Past CFIB research shows that electricity is the main source of energy used by the SME sector. In terms of their electricity use, Figure 1 shows small business owners consume electricity mostly for heating (68 per cent); for their building, such as lighting and office equipment (54 per cent); and for other operations (e.g. machinery and refrigeration – 36 per cent).

Figure 1:

Which of the following accounts for the highest level of electricity consumption in your business?

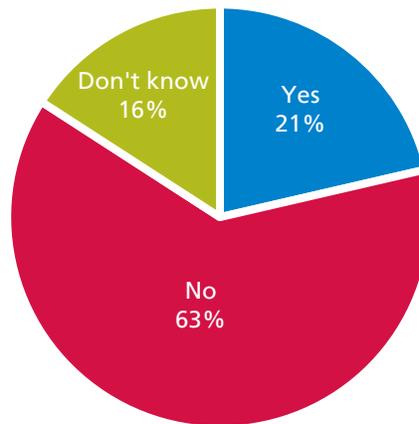


Source: CFIB, NL Electricity Survey, February 2017.

Managing electricity use is an important way to control the costs of electricity. However, 63 per cent of small business owners stated their power utility has not offered them any information on how to manage their electricity usage (Figure 2). Newfoundland Power and Newfoundland and Labrador Hydro have done a lot of work in trying to get businesses to conserve electricity. They have an opportunity to target businesses with pertinent information on the TakeCharge program on a monthly basis and they should be taking better advantage of it. In addition, business owners could see savings through this program, although it would require significant investment. In the current fiscal and economic environment, finding the available funding within the business to make any changes to conserve electricity may prove challenging.

Figure 2:

Has your power utility provided your business with any information on how to manage your electricity usage?



Source: CFIB, NL Electricity Survey, February 2017.

With the Muskrat Falls project coming on stream, it will be even more important for SME owners to find ways to reduce their electricity costs. Savings can be accomplished by conserving electricity or using electricity more consistently (i.e. managing energy demand). However, as Figure 3 shows, 85 per cent of SME owners will find it difficult to reduce their consumption. Further, nearly half of SME owners understand their electricity bills (54 per cent) and the effect demand charges have on their electricity costs (56 per cent). Based on CFIB analysis of SME electricity bills, larger SMEs can effect a reduction in their electricity bills by managing their demand effectively. The average business employing 20-499 people pays about \$13,175 annually in demand charges. These businesses tend to be involved in manufacturing and processing, which may make it more difficult to implement demand management initiatives due to customer demand for products and services or the time of year of production. However, these initiatives are useful to consider, in consult with their power utility, as the cost savings may be significant for them. The Five-Year Conservation Plan (2016-2020) developed by Newfoundland Power and NL Hydro places a greater focus on demand management, so there is potential for SMEs to achieve savings.

Types of Utility Charges

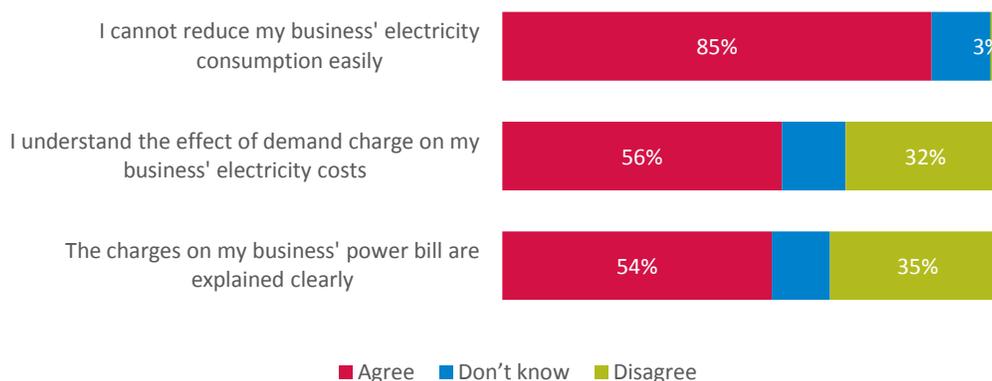
Demand Charge: Demand is the measure of power required at any one point in time. The electric meter will record the highest demand that is reached. Usually, the residential class does not pay demand charges.

Energy Charge: A rate applied to the kilowatt hours consumed. This charge is related to the cost of generated or purchased energy.

Service Charge: A fixed base charge for electricity service. Usually, the residential class and small power (general service, small commercial classes) pay this charge to cover the cost and the maintenance of the utility's equipment.

Figure 3:

Do you agree or disagree with the following statements about electricity?



Source: CFIB, NL Electricity Survey, February 2017.

There is another alternative - net metering - available to SMEs to help mitigate the cost of electricity. Recently, the PUB approved a net metering program to be implemented by NL Hydro and Newfoundland Power. In its December 2016 application to the PUB, Newfoundland Power expects to have relatively small up-take on net metering and, with the 5 MW cap, forecasts a range of 667 to 1000 customers to avail of net metering. The utility concludes there will be no change to existing customer and demand charges for General Service Rates #2.1, 2.3, and 2.4 (although this is subject to future rate applications and the implications of the interconnection

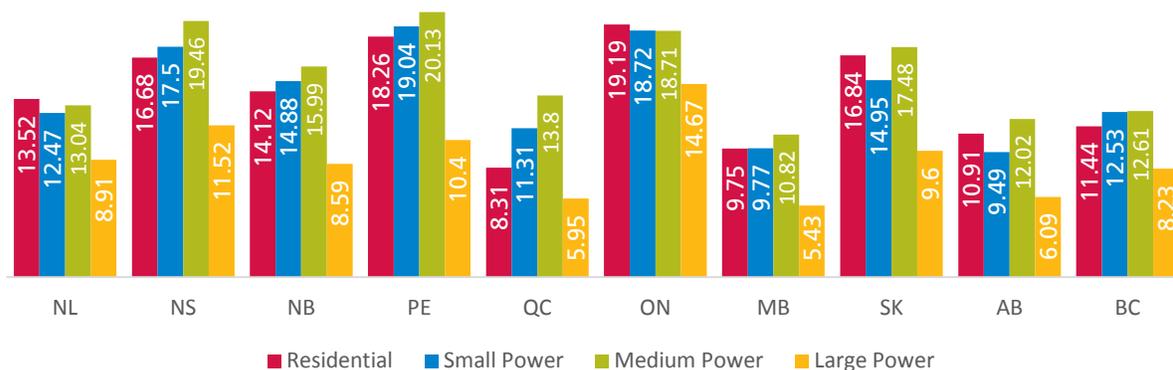
of the Muskrat Falls hydroelectric plant to the Island Interconnected system).¹ CFIB research on energy conservation indicates small business owners are split on whether they would consider using net metering to offset their electricity costs. Any decision will incorporate a review of the cost and regulatory considerations of adopting net metering, but, as a mechanism to reduce electricity costs, it will be accessible to only a few SMEs. Notwithstanding, small business owners may choose alternatives (e.g. wind power) to reduce reliance on hydroelectricity.

Cost of Electricity

In Newfoundland and Labrador, the cost of electricity for all rate classes is moderate compared to other jurisdictions in Canada (see Figure 4).² An annual study of electricity prices conducted by Hydro-Quebec shows, in 2016, the highest residential and small power rates were in Ontario and Prince Edward Island, the highest medium power rates were in Prince Edward Island and Nova Scotia, and the highest large power rates were in Ontario and Nova Scotia. The lowest residential and large power rates were in Manitoba and Quebec and the lowest small power and medium power rates were in Manitoba and Alberta.

Figure 4:

Average total electricity costs by jurisdiction in 2016 (¢/kWh)



Source: Hydro-Quebec, *Comparison of Electricity Prices in North American Cities*, April 2016.

¹ Application to Approve a Net Metering Service Option for Customers, Newfoundland Power, December 19, 2016.

<http://www.pub.nf.ca/applications/NP2017NetMetering/applications/From%20NP%20-%20Application%20to%20Approve%20a%20Net%20Metering%20Service%20Option%20for%20Customers%20-%202016-12-19.PDF>. Accessed May 24, 2017.

² Source: Hydro-Quebec, *Comparison of Electricity Prices in North American Cities*, April 2016. p. 26.

http://www.hydroquebec.com/publications/en/docs/comparaison-electricity-prices/comp_2016_en.pdf. Accessed May 24. The Hydro-Quebec report estimates bills in the major cities of Canadian provinces. For purposes of this CFIB document, the data presented for each city is assumed to apply to all customers in the province. The only exceptions are Alberta and Ontario, where an average for Edmonton and Calgary and one for Toronto and Ottawa was taken to determine the provincial rates. The number is based on total electricity costs, which would include all applicable taxes. For medium power customers, the numbers are based on bills estimated for a consumption level of 100,000 kWh, power demand of 500 kW, and a load factor of 35%. The data for large power customers is based on bills estimated for a consumption level of 3,060,000 kWh, power demand of 5,000 kW, and a load factor of 85%.

In 2017, Nalcor announced projected electricity rates after the Muskrat Falls project is completed will be nearly 23 cents per kWh, essentially doubling the July 1, 2017 rates. An analysis of electricity bills collected from CFIB members estimates the total annual cost of electricity in 2017 to be \$226 million for SMEs (see Table 2 in Appendix A). Based on this estimate, a doubling of electricity rates will mean an additional annual cost of \$179 million for the SME sector upon the completion of the Muskrat Falls project (see Table 3 in Appendix A). This is a conservative number that assumes consumption and demand remain at 2016 levels and does not account for any changes to service and demand charges. This forecast recognizes the Harmonized Sales Tax on electricity is an input tax credit for SMEs. It further assumes all businesses pay their electricity bills in time to take advantage of the 1.5 per cent discount available to them.

The government has noted it will do all it can to ensure electricity rates do not double when the Muskrat Falls project is completed by 2020. The provincial 2017 Budget announced the creation of a Rate Management Reserve, which will put \$210 million aside in 2020-21, \$245 million in 2021-22, and \$245 million in 2022-23. During Question Period in the House of Assembly on March 8, 2017, Premier Dwight Ball stated, “[the government] will use whatever options that we have available to us to maintain competitive rates.” The options available to the government may have a significant effect on ensuring electricity rates do not double, and based on the information available to the public, they are as follows:

- According to Budget 2017 documents, the **recall of 300 MW of power under the Power Contract and Renewed Power Contract with Hydro-Quebec** can displace Holyrood power, thereby creating an estimated savings of \$160 million to contribute to rate mitigation efforts.
- As part of an exchange during Question Period on March 8, 2017, Premier Ball noted revenue from **sale of excess power** applied to rate mitigation efforts could have the effect of 1 to 2 cents per kWh.
- According to Budget 2017 documents, the **\$2.9 billion extended loan guarantee** is projected to reduce rates by 1 to 1.5 cents per kWh. A CBC report indicates 1.5 cents per kWh has been applied to achieve Nalcor’s future rate projection of nearly 23 cents per kWh.³
- The Muskrat Falls project and Labrador-Island Link (LIL) are expected to generate a **rate of return** of 8.4 per cent and 8.8 per cent, respectively; Newfoundland Power’s rate of return is expected to be 8.5 per cent. While Nalcor expects the rate of return on LIL to decline in the long-term, projections for the rate of return on Muskrat Falls show

³ CBC Newfoundland and Labrador. “7 facts and figures from the Muskrat Falls update,” <http://www.cbc.ca/news/canada/newfoundland-labrador/7-facts-figures-muskrat-falls-update-1.4177899>. Accessed June 26, 2017.

significant long-term growth.⁴ The rate of return will generate hundreds of millions of dollars of revenue, which could be returned to the ratepayer.

In addition to these options, the government can also **remove the Harmonized Sales Tax (HST) on electricity**. This initiative will not benefit business owners directly because HST is an input tax credit; however, residents will have more money in their pockets they could use to support small business and the local economy.

Conclusion

In any public discourse about the Muskrat Falls project and its effect on electricity rates, the lens used is that of the resident. The government has made clear it will take the necessary steps to ensure the Muskrat Falls project does not double rates. We are pleased the government has committed to address a doubling of power rates as it would be harmful to SMEs. Yet, this does not mean electricity rates will not increase in the future because they will; the only unknown is how large these increases will be. Regardless, as an important driver of the local economy, SMEs need their voices heard in this conversation.

Recommendation

- ▶ Provide PUB oversight on the Muskrat Falls project to ensure greater transparency and accountability for the project, but also more predictability on future electricity rate increases.
- ▶ Eliminate the Harmonized Sales Tax applied to electricity for residents.

⁴ Nalcor Energy. Completed ATIPPA request. <https://nalcorenergy.com/wp-content/uploads/2016/12/R-Response-PB-576-2015.pdf>. Accessed May 24, 2017.

Appendix A – Electricity Costs by Size of Business (2017)

Table 1: Annual Average Consumption and Cost

	1-4 employees	5-19 employees	20-499 employees
Consumption (KWh)	40,994	114,203	716,687
Power demand (KW)	174	457	2,430
Service charge	\$348	\$507	\$1,035
Energy charge	\$3,794	\$9,532	\$53,093
Demand charge	\$544	\$2,201	\$13,175
Charge Subtotal	\$4,686	\$12,240	\$67,303
Discount (1.5%)	\$70	\$184	\$1,010
Subtotal	\$4,616	\$12,056	\$66,294
HST	\$686	\$1,803	\$9,795
Total power cost	\$5,354	\$13,653	\$77,463

Source: 112 Newfoundland Power and NL Hydro electricity bills collected from CFIB members. Breakdown: 40 – 1-4 employees, 51 – 5-19 employees, and 21 – 20-499 employees.

Table 2: 2017 Cost of Electricity (HST excluded)

Size	Number of businesses	Average annual cost	Total annual SME cost
1-4	8411	\$4,616	\$38,823,519
5-19	5408	\$12,056	\$65,200,972
20-499	1848	\$66,294	\$122,510,424
Total	15667		\$226,524,915

Source: Number of Businesses by Employment Size Range, Trade and Business Statistics, Newfoundland and Labrador Statistics Agency (excludes Public Administration sector), http://www.stats.gov.nl.ca/Statistics/Trade/PDF/BR_NL_Size_2016.pdf. Accessed on May 24, 2017.

Table 3: Cost of Doubled Electricity Rates

Size	Number of businesses	Average annual cost	Total annual SME cost
1-4	8411	\$3,737	\$31,435,052
5-19	5408	\$9,389	\$50,774,475
20-499	1848	\$52,361	\$96,763,468
Total	15667		\$178,972,995

Source: Number of Businesses by Employment Size Range, Trade and Business Statistics, Newfoundland and Labrador Statistics Agency (excludes Public Administration sector), http://www.stats.gov.nl.ca/Statistics/Trade/PDF/BR_NL_Size_2016.pdf. Accessed on May 24, 2017.

Appendix B – Survey Results

RESULTS: Newfoundland and Labrador Electricity Survey

Survey method: Web
 Survey period: February 7 – February 23, 2017
 Tabulation date: February 23, 2017
 Total responses: 167
 Results are statistically accurate within +/- 7.58 percentage points, 19 times out of 20.

% Response

1. Does your business receive an electricity bill from a power utility? (Select one answer only)

- 88.6 Yes
- 9.6 No
- 1.8 Don't know

2. Which of the following accounts for the highest level of electricity consumption in your business? (Select a maximum of two answers)

- 66.9 Heating
- 9.5 Hot water
- 53.4 Building (e.g. lighting, air conditioning, office equipment, etc.)
- 35.1 Operations (e.g. machinery, refrigeration, etc.)
- 1.4 Other (Please specify) _____
- 1.4 Don't know

3. Has your power utility provided your business with any information on how to manage your electricity usage? (Select one answer only)

- 21.4 Yes
- 62.8 No
- 15.9 Don't know

4. Do you agree or disagree with the following statements about electricity? (Select one for each line)

	Agree	Disagree	Don't know
I understand the effect of demand charge on my business' electricity costs	55.6	31.7	12.7
The charges on my business' power bill are explained clearly	53.6	34.8	11.6
I cannot reduce my business' electricity consumption easily	85.4	2.9	11.7

5. As a business owner, to what extent do you support or oppose the Muskrat Falls hydroelectric development project? (Select one answer only)

- 9.5 Strongly support
- 33.5 Somewhat support
- 19.6 Somewhat oppose
- 25.3 Strongly oppose
- 12.0 Don't know

Question 6. Why do you support the Muskrat Falls hydroelectric development project?

Question 7. Why do you oppose the Muskrat Falls hydroelectric development project?

Question 8. Are there any messages you would like us to deliver to the Premier and Minister of Natural Resources?