

# NEWFOUNDLAND AND LABRADOR HYDRO

Strategic Plan 2017-2019  
Transparency and Accountability

March 2017





## Message from the Boards of Directors

I am pleased to provide the Strategic Plan for Newfoundland and Labrador Hydro (Hydro or NLH), on behalf of the Board of Directors.

Hydro is a category one public body under the *Transparency and Accountability Act* and this Strategic Plan was prepared in accordance with the associated guidelines.

This Strategic Plan covers the time period from January 1, 2017 to December 31, 2019. The Plan content addresses the applicable strategic directions of the Provincial Government in relation to Hydro's role in the energy sector as communicated by the Minister of Natural Resources.

As the Board of Directors of Hydro, we are accountable for the preparation of this Plan and for the achievement of the specific goals and objectives contained herein.



John Green  
Chair  
Newfoundland and Labrador Hydro



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## 1 INTRODUCTION

In 2016, the regulated utility Newfoundland and Labrador Hydro (Hydro), was separated from Nalcor's unregulated business. In keeping with this separation Hydro has developed its own strategic plan for the planning period.

The 2017-2019 Strategic Plan for Hydro takes into account the strategic directions of the Provincial Government in relation to the energy sector (see Appendix 1). The goals and objectives of Hydro presented in this document support the achievement of the strategic directions relevant to Hydro's mandate - the generation, transmission and distribution of electricity to utility, residential, commercial and industrial customers in Newfoundland and Labrador.<sup>1</sup>

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<sup>1</sup> The activities of Hydro's subsidiary Churchill Falls and Nalcor's Energy Marketing line of business, that manages the sale of electricity available from the 300 megawatt recall energy block available from Churchill Falls to Hydro, are included in the 2017-2019 Strategic Plan for Nalcor.

## 2 HYDRO OVERVIEW

As the primary generator of electricity for use in Newfoundland and Labrador, Hydro is focused on providing a safe, reliable and least-cost electricity supply to meet current energy demand and future growth.

The majority of Hydro's business is regulated by the Newfoundland and Labrador Board of Commissioners of Public Utilities (PUB) and its electricity rates are set through periodic general rate applications. The regulated portion of the company includes the generation, transmission and distribution of electrical power and energy to utility, residential and commercial customers, as well as island industrial customers. The non-regulated activities of Hydro include electricity sales to industrial customers in Labrador west.

Hydro's generating assets include nine hydroelectric plants, one oil-fired plant, four gas turbines, and 25 diesel plants. These generating assets along with a network of transmission and distribution lines bring electricity to communities throughout Newfoundland and Labrador (see Appendix 2).

In 2016, Hydro directly employed 934 people. The location of these employees reflects Hydro's service area and the location of the company's electricity assets, with 70 per cent located in rural areas. The gender composition of Hydro's employee group is 81 per cent male and 19 per cent female. As the largest employer within Nalcor, Hydro will play a key role in implementing Nalcor's multi-year action plan to support gender equity, diversity and inclusion.

In 2016, Hydro had revenues of \$675.5 million. The majority of Hydro's revenues are from energy sales to utility, rural and industrial customers with other revenues including preferred dividends from Hydro's subsidiary Churchill Falls. Consolidated energy sales also include CF(L)Co sales to Hydro Quebec as well as sales of recall power. In 2016, Hydro net income of \$56.3 million consisted of \$19.0 million from Hydro Regulated, \$40.7 million from Churchill Falls and a loss of \$3.4 million from recall power and other non-regulated activities. The following table summarizes the consolidated 2016 revenue and expenses for Hydro.



**Table 1: Hydro Consolidated Revenue and Expenses 2016**

<i>For the year ended December 31 (millions of dollars)</i>	\$	%
Revenue		
Energy sales	647.7	95.9
Other revenue	27.8	4.1
	675.5	
Expenses		
Fuels	167.5	27.0
Power purchased	99.1	16.0
Operations and administration	192.5	31.1
Net finance expense	70.1	11.3
Amortization	84.7	13.7
Other income and expenses	6.1	1.0
Regulatory adjustments	(0.8)	-0.1
	619.2	
Net Income	56.3	

### 3 MANDATE

The *Hydro Corporation Act* mandates Hydro to be responsible for:

- Developing and purchasing power and energy on an economic and efficient basis.
- Engaging within the province and elsewhere in the development, generation, production, transmission, distribution, delivery, supply, sale, purchase and use of power from water, steam, gas, coal, oil, wind, hydrogen and other products.
- Supplying power, at rates consistent with sound financial administration, for domestic, commercial, industrial or other uses in the province and subject to the prior approval of the Lieutenant-Governor in Council, outside of the province.

## 4 LINE OF BUSINESS

Hydro is the primary generator of electricity in Newfoundland and Labrador. The utility delivers safe, reliable, and least cost power to utility, industrial, residential and commercial customers in more than 200 communities in the province.

Hydro activities can be grouped as follows:

- Electricity generation involves the operations of nine hydroelectric generating stations, one oil-fired plant, four gas turbines, and 25 diesel plants, including 21 isolated diesel generating and distribution systems. Hydro is also responsible for forecasting electricity requirements in the province and advancing options to ensure adequate supply to meet forecasted electricity demand.
- Transmission activities include the operation and maintenance of over 3,700 kilometres of transmission lines.
- System operations provides oversight of the electricity system to reliably meet the changing requirements of electricity customers by utilizing the combination of available generation and power delivery resources to provide service safely and cost effectively.
- Distribution and customer service activities include the operation and maintenance of more than 3,300 kilometres of distribution lines. Customer service activities address the requirements of Newfoundland Power, industrial customers and over 38,000 direct residential and commercial customers in rural Newfoundland and Labrador.

## 5 VALUES

Employees of Hydro recognize that electricity is essential to social well-being and economic prosperity in Newfoundland and Labrador. In fulfilling Hydro's mandate, employees are unified by the following

- Safety – relentless commitment to protecting ourselves, our colleagues, and our community.
- Open Communication – fostering an environment where information moves freely in a timely manner.
- Accountability – holding ourselves responsible for our actions and performance.
- Honesty and Trust – being sincere in everything we say and do.
- Teamwork – sharing our ideas in an open and supportive manner to achieve excellence.
- Respect and Dignity – appreciating the individuality of others by our words and actions.
- Leadership – empowering individuals to help guide and inspire others.

## 6 PRIMARY CLIENTS

Hydro sells electricity to three primary customer groups:

- Newfoundland Power - an investor-owned utility which distributes electrical power to 236,000 customers on the island portion of the province, with Hydro supplying over 90 per cent of its energy requirements.
- Industrial customers – regulated sales to Corner Brook Pulp & Paper Limited, North Atlantic Refining Limited, and Teck Cominco Limited and unregulated sales to Wabush Mines in Labrador.
- Over 38,000 residential and commercial customers in rural Newfoundland and Labrador.

## 7 VISION

Providing electricity to enable social well-being and economic prosperity for the people of Newfoundland and Labrador.

## 8 ISSUES

The strategic issues outlined below will be addressed by Hydro in order to realize its mandate and vision. Consistent with the underlying philosophy of the multi-year performance-based planning required under the provisions of *Transparency and Accountability Act*, these issues are at a governance level and reflect the priorities of the Hydro board and support the Provincial Government's strategic directions for the energy sector.

Issue 1: Reliable electricity supply

Issue 2: Electricity rates and customer service

Issue 3: Safety

## 9 GOALS AND OBJECTIVES

### Issue 1: Reliable electricity supply

Hydro ensures there is a safe, reliable and least-cost electricity supply available to meet the needs of customers now and in the future. The company's mandate supports fulfillment of the strategic direction of government related to energy security and reliability in Newfoundland and Labrador.

Over the planning period, Hydro will focus on providing a reliable electricity supply by maintaining and renewing assets, preparing for the interconnection of the provincial electricity system to North America and the integration of the Muskrat Falls power, as well as continuing to assess and respond to future growth in customer requirements.

A key challenge facing the Canadian utility industry is renewal of aging electricity infrastructure. As with other utilities, many of Hydro's assets are over 40 years old and require significant investment over the planning period and beyond to ensure a continued reliable supply of electricity.

Asset management is the cornerstone of Hydro's approach for managing assets over their lifecycle and making the investments required for a reliable, cost-effective supply of electricity. Keeping Hydro's electricity systems in reliable operating condition is accomplished through a combination of routine maintenance and capital investments to replace assets that have reached the end of their useful life. From 2005-2016, Hydro invested over \$1 billion to upgrade or replace its assets. For the 2017-2019 planning period, Hydro's capital expenditures are expected to continue at significant levels with budgeted expenditures of over \$300 million in 2017 including \$177.5 million related to the construction of a third transmission line from Bay d'Espoir to the western Avalon Peninsula to reliably meet growing demand in this area of the province.

The provincial electricity system will change significantly with the development of the Muskrat Falls generation project and associated transmission facilities including interconnection to Labrador through the Labrador-Island Link and to the North American electricity grid through the Maritime link. These changes present an opportunity to reliably meet the needs of



customers during the planning period and beyond.

In addition to meeting current needs, Hydro has a responsibility to assess electricity requirements in the province and identify options to meet future growth in customer requirements. Hydro will update the comprehensive risk assessment of options to address Island Interconnected System energy and demand requirements in advance of the completion of the Muskrat Falls project and will advance any recommendations as required. In addition to the requirements of the Island electrical system, Hydro will continue to assess electricity requirements and options to respond in the Labrador Interconnected System and isolated diesel communities. Hydro will also monitor the power requirements of potential new industrial customers, including mining developments in Labrador West, and respond as appropriate.

<b>Issue 1: Reliable electricity supply</b>	
<b>Goal</b>	
By December 31, 2019, Hydro will have advanced initiatives to support electricity system reliability.	
Indicators	<ul style="list-style-type: none"> <li>▪ Developed reliability improvement plans for key generating and transmission assets and supporting infrastructure.</li> <li>▪ Completed required maintenance work and capital investments to support reliability.</li> <li>▪ Assessed the adequacy of future electricity supply and identified options to address any issues.</li> <li>▪ Advanced preparations for interconnection of electricity systems and integration of Muskrat Falls power and assets.</li> </ul>
<b>Objective</b>	
By December 31, 2017, Hydro will have advanced electricity system investments and activities to enhance reliability.	
Indicators	<ul style="list-style-type: none"> <li>▪ Completed planned capital investments in Hydro assets.</li> <li>▪ Completed priority maintenance work required for the winter 2017/2018 season.</li> <li>▪ Finalized Hydro's 2018 plan for capital investments.</li> <li>▪ Complete activities to prepare for interconnection of electricity systems and integration of Muskrat Falls power and assets.</li> <li>▪ Analyzed electricity supply requirements in advance of interconnection with the North American grid.</li> <li>▪ Monitored electricity supply requirements of any potential new industrial customers, including mining developments in Labrador West, and responded as appropriate.</li> <li>▪ As required, advanced the assessment of renewable/alternative power</li> </ul>

Issue 1: Reliable electricity supply	
	generation options, including wind and small hydro, for communities that rely on diesel for electricity generation.
<b>Objective</b> By December 31, 2018, Hydro will have progressed investments and implemented initiatives to enhance electricity system reliability.	
<b>Objective</b> By December 31, 2019, Hydro will have further advanced investments and initiatives to enhance electricity system reliability.	

## Issue 2: Electricity rates and customer service

As the primary generator of electricity in the province, Hydro has a significant impact on social well-being and economic prosperity in the province. In fulfilling its mandate, Hydro supports the strategic direction of the Provincial Government regarding maximized value and more specifically the focus to minimize the burden on electricity customers in the province.

This section of the plan outlines the indicators that Hydro will pursue related to electricity rates as well as customer service and energy efficiency activities.

Electricity rates are impacted by a number of factors including capital investments in the electricity system, power purchases, fuel costs and the overall cost of operations. Hydro's mandate requires a commitment to the provision of least-cost power to customers in Newfoundland and Labrador. This commitment is reflected in a prudent approach to capital investment that ensures the appropriate balance between cost and reliability. During the planning period, Hydro will also place increased emphasis on completing the required maintenance of assets while managing operating costs through productivity and efficiency actions.

A key driver of future electricity rates is the cost of the Muskrat Falls project. Hydro will work with the Government of Newfoundland and Labrador and Nalcor to assess and implement measures to mitigate the impacts of the Muskrat Falls project on electricity rates.

Hydro delivers the majority of the electricity needed by Newfoundland Power to address their customers' needs and also directly serves over 38,000 residential and commercial customers and several large industrial customers. Better understanding the needs and expectations of all customers and identifying approaches that sustain or improve customer satisfaction will be a focus in the 2017-2019 planning period.

Hydro's commitment to customers also includes education and programs to help customers reduce their electricity use and costs. During the planning period, Hydro will continue to help electricity residential, commercial and industrial consumers conserve energy. The Five Year Conservation Plan: 2016-2020, filed with the PUB in 2015, outlines energy efficiency program

offerings for residential and commercial customers. The plan includes programs delivered in partnership with Newfoundland Power through the takeCHARGE program which offers rebate programs to encourage residential and commercial customers to reduce their electricity usage as well Hydro's energy efficiency programs delivered to its customers in isolated communities.

The Industrial Energy Efficiency Program (IEEP) provides industrial electricity customers with financial assistance and technical support to complete feasibility studies and capital upgrades to achieve electricity savings. Over the planning period, Hydro will continue to engage with industrial customers to encourage and support improvement projects.

<b>Issue 2: Electricity rates and customer service</b>	
<b>Goal</b> By December 31, 2019, Hydro will have supported measures to mitigate electricity rate increases and advanced customer service and energy efficiency initiatives.	
<b>Indicators</b>	<ul style="list-style-type: none"> <li>▪ Identified and implemented measures to manage operating and capital costs.</li> <li>▪ Supported assessment and implementation of measures to mitigate the impact of the Muskrat Falls costs on rates.</li> <li>▪ Evaluated customer satisfaction and developed and implemented initiatives to enhance customer service.</li> <li>▪ Promoted energy conservation by residential, commercial and industrial customers.</li> </ul>
<b>Objective</b> By December 31, 2017, Hydro will have managed costs and implemented initiatives to enhance customer service and energy efficiency	
<b>Indicators</b>	<ul style="list-style-type: none"> <li>▪ Prioritized capital investments to ensure appropriate balance between reliability and costs.</li> <li>▪ Identified and implemented measures to manage operating costs.</li> <li>▪ Supported efforts of the Government of Newfoundland and Labrador and Nalcor to assess and implement measures to mitigate the impact of Muskrat Falls costs on rates.</li> <li>▪ Implemented customer service initiatives related to residential and commercial customers, Newfoundland Power, and industrial customers.</li> <li>▪ Measured commercial customer satisfaction and identified key areas for improvement.</li> <li>▪ Delivered energy efficiency programs to residential and commercial customers, including those in isolated communities.</li> <li>▪ Worked with industrial customers through the Industrial Customers Energy Efficiency Program to identify and assess energy efficiency opportunities.</li> </ul>

**Issue 2: Electricity rates and customer service**

**Objective**

By December 31, 2018, Hydro will have implemented initiatives manage costs, enhance customer service and energy efficiency.

**Objective**

By December 31, 2019, Hydro will have implemented additional measures to manage costs and further advanced customer service and energy efficiency initiatives for customers.

### Issue 3: Safety

Achieving excellence in safety is Hydro’s number one priority and safety is a shared core value. For Hydro, safety excellence is more than a way of operating it is an integral part of Hydro’s identity and strategy for the planning period and into the future. Hydro’s pursuit of safety excellence encompasses the safety of employees, customers and the general public.

In 2016, many areas of Hydro sustained excellent safety performance and the company is seeing its safety culture mature with employees identifying and addressing unsafe conditions and behaviours and accepting personal responsibility for their safety and the safety of others.

Achieving and maintaining excellent safety performance in all areas of the company is an ongoing challenge. During the planning period, Hydro will continue to implement initiatives to move the company forward on its journey to safety excellence. Consistent with its multi-year safety plans, these initiatives involve procedures for completing high-risk work, electrical safety training to maintain employee competence, and employee injury prevention communication. To identify opportunities for improvement, Hydro will also continue to complete investigations of all safety incidents and analyse safety performance to identify areas for improving the design and delivery of its safety programs over the planning period.

Customer safety and public safety around electrical equipment are also key elements of Hydro’s safety commitment. Over the planning period power line safety, power outage safety and winter preparedness along with safety around hydroelectric dams and other electrical equipment are key themes for Hydro’s customer and public communications.

### Issue 3: Safety

#### Goal 1

By December 31, 2019, Hydro will have continued progress towards sustained safety excellence.

#### Indicator

- Delivered electrical safety training for employees.
- Completed safety-related communications activities for employees and the general public.

#### Objective

By December 31, 2017, Hydro will have implemented safety training and communication programs in support of safety excellence.

<p>Indicators</p>	<ul style="list-style-type: none"> <li>▪ Delivered employee safety training including:                             <ul style="list-style-type: none"> <li>▪ Completed planned training for employees working around electrical equipment.</li> <li>▪ Completed safety training for new employees, employees taking on new roles and refresher training for existing employees including: work protection code, confined space entry, and working at heights.</li> </ul> </li> <li>▪ Assessed employee competence in completing high risk work through task observations.</li> <li>▪ Completed employee communication activities for the 2017 injury prevention campaign.</li> <li>▪ Completed customer and public safety communication activities.</li> </ul>
<p><b>Objective</b>                  By December 31, 2018, Hydro will have advanced safety training and communication programs to achieve long-term safety excellence.</p>	
<p><b>Objective</b>                  By December 31, 2019, Hydro will have continued progress towards sustained safety excellence by advancing safety programs.</p>	





## **Appendix 1**

### **Strategic Directions for the Energy Sector**

The strategic directions of the Provincial Government in relation to the energy sector as communicated by the Minister of Natural Resources include:

#### **Strategic Direction #1: Energy Security and Reliability**

Outcome: Energy security and reliability in Newfoundland and Labrador

Focus areas:

- Transparent project development with improved management and oversight
- Long-term planning for the electricity sector in preparation for 2041
- Distributed energy generation including wind and small hydro with focus on rural communities

#### **Strategic Direction #2: Maximized Value**

Outcome: Maximized value from domestic use and export of energy

Focus areas:

- Minimized burden on ratepayers and taxpayers
- Intensive marketing of wind and hydro
- Investment and innovation in electricity generation projects
- Options of the advancement of the Gull Island Project

#### **Strategic Direction #3: Oil and Gas Industry Development**

Outcome: Advanced the oil and gas industry in the province

Focus areas:

- Long-term vision and policy for the industry
- Strong benefits agreements that maximize employment and business access
- Effective monitoring and oversight
- Research and development in deep-water oil and gas fields
- Streamlined regulatory approval processes
- Development and application of a generic royalty regime
- Natural gas development
- Evidence-based approach to hydraulic fracturing



## Appendix 2 Provincial Electricity Generation and Transmission System

