

NALCOR ENERGY

Strategic Plan 2017-2019 Transparency and Accountability

March 2017



Message from the Boards of Directors

I am pleased to provide the Strategic Plan for Nalcor Energy on behalf of the Board of Directors.

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

The focus period for this Strategic Plan is January 1, 2017 to December 31, 2019. The Plan content outlines how Nalcor Energy will address the applicable strategic directions of the Provincial Government in relation to the energy sector as communicated by the Minister of Natural Resources.

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



Chair
Nalcor Energy

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1 INTRODUCTION

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 marketing. Nalcor 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 has six lines of business at December 31, 2016: Newfoundland and Labrador Hydro, Churchill Falls, Lower Churchill Project, Oil and Gas, Bull Arm Fabrication, and Energy Marketing.

The 2017-2019 Strategic Plan for Nalcor Energy takes into account the strategic directions of the Provincial Government in relation to the energy sector. The goals and objectives of Nalcor presented in this document support the achievement of the strategic directions relevant to Nalcor's mandate to invest in, engage in, and carry out activities in all areas of the energy sector in the province and elsewhere.

In 2016, Nalcor's executive structure was reorganized to allow for the separation of Nalcor's regulated business, Newfoundland and Labrador Hydro (Hydro), from its unregulated business operations. Hydro, also a Category 1 public body, prepares and submits a three-year strategic plan as required under the *Transparency and Accountability Act*. See *Newfoundland and Labrador Hydro, 2017-2019 Strategic Plan* for further details regarding Hydro's strategic issues for the planning period.

2 OVERVIEW

Within its six lines of business, Nalcor has 11 wholly owned subsidiaries: Newfoundland and Labrador Hydro (Hydro), Nalcor Energy – Oil and Gas, Nalcor Energy – Bull Arm Fabrication, Nalcor Energy Marketing Corporation, Labrador-Island Link General Partner Corporation (LIL GP), Labrador-Island Link Holding Corporation (LIL Holdco), Muskrat Falls Corporation (MF Corp), Lower Churchill Management Corporation (LCMC), Labrador-Island Link Operating Corporation (LIL Opco), Labrador Transmission Corporation (Lab Transco), and Gull Island Power Corporation (GIPCo).). GipCo and LCDC are inactive subsidiaries.

Through its subsidiary, Hydro, Nalcor holds a 65.8 per cent interest in Churchill Falls (Labrador) Corporation Limited (CF(L)Co) and 51 per cent of Lower Churchill Development Corporation (LCDC). CF(L)Co in turn owns one third of the shares of Twin Falls Power Corporation Limited. In 2012 Nalcor also created the Labrador-Island Link Partnership (LIL Partnership) in accordance with the Labrador-Island Link Limited Partnership Agreement to develop the Labrador-Island link. LIL Holdco holds all of LIL Partnership's 75 Class A Units and the 1 Class C Unit; LIL GP holds the 1 GP Unit; and ENL Island Link Incorporated holds all of the 25 Class B Units.

Headquartered in St. John's, Nalcor's energy portfolio is located throughout the province (see Appendix 2). In 2016, Nalcor had over 1,500 employees, with over 60 per cent of these employees located in rural parts of the island and Labrador. The gender composition of Nalcor's employee group was 73 per cent male and 27 per cent female. Nalcor is currently implementing a multi-year action plan to support gender equity, diversity and inclusion.

In 2016, Nalcor had revenues of \$824.1 million. The majority of Nalcor's revenues are currently generated from energy sales through Hydro to utility, rural and industrial customers. Approximately 33 per cent of Nalcor's 2016 expenditures related to fuels and power purchases with operating costs accounting for 30 per cent of expenses, depreciation, depletion and amortization totalling 20 per cent and finance charges accounting for approximately 11 per cent.

Table 1: Nalcor Energy Consolidated Revenue and Expenses 2016

<i>For the year ended December 31, 2016 (millions of dollars)</i>	\$	%
Revenue		
Energy sales	778.9	94.5
Other revenue	45.2	5.5
	824.1	
Expenses		
Fuels	167.5	24.3
Power purchased	60.8	8.8
Operating costs	207.3	30.2
Oil production, marketing and transportation costs	26.3	3.8
Transmission rental and market fees	22.1	3.2
Depreciation, depletion, amortization	135.0	19.6
Exploration and evaluation	1.5	0.2
Net finance (income) expense	72.1	10.5
Other (income) expense	(4.0)	(0.5)
Preferred dividends	-	-
Regulatory adjustments	(0.8)	(0.1)
	687.8	
Profit	136.3	

3 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.

4 LINES OF BUSINESS

The activities of Nalcor's six lines of business support the fulfillment of the strategic directions of the Provincial Government for the energy sector. A description of each line of business is presented below with additional information pertaining to each of Nalcor's strategic issues for the 2017-2019 planning period included in the issues section.

Newfoundland and Labrador Hydro

Hydro, a subsidiary of Nalcor, is focused on providing a safe, reliable and least cost electricity supply to meet current energy needs and accommodate future growth. Through its regulated and non-regulated activities, Hydro is the primary generator of electricity for use in Newfoundland and Labrador.

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.

Churchill Falls

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, 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, to serve mining industry in Labrador West, and for exports via sales to Nalcor Energy Marketing.

Nalcor Energy – Oil and Gas

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. The company also continues to pursue additional investment opportunities.

Lower Churchill Project

The hydroelectric potential of Muskrat Falls and Gull Island make the lower Churchill River in Labrador the best hydroelectric sources in North America and 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.

Phase one of the Lower Churchill Project, the Muskrat Falls Project, includes an 824 megawatt hydroelectric generating facility at Muskrat Falls, over 1600 km of transmission lines across the province, and the Maritime Link between Newfoundland and Nova Scotia. Construction on all components of the project significantly advanced in 2016. Work was completed at the spillway to allow for the redirection the flow of the lower Churchill River at Muskrat Falls. For the transmission projects in Labrador and on the island, 100 per cent of the towers and wire stringing was completed on two, 250 km transmission lines from Churchill Falls to Muskrat Falls and construction on the 1,100 km Labrador-Island Transmission Link (LIL) also significantly advanced across the province. At the Strait of Belle Isle Marine Cable Crossing, the longest high voltage direct current cable landfall pull-in in the world was completed.

Bull Arm Fabrication

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 2,560 hectares and has integrated and comprehensive infrastructure to support fabrication and assembly of three key project functions, simultaneously, in three separate theatres: Topsides Fabrication and Assembly, Dry-dock Fabrication and Construction, and Deepwater Construction and Integration Site. Currently, the Bull Arm site is fully leased by ExxonMobil for the construction and commissioning phases of the Hebron Project.

Energy Marketing

Nalcor is involved in energy marketing and other energy activities including non-regulated

electricity generation, wind energy, and research and development. Nalcor's current energy marketing portfolio will grow over the coming years and currently includes recall power that is not required by Hydro.

5 OTHER ORGANIZATIONAL PRIORITIES

In addition to the three strategic issues presented, Nalcor is continually focused on a number of other key priority areas. Despite its diverse business, Nalcor is focused on the impacts of its actions and the company's long-term sustainability, with specific focus on priorities such as safety, environment, gender equity, diversity and inclusion, and financial strength.

A Clear and Focused Safety Vision

A relentless commitment to safety drives all of Nalcor lines of business. Achieving excellence in safety is Nalcor's number one priority and safety is a shared core value. For Nalcor, safety excellence is more than a way of operating it is an integral part of Nalcor's identity and strategy for the planning period and into the future. The goal is to achieve world-class safety performance and an injury-free workplace, and this responsibility and aspiration is embraced by every person in the organization.

Over the last decade, Nalcor has seen steady improvements in its safety performance. Since 2005, there has been a 69 per cent reduction in Nalcor's all-injury frequency rate and a 90 per cent reduction in lost-time injury frequency. The company is busier than it has ever been. There is an unprecedented amount of work in the field and there are many contractors working on Nalcor's sites. Despite this high volume of activity, the company saw a 97 per cent reduction in lost days in 2016 with many areas sustaining zero lost-time injuries over an extended period.

While these are significant accomplishments, the company knows to achieve safety excellence it must remain focused. Nalcor remains relentlessly committed to safety across the company, at all levels, from the front lines to the Board of Directors. As the company continues to move forward on its journey to safety excellence, it will embrace every opportunity for continuous improvement.

Positive Environmental Stewards

As Nalcor leads the development of the province's energy resources, the company remains committed to following sound, responsible environmental practices and being positive environmental stewards across all of its lines of business. Through its work, the company focuses on effective and environmentally sound practices as part of its promise to be environmentally responsible and sustainable.

Nalcor is proud to have *ISO 14001 Certified Environmental Management Systems (EMS)* as its framework for governing Nalcor's environmental responsibilities and it is an integral component of the organization's business operations. Nalcor's EMS governs the environmental activities of its electricity businesses, Hydro and Churchill Falls, and both are ISO 14001 certified.

Throughout 2016, key environmental aspects of a number of significant capital projects were advanced. Construction of the new transmission line from Bay d'Espoir to the Avalon Peninsula received Environmental Assessment (EA) release, including the plan for the segment through the Bay du Nord Wilderness Area. A project for critical repairs to Goodyear's dam in Grand Falls-Windsor also received EA release. Planned environmental management activities for the Muskrat Falls Project were also completed in 2016, and all activities remained compliant with existing environmental permits and regulations. A total of 3,142 individual Environmental Monitoring Reports and 12 detailed environmental audits were completed across the Muskrat Falls Project.

As well, a program for assessment and recovery of historic resources and archaeological artifacts in the project area for the construction phase continued in 2016. This work is expected to be completed in 2017. The environment continues to be an important focus at all of Nalcor's work sites. Together Nalcor has met key milestones and targets that exemplify its commitment and Nalcor will continue to be vigilant in managing environmental risks. As Nalcor leads the development of the province's energy resources, the company remains as committed as ever to following sound, responsible environmental practices and being positive environmental stewards.

The Lower Churchill project is a major part of Newfoundland and Labrador's strategy to reduce greenhouse gas (GHG) emissions from increased electricity demand and to offset GHG

emissions from other sources. Once in operation, the Project should displace more than 16 megatonnes of carbon dioxide emissions annually – the equivalent to taking 3.2 million vehicles off the road each year.

Throughout the planning period, Nalcor will also continue to work with and support the Provincial Government's Department of Municipal Affairs and Environment on *The Methylmercury Monitoring Plan for Surface Water Quality – Muskrat Falls Reservoir, Churchill River and Lake Melville* to appropriately monitor the Muskrat Falls Reservoir, the downstream river and Lake Melville to assess changes in the level of methylmercury in water and sediment due to the creation of the reservoir.

A Vision for Gender Equity, Diversity and Inclusion

Nalcor's goal is to embrace individual differences and enable each other to reach their full potential. Gender equity, diversity and inclusion is a business imperative for Nalcor. Nalcor's Diversity and Inclusion Council was established in 2011 and has been working on enhancing D&I in the workplace. And while the company has made progress in many areas, there is still work to be done. Nalcor recognizes that women and other designated groups are underrepresented in various occupational groups throughout the organization, particularly in executive, technical roles and skilled trades. In 2016, the company has set targets to increase the representation of women in our workforce in occupations in which they are under-represented. Women represented 24 per cent of Nalcor's workforce in 2016. The highest representation of women are in administrative (93%), professional excluding Engineers (53%), semiprofessional (62%), and service positions (50%).

In addition to a target-setting initiative, the company is committed to implementing gender equity, diversity and inclusion strategies to attract, recruit, develop and retain members of designated groups including Aboriginal peoples, persons with disabilities and members of visible minorities. Nalcor is currently undertaking a self-identification census to attain an understanding of the current representation of members of other designated groups within our existing workforce. This information will allow Nalcor to assess baseline representation and identify targeted strategies and initiatives to increase the representation of other designated groups in our workforce to ensure an inclusive work environment.

As part of Nalcor Energy's ongoing commitment to positive and productive relationships with

Indigenous peoples, communities and the public, a new position of Manager of Indigenous Affairs & Community Relations was established in 2016 to provide ongoing guidance and support in the areas of Indigenous affairs, stakeholder management and communications.

Nalcor recognizes that building a diversity culture and achieving targets is a journey, similar to the journey of building a safety culture, but the company is focused on implementing strategies that will set the organization up for sustained success.

Financial Strength

The diversity of Nalcor's operations sees the company manage equity investments in large scale offshore oil and gas projects; advance capital projects; and sell electricity in export markets. Nalcor maintains fabrication facilities and investigates the expansion of provincial energy resources for future benefit. Through its subsidiary Hydro, electricity generation, transmission and distribution infrastructure is operated, maintained and renewed. As it advances its mandate, the company operates in the global energy industry and it must strike the balance between capitalizing upon growth opportunities from provincial energy resources for future benefit while ensuring strict management of costs, acting always in the best interests of taxpayers and ratepayers. In doing so, Nalcor prepares long-term robust asset management plans to ensure prudent investments and long-term reliable supply, while reviewing expansion opportunities against the broader context of the existing energy portfolio and the cost-benefit analysis in proceeding.

5 VALUES

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

- Open Communication – fostering an environment where information moves freely in a timely manner.
- Accountability – holding ourselves responsible for our actions and performance.
- Safety – relentless commitment to protecting ourselves, our colleagues, and our community.
- 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

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

7 THE VISION

Nalcor

Energy resources that are developed, maintained and utilized for long-term energy security and maximum benefit for Newfoundlanders and Labradorians

8 ISSUES

Nalcor drives performance excellence in its lines of business and functional support areas through its planning and performance monitoring processes. Nalcor focuses on five key areas - safety leadership, environmental leadership, business excellence, people and community. These focus areas drive goals, objectives and operational activities throughout the company.

The strategic issues outlined below will be addressed by Nalcor in order to realize its mandate. 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 Nalcor and support the Provincial Government's strategic directions for the energy sector. Other issues and focus areas, such as safety and environmental leadership, will continue to drive operational activities of Nalcor and its lines of business and support efforts to address the issues outlined.

Issue 1: Electricity Supply and Reliability

Issue 2: Value from Electricity

Issue 3: Oil and gas interests, exploration and development

9 GOALS AND OBJECTIVES

Issue 1: Electricity supply and Reliability

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 the 2017-2019 planning period, Nalcor will advance construction of the Muskrat Falls project to secure a new reliable source of power for customers in the province. During the same period, Nalcor will continue to invest in and manage its assets at the Churchill Falls plant to ensure reliable operating condition to ensure these assets are fully functional beyond the expiry of current contractual commitments with Hydro-Quebec in 2041.

For more details regarding Hydro's ongoing asset management program, please see its three-year strategic *Newfoundland and Labrador Hydro, 2017-2019 Strategic Plan*, Issue 1: Reliable Electricity Supply.

Muskrat Falls Project

The Muskrat Falls hydroelectric development on the lower Churchill River in Labrador includes construction of an 824 MW hydroelectric dam and more than 1,500km of associated transmission lines, including interconnection to Labrador through the Labrador-Island Link and to the North American electricity grid through the Maritime link, in order to deliver electricity to homes and businesses in Newfoundland and Labrador. Development of Muskrat Falls also includes integration of the Muskrat Falls assets into the existing provincial electricity system.

The Muskrat Falls project was sanctioned in 2012 and advanced significantly during the 2014-2016 planning period. In 2016, for the transmission projects in Labrador and on the island

(Power Supply), 100 per cent of the towers and wire stringing was completed on two, 250 km transmission lines from Churchill Falls to Muskrat Falls. Construction on the 1,100 km Labrador-Island Transmission Link (LIL) also significantly advanced across the province. Significant work was completed at the Strait of Belle Isle Marine Cable Crossing where longest high voltage direct current cable landfall pull-in in the world was completed. At the Muskrat Falls hydroelectric site in Labrador, the facility's spillway was put into operation. Four of the five spillway gates were safely and successfully raised, opening the spillway and redirecting the flow of the lower Churchill River at Muskrat Falls for the first time. In addition, following the completion of the temporary cofferdam in the fall, the river impoundment process commenced.

During the planning period, interconnection to Labrador, through the Labrador-Island Link and to the North American electricity grid through the Maritime link will occur, resulting in reliable power flow over the new transmission infrastructure to supply customers on the Island Interconnected System. Activities will also include planning for the integration of the Muskrat Falls generation with its first power flow later in the planning period. Nalcor will ensure the successful integration of these assets for first equipment energization and power flows to the Island.

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, drives the Churchill Falls strategy.

In 2016, Churchill Falls celebrated 45 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 2005-2016, \$351.9 million was invested to upgrade or replace Churchill Falls assets with annual capital expenditures increasing during the period by 585 per cent to \$40.9 million in 2016.

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 2017-2019 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 2017-2019 planning period are forecast to be in excess of \$202 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 the long-term security and reliability of the province's electricity supply	
Indicator	<ul style="list-style-type: none"> ▪ Advanced construction of the Muskrat Falls Project ▪ Prepared for integration into the provincial electricity system ▪ Prepared for interconnection with the North American grid ▪ Continued to invest in Churchill Falls assets
Objective By December 31, 2017, Nalcor will have advanced capital projects to enhance electricity supply and reliability for the province	
Indicators	<ul style="list-style-type: none"> ▪ Achieved key construction milestones for generation portion of the Muskrat Falls Project ▪ Achieved key project milestones for Transmission portion of the Muskrat Falls Project ▪ Prepared for commissioning of Muskrat Falls assets ▪ Supported commercial arrangements and regulatory requirement for integration of Muskrat Falls assets ▪ Prepared maintenance plans for assets going into operation in 2017 and 2018 ▪ Established Operating and Maintenance requirements for operation of the transmission facilities including those with Hydro and CF(L)Co ▪ Completed support activities for the operation of Muskrat Falls assets ▪ Reviewed and updated five-year capital plan for CF(L)Co ▪ Completed planned 2017 capital investment in CF(L)Co assets
Objective 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	

Issue 1: Electricity Supply and Reliability

Objective

By December 31, 2019, Nalcor will have further advanced capital projects to enhance the long-term security and reliability of the province's electricity supply.

Issue 2: Value from Electricity

As Nalcor carries out its mandate to develop the province's energy resources, 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's and, in particular, the Muskrat Falls project - are not only backed by taxpayers but also passed along to customers in the form of increased electricity rates. These rates have a significant impact on the provincial economy. During the planning period, Nalcor must also 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 post Muskrat Falls.

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 2016, net income from these activities totaled \$17.5 million accounted for 13 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. As well, Nalcor will investigate options to reduce project costs including measures such as reducing debt financing, extending repayment schedules, and reducing return on equity.

During the planning period, Nalcor will monitor and assess market opportunities for expansion of its electricity portfolio, in particular Gull Island, in order to capitalize on revenue opportunities from energy resources. Should Gull Island market opportunities progress, Nalcor will complete the required project planning, engineering, and other readiness activities. Efforts to advance Gull Island will consider the broader context of matching market opportunities with the range of potential developments in the province's entire clean electricity generation portfolio.

Other opportunities for maximizing revenue exist through legal actions related to the Upper Churchill Power Contract. A power contract with Hydro-Québec dated May 12, 1969, provides for the sale of almost 90 per cent of the energy from the Churchill Falls facility to Hydro-Québec. Presently, the purchase price under the Power Contract is one-quarter of one cent per kilowatt hour and the automatic renewal clause fixes the purchase price at one-fifth of one cent for a 25 year period beginning in 2016. This will mean, for the remainder of the Power Contract, power will be sold to Hydro- Québec for less than five per cent of its present commercial value.

In 2009, CF(L)Co formally requested that Hydro-Québec enter into discussions to amend the pricing terms for the remainder of the 1969 Power Contract. Hydro-Québec did not respond and therefore, in early 2010, CF(L)Co filed a motion against Hydro-Québec in Quebec Superior Court seeking to change, as of November 2009, the pricing terms for the remaining term of the Power Contract. It is the position of CF(L)Co that the circumstances since the original contract was signed have changed in ways that could not have been anticipated by the parties, and have resulted in an inequitable distribution of the contractual benefits in favour of Hydro-Québec. This situation, combined with the obligation under the Quebec Civil Code to act in good faith throughout the term of a contract, CF(L)Co believes obliges Hydro-Québec to renegotiate the pricing terms of the contract to re-establish the equilibrium of benefits.

The Quebec Superior Court ruled against CF(L)Co in 2014, following which CF(L)Co filed an appeal. The Quebec Court of Appeal ruled against CF(L)Co on August 1, 2016. On September 30th, CF(L)Co filed an application for leave to appeal to the Supreme Court of Canada. The decision on whether leave will be granted is outstanding. If leave is granted, a hearing before the Supreme Court could be held within 6- 12 months.

In July of 2013 Hydro-Québec filed a Motion in Quebec Superior Court seeking a Declaratory Judgement with respect to the Power Contract. Hydro-Québec is seeking declarations with respect to i) "Continuous Energy" under the Renewed Power Contract (commencing September 1, 2016 and expiring August 31, 2041) and whether , as CF(L)Co contends, it limits Hydro-Québec's energy entitlement to a specific (and equal) amount during each month of the term of the Renewed Power Contract and ii) whether CF(L)Co can sell to a third party amounts of power beyond the 300 MW recall block provided for in the Power Contract. 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 Superior Court. In December 2016, the appeal factum was filed. The appeal hearing is anticipated in 2018.

Nalcor's activities to extract maximum value from its electricity portfolio, to investigate options for reducing project costs, and continuing legal actions 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"> ▪ Advanced opportunities to mitigate rates ▪ Advanced opportunities to maximize value from electricity sales and new developments
Objective By December 31, 2017, Nalcor will have assessed options to increase value from electricity resources in the province	
Indicators	<ul style="list-style-type: none"> ▪ Investigated options to mitigate impact of Muskrat Falls Costs on electricity rates ▪ Continued to implement measures to maximize portfolio value such as targeting higher priced markets and times to exceed the energy price benchmark ▪ Continued preparations for the Upper Churchill Power Contract legal actions ▪ Assessed and engaged potential customers on potential future electricity development for the export market and industrial customer opportunities.
Objective By December 31, 2018, Nalcor will have advanced opportunities to extract maximum value from the province's electricity resources.	
Objective By December 31, 2019 Nalcor will have further advanced efforts and opportunities to extract maximum value from the province's electricity resources.	

Issue 3: Oil and gas interests, exploration and development

The mandate of Nalcor, established under the *Energy Corporation Act (2008)* includes exploring for, developing, producing, refining, marketing and transporting hydrocarbons and products from hydrocarbons. These activities support fulfillment of the strategic direction of government related to advancing the oil and gas industry in the province.

Nalcor 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's 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. During the 2017-2019 planning period, Nalcor will continue its exploration investments to delineate Newfoundland and Labrador's resource potential and find new frontier areas that could contain commercial hydrocarbon deposits.

Nalcor also currently manages oil and gas interests in three developments offshore Newfoundland and Labrador. Nalcor 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 2016 was 2.23 million barrels and net income was net income was \$57.6 million, 42 per cent of Nalcor's profit.

The three offshore developments in which Nalcor is a partner will reach significant milestones over the 2017-2019 timeframe. Over the planning period, Nalcor 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 45 million barrels through December 2016. 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. For the

2017-2019 period, key milestones will include a decision on the mode of development for the White Rose Extension Project (which includes West White Rose) and a subsequent sanction of the project. Work will also continue on 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 helped achieve record production levels from the HSE area. For the 2017-2019 period, the initial subsea drilling program will come to an end, with production levels expected to peak early in the planning period.
- Hebron: Progress continued in the period on the Hebron Project, meeting schedule milestones required for a mid 2017 tow-out of the Hebron Gravity Based Structure (GBS) to the field. The Utilities and Process Module (UPM) arrived at Bull Arm from Ulsan, Korea in the third quarter of 2016. Mating of the integrated topsides and the GBS was completed prior to year-end. Work continues into 2017 at the Bull Arm deepwater site, with first oil to be achieved by late 2017.

In addition to the economic value provided through equity, the ownership position provides Nalcor 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 Nalcor to foster relationships that help ensure better alignment between the provincial interest and the partners in the project. Over the planning period, Nalcor 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 the exploration and development of the Province’s oil and gas resources.	
Indicators	<ul style="list-style-type: none"> ▪ Managed equity interests in offshore development in support of planned project advancements ▪ Advanced knowledge of resource potential through execution of multi-year exploration strategy.

Issue 3: Oil and gas interests, exploration and development

Objective 1
 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	<ul style="list-style-type: none"> ▪ Exercised Joint Venture voting rights and committee representation in the three offshore developments to support the advancement of progress toward planned project milestones ▪ Acquired geoscience data: <ul style="list-style-type: none"> ▪ Continued offshore exploration data surveys ▪ Continued multiyear exploration strategy ▪ Communicated Nalcor geoscience results to the global oil and gas industry.
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Objective
 By December 31, 2018, Nalcor Energy-Oil and Gas will have supported efforts to further advance offshore project milestones and enhanced knowledge of the province’s oil and gas resource potential.

Objective
 By December 31, 2019, Nalcor Energy-Oil and Gas will have continued to support efforts to advance offshore project milestones and further enhanced knowledge of the province’s oil and gas resource potential.

Appendix 1

Strategic directions

A strategic direction is the articulation of a desired physical, social, or economic outcome that would normally require action by, or involvement of, more than one government entity.

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 for 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

Strategic Direction #4: Growth in the Mining Sector

Outcome: Mining Sector Growth

Focus areas:

- Investment In programs that support exploration activity in the province
- Venture Capital Fund for mineral exploration and development
- Supporting the development of a competitive mining tax regime
- Focused promotion of emerging areas of mineral potential

Appendix 2
Energy Portfolio

