

Transparency and Accountability Report

2017



June 2018





## Message from the Boards of Directors

Honourable Siobhan Coady  
Minister of Natural Resources  
Government of Newfoundland and Labrador  
P. O. Box 8700  
St. John's, NL  
A1B 4J6

Dear Minister Coady:

In accordance with the *Transparency and Accountability Act*, I am pleased to submit the 2017 Annual Performance Report on behalf of the Board of Directors of Nalcor Energy.

The 2017-2019 Strategic Plan for Nalcor Energy outlined the applicable strategic directions of the Provincial Government in relation to the energy sector, as communicated by the Minister of Natural Resources.

This Performance Report will present performance results and accomplishments for the calendar year 2017 for Nalcor Energy. As the Board of Directors of Nalcor Energy, we are accountable for the preparation of this report and are accountable for the results.



Chair, Board of Directors  
Nalcor Energy



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## 1 OVERVIEW

Nalcor Energy (Nalcor), a Category 1 public body, is Newfoundland and Labrador’s energy company leading the development of the province's energy resources. The company’s business includes the development, generation, transmission and sale of electricity; the exploration, development, production and sale of oil and gas; industrial fabrication site management; and energy trading. Nalcor is leading the development of the province’s energy resources and has a corporate-wide framework that facilitates the prudent management of its assets while continuing an unwavering focus on the safety of its workers, contractors and the public.

Nalcor is a provincial Crown corporation established in 2007 under a special act of the Legislature of the Province of Newfoundland and Labrador. In 2016, Nalcor’s executive structure was reorganized to allow for the separation of Nalcor’s regulated business (Newfoundland and Labrador Hydro) from its unregulated business operations. Nalcor’s legal structure at December 31, 2017 included the entities listed below.

Entity Name	Description of Interest
Newfoundland and Labrador Hydro (Hydro)	Wholly owned subsidiary
Nalcor Energy – Oil and Gas Inc. (Oil and Gas)	Wholly owned subsidiary
Nalcor Energy – Bull Arm Fabrication Inc. (Bull Arm Fabrication)	Wholly owned subsidiary
Nalcor Energy Marketing Corporation (Energy Marketing)	Wholly owned subsidiary
Muskrat Falls Corporation (Muskrat Falls)	Wholly owned subsidiary
Labrador Transmission Corporation (Labrador Transco)	Wholly owned subsidiary
Labrador-Island Link Holding Corporation (LIL Holdco)	Wholly owned subsidiary
Labrador-Island Link Limited Partnership (LIL LP)	Limited partnership in which Nalcor, through LIL Holdco, owns 100 per cent of the 75 Class A and 1 Class C limited partnership units and, through LIL GP, 1 General Partner Unit.
Labrador-Island Link General Partner Corporation (LIL GP)	Wholly owned subsidiary
Labrador-Island Link Operating Corporation (LIL OpCo)	Wholly owned subsidiary
Lower Churchill Management Corporation (LCMC)	Wholly owned subsidiary
Churchill Falls (Labrador) Corporation Limited (Churchill Falls)	65.8 per cent owned joint operation of Hydro
Twin Falls Power Corporation Limited (Twin Falls)	33.3 per cent owned joint venture of Churchill Falls
Gull Island Power Corporation (GIPCo)	Wholly owned subsidiary (inactive)
Lower Churchill Development Corporation (LCDC)	51 per cent owned subsidiary of Hydro (inactive)

Headquartered in St. John's, Nalcor's energy portfolio is located throughout the province (see Appendix 1).

## **Mandate**

### **Nalcor**

The mandate of Nalcor, established in legislation under the *Energy Corporation Act*, is to invest in, engage in, and carry out activities in all areas of the energy sector in the province and elsewhere, including:

- Developing, generating, producing, transmitting, distributing, delivering, supplying, selling, exporting, purchasing and using power from wind, water, steam, gas, coal, oil, hydrogen or other products used or useful in the production of power.
- Exploring for, developing, producing, refining, marketing and transporting hydrocarbons and products from hydrocarbons.
- Manufacturing, producing, distributing and selling energy related products and services.
- Research and development.

## **Business Segments**

Nalcor has six business segments in its operating structure: Newfoundland and Labrador Hydro, Power Development, Power Supply, Offshore Development, Energy Markets and Corporate.

The activities of these business segments support the fulfillment of the strategic directions of the Provincial Government for the energy sector. A description of each of the business segments is presented below.

### **Newfoundland and Labrador Hydro**

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 production – Hydro has an installed generating capacity of 1,763 megawatts (MW) which includes the operations of nine hydroelectric generating stations, one oil-fired plant, four gas turbines, and 25 diesel plants, including 20 isolated diesel generating and distribution systems.
- Transmission and distribution – Hydro operates and maintains over 4,400 kilometres of transmission lines and more than 50 high voltage terminal stations which connect to generation and delivery points for Newfoundland Power on the island, industrial customers, and Hydro’s rural distribution systems province-wide. Hydro also operates and maintains approximately 2,700 kilometres of distribution lines throughout the province.
- The Newfoundland and Labrador System Operator (NLSO) 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, reliably, and cost effectively.
- Customer service activities address the requirements of Newfoundland Power, industrial customers and over 38,600 direct residential and commercial customers in rural Newfoundland and Labrador.
- Electricity system planning involves forecasting electricity requirements in the province and advancing options to ensure adequate supply of generation resources and transmission and distribution infrastructure to reliably meet forecasted electricity demand.

### ***Power Development***

The development of the 824 megawatt Muskrat Falls hydroelectric generating facility on lower Churchill River in Labrador is a key component of the province's energy warehouse. The clean, stable, renewable electricity provides an opportunity for the province to meet its own domestic and industrial needs in an environmentally sustainable way, and also export excess electricity to other jurisdictions where the demand for clean, renewable energy continues to grow. Once construction is complete this asset will become part of the Power Supply segment.

### ***Power Supply***

Power Supply includes Churchill Falls (Labrador) Corporation, the Labrador Transmission Assets, Labrador-Island Link and the Menihek Generating Station.

Nalcor's operation in Churchill Falls is one of the largest underground hydroelectric powerhouses in the world, with a rated capacity of 5,428 megawatts (MW). Safely operating and maintaining its electricity assets, as well as municipal and community services in support of these electricity assets, drives the Churchill Falls strategy.

The Churchill Falls generating station provides clean, renewable electricity to millions of consumers throughout North America. A significant portion of that electricity is being sold to Hydro-Québec under a long-term contract. Churchill Falls sells 525 MW to Hydro for use in the province, with any surplus recapture exported via sales to Nalcor Energy Marketing.

The transmission component of Power Supply Labrador Transmission Assets and the Labrador Island Link comprise the new transmission component of Power Supply, and includes 1,600 km of transmission lines. The Labrador Transmission Assets connect Churchill Falls to the Muskrat Falls terminal station, and the Labrador Island link further connects Muskrat Falls to the construction of over 1,600 km of transmission lines from Churchill Falls Labrador to Soldiers Pond on the island's Avalon Peninsula (including a subsea transmission link connecting Labrador to the island).

Menihek is a 19 megawatt (MW) hydro power generating station located in north-western Labrador that provides electricity to customers in Schefferville, Quebec. It is wholly owned by Nalcor Energy and its operation funded by Hydro-Québec through a long term agreement.

### ***Energy Markets***

Nalcor Energy Marketing is a full service, 24 hour electricity trading operation and is Nalcor's face to the external electricity markets. Nalcor's current energy marketing portfolio includes recapture power that is not required by Hydro to meet electricity customer requirements in

Labrador and firm transmission capacity through Quebec. Nalcor's energy marketing portfolio will grow over the coming years with the completion of the Muskrat Falls hydroelectric facility and related transmission assets.

### ***Offshore Development***

Nalcor's Offshore Development includes Oil and Gas business and Bull Arm Fabrication. Nalcor Energy Oil and Gas manages oil and gas interests and is currently a partner in three developments in the Newfoundland and Labrador offshore oil and gas industry: the Hebron oil field, the White Rose Growth Project, and the Hibernia Southern extension. Through its multi-year exploration strategy, Nalcor Energy Oil and Gas also supports efforts toward further exploration and development of the province's potential offshore and onshore resources.

On March 27, 2018 the Province announced that the oil and gas subsidiary of Nalcor Energy would be established as a stand-alone crown corporation. Planning is underway to effect this transition, which is anticipated to be completed in 2018.

Bull Arm Fabrication manages Atlantic Canada's largest fabrication site. Close to international shipping lanes and Europe, this site has unobstructed, deep water access to the Atlantic Ocean. This facility spans over 2,550 hectares and has integrated and comprehensive infrastructure to support fabrication and assembly of three key project functions, simultaneously, in three separate theatres: Fabrication Yard, Marine Facility, and Deepwater Site. Most recently, the Bull Arm site was fully leased by ExxonMobil Canada Properties for the construction and commissioning phases of the Hebron Project. In 2017, Nalcor Energy issued a Request for Proposals (RFP) to assess proposed use for the Bull Arm Fabrication facility with the goal of securing a tenant(s) that will maximize site utilization and attract sustainable business opportunities.

### ***Corporate***

This business segment includes finance and accounting operations, corporate planning and reporting, corporate communications, shareholder relations, information management, human resources, safety, environment, community investment and all other shared service functions.

## **Values**

Employees of Nalcor and its subsidiaries, including Hydro, are committed to building a bright future for Newfoundland and Labrador, unified by the following core values:

<b>Open Communication</b>	Fostering an environment where information moves freely in a timely manner.
<b>Accountability</b>	Holding ourselves responsible for our actions and performance.
<b>Safety</b>	Relentless commitment to protecting ourselves, our colleagues, and our community.
<b>Honesty and Trust</b>	Being sincere in everything we say and do.
<b>Teamwork</b>	Sharing our ideas in an open and supportive manner to achieve excellence.
<b>Respect and Dignity</b>	Appreciating the individuality of others by our words and actions.
<b>Leadership</b>	Empowering individuals to help guide and inspire others.

## **Primary Clients**

In addition to the clients of its subsidiary, Hydro, Nalcor's clients include:

- Partners in oil and gas projects
- Emera Energy
- Bull Arm Fabrication site tenants
- Supply and service companies in the energy sector and construction sector

## **Number of Employees, Physical Location and Other Key Statistics**

Nalcor, the province's energy corporation, is leading the development of the province's energy resources. As of December 31, 2017, Nalcor had 1,540 employees, with 61 per cent of these employees located in rural parts of the island and Labrador. The gender composition of Nalcor's employee group was 72 per cent male and 28 per cent female; up from 19 percent in 2016. Nalcor is currently implementing a multi-year action plan to support gender equity, diversity and inclusion across all lines of business. In addition to the target-setting initiative established in 2017, Nalcor is committed to implementing diversity and inclusion strategies to attract, recruit, develop and retain members of designated groups including Indigenous peoples, persons with disabilities and members of visible minorities. Nalcor has undertaken a

self-identification census to attain an understanding of the current representation of members of other designated groups within our existing workforce. This information informs initiatives to support increased representation of designated groups and an inclusive work environment for all employees. In 2017, such initiatives included a comprehensive review of Nalcor's recruitment and selection process through a diversity and inclusion (D&I) lens and the launch of a company-wide D&I Champions Committee.

Gender	Rural	Urban	Total	Per cent
Female	169	265	434	28%
Male	768	338	1106	72%
<b>Total</b>	937	603	1540	
<b>Per cent</b>	61%	39%		

### 2017 Consolidated Revenues and Expenses

In 2017, Nalcor had revenues of \$930 million. The majority of Nalcor's revenues are currently generated from electricity sales from Hydro and Churchill Falls and petroleum and natural gas sales in Oil and Gas. Approximately 33 per cent of Nalcor's 2017 expenditures related to fuels and power purchases with operating costs accounting for 25 per cent of expenses; depreciation, depletion, amortization and impairment totaling 35 percent and finance charges accounting for approximately eight per cent. The following table summarizes the 2017 consolidated revenue and expenses for Nalcor.

**Table 1: Nalcor Energy Consolidated Revenue and Expenses 2017**

<i>For the year ended December 31, 2017 (millions of dollars)</i>	\$	%
Revenue		
Energy sales	858	92.3
Other revenue	72	7.7
	930	
Expenses		
Fuels	226	26.1
Power purchased	62	7.1
Operating costs	219	25.3
Production, marketing and transportation costs	36	4.1
Transmission rental and market fees	25	2.9
Depreciation, depletion, amortization and impairment	300	34.6
Exploration and evaluation	1	0.1
Net finance expense	66	7.6
Other expense (income)	23	2.7
Regulatory adjustments	(91)	-10.5
	867	
Profit for the year	63	

The 2017 Consolidated Financial Statements for Nalcor are appended to this document (See Appendix 2).

## 2 HIGHLIGHTS AND PARTNERSHIPS

Nalcor works with a variety of agencies, departments and commissions to execute its mandate. During 2017, Nalcor worked closely with each of these organizations to advance the strategic directions of the Provincial Government related to the energy sector.

### **Department of Natural Resources**

Nalcor works with the Department of Natural Resources in policy-related areas for the various energy sector activities in which the companies engage and supports the companies' efforts to progress all the strategic issues outlined. In 2017, Nalcor and Hydro representatives served as members of the Rate Mitigation Committee, chaired by the Department of Natural Resources, which is analyzing options to mitigate future electricity rates.

The acquisition of working interests in offshore oil fields and the company's exploration strategy were coordinated efforts between the department and Nalcor Energy – Oil and Gas. Nalcor and the Department worked together to communicate insights from its exploration strategy to global exploration and production companies. These activities support fulfillment of the strategic direction of government related to the increased exploration and development of energy resources and realizing maximum benefits to the province through the strategic development of our resources

### **Department of Finance**

Nalcor works with the Department of Finance in relation to addressing requirements related to financial structure, dividend policies as well as providing guarantees for the company's debt financing activities. During 2017, the enhanced Federal Loan Guarantee and Nalcor's financing plans and equity requirements are examples of interactions between the Department and Nalcor.

### **Other Departments/Public Bodies**

Nalcor also shares commitments with the Department of Municipal Affairs and Environment, Service NL, and the federal Department of Fisheries and Oceans and Environment Canada in relation to the environmental aspects of the company's activities. Nalcor's subsidiary, NL Hydro, works with the Public Utilities Board and Newfoundland Power. This will be discussed in Hydro's 2017 Report.

### 3 OUTCOMES OF GOALS AND OBJECTIVES

The 2017-2019 Strategic Plan for Nalcor highlighted three strategic issues around which goals and objectives were established. These issues encompass the activities of Nalcor and its subsidiaries. A separate report will be filed by Hydro for 2017.

For each strategic issue, the 2017 objectives and indicators are provided along with a summary of related accomplishments.

#### ISSUE 1: ELECTRICITY SUPPLY

Nalcor's mandate, as established in legislation under the *Energy Corporation Act*, is to invest in, engage in, and carry out activities in all areas of the energy sector in the province and elsewhere. In carrying out this mandate, Nalcor is responsible for developing the province's energy resources to provide Newfoundlanders and Labradorians with a secure and reliable source of electricity to meet their ongoing needs. This mandate supports the strategic direction of government related to energy security and reliability in Newfoundland and Labrador. Through its subsidiary Hydro and its Churchill Falls line of business, Nalcor also undertakes a robust asset management program to ensure ongoing capital investments and maintenance of existing electricity assets to ensure long-term reliable operation of these assets.

During 2017, Nalcor advanced the construction of the Muskrat Falls Project to secure a reliable source of clean, renewable power for customers in the province.

Nalcor invested \$70.2 million in its assets at the Churchill Falls plant, in 2017, to ensure reliable operating condition to ensure these assets are fully functional beyond the expiry of current contractual commitments with Hydro-Quebec in 2041.

#### **Muskrat Falls Project**

Construction of the Muskrat Falls Project continued throughout 2017 with many milestones reached. The project is well advanced with overall construction reaching 89 per cent at the end of 2017.

#### *Power Development (Generation)*

The powerhouse, spillway and three dams are the primary components of the generating facility that span the lower Churchill River to create the reservoir, which is the source of power for the plant. At the end of the year, the intake and powerhouse structures were substantially completed. With the powerhouse building constructed and enclosed, work continued on the assembly and installation of the four generating units inside the powerhouse. In 2017, the

generation project reached an important milestone with the completion of the South and North Spur dams, two of the three dams required to create the Muskrat Falls reservoir. Significant progress was also made on the North dam with 40 per cent of work on that dam completed. First power from the generation project is expected late 2019.

#### *Power Supply (Transmission)*

In 2017, Nalcor completed construction of the Labrador-Island Transmission Link (LIL) travelling 1,100 kilometres from Muskrat Falls in Labrador to Soldiers Pond on the Avalon Peninsula. This achievement marked the completion of all transmission line construction required for the project including the Labrador Transmission Assets and the Strait of Belle Isle Marine Cable Crossing. The final key pieces of electrical equipment including transformers for Muskrat Falls, rotors, and stators required at Soldiers Pond were safely delivered to each site and installation work began on each. As construction continued on the switchyards and converter stations, work began on energizing the transmission assets. The transmission project remains on target to bring power from Labrador to the island in mid-2018.

#### **Churchill Falls - Asset Management**

Nalcor's operation in Churchill Falls is one of the largest underground hydroelectric powerhouses in the world, with a rated capacity of 5,428 megawatts (MW). Safely operating and maintaining its electricity assets, as well as municipal and community services in support of these electricity assets, drives the Churchill Falls strategy.

In 2017, Churchill Falls celebrated 46 years since first power. With the plant and related infrastructure aging, asset management is critical to keeping assets in reliable operating condition to provide reliable service to customers for the long-term and to ensure assets are fully functional well beyond the expiry of current commitments in 2041. From 2008-2017, \$399 million was invested to upgrade or replace Churchill Falls assets with annual capital expenditures steadily increasing year over year during a period of ongoing asset renewal to \$70.2 million in 2017. This capital investment, between 2008-2017, was the result of a focus on capital renewal / rehabilitation of aging assets, after approximately 35 years of operation by 2008.

Taking steps to ensure the continued performance of the Churchill Falls facilities through planning and strategic investment will drive the company's strategy for the 2018-2019 planning period and beyond. A long-term asset management plan has been developed that reflects the level of service required of the plant combined with key asset information including condition assessments and operating and maintenance experience. Currently, capital investments for 2018-2019 planning period are forecast to be in excess of \$132 million.

In advancing the Muskrat Falls project, including integration of Muskrat Falls assets into the provincial electricity system and interconnection with the North American grid, and continuing to invest in Churchill Falls assets, Nalcor is ensuring a secure and reliable source of electricity and supports the strategic direction of government related to Energy Security and Reliability for the long-term.

Issue 1: Electricity Supply and Reliability	
Goal: By December 31, 2019, Nalcor will have advanced long-term security and reliability of the province's electricity supply	
Indicators	<ul style="list-style-type: none"> <li>▪ Advanced construction of the Muskrat Falls Project.</li> <li>▪ Prepared for integration into the electricity system.</li> <li>▪ Prepared for interconnection with North American grid.</li> <li>▪ Continued to invest in Churchill Falls assets.</li> </ul>
<p><b>Objective</b></p> <p>By December 31, 2017, Nalcor will have advanced capital projects to enhance electricity supply and reliability for the province.</p>	
INDICATORS	2017 Accomplishments
Achieved key project milestones for generation portion of the Muskrat Falls Project.	<ul style="list-style-type: none"> <li>▪ Safety performance strong compared to industry benchmarks.</li> <li>▪ South Dam completed and North Spur stabilization work completed.</li> <li>▪ Significant work completed on the North Dam.</li> <li>▪ Powerhouse fully enclosed.</li> <li>▪ Successful impoundment to establish winter headpond for the reservoir.</li> <li>▪ Safety/debris/ice boom installed.</li> <li>▪ Balance of Plant contract awarded.</li> <li>▪ Spillway gates under operation by LCP Project Delivery Team.</li> </ul>
Achieved key project milestones for transmission portion of the Muskrat Falls Project.	<ul style="list-style-type: none"> <li>▪ Safety performance strong compared to industry benchmarks.</li> <li>▪ Construction of overland transmission including the Labrador Transmission Assets from Churchill Falls to Muskrat Falls and Labrador-Island Transmission Link from Muskrat Falls to Soldiers Pond substantially complete.</li> <li>▪ AC transmission line from Churchill Falls to Muskrat Falls was energized to support the Labrador East electricity load during winter 2017.</li> <li>▪ At Soldiers Pond, the AC assets are complete, have been handed over to Hydro, and are in operation.</li> <li>▪ The Strait of Belle Isle marine cable crossing complete and ready</li> </ul>

Issue 1: Electricity Supply and Reliability	
	for energization.
Prepared for commissioning of Muskrat Falls Assets.	<p><u>Power Development:</u></p> <ul style="list-style-type: none"> <li>▪ Site completion team hiring in preparation for upcoming electrical and mechanical commissioning scope was completed.</li> <li>▪ Working with contractors for the mechanical completion and commissioning scope population of the project completion system.</li> <li>▪ Contractor asset handovers of North Spur, South Dam, safety/Debris/ice boom and Spillways gates (first phase) and ancillaries are accepted.</li> <li>▪ Commissioned Spillway gates and powerhouse overhead crane.</li> </ul> <p><u>Power Supply:</u></p> <ul style="list-style-type: none"> <li>▪ Completed energization and integration of the AC assets at Soldiers Pond terminal station to Hydro’s distribution system.</li> <li>▪ Energization of bus extensions at Churchill Falls complete.</li> <li>▪ Ongoing static commissioning surveillance witnessing of Churchill Falls and Muskrat Falls substations, Soldiers Pond and Muskrat Falls converter stations, and Soldiers Pond Synchronous Condensers.</li> <li>▪ Achieved substantial completions activities at transition compounds and electrode sites.</li> <li>▪ Advanced recruiting site completion teams and commissioning surveillance personnel completed.</li> <li>▪ Ongoing development of energization procedures for converter stations, synchronous condensers, and Muskrat Falls terminal station.</li> <li>▪ Substantially advanced build out of Power Supply Operations team for new assets.</li> <li>▪ Finalizing documentation process for handover and turnover</li> </ul>
Supported commercial arrangements and regulatory requirement for integration of Muskrat Falls assets.	<ul style="list-style-type: none"> <li>▪ Completed interim agreements related to pre-Muskrat Falls commercial arrangement between Hydro and Nalcor Energy Marketing for the import of energy to displace fossil fuel based generation.</li> <li>▪ Supported the advancement of government legislative requirements for an open access transmission regime.</li> </ul>

Issue 1: Electricity Supply and Reliability	
<p>Prepared maintenance plans for assets going into operation in 2017-2018.</p>	<ul style="list-style-type: none"> <li>▪ Advanced the development of detailed maintenance requirements for transmission assets.</li> <li>▪ Established a team of asset specialists to develop maintenance tactics.</li> <li>▪ Identified initial maintenance requirements to be adopted from existing practices and Original Equipment Manufacturer recommendations for the new transmission facilities.</li> <li>▪ Contractor maintaining AC station assets during initial operation until assets are ready to be turned over to company in 2018.</li> <li>▪ Company reviewed and implemented operational maintenance requirements to support the new HVac transmission lines in Labrador which were turned over in 2017.</li> <li>▪ Entered into support agreements with experienced HVdc operators and maintainers to guide development of operations and maintenance requirements through initial operation of the Labrador Island Link HVdc equipment.</li> <li>▪ Established project team to operate and maintain Muskrat Falls spillway facilities during construction until ready to turn over to the operations team.</li> </ul>
<p>Established operating and Maintenance requirements for operation of the transmission facilities including those with Hydro and CF(L)Co.</p>	<ul style="list-style-type: none"> <li>▪ Drafted operating and maintenance scopes of work for Hydro and CF(L)Co to execute on the transmission facilities in preparation of completing formal agreements with these companies in 2018 prior to the assets being turned over to the operations organization to maintain and operate.</li> </ul>
<p>Completed support activities for the operation of Muskrat Falls assets.</p>	<ul style="list-style-type: none"> <li>▪ Advanced the completion of Master Service Agreements for Nalcor to provide all services for the companies which own the new assets.</li> <li>▪ Established a collective agreement between Nalcor and IBEW for operation and maintenance of the new assets.</li> <li>▪ Established the engineering organization within Nalcor to support the operation of the new assets.</li> <li>▪ Advanced the corporate support organization implementation for Finance, HR, Safety, Environment and Indigenous relations.</li> </ul>

Issue 1: Electricity Supply and Reliability	
Reviewed and updated five-year capital plan for CF(L)Co.	<ul style="list-style-type: none"> <li>2018-22 capital plan was reviewed and updated in 2018, and validated by a third party consultant.</li> </ul>
Completed planned 2017 capital investment in CF(L)Co assets.	<ul style="list-style-type: none"> <li>Successfully delivered 2017 capital program for rehabilitation of generation and transmission assets, with continuation of the following rehabilitation programs: transformers, switchyard, gates and structures, and transmission.</li> </ul>

The objectives and indicators for 2018 are consistent with the direction outlined in the 2017-2019 Strategic Plan.

Issue 1: Electricity Supply and Reliability	
<p><b>Objective</b></p> <p>By December 31, 2018, Nalcor will have progressed capital projects for enhancement of the long-term security and reliability of the province’s electricity supply.</p>	
Indicators	<ul style="list-style-type: none"> <li><b>Generation and Transmission:</b> <ul style="list-style-type: none"> <li>Maintained strong safety performance compared to industry benchmarks.</li> </ul> </li> <li><b>Generation Construction:</b> - Achieved Key Project Milestones, including: <ul style="list-style-type: none"> <li>Achieved Pit Free milestone for Unit 1 and Unit 2.</li> <li>Commenced Unit 1 Turbine Assembly.</li> <li>Completed Intake Unit 1 and Unit 2 guides.</li> <li>Completed placement of Roller Compacted Concrete (RCC) at North Dam.</li> <li>Completed planning for full Impoundment.</li> </ul> </li> <li><b>Generation Commissioning:</b> <ul style="list-style-type: none"> <li>Finalized Readiness Plan for Unit 1 Pre/Post Grid Synchronization Tests.</li> <li>Finalized Dynamic Commissioning &amp; Start-Up Plan and Schedule.</li> </ul> </li> <li><b>Transmission Construction:</b> - Achieved Key Project Milestones, including: <ul style="list-style-type: none"> <li>Completed all construction of HVdc Facilities and Transmission infrastructure for LTA and LITL.</li> </ul> </li> </ul>

## Issue 1: Electricity Supply and Reliability

- Transmission Commissioning:
  - Completed Testing and Trial Operation for all LTA Assets; LTA Assets Ready for Power Transfer
  - Completed Testing and Trial Operation for Pole 1 LITL Assets; Pole 1 Ready for Power Transfer.
  - Finalized Commissioning Plan for Bi-Pole Operation.

## ISSUE 2: VALUE FROM ELECTRICITY

As Nalcor carries out its work to safely and responsibly develop Newfoundland and Labrador's energy resources for the maximum benefit for the people of the province, it is keenly aware of the impact its operations have on electricity costs. This mandate supports the strategic direction of government regarding maximized value with regard to the development and export of energy. Capital and financing costs associated with Nalcor's capital projects - through its subsidiary Hydro and, in particular, the Muskrat Falls Project - are not only backed by taxpayers but also passed along to customers through electricity rates.

Nalcor continues to consider the opportunities for minimizing costs of capital while also increasing revenue from its operations. These measures will provide opportunities to manage and mitigate electricity rates for customers after the in-service of the Muskrat Falls Project. Nalcor is focused on successfully completing the Muskrat Falls Project. At the same time the company is continuing to explore and assess opportunities in export markets that could bring value to the province from the sale of surplus energy. The company is investigating all reasonable measures to minimize the impact of the Muskrat Falls Project on electricity customers.

Nalcor currently sells electricity as a participant in the competitive energy markets in Canada and the United States. The current portfolio includes electricity available from the 300 MW recapture energy block available from Churchill Falls to Hydro. To access export markets, Nalcor, through its subsidiary, Hydro, signed a Transmission Service Agreement with Hydro-Québec TransÉnergie (HQT) under HQT's Open Access Transmission Tariff in 2009 and in 2013, Nalcor renewed that agreement for another 10 years. The agreement is for long-term power transmission capacity from Labrador through Quebec to the New York border with the ability to transmit electricity to other markets. In 2017, net income from these activities totaled \$15 million and accounted for 24 per cent of total Nalcor income. During the planning period, Nalcor will pursue all opportunities to optimize the value of the province's electricity portfolio through export sales.

In 2010, CF(L)Co filed a motion with the Quebec Superior Court, requesting the court to amend the extremely low pricing terms of the 1969 Power Contract and the Renewed Power Contract between CF(L)Co and Hydro Québec. The Quebec Superior Court ruled against CF(L)Co in 2014, following which CF(L)Co filed an appeal, which was subsequently ruled against by the Quebec Appeal Court in 2016. Following such rulings against CF(L)Co, CF(L)Co filed an application for leave to appeal to the Supreme Court of Canada which was subsequently granted. The appeal

was heard by the Supreme Court of Canada in December 2017, however, the decision is still pending.

In a second, but unrelated, legal action filed by Hydro Québec in the Québec Superior Court in 2013, Hydro Québec sought a Declaratory Judgment relating to the interpretation of certain terms of the 1969 Power Contract and the Renewed Power Contract (commencing September 1, 2016 and expiring August 31, 2041). In this proceeding, Hydro-Québec sought the Court’s declarations with respect to i) “Continuous Energy” under the Renewed Power Contract and ii) CF(L)Co’s right to sell power beyond the 300 MW recall block provided for in the Power Contract and the Renewed Power Contract on an interruptible basis to third parties. The Quebec Superior Court ruled against CF(L)Co in August 2016. On September 7, 2016 CF(L)Co filed an appeal with the Quebec Court of Appeal. In December 2016, the appeal factum was filed. A court date for the appeal hearing is yet to be assigned.

Nalcor’s activities to extract maximum value from its electricity portfolio and to investigate options for reducing project costs all serve to support the strategic direction of government of maximized value.

Issue 2: Value from Electricity	
Goal: By December 31, 2019, Nalcor will have advanced efforts to maximize the overall value from the electricity resources for the people of the province.	
Indicators	<ul style="list-style-type: none"> <li>▪ Advanced opportunities to mitigate rates.</li> <li>▪ Advanced opportunities to maximize value from, electricity sales and new developments.</li> </ul>
<b>Objective</b>	
By December 31, 2017, Nalcor will have assessed options to increase value from electricity resources in the province.	
INDICATORS	2017 ACCOMPLISHMENTS
Investigated options to mitigate impact of Muskrat Falls Project costs on electricity rates.	<ul style="list-style-type: none"> <li>▪ Nalcor/Hydro representatives served as members of the Rate Mitigation Committee, chaired by the Department of Natural Resources, which is analyzing options to mitigate future electricity rates.</li> <li>▪ Nalcor and Hydro finalized commercial arrangements to import off-Island power purchases to offset production at the Holyrood Thermal Generating Station upon commissioning of the Maritime Link. As part of its 2017</li> </ul>

Issue 2: Value from Electricity	
	<p>General Rate Application, Hydro proposed that the savings that result from the off-island purchases be collected into a deferral account that would be used to smooth the customer transition to higher rates. This proposal remains under review as part of the General Rate Application before the PUB.</p>
<p>Continued to implement measures to maximize portfolio value such as targeting higher proceed markets and times to exceed the energy price benchmark.</p>	<ul style="list-style-type: none"> <li>▪ Nalcor Energy Marketing delivered 99 percent of available surplus Recapture to market.</li> <li>▪ Nalcor Energy Marketing exceeded its New York energy price benchmark performance measure by 52 per cent, primarily by timing deliveries towards higher priced hours combined with directing energy to higher priced markets.</li> </ul>
<p>Continued preparations for Upper Churchill Power Contract legal actions.</p>	<ul style="list-style-type: none"> <li>▪ The appeal hearing for the legal action brought by CF(L)Co in 2010 addressing the inequities of the 1969 Power Contract pricing terms was held before the Supreme Court of Canada on December 5, 2017. The decision is pending.</li> </ul>
<p>Assessed and engaged potential customers on potential future electricity development for the export market and industrial customer opportunities.</p>	<ul style="list-style-type: none"> <li>▪ Conducted a market sounding to identify opportunities for excess energy sales in Northeastern North American markets, and partnered with Emera Inc. in its proposal to sell energy in response to the Request for Proposals for clean energy issued by distributors in Massachusetts.</li> <li>▪ Engaged with the Federal Government, Atlantic Canadian Governments, and utilities in the Regional Electricity Cooperation and Strategic Infrastructure Initiative.</li> </ul>

The objectives and indicators for 2018 are consistent with the direction outlined in the 2017-2019 Strategic Plan.

Issue 2: Value from Electricity	
<p><b>Objective</b> By December 31, 2018, Nalcor will have advanced opportunities to extract maximum value from the province's electricity resources.</p>	
<p>Indicators</p>	<ul style="list-style-type: none"> <li>▪ Investigated options and, as appropriate, acted upon options to mitigate impact of Muskrat Falls Costs on electricity rates.</li> </ul>

**Issue 2: Value from Electricity**

- Continued to implement measures to maximize portfolio value such as targeting higher priced markets and times to exceed the energy price benchmark.
- Take action, as required, upon receiving a decision from the Supreme Court of Canada addressing the inequities of the 1969 Power Contract pricing terms.
- Continued preparations relating to the appeal of the Declaratory Judgement legal proceedings.
- Assessed and engaged potential customers on potential future electricity development for the export market and industrial customer opportunities.

### ISSUE 3: OIL AND GAS INTERESTS, EXPLORATION AND DEVELOPMENT

The mandate of Nalcor, established under the *Energy Corporation Act (2008)* included exploring for, developing, producing, refining, marketing and transporting hydrocarbons and products from hydrocarbons. Through its subsidiary, Nalcor Energy - Oil and Gas Inc., these activities supported fulfillment of the strategic direction of government related to advancing the oil and gas industry in the province for the past decade.

In February, 2018 the Province of Newfoundland and Labrador launched a policy document entitled *The Way Forward* on Oil and Gas as part of its Advance 2030 plan. In support of this document the Province announced on March 27, 2018 that the oil and gas subsidiary of Nalcor Energy would be established as a stand-alone crown corporation. Planning is underway to effect this transition, which is anticipated to be completed in 2018.

Nalcor Oil and Gas has developed a multi-year strategy that outlines priorities for increasing exploration interest in the province. Oil and gas exploration, when successful, can lead to significant discoveries and new developments. Nalcor Oil and Gas exploration strategy is driven by a desire to replace reserves that have been produced, add sufficient reserves to allow for growth in production, and discover new resources that will provide the basis for a long term industry that yields significant economic benefits for the people of the province. This strategy aims to encourage more exploration and drilling by international exploration and production companies through investment in the provision of high-quality seismic data.

Nalcor Oil and Gas also currently manages oil and gas interests in three developments offshore Newfoundland and Labrador. Nalcor Oil and Gas holds a five per cent working interest in the White Rose Extension project. This project includes the North Amethyst field, West White Rose and South White Rose Extension. The company also has a 10 per cent working interest in the Hibernia Southern Extension (HSE) and is a co-venturer in the Hebron oil field holding a 4.9 per cent working interest in the province's fourth offshore oil project. Total production in 2017 was 3.2 million barrels and net income was \$9 million.

Over the planning period, the new corporation formed by Q4, 2018 will continue to work with its partners to advance work plans and achieve project milestones.

- White Rose Extension Project: The North Amethyst field produced first oil in May 2010 and has produced over 50 million barrels through December 2017. In 2015, first production from the South White Rose Extension was achieved and in 2016, first production was achieved from the first producer in the Hibernia formation at the White Rose field. In 2017, the White Rose Extension project was sanctioned, with first oil anticipated in 2022. For the

2018-2020 period, key activities will include the construction of the Wellhead Platform and the further delineation of the White Rose area’s future oil and gas potential.

- Hibernia Southern Extension: First oil was achieved from the Hibernia Southern Extension (HSE) in 2011, supplementing production from the original Hibernia project area, helping the overall field in achieving the one billionth barrel of oil on December 21, 2016. Accelerated drilling progress in 2016 and 2017 helped achieve record production levels from the HSE area. For the 2018-2020 period, the focus will be on the sustainment of maximum production levels through sound reservoir management.
- Hebron: First oil was achieved from Hebron on November 27<sup>th</sup>, 2017, one month ahead of schedule. For the 2018-2020 period, activities will focus on safe and environmentally sound ramp up of production rates from the platform, as well as the investigation and analysis of future upside potential in the field.

In addition to the economic value provided through equity, the ownership position provides the newly formed corporation with a seat at the decision-making table and direct involvement in the management of the development of our resources. The knowledge, information and understanding that this participation brings, will enable this corporation to foster relationships that help ensure better alignment between the provincial interest and the partners in the project. Over the planning period, the new corporation will continue to exercise its rights under joint venture agreements to pursue issues of interest to enhance sustainable long-term exploration and development of our resources.

Issue 3: Oil and Gas Interests, Exploration and Development	
Goal: By December 31, 2019, Nalcor Energy-Oil and Gas will have advanced opportunities to increase exploration and development of the Province’s oil and gas resources. <sup>1</sup>	
Indicators	<ul style="list-style-type: none"> <li>▪ Managed equity interests in offshore development in support of planned project advancements.</li> <li>▪ Advanced knowledge of resource potential through execution of multi-year exploration strategy.</li> </ul>
<b>Objective:</b> By December 31, 2017, Nalcor Energy-Oil and Gas will have supported the advancement of offshore projects and advanced acquisition and communication of geoscience data.	
INDICATORS	
2017 ACCOMPLISHMENTS	
Exercised Joint Venture	<ul style="list-style-type: none"> <li>▪ Discovery of additional oil resources through the drilling of</li> </ul>

<sup>1</sup> Nalcor, Oil and Gas is maintaining its current reporting structure for this report. Changes will be reflected as we move through the transition to the new corporation.

Issue 3: Oil and Gas Interests, Exploration and Development	
<p>voting rights and committee representation in the three offshore developments to support the advancement of progress toward planned project milestones.</p>	<p>the A-78 well in the North West White Rose region.</p> <ul style="list-style-type: none"> <li>▪ Worked with partners to sanction the White Rose Extension project.</li> <li>▪ Successful completion of the Hebron platform construction, with subsequent tow out in June, 2017.</li> <li>▪ Hebron First Oil November 27<sup>th</sup>, one month ahead of schedule.</li> <li>▪ Continued high performance at Hibernia South.</li> </ul>
<p>Acquired geoscience data:  Continued offshore exploration data surveys.  Continued multiyear exploration strategy.</p>	<ul style="list-style-type: none"> <li>▪ 9800 square kilometer 3D seismic survey completed.</li> <li>▪ Over 21,000 line kilometers of 2D seismic completed.</li> <li>▪ Seabed coring, multibeam and heatflow survey completed.</li> <li>▪ Resource Assessment for the NL01_LS (Labrador South area) completed.</li> <li>▪ Rock wash study on cataloging core and cuttings completed</li> <li>▪ Phase 2 Metocean Study completed.</li> <li>▪ Nominated Area of Interest to the CNLOPB for the Southern Newfoundland Sector – Submitted.</li> </ul>
<p>Communicated Nalcor geoscience results to the global oil and gas industry.</p>	<ul style="list-style-type: none"> <li>▪ Presented technical geoscience work at multiple international oil and gas conferences.</li> <li>▪ Individual company meetings on the prospectivity of the region continued throughout the year.</li> </ul>

The objectives and indicators for 2018 are consistent with the direction outlined in the 2017-2019 Strategic Plan.

Issue 3: Oil and Gas Interests, Exploration and Development	
<p><b>Objective</b>                      By December 31, 2018, Nalcor Energy-Oil and Gas will have supported efforts to further advance offshore project milestones and further enhanced knowledge of the province’s oil and gas resource potential.</p>	
<p>Indicators</p>	<ul style="list-style-type: none"> <li>▪ Supported transition of Oil and Gas to a new stand-alone corporation; develop and execute on a consolidated plan for</li> </ul>

**Issue 3: Oil and Gas Interests, Exploration and Development**

	<p>a successful transition.</p> <ul style="list-style-type: none"><li>▪ Continued to exercise Joint Venture voting rights and committee representation in the three offshore developments in support of the advancement of progress toward planned project milestones.</li><li>▪ Continued to acquire geoscience data:<ul style="list-style-type: none"><li>▪ Continue offshore exploration data surveys.</li><li>▪ Continue multiyear exploration strategy.</li></ul></li><li>▪ Communicated Nalcor geoscience results to the global oil and gas industry.</li></ul>
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## 4 OPPORTUNITIES AND CHALLENGES

Implementing the remaining priorities outlined for 2018-2019, in the current strategic plan, will require Nalcor to continue to build on its accomplishments and address future challenges and opportunities. The key challenges and opportunities that will be addressed reflect the next phase of Nalcor's strategy in support of the Provincial Government's energy sector strategic directions.

### *Electricity Supply and Reliability*

#### **Muskrat Falls Project**

During the 2018-2019 planning period, Nalcor will continue to advance Muskrat Falls Project to secure a new reliable source of clean, renewable power. The integration of Muskrat Falls assets into the provincial electricity system and interconnection with the North American grid will continue to support energy security and reliability.

#### **Churchill Falls – Asset Management**

During the next phase of the planning period, Nalcor will continue to safely operate and maintain its electricity assets in Churchill Falls. Its long-term asset management plan and strategic investment will ensure the continued performance of Churchill Falls and contribute to long-term energy security and reliability.

### *Value from Electricity*

Nalcor's energy marketing portfolio continues to grow. Over the remainder of the planning period, Nalcor will advance its plan for energy marketing operations, continuing to maximize opportunities to enhance value from electricity exports, bringing value to the province. Currently, Nalcor and Hydro, along with members of the Department of Finance and Department of Natural Resources are representatives on the Rate Mitigation Committee, chaired by the Assistant Deputy Minister, Energy Policy. The Rate Mitigation Committee is tasked with analyzing initiatives to help mitigate future electricity rates in an integrated manner to ensure that maximum results to achieve rate mitigation are achieved. Nalcor and Hydro support all reasonable measures to minimize the impact of the Muskrat Falls Project on rate payers of the province.

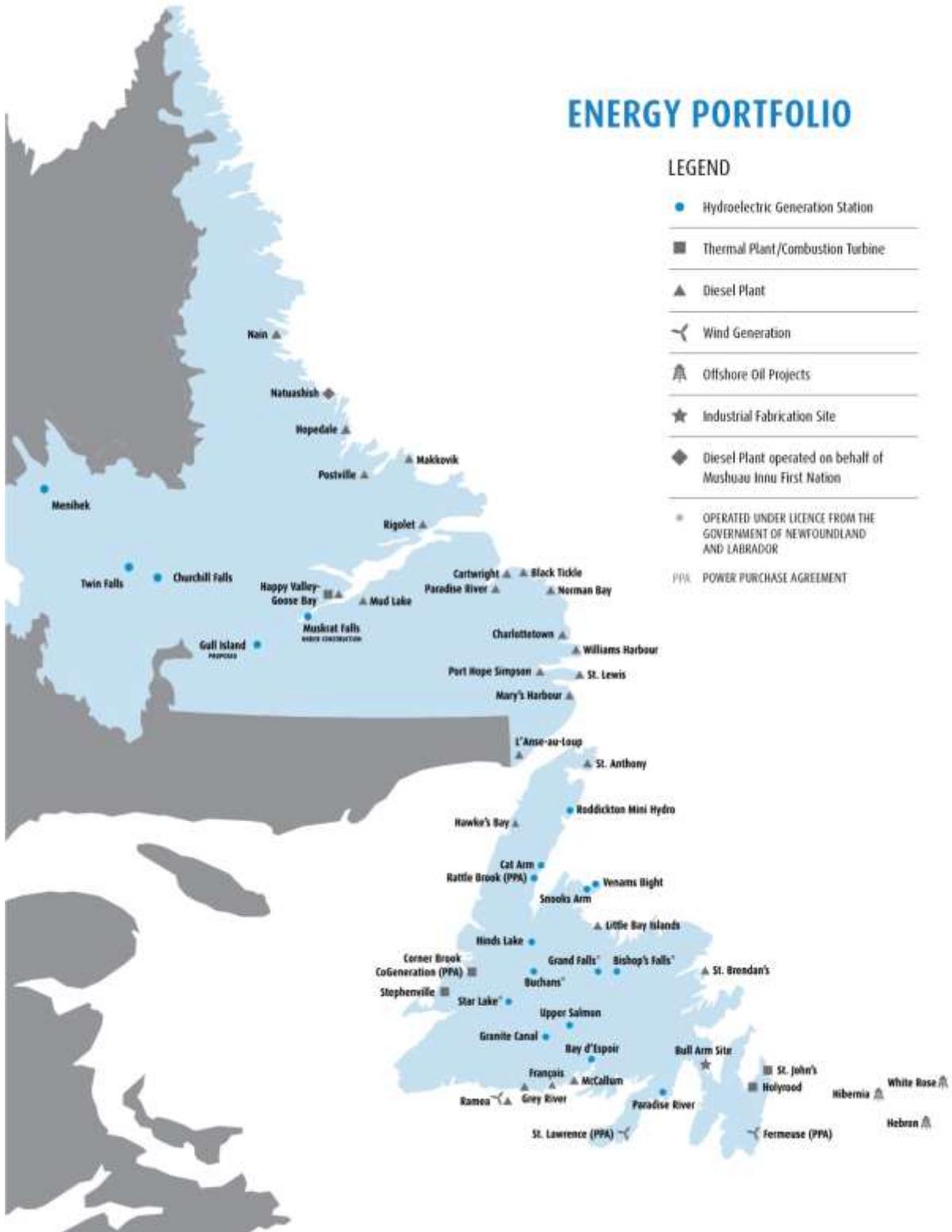
### ***Oil and Gas Interests, Exploration and Development***

Nalcor Energy Oil and Gas currently manages oil and gas interests in three developments offshore Newfoundland and Labrador and has economic value through its equity interests. Once established, the newly announced oil and gas corporation will continue to enhance sustainable long-term exploration and development of our resources.

Over 2018, Nalcor will support the transition of Oil and Gas to a new stand-alone corporation. It will also advance engagement and evaluation activities for the Bull Arm Fabrication site, advance a long-term operations plan for the site to ensure optimized asset integrity, and continue lease monitoring activities.

*Appendix 1*

Energy Portfolio



## Appendix 2

### Nalcor Energy Consolidated Financial Statements