

Newfoundland
Labrador

Natural Resources

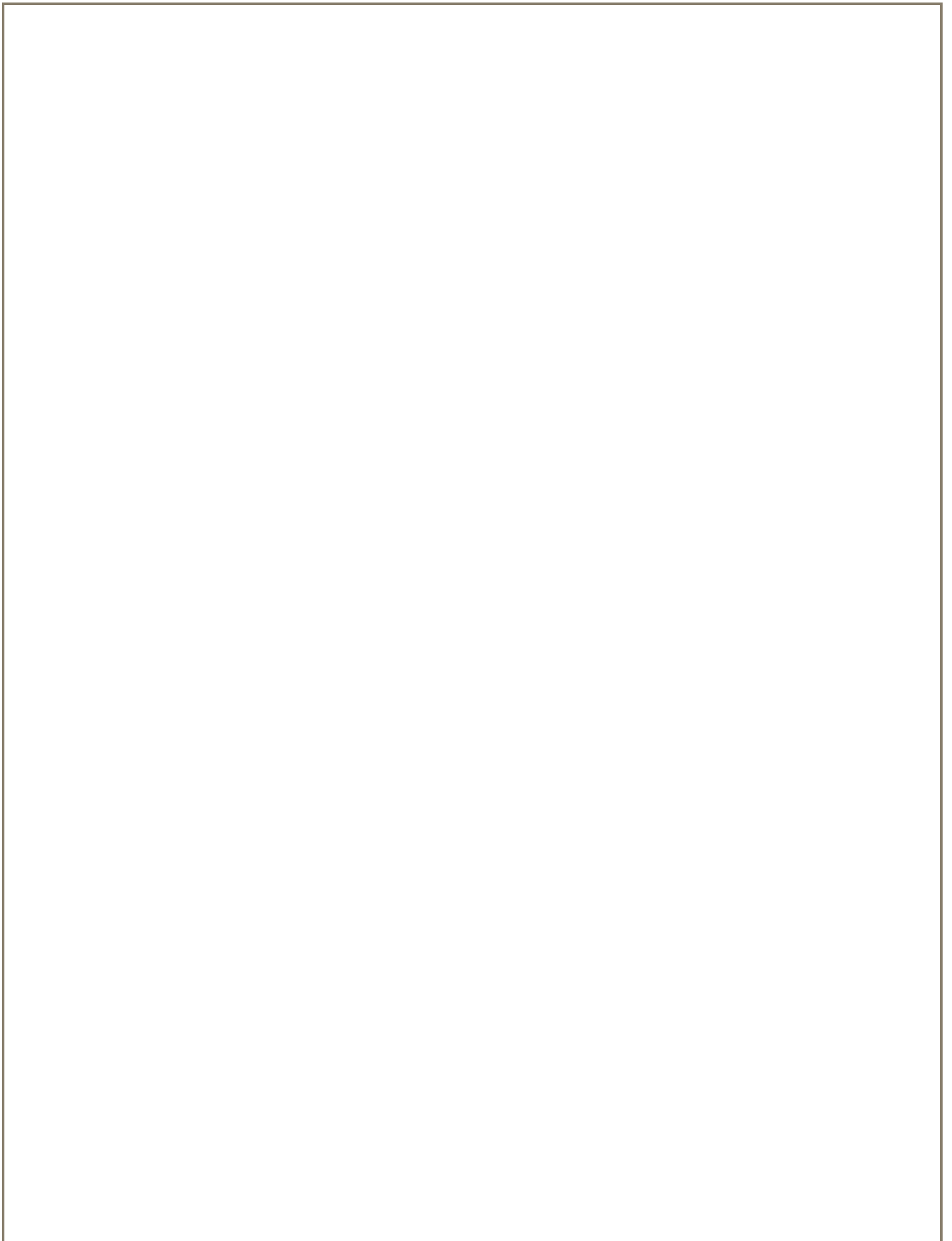
**Annual Report
2015-16**

Report prepared by:

Department of Natural Resources
Strategic Planning and Policy Coordination Division
50 Elizabeth Avenue
P.O. Box 8700
St. John's, NL, A1B 4J6
Phone: 1-709-729-3214

Table of Contents

Message from the Minister	
Performance Reporting	i
Change in Departmental Responsibilities	ii
<u>Section 1: The Department</u>	
Overview of Industry Sectors	1
Overview of the Department	10
<u>Section 2: Accomplishments</u>	
Report on Performance	17
Shared Commitments	33
Additional Highlights and Accomplishments	34
<u>Section 3: The Year Ahead</u>	
Opportunities and Challenges	35
Appendix I: Legislation	36
Appendix II: Statement of Revenues and Expenditures	38
Appendix III: Entity Reporting to the Minister	40



Message from the Minister



Speaker of the House of Assembly

Dear Mr. Speaker:

The Government of Newfoundland and Labrador is committed to being open and transparent, as well as accountable to the people of the province. As Minister of Natural Resources, I am pleased to submit my department's 2015-16 annual report. I was pleased to have been appointed as Minister in December 2015 and this report outlines activities undertaken by the Department of Natural Resources from April 1, 2015 to March 31, 2016.

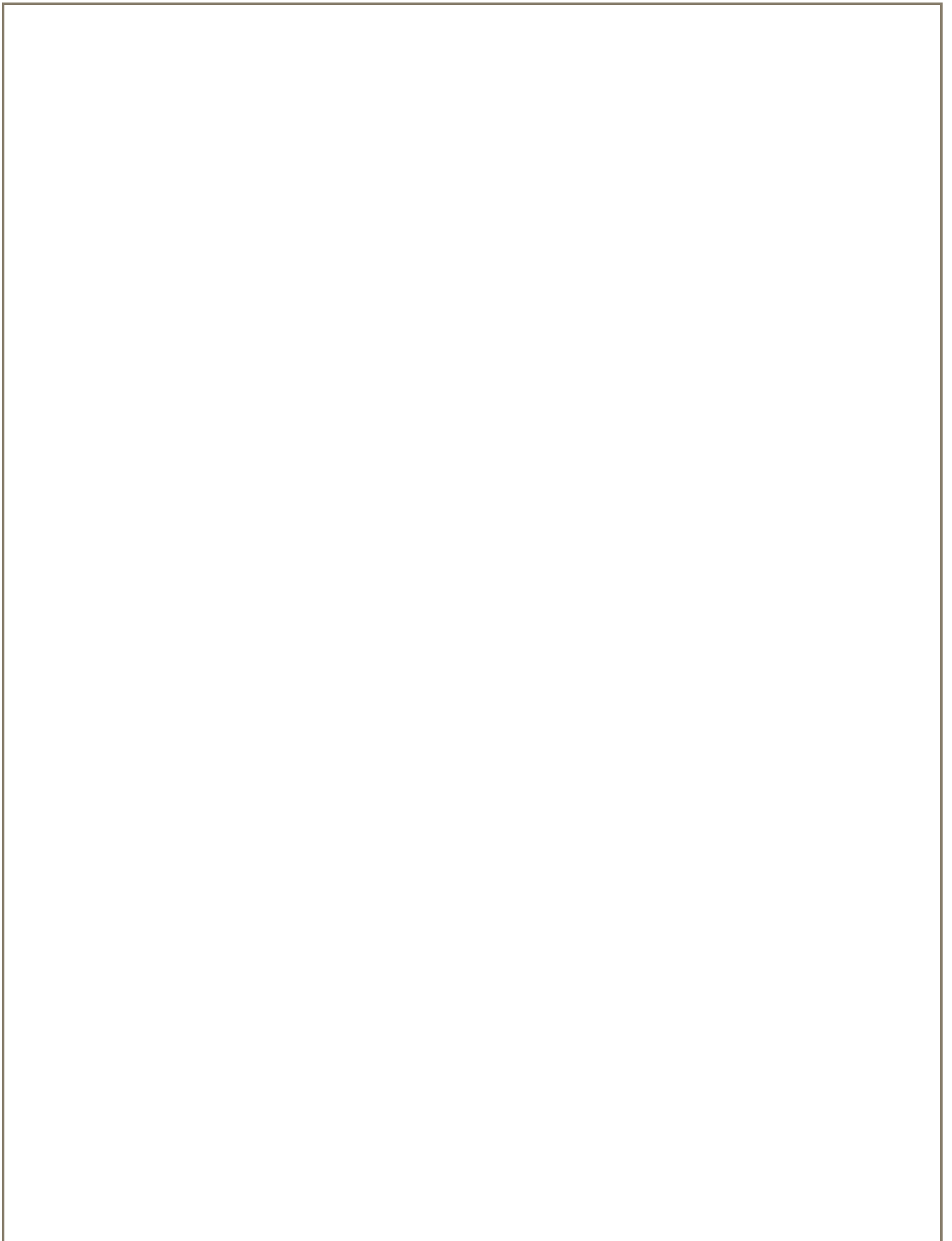
I look forward to working with the department to build on the successes of 2015-16, accomplish the commitments outlined in my Mandate Letter and embrace the opportunities and challenges that 2016-17 has to offer.

As Minister of Natural Resources, I am accountable for the results reported in this document. This annual report has been prepared in accordance with the requirements of the *Transparency and Accountability Act*, under which the Department of Natural Resources is classified as a Category 1 entity.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Siobhan Coady', written in a cursive style.

Siobhan Coady
Minister of Natural Resources
Deputy Government House Leader
Member for St. John's West





Performance Reporting

The *Transparency and Accountability Act* requires government departments, agencies, boards and commissions to engage in a formal planning and reporting process. As part of this process, the department must prepare and publish a strategic plan every three years. The strategic plan identifies the goals and objectives chosen by the department to advance its priorities over the planning period. Under this planning model, goals represent targeted outcomes over a three-year cycle, while objectives cover smaller achievements targeted for each year within the planning period. The strategic plan also lays out the department's overall mission which represents its single most important focus area and is typically carried through two planning cycles (usually six years) and reflected in two, subsequent, strategic plans. When engaging in the strategic planning process, the department must step back from day-to-day operations and identify the areas of its mandate that are of strategic importance to clients and/or the province as a whole, and identify mechanisms for advancing work in these areas. By publishing these plans, the department is able to inform the citizens of the province of what these priority areas are and how it plans to move them forward.

After the strategic plan is finalized and published, the department is required to monitor performance and provide periodic updates to the public on progress towards the priorities identified. Each year, the department prepares an annual performance report which provides updates on the achievement of annual objectives. In the final year covered by a planning period, the department must also report on progress toward the goals set out in the strategic plan. In the last year of a mission period, the department must provide an update on achievements toward its overall mission.

This past fiscal year was the second year in the Department of Natural Resources 2014-17 strategic planning period. As a result, this report will provide an account of the department's performance towards its annual objectives for 2015-16. Achievements with respect to its three-year goals for 2014-17 will occur in the annual report for 2016-17 as will an account of progress toward the department's mission.



Change in Departmental Responsibilities

The department's 2014-17 Strategic Plan was made up of two "sub-plans": one for the department's Mines and Energy Branches and one for the Forestry and Agrifoods Agency (the agency). At the time the plan was prepared, the agency was considered part of the Department of Natural Resources. In March 2015, however, responsibility for the agency was transferred to the Minister of Fisheries and Aquaculture. As a result, this annual report will focus on performance results related to the current structure of the department, i.e., Mines and Energy only. A separate report will be prepared to address the annual performance of the Forestry and Agrifoods Agency.



Overview of Industry Sectors

The Department of Natural Resources (the department), has responsibility for legislative, regulatory and policy functions related to the mining, oil and gas and electricity sectors. These sectors are key contributors to the province's gross domestic product (GDP), employment and overall economic growth, and make significant contributions to the provincial treasury in the form of royalties and taxes. This introductory section of the annual report provides an overview of these sectors in the province. This overview will provide context for a discussion, in the following section, of the department's structure and functions, which are sector-based.

Mining

Newfoundland and Labrador has a large and diversified minerals industry that accounted for 5.5 per cent, or over \$1.7 billion, of the province's nominal gross domestic product in 2014¹. The industry provides a wide variety of commodities to domestic and world markets and while large, world-class iron and nickel deposits make up the largest part of the province's mineral shipments, production also includes copper, gold, cobalt, zinc, peat and other industrial minerals.

Based on data from the province's mining companies, the gross value of mineral shipments for 2015 was roughly \$2.9 billion, on par with 2014 shipments. Direct employment in the minerals industry was 7,124 person-years in 2015, only slightly lower than 2014 employment of 7,436 person years. Mining projects continue to progress and mining will continue to be a major contributor to employment and economic development in the province. Companies have responded to market challenges by implementing cost-saving measures and/or increasing metal production. Thanks in part to these and other measures, the provincial mining industry is forecasted to produce shipments of \$2.8 billion and generate 7,100 person-years in 2016².

The past year has been challenging for the global mining and exploration industry with continued weakening of prices for many commodities. However, the future remains promising with a new mine being constructed, expansions at existing mining operations, some companies preparing advanced feasibility studies and innovative projects such as tailings recycling being initiated. Prices for iron ore and nickel have seen increases but commodity forecasts remain conservative. The following paragraphs provide an

¹ The *Economy 2016*, Department of Finance.

² Sources: Department of Natural Resources and Natural Resources Canada.



overview of some of the larger projects ongoing in the province. More information on current and prospective developments is available on the department's web site (www.nr.gov.nl.ca).

Iron Ore

Iron ore deposits in the province's Labrador Trough are some of the richest in the world with 50 years of production to date and decades more of future production. Even though prices for iron ore have fallen, production in Labrador has continued. The Iron Ore Company of Canada (IOC) has been producing iron ore at the Carol Lake project in Labrador West since the 1960s. In 2015, total shipments (pellets and concentrate) were approximately 18 million tonnes and this is expected to increase to 20.1 million tonnes in 2016. IOC has put its Wabush 3 expansion project on hold but remains optimistic that market conditions will enable the company to bring this project to fruition.

Tata Steel Minerals Canada Limited (TSMC) is a joint venture between Tata Steel of India and New Millennium Iron Corporation (NML). TSMC is developing/operating a high-grade iron ore project in the Menihek area of northwestern Labrador. TSMC shipped the first load of iron ore to Europe from the project in September, 2013 and by 2015 shipments were 2.26 million tonnes. This material was processed using a dry crushing and screening method, however a new processing plant has been constructed that can process ore of lower grades using a wet processing method. While the project is currently utilizing a direct shipping ore (DSO) approach, it achieved trial "ore on the ground" production from its new plant in August, 2015. At full operation, capacity is expected to be six million tonnes with plant feed coming from both Labrador and Quebec with annual employment estimated at about 340 person years.

Base and Precious Metals

Vale Newfoundland and Labrador Limited (VNL) operates an open-pit mine and mill in Voisey's Bay, and a hydrometallurgical (hydromet) processing facility at Long Harbour. The mine started operations in 2005, and produces nickel, copper and cobalt. The hydromet plant - still under development - processes Voisey's Bay nickel concentrate into finished nickel. During 2015, VNL reported production of 53,000 tonnes of nickel, 32,000 tonnes of copper and 849 tonnes of cobalt.

During 2015, VNL's parent company, Vale, sanctioned the development of an underground mine at Voisey's Bay as per the terms of the Development Agreement. Construction activity will start in 2016 and ore production is projected to begin in 2020. Hundreds of construction jobs will be created, as well as another 450 positions during operations from 2020 to beyond 2035. This next phase of the Voisey's Bay project will generate significant additional industrial benefits to the province.



Development work continued and VNL achieved a major milestone during the year at the Long Harbour hydromet facility by operating solely on high grade nickel concentrate from Voisey's Bay. Construction of additional circuits required to enable processing of Voisey's Bay middling grade concentrate is continuing. Once fully operational, the Long Harbour plant will process all nickel concentrates produced at Voisey's Bay and produce finished nickel, copper and cobalt. The plant will employ about 475 people at full production.

Employment for all aspects of the Voisey's Bay project is anticipated to be 3,660 person years for 2016. This includes operations at the open-pit mine, operations and ongoing development work at the Long Harbour plant, as well as work related to the development of the underground mine.

Rambler Metals and Mining Canada Ltd. (RMM) operates the Ming copper-gold mine on the Baie Verte Peninsula. The project is a high-grade, low-tonnage operation that employs 137 people with production forecasted through 2021. The mine also contains a larger, low-grade copper resource known as the Lower Footwall Zone (LFZ). In July 2015, RMM completed a pre-feasibility study for low capital cost, low risk development that would increase production by mixing lower grade LFZ ore with higher grade massive sulfide ore. Development of the LFZ could extend the mine life from six to 21 years.

Anaconda Mining Inc. operates an open-pit gold mine and mill at Pine Cove on the Baie Verte Peninsula as part of its Point Rousse Project. The company is working towards expanding reserves and is optimistic about adding to the mine life. In 2015, Anaconda spent \$1.7 million in mill automation upgrades and an additional \$1.7 million in exploration. The project employs 90 people and current reserves will sustain operations until 2019.

Industrial Minerals

Canada Fluorspar (NL) Incorporated (CFI) will begin construction in early 2016-17 of a surface and underground fluorspar mine in St. Lawrence on the Burin Peninsula. The CFI operation will mine up to 200,000 tonnes of acid-grade fluorspar concentrate annually from the AGS Vein, and will include a mill, tailings management facilities and supporting infrastructure. The company states that the mine will require a two-year construction period and will provide a 10-year mine life. Construction will result in peak employment of approximately 340 workers and the operation phase will create 164 full-time positions.



Exploration

The province's minerals industry includes an active exploration sector, including many locally-based companies and individuals who provide expertise and financing to seek the next generation of mineral wealth. Exploration for minerals is conducted throughout the province, providing economic stimulation in rural areas and the potential for new industrial growth. The Provincial Government supports exploration through modern, online mineral rights systems, efficient permitting, comprehensive public geoscience, and direct financial support to junior exploration companies and prospectors.

Mineral exploration expenditures for 2016 are forecast at \$19.6 million; down from an estimated 2015 value of \$ 47.5 million³. Decreasing expenditures is a trend being seen in the exploration sector around the world. While several factors have contributed to the decline, it is mainly due to the difficulty being experienced by exploration companies in raising capital on the open market. This challenge is closely associated with the downward pressure on commodity prices.

Energy

Oil and Gas⁴

The oil and gas industry has been an important part of Newfoundland and Labrador's economy since production began at the Hibernia oil field in 1997. In 2014, oil extraction and support activities accounted for 25.7 per cent of the province's nominal GDP. In 2015, these same activities resulted in 3.6 per cent of provincial employment, or roughly 8,400 person years. Similar to the minerals sector 2015-16 was a difficult year for the oil and gas industry globally as the price of oil experienced further declines.

Crude oil production from the province's offshore oil fields, while still strong, decreased by 20.5 per cent from 78.9 million barrels in 2014 to 62.7 million barrels in 2015, as all three producing projects recorded lower production. The estimated value of oil production was \$4.1 billion in 2015, representing a decrease of more than 50 per cent compared to 2014. The decrease was the result of both lower production volumes and a substantial decline in crude oil prices. The price of Brent crude oil, a benchmark for Newfoundland and Labrador oil, averaged US\$52.32/barrel in 2015, down 47.1 per cent from an average of US\$98.97/barrel in 2014. The negative impact of lower oil prices was partially offset by a lower Canadian dollar which depreciated by 13.6 per cent relative to the U.S. dollar in 2015.

³ Source: Department of Natural Resources.

⁴ Information and statistics in this section sourced from *The Economy, 2016*, Department of Finance.



Hibernia

Hibernia's total production decreased by 21.6 per cent (9.1 million barrels) in 2015 to 33.0 million barrels. Production was curtailed from September 18 to October 21 as the Hibernia Gravity Based Structure (GBS) underwent a planned regulatory maintenance and inspection turnaround. Cumulative production at Hibernia, since first oil in November 1997 to December 31, 2015, was 952 million barrels (58 per cent of reserves) worth an estimated \$65.3 billion. As of December 31, 2015, a total of 2,231 people were working on the Hibernia project within the province with 1,926 (86 per cent) from Newfoundland and Labrador.

When initially proposed for development, estimated recoverable reserves at Hibernia totaled 520 million barrels and field depletion was expected to occur within the 2015 - 2017 timeframe. Since then, estimated recoverable reserves have increased more than threefold to 1,644 million barrels and the project operator now expects to produce until at least 2040.

Terra Nova

Terra Nova produced 13.1 million barrels of oil in 2015, a decrease of 3.7 million barrels (22.1 per cent) compared to 2014. On May 13, 2015, the Terra Nova floating production, storage and offloading vessel (FPSO) was taken offline for scheduled maintenance. Work included routine maintenance as well as tank remediation. Production resumed in early July 5, two and a half weeks ahead of schedule. Cumulative production from Terra Nova, since first oil in January 2002 to December 31, 2015, was 379 million barrels (75 per cent of reserves) with an estimated value of \$26.7 billion. As of December 31, 2015, there were 815 people employed on the Terra Nova project within the province, with 759 (93 per cent) from Newfoundland and Labrador.

White Rose (including the North Amethyst field)

White Rose produced 16.6 million barrels in 2015, down 16.8 per cent (3.4 million barrels) from 2014. The SeaRose FPSO was shut down for 16 days in August for regular maintenance. Cumulative production from White Rose, since first oil in November 2005 to December 31, 2015, was 254 million barrels (53 per cent of reserves) with an estimated value of \$22.8 billion. On December 17, 2014, Husky Energy announced that, in light of the current low oil price environment, it was deferring the final investment decision on the West White Rose extension project. Husky also announced that it will be considering alternative modes of development to the wellhead platform, including a sub-sea development concept. Despite the delay in the final investment decision, Husky has indicated it remains committed to the development of West White Rose and other target areas and the project remains an important part of its long-term portfolio.



As of December 31, 2015, there were 1,095 people employed on White Rose operations within the province, with 1,019 (93 per cent) from Newfoundland and Labrador. In addition, there were a total of 147 people working on the White Rose Extension (all locations) with 102 (69 per cent) from the province.

Hebron

The Hebron project, estimated to contain over 700 million barrels of recoverable oil, received official sanction on December 31, 2012. The project will utilize a stand-alone GBS similar to, but on a smaller scale than, Hibernia. The Hebron GBS is designed for an oil production rate of 150,000 barrels of oil per day and the total capital cost for the project is estimated at more than \$14 billion.

GBS construction at the Bull Arm dry dock began in October 2012. After pouring the GBS base slab, the GBS was floated to the Bull Arm deepwater site on July 22, 2014. Construction associated with the lower part of the GBS is now complete and construction of the topsides modules is ongoing as well as installation of all mechanical systems inside the GBS.

The accommodations module is nearing completion at Bull Arm, with assembly and architectural finishing underway. The flare boom, which was fabricated in Channel-Port aux Basques by Talon Energy, was completed in October 2015. Fabrication is being finalized on the helideck and life-boat stations by C & W Offshore in Bay Bulls. The Drilling Support Module was fabricated in Marystown by Kiewit Offshore Services and completed in December 2015.

Two topsides modules are being built in South Korea by Hyundai Heavy Industries. Fabrication of the Derrick Equipment Set is complete and it arrived at Bull Arm in November 2015. Fabrication of the Utilities Process Module will be completed in 2016. Mating of the GBS and topsides, as well as hook up and commissioning of the platform, is scheduled for later in 2016. First oil is expected late in 2017.

As of December 31, 2015, there were 5,075 people working on the Hebron project within the province, of which 4,624 (91 per cent) were residents of Newfoundland and Labrador.

Recent Discoveries

In 2013, Statoil announced two new discoveries in the deepwater (approximately 1,100 metres) Flemish Pass Basin. The Harpoon discovery (whose resource potential has yet to be fully assessed) was announced in June 2013 and the Bay du Nord discovery (estimated to contain between 300 and 600 million barrels of recoverable oil) was



announced in August 2013. Bay du Nord was the world's largest liquid fuels discovery of 2013 and the largest Statoil-operated discovery outside of Norway. The Harpoon and Bay du Nord discoveries are in close proximity to the 2009 Mizzen discovery, which is estimated by the C-NLOPB to contain 102 million barrels of recoverable oil. Statoil holds a 65 per cent interest in the Mizzen, Harpoon and Bay du Nord fields, and Husky Energy holds the remaining 35 per cent interest.

Exploration

Statoil and Husky Energy remain confident about the potential of the Newfoundland and Labrador offshore area as evidenced by their ongoing exploration program in the area of the Bay du Nord discovery in the Flemish Pass Basin. The 18-month exploration program is expected to be completed in the first half of 2016. Husky Energy recently stated that even during this period of low prices, the Flemish Pass has been gaining the attention of many super majors in the oil industry, demonstrating that the industry sees this as an important area of development in the long-term.

Prospectivity

Over the past five years, the Provincial Government and Nalcor, in partnership with global seismic companies TGS and Petroleum Geo-Services, has conducted one of the largest seismic programs in the world. Analysis of satellite seeps survey data and recently acquired seismic data resulted in the delineation of new offshore basins as well as extensions to existing basins offshore Labrador. As well, significant prospectivity in deepwater areas offshore Newfoundland has been identified.

On October 1, 2015, the Provincial Government and Nalcor Energy announced the results of a new resource assessment, completed by international petroleum consultancy firm Beicip-Franlab, for the parcels included in the 2015 Call for Bids. The assessment concluded that these areas have an in-place resource potential of 12 billion barrels of oil and 113 trillion cubic feet of natural gas. This illustrates the province's tremendous oil and gas resource potential as these areas cover less than two per cent of the total Newfoundland and Labrador offshore area.

Electricity

In addition to oil and gas, Newfoundland and Labrador has nearly 7,500 megawatts (MW) of electric generating capacity, of which approximately 90 per cent is hydro and wind, as well as transmission and distribution systems serving about 300,000 customers. Electricity utility service is provided by Newfoundland and Labrador Hydro and



Newfoundland Power, both of which are regulated by the Board of Commissioners of Public Utilities (PUB).

Newfoundland and Labrador Hydro (Hydro)

Hydro is a subsidiary of Nalcor Energy (Nalcor), a Crown corporation, and is primarily a generation and transmission utility providing over 80 per cent of the electricity consumed in the province, as well as providing distribution services in Labrador and to rural parts of the island. Hydro's generating assets include nine hydroelectric plants, one oil-fired plant, four gas turbines, and 25 diesel plants. These generating assets along with a network of transmission and distribution lines bring electricity to communities throughout Newfoundland and Labrador.

Newfoundland Power

Newfoundland Power is primarily a power distribution utility company, with some generation and transmission assets, operating on the island portion of the province. Newfoundland Power purchases the majority of its customer electricity supply from Hydro.

Generation-Transmission Systems

The province has two primary generation-transmission systems: the Island Interconnected System and the Labrador Interconnected System. The Island Interconnected System has a total generating capacity of approximately 2,100 MW, 80 per cent of which is provided by generating stations operated by Hydro. On the Island Interconnected System, Hydro also purchases wind-generated electricity from two privately-owned, 27 MW wind projects. The Labrador Interconnected System serves customers from Labrador West to the Lake Melville region and is powered by electricity generated at the Churchill Falls hydroelectric generation facility which has a rated capacity of 5,428 MW. A significant portion of this energy is sold to Hydro-Québec under long-term contracts; while Newfoundland and Labrador Hydro has 225 MW available for customers in Labrador, and 300 MW for retail and industrial customers in Labrador and to sell in various export markets in Eastern Canada and the United States by exporting through Québec. In addition to the two primary systems in the province, there are another 21 remote diesel systems located in coastal communities that are not on the Island or Labrador interconnected grids. Non-firm renewable electricity generation displaces diesel generation in two of these isolated systems: hydro from Lac Robertson in Quebec serves the L'Anse au Loup system and wind generation serves the Ramea system.



Muskrat Falls Project

The province's electricity generation and transmission capacity will soon be enhanced with the introduction of power and infrastructure from the Muskrat Falls Project, which Nalcor is leading. The project includes three major components: the 824 MW Muskrat Falls Hydroelectric Generating Facility, Labrador Transmission Assets including two 250 km HVac transmission lines from Muskrat Falls to Churchill Falls, and the Labrador-Island Transmission Link including a 1,100 km bi-pole HVdc transmission line from Muskrat Falls to Soldiers Pond. Electricity from the Muskrat Falls Project will make the province a global leader in clean renewable power, bringing the province's electricity generation mix to 98 percent renewable once Muskrat Falls is complete. This renewable power will meet the province's domestic and industrial needs for the foreseeable future and will enhance the reliability of the Island Interconnected System. In conjunction with the Muskrat Falls Project, the associated 500 MW Maritime Link will connect the Island and Nova Scotia with approximately 350 km of overland transmission line and two subsea cables spanning 170 km beneath the Cabot Strait. This link will connect the Island with the North American electricity grid for the first time, enabling new export and import of electricity with neighboring jurisdictions, and further enhancing the reliability of the province's electricity system.



Overview of the Department

The sections below provide an account of the department's legislative mandate, lines of business and basic organizational structure.

Mandate

The official mandate of the Department of Natural Resources, as laid out in the *Executive Council Act*, includes the supervision, control and direction of all matters relating to promotion, exploration and development of mineral and energy resources and related industry developments including:

- Mines, minerals, quarries, quarry materials and beaches;
- Onshore petroleum resources;
- Offshore petroleum resources, managed jointly with the federal government;
- Electrical generation and transmission;
- Overall responsibility for provincial energy supply and demand;
- Development, monitoring, supervision, assistance or other government intervention into any of the industries as described above;
- Petroleum royalties and associated matters, within or outside the province; and,
- Identifying, assessing and monitoring industrial benefits commitments from major resource development projects.

The department carries out its mandate, in part, through the administration of a number of pieces of legislation, outlined in Appendix I, and associated regulations. Programs and services delivered by the department fall within one of the four lines of business defined below.

Lines of Business

Resource Policy

Working closely with key stakeholders, the department develops, maintains and administers resource policy to coordinate and facilitate sustainable development and management. In doing so, the department directly and indirectly develops, monitors and/or initiates supporting regulatory and benefits activities.



Resource Management

In the onshore area of the province, the department ensures that industry follows responsible resource development and management practices for the maximum benefit of the people of the province. To achieve this, the department monitors resource development activities to ensure adherence to relevant policy and is responsible for the development and administration of royalty regimes for petroleum projects (onshore and offshore). The department also administers title allocation and ensures compliance with site development and rehabilitation requirements⁵.

With respect to offshore petroleum activity the department discharges its operational resource management functions under a joint federal-provincial regime administered by the C-NLOPB.

In the electricity sector, the department provides advice and support for government decision-making related to resource management. Other resource management activities are implemented through the PUB and Newfoundland and Labrador Hydro.

Resource Exploration and Assessment

This line of business is a major contributor to the advancement of exploration in the province's mineral and petroleum sectors. The department's main lever in attracting resource exploration is through the collection and dissemination of geoscience data. Through investment and direct geoscience research, the department accumulates and distributes scientific information to the exploration community. The availability of this information reduces overall exploration risk and provides an incentive for industry to explore in Newfoundland and Labrador. It is this exploration activity that will lead to new resource development projects, along with the associated economic benefits to the province. As a supplement to its work in the area of geoscience, the department also maintains an extensive library of drill core originating from mineral and onshore petroleum exploration activities and provides training, mentoring and other supports to prospectors.

Promotion and Facilitation of Resource Development

Resource development projects generally tend to be long term and capital intensive and generate significant economic and employment benefits. These projects can be

⁵ A number of onshore resource management activities are carried out by the Department of Environment and Climate Change (e.g., monitoring compliance with environmental regulations) and Service NL (e.g., monitoring compliance with occupational health and safety regulations).



important catalysts of growth, particularly for rural areas, as well as for the development of industrial infrastructure and the province's supply and service capabilities. Activities are specifically directed to negotiating, promoting and facilitating well-planned, responsible mineral and energy development and associated business and employment opportunities.

Vision and Mission

The department's vision and mission represent the higher ideals and outcomes that the department strives for in the delivery of its programs and services. The vision is an inspirational statement that represents the ideal state that would exist if the department was successful in completely fulfilling its mandate. The department's vision is as follows:

The vision of the Department of Natural Resources is a province that realizes the full benefit from the sustainable development of its natural resources.

The department's mission represents an ultimate outcome that the department intends to achieve over a period of time. While there are a number of outcomes that the department is working towards, the mission represents the single-most important focus for the period identified. The department's mission, first developed in 2011 for the period 2011-17, is as follows:

By March 31, 2017, the Department of Natural Resources will have supported the growth of the energy and mineral resource industries in a sustainable manner for the benefit of future generations.



Organizational Structure

The department's programs and services are delivered through two main branches, supported by shared executive and support services.

Mines Branch

The Mines Branch is divided into three main divisions:

The **Mineral Development Division** is responsible for the approval and permitting of mining operations through the *Mining Act*, the administration of the Mineral Incentive Program; the collection, analysis and publication of mineral production data; and the assessment and rehabilitation of abandoned mine sites across the province.

The **Mineral Lands Division** is responsible for the administration of mineral land tenure through the *Mineral Act*, the *Mineral Holdings Impost Act* and related legislation, including the issuance of exploration licenses and mining leases; the administration of quarry material rights and developments, including on-going field investigations, through the *Quarry Materials Act*; issuing exploration approvals and the performance of follow-up inspections; the maintenance of the core library system and the provincial mineral rights registry.

The **Geological Survey Division** is responsible for mapping and interpreting the province's geology; conducting geochemical and geophysical surveys; conducting mineral deposit studies; maintaining and publishing maps, reports and databases concerning the province's geological and mineral endowment, including geographic information system databases and web-delivery; and promoting the province's mineral potential.

Energy Branch

The Energy Branch is divided into three main sections, each made up of several divisions.

The **Petroleum Development Section** is responsible for fostering the exploration, development and production of the province's hydrocarbon resources. Responsibilities include: the provision of technical services in the areas of petroleum geoscience, petroleum engineering and petroleum operations to facilitate sustainable development



and management for both onshore and offshore deposits; and, the provision of marketing and promotional services, both nationally and internationally, to help ensure continued interest and investment by industry.

The **Royalties and Benefits Section** is responsible for maximizing the benefits to the local economy from the development of major resource projects. Responsibilities include: the negotiation, development and administration of energy and mines project agreements and royalty legislation/regulations; the negotiation and monitoring of industrial benefits commitments related to energy and mines resource developments; the auditing of petroleum project costs and revenues to verify the accuracy of royalties paid to the province; the provision of energy-related economic/financial and supply/demand information, analysis and advice to inform resource management decisions; and the promotion of the province’s industrial capacity and capabilities.

The **Energy Policy Section** is responsible for developing, planning and coordinating legislative, regulatory and policy matters relating to the province's energy sector. Responsibilities include: the management/co-management of onshore/offshore petroleum exploration and development, including regulatory development and compliance; electricity industry governance and structure, electricity industry markets, alternative energy, and responsibility for the *Electrical Power Control Act*; and general policy, planning and coordination related to the energy sector.

Employees

As of March 31, 2016, the Department of Natural Resources had 194 positions. At the time of reporting there were 166 active staff members.

Branch	Female	Male	Total
Mineral Resources	31	48	79
Energy	24	31	55
Financial Operations ¹	3	5	8
Executive/Executive Support	15	5	20
Minister’s Office	3	1	4
Total	76	90	166

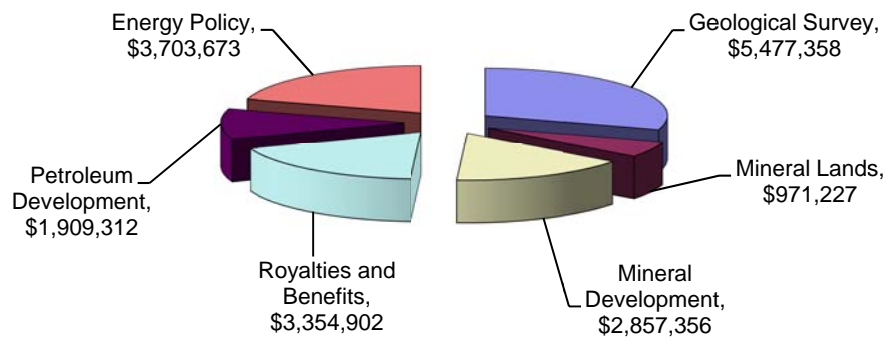
1. Financial Operations staff were shared with the Forestry and Agrifoods Agency and the Department of Fisheries and Aquaculture.



Expenditures

In 2015-16, expenditures for the divisions and sections of the department were just over \$18.2 million. The chart below shows expenses for the three divisions of the Mines Branch as well as the three sections of the Energy Branch. These figures do not include \$3.08 million related to executive and support services, some of which were shared with the Forestry and Agrifoods Agency and the Department of Fisheries and Aquaculture.

2015-16 Expenditures by Division/Section



In addition to these amounts, just over \$950,000 was directed toward operational funding for the C-NLOPB and \$760 million was directed to Nalcor for oil and gas activities and the Lower Churchill Project. For more information on expenditures for the year, refer to Appendix II.



Physical Location and Web Site

The department's main office is located in the Natural Resources Building in St. John's which houses the majority of department staff. Several staff members work at departmental/government facilities in Grand Falls-Windsor, Pasadena and Happy Valley-Goose Bay. In addition, several employees are located at the department's geochemical laboratory at the Howley Building in St. John's.

The department's main office address is as follows:

Department of Natural Resources
50 Elizabeth Avenue
P.O. Box 8700
St. John's, NL A1B 4J6

The department's web site address is www.nr.gov.nl.ca. A link to the department's web site is also provided on the main web site for the Government of Newfoundland and Labrador at www.gov.nl.ca.



Report on Performance

This section of the Annual Performance Report details the department's accomplishments towards 2015-16 objectives and indicators, as set out in the 2014-17 Strategic Plan.

Issue 1: Sustained Industry Growth

The mineral and petroleum sectors are significant contributors to Newfoundland and Labrador's economy and continued success in these industries is vital to ongoing economic growth. To keep resource revenues flowing, new developments will be needed, particularly as existing projects reach maturity and decline. New developments are dependent on the discovery of new, economically viable resource deposits. The projects of tomorrow lie in the province's undiscovered and/or underdeveloped petroleum and mineral resources.

Locating and assessing the viability of these resources, however, usually requires capital-intensive exploration programs by industry. Mining and petroleum companies often operate global exploration programs and choose the specific areas where they will explore based on a number of factors. One of the most important factors is the resource potential, based on existing scientific evidence, of each region under consideration. As such, the more geoscience knowledge that can be amassed and shared with industry, the better.

Scientific Supports for Exploration

The department is continually focused on increasing the amount of geoscience data collected in the province, along with related analysis and interpretations. During 2015-16, the department continued to carry out its own geoscience field work and analytical studies through its Geological Survey Division and completed development of a plan to guide the Geological Survey's projects over the next five years. In support of the petroleum sector, the department commissioned and contributed to a study on the petroleum potential and exploration framework of Western Newfoundland. The resulting report was made available to interested companies, and the public, on the department's web site. In addition, the department collaborated with Nalcor Energy, through the Offshore Geoscience Data Program, to fund an independent resource assessment of the 11 parcels of land on offer by the Canada-Newfoundland and Labrador Offshore



Petroleum Board (C-NLOPB) in the 2015 Call for Bids. This information helped contribute to the most successful Call for Bids in the province's history.

Complementing this work, the department advanced an evaluation of its Core Storage Program. Through the program, the department maintains a library of drill core samples for inspection by the exploration community. The department receives new core samples each year and, with the collection continually growing, is facing a challenge in terms of adequate space. The evaluation will help determine how best to sustain the program and its facilities over the long-term.

Promotion and Investment Attraction

In addition to technical and financial support for resource exploration, the department places emphasis on raising industry awareness about Newfoundland and Labrador as an attractive region for exploration. The department regularly participates in promotional events on a local, national and international scale to ensure that companies looking to explore know about this province's resource potential, industrial supply and service capabilities and stable economic and political environment. The department also helps facilitate connections between local mineral rights holders and global industry players/investors. Such connections can help provide the funds needed to complete exploration/ assessment work on a resource property that may eventually lead to a new development project. During the year, the department continued to advance its promotion and investment attraction efforts with attendance at key exploration-focused conferences, the preparation and distribution of promotional materials and the dissemination of geoscientific and licensing information.



Goal

By March 31, 2017 the Department of Natural Resources will have advanced initiatives to attract investment and encourage exploration in the province's mineral and petroleum sectors.

2015-16 Objective

By March 31, 2016 the Department of Natural Resources will have advanced planning, geoscience and promotion activities to support mineral and petroleum exploration activity in the province.

Measure: Advanced activities in support of exploration

Indicators:

1. Completed development of the Geological Survey's five-year plan and began implementation.

Development of the five-year plan was completed and implementation commenced during the year with the advancement of field projects, as well as data analysis and documentation. Many of the Geological Survey Division's research projects are multi-year, requiring up to four years of field work (in order to map contiguous areas, for example) and up to two years of data analysis and documentation. The five-year plan provides division geoscientists with a context for their work, provides client groups with information about ongoing and upcoming research and, in general, provides overall guidance for the division's work over the medium term.

2. Completed 2015 Geological Survey field projects.

The department's Geological Survey Division completed planned field projects during the summer of 2015. Projects included bedrock geological mapping in western Labrador and on the Bonavista Peninsula; surficial geological mapping and till geochemistry in central Newfoundland; monitoring vulnerable coastlines through coastal erosion studies; gold studies in central Newfoundland; uranium studies in central Labrador; and iron ore studies in western Labrador. Findings from these field programs, as well as from a number of office-based projects, were published in



March 2016 as part of the department's 2016 Current Research volume. Twelve new research articles were included in the publication, adding to the province's geoscience knowledgebase. In addition, data from these projects was released via open file reports, and is included on the Geological Survey's online Geoscience Atlas.

3. Completed planned efforts with respect to mineral and petroleum resource promotion and investment attraction.

The Geological Survey's promotion team continued to support initiatives to encourage growth in the mining and mineral exploration sectors. The group organized and delivered promotional initiatives at China Mining (Tianjin), Canada-China Minerals Forums (Beijing and Shanghai), and Quebec Exploration (Montreal), as well as local venues in St. John's, Baie Verte and Happy Valley-Goose Bay. A successful Mineral Resources Review was held as part of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) meeting in St. John's in November, and Geological Survey staff attended Quebec Mining in Quebec City, also in November. In January 2016 the promotion program continued through representation at Mineral Exploration Roundup in Vancouver, followed by another successful event at the Prospectors and Developers Association meeting in Toronto in March 2016.

The Petroleum Development section continues to encourage exploration investment through promotion of opportunities both onshore and offshore. The group completed promotional material on the new offshore scheduled land tenure system and associated opportunities with the 2015, 2016 and 2017 licensing rounds. This material was distributed and promoted through speaking engagements nationally and internationally in St. John's, Denver, Calgary, Aberdeen and Ireland.

The 2015 licensing round was the first to be completed under the new scheduled system. This round, which closed in November, 2015, generated the largest overall work commitment bids in the province's history, with total bids received in excess of \$1.2 billion. Several new companies, including Nexen Energy ULC, BP Canada Energy Group ULC, and BG International Limited were successful in the licensing round process for the first time.

At year-end, planning was underway to continue promoting opportunities associated with the 2016 and 2017 licensing rounds in Houston, London, Stavanger and Calgary.



4. Advanced the evaluation of the Core Storage Program.

An important aspect of this evaluation exercise will be the gathering of opinions and suggestions from clients on the future of the Core Storage Program, particularly with respect to the challenges of long-term capacity and infrastructure. During the summer of 2015, informal discussions were held with the client group during their visits to core libraries. These discussions helped the department determine how it would engage stakeholders as part of the evaluation process. To this end, a stakeholder questionnaire was drafted and, once finalized, will be used to solicit input from industry representatives as well as other Core Storage clients. In addition the department initiated a review of policies and business functions in place in other jurisdictions with similar programs. The questionnaire will be distributed to stakeholders in 2016.

It should be noted that while efforts to advance this evaluation progressed during the year, the initiative has been delayed slightly due to operational constraints at core storage facilities, largely related to matters of occupational health and safety (e.g. air quality, site ergonomics, and infrastructure degradation). The department is working to mitigate these issues.

5. Commissioned, collaborated and posted “Petroleum Potential and Exploration Framework of Western Newfoundland Sedimentary Basins”.

The Government of Newfoundland and Labrador encourages exploration in the sedimentary basins of Western Newfoundland and provides interested parties with all available information and data pertinent to the onshore area as provided for in the *Petroleum and Natural Gas Act* and subordinate regulations. The offshore data is available from the Canada-Newfoundland and Labrador Offshore Petroleum Board. In 2015-16, the *Petroleum Potential and Exploration Framework of Western Newfoundland Sedimentary Basins* report was commissioned by the department to introduce interested companies to the petroleum potential and exploration framework of the Western Newfoundland sedimentary basins. The department retained external consultants as principle authors of the report while department staff members contributed technical content for the report. The report was completed and posted on the department’s web site during the year and can be found via the following link: http://www.nr.gov.nl.ca/nr/publications/energy/WNL_SedimentaryBasins.pdf.



6. Collaborated with Nalcor Energy, through the Offshore Geoscience Data Program, to fund an independent resource assessment of the 11 parcels of land on offer in the 2015 offshore Call for Bids (NL15-01EN).

The resource assessment was completed as planned under the Offshore Geoscience Data Program (OGDP), an initiative dedicated to the execution of offshore petroleum geoscience studies, which is funded by the department and jointly administered with Nalcor. Results of the resource assessment were made available to the public on October 1, 2015 and showed in-place oil and gas resource potential of 12 billion barrels of oil and 113 trillion cubic feet of gas for the area covering the 11 parcels on offer in the in Call for Bids (NL15-01EN) in the Flemish Pass Basin. Subsequently, Statoil drilled a well on a license (EL-1143) awarded from this Call for Bids and announced a discovery at the Baccalieu prospect.

2016-17 Objective

By March 31, 2017 the Department of Natural Resources will have improved overall its technical knowledge base and promotional/investment attraction programs in support of mineral and petroleum exploration activity in the province.

Measure: Improved technical knowledge base and promotional/investment attraction programs

Indicators:

- Completed 2016 Geological Survey field projects
- Completed planned efforts with respect to mineral and petroleum resource promotion and investment attraction
- Collaborated with Nalcor on the implementation of its exploration strategy including early stage geoscience data acquisition and provision of independent resource assessments



Issue 2: Effective Management of Resource Development

It is the department's responsibility to provide management and oversight of mineral and energy resource development in the province to ensure that development is responsible, and sustainable and that it is conducted in a way that maximizes benefits to the people of the province. The department achieves effective management through a number of means, including the creation, maintenance and administration of legislative/regulatory frameworks and the monitoring of mineral and energy developments in the province. In some situations, the department can have a more direct impact on resource development, as in the case of mineral deposits for which the Provincial Government holds exclusive mining rights. Additionally, the department is able to co-operate with other departments and agencies toward better management of lands, better planning for communities and the advancement of resource-based developments that are non-industrial in nature, such as geoheritage sites.

Legislative / Regulatory Frameworks

The royalty arrangements in place for the province's operating oil projects are all different and, to a large extent, have been reached through contractual negotiations between the Provincial Government and project proponents. During the year, the department introduced a new, generic offshore oil royalty regime for the province. In addition, the department continued its work with the Federal Government and other stakeholders through the Frontier and Offshore Regulatory Renewal Initiative toward the modernization of the regulatory regime for the offshore petroleum industry. The department also advanced efforts toward the development of revised Mineral and Quarry Materials Exploration Guidelines.

Increased / Improved Oversight

The department continued to enhance efforts to provide oversight of natural resource developments. These efforts included the continued enhancement of the department's internal capacity to administer, audit and monitor to province's existing royalty regulations and agreements.

The department also continued participating in the Provincial Government's oversight committee for the construction phase of the Muskrat Falls Project. Details on this oversight initiative are provided under Issue 3 Electricity Sector Advancement, Indicator 3.



Effective Management of Crown-Held Deposits

Over the last several years, the department has worked towards the development of the Julienne Lake iron ore deposit in western Labrador. The deposit is located approximately 25 kilometres from Wabush and Labrador City in “exempt mineral land”, meaning land where all mineral rights are held by the Crown. Following a comprehensive evaluation of proposals from industry to develop the deposit, the Provincial Government began discussions with a prospective developer – the Julienne Lake Alliance (JLA) – in 2013-14. Further discussions were held with the JLA in 2015-16 but little progress was made toward development due to the continued downturn in iron ore prices.

Goal

By March 31, 2017 the Department of Natural Resources will have advanced management mechanisms, capacities and initiatives to help ensure resource developments are conducted responsibly and provide maximum benefit to the people of the province.

2015-16 Objective

By March 31, 2016 the Department of Natural Resources will have further progressed the department’s management mechanisms, capacities and initiatives related to resource development

Measure: Further progressed management mechanisms, capacities and initiatives

Indicators:

1. Advanced efforts to revise the Mineral and Quarry Materials Exploration Guidelines.

A draft of the revised guidelines was updated to reflect feedback received in 2014-15 as a result of consultations with industry groups and Aboriginal organizations. A final draft of the guidelines was submitted to the Provincial Government’s Interdepartmental Land Use Committee (ILUC) in early 2016. A formal response from ILUC is pending. Implementation is anticipated to follow in 2016-17.



2. Continued to advance the Julienne Lake project.

The department continued discussions during the year with the Julienne Lake Alliance, however at year end, negotiations were on hold due to the decline in the world iron ore market.

3. Implemented a system for annual review of mining and quarry leases.

The department implemented a system (i.e., a process) for annual compliance review of mining operations and leases over and above mechanisms previously in place for the annual review of mining operations. The new process involves systematic information collection and documentation of various production, operational and lease parameters and annual review of those parameters and overall lease status. As stated, this additional tracking and review activity is supplemental to the review work already undertaken by the department on annual reports submitted by mining operations.

A similar documentation and tracking process is being established for quarry leases. During the year, existing baseline information (e.g., lease expiry dates) has been compiled, is regularly updated/monitored and has been utilized for annual review purposes. This system will be improved in future as the department begins to systematically collect and document information on additional aspects of quarry lease operations (e.g., whether current/updated development plans are on file). The new system was not fully implemented for quarry leases during 2015-16 due to capacity challenges associated with managing the high volume of quarry permit/lease activity taking place in the province.

4. Continued efforts toward the development of a new, generic offshore oil royalty regime for the province.

The department released a new, generic offshore oil royalty regime in November 2015. Efforts continue to draft recommendations to support the adoption of the new regime.

5. Continued regulatory development by participating in the Frontier and Offshore Regulatory Renewal Initiative (FORRI) to update our already-robust regulatory regime for offshore oil and gas activities.

An external consultant was retained – cost-shared with the Government of Nova Scotia and NRCan – to supplement the work performed to-date by the FORRI



committee. The consultant performed an analysis and assessment of the structure required for the proposed Framework Regulations in the interest of ensuring all required technical components are adequately addressed during their development.

In line with this work, department officials participated in technical working group sessions with the consultant in the ongoing development of policy intent to support the drafting of the Framework Regulations. In addition, a stakeholder consultation plan was developed with the first consultation session taking place on March 31, 2016. Subsequent consultation sessions will occur throughout the remainder of 2016.

6. Completed further development of the Royalties Management System.

During 2015-16 the Interest Holders of the Terra Nova project began to file their royalty returns using RMS, a significant milestone for the RMS project. In addition, a new module dedicated to the White Rose and White Rose Expansion project was implemented for internal use. During the year the system was also upgraded with enhanced reporting options. Development and testing progressed on other modules as well: the department completed the development of the Hebron project module, and development work on the Hibernia module continued through the remainder of 2015-16. Both of these modules are scheduled to be implemented in the 2016-17 fiscal year.



2016-17 Objective

By March 31, 2017 the Department of Natural Resources will have improved overall the department's management mechanisms, capacities and initiatives related to resource development

Measure: Improved management mechanisms, capacities and initiatives

Indicators:

- In cooperation with the federal government and other stakeholders, advanced the province's regulatory framework for offshore petroleum operations, including:
 - Continued development work on new OHS regulations
 - Continued regulatory development including stakeholder consultations by participating in the Frontier and Offshore Regulatory Renewal Initiative to advance efforts toward amalgamating these regulations into a single, modernized Framework Regulation
- Continued participation including stakeholder consultations in the Federal-Provincial Offshore Land Tenure Policy Working Group to review and provide recommendations for improvement of the existing Land Tenure framework
- Completed measures toward the modernization of Quarry Materials Program administration
- Finalized and implemented the Mineral and Quarry Materials Exploration Guidelines



Issue 3: Electricity Sector Advancement

The province's Interconnected Labrador, Interconnected Island, and remote diesel systems have operated in isolation from each other since their inception decades ago. With increasing demand, aging infrastructure, and the province's commitment to renewable and sustainable energy development, significant changes and improvements are necessary to these systems. To facilitate these changes, the Provincial Government has placed considerable emphasis in recent years on advancing the Lower Churchill hydro resource and developing and implementing related policies and industry structures.

With the completion of the Muskrat Falls phase of the Lower Churchill Project, the isolated Island grid will be interconnected for the first time with the Labrador grid through the Labrador-Island Link transmission line and with Nova Scotia and North America through the Maritime Link transmission line. These interconnections will provide a path to sell excess power, as well as a means of importing power if needed for reliability purposes or advantageous for commercial purposes. This change in the electricity system will require a broader regulatory framework which considers this interconnection to North America.

During the year, the department continued to work with Nalcor Energy on the advancement of the Muskrat Falls Project as well as on related preparations for North American electricity market requirements (e.g., market rules, transmission access rules, reliability framework, etc.). Complementing this ongoing work, the department also examined the findings from Power Advisory's review of the province's electricity system and took steps toward the implementation of industry best practices and other findings from the report.

While the Muskrat Falls Project is the main focus among renewable energy initiatives, the department also continues to explore opportunities in other renewable energy areas. The department completed the development of a provincial net metering policy framework, with input from Newfoundland and Labrador Hydro and Newfoundland Power, for renewable energy sources such as wind and solar. In addition, the department monitored the Biogas Electricity Generation Pilot Program in collaboration with Newfoundland and Labrador Hydro.



Goal

By March 31, 2017 the Department of Natural Resources will have implemented measures toward enhanced reliability, sustainability and export readiness of the province's electricity system.

2015-16 Objective

By March 31, 2016 the Department of Natural Resources will have advanced priorities related to hydro and electricity development and reliability in the province.

Measure: Advanced priorities

Indicators:

1. Completed the provincial net metering policy.

On July 28, 2015, the department released its Net Metering Policy Framework, which provides the policy parameters for Newfoundland and Labrador Hydro and Newfoundland Power to develop and submit their net metering applications to the PUB.

The framework reflected guidance provided by an independent consultant, Navigant Consulting, on standard industry practice for net metering. The department worked with Newfoundland and Labrador Hydro and Newfoundland Power to develop this policy framework, and will continue to work with them to monitor and evaluate the implementation of net metering programs to customers.

Net metering will allow utility customers with small-scale generating facilities to generate power from renewable sources for their own consumption. Pending PUB approval of the net metering applications, customers will be able to feed power into the distribution system during periods when they generate excess power and draw power from the grid when their generation does not fully meet their needs.

Both utilities are working on their program applications and have reaffirmed their commitment to moving forward with net metering in a timely manner. The exact timing of their submissions depends on the regulatory schedules of both the utilities



and the PUB. The department has frequently raised with the utilities the status of their applications and encouraged them to accelerate their processes to ensure implementation can occur before the end of 2016.

2. Reviewed and initiated action, where appropriate, on findings from the external consultant's review of the electricity system.

Power Advisory's October 6, 2015 "Review of the NL Electricity system" included numerous best practices and findings to help ensure that Newfoundland and Labrador is positioned to maximize the value and benefits of its electricity resources as the province prepares to connect with the North American electricity grid.

Several actions have been taken since the report was released that address some best practices and findings. To enhance governance, Government and Nalcor announced changes to Nalcor's governance model, which included changing the position of Vice-President of Hydro to President of Hydro and creating the new executive position of Vice President, Regulatory Affairs and Customer Service. Additionally, in March 2016, the Premier introduced Bill 1, Independent Appointments Commission Act to the House of Assembly. This act will establish an Independent Appointments Commission and require a merit-based process for appointments to all agencies, boards, and commissions. This legislation will enhance the government at Nalcor Energy and Hydro, as board members will be selected by the Independent Appointments Commission through a merit-based process.

The department also incorporated best practices and findings into its ongoing work, including its work with Nalcor Energy, in preparation for the Muskrat Falls Project entering service and interconnection with the North American electricity system once the Muskrat Falls Project is complete. As an example, part of the department's focus during the year was on contemplating ways to ensure the appropriate reliability standards are in place following interconnection. As part of this effort, the department worked to assess the implications of North American Electric Reliability Corporation (NERC) and Northeast Power Coordinating Council (NPCC) membership and standards implementation, as well as any reliability oversight roles that may change following interconnection. Provincial reliability is presently governed by voluntarily-adopted electric reliability practices developed by Hydro and Newfoundland Power based on standard industry practices with review oversight exercised by the PUB. While the province has not adopted North American Electric Reliability Corporation (NERC) standards in a formal manner to date, current reliability practices and procedures are very similar to many NERC reliability standard requirements. In



2015-16, NR worked with Nalcor to assess the implications of NERC and Northeast Power Coordinating Council (NPCC) membership and standards implementation as well as any reliability oversight roles that may change following interconnection.

3. Completed planned 2015-16 components necessary to advance Lower Churchill Project milestones.

The Department of Natural Resources continued to work with Nalcor to assess policy options and identify and implement various actions required to transition to an interconnected electricity system after Muskrat Falls enters service. For instance, as noted above, during the year considerations were underway regarding appropriate reliability standards for interconnection, including the assessment of adopting appropriate NERC reliability standards. Adoption would ensure a consistent set of reliability standards with neighbouring jurisdictions and the reliable transfer of power following interconnection. The department also worked with Nalcor to investigate the elements required to establish an open access transmission regime in the province, which would facilitate market access upon interconnection. In addition, as part of assessing market opportunities to export surplus power from the Lower Churchill Project, in July 2015, the department announced the formation of a working group between Newfoundland and Labrador and Ontario to explore clean electricity trade opportunities between the two provinces.

As part of its role in monitoring the benefits accruing to the province from major resource projects, department staff tracked economic and employment benefits associated with the Muskrat Falls project.

The department also continued to play a key role during the year in the Muskrat Falls Project Oversight Committee. The Committee, which includes senior officials from a number of departments, monitors project progress with focus on costs, scheduling, and overall performance. The committee met regularly with Nalcor Energy officials, reported directly to Cabinet and provided regular updates to the public.

The Premier and the Minister of Natural Resources announced December 21, 2015 that given cost overruns, schedule changes and baseline updates on the Muskrat Falls Project, Ernst & Young LLP (EY) would be undertaking an independent review of the cost, schedule and associated risks for the Project to determine if there are any critical risks moving forward and to identify opportunities for corrective action, if necessary. This review will confirm the funding and time required to complete the



project, and will ensure any risks from a financial perspective are reflected in future planning processes.

4. Monitored the Biogas Electricity Generation Pilot Program in collaboration with Newfoundland and Labrador Hydro.

Proponents have expressed to the department an interest in developing biogas generation. The department worked with Hydro on a regular basis to obtain updates on program progress and offer support, where possible, on program implementation. The department has also been in contact with a proponent to facilitate participation in the program.

2016-17 Objective

By March 31, 2017 the Department of Natural Resources will have advanced priorities related to the Lower Churchill project.

Measure: Advanced priorities

Indicators:

- Strengthened oversight and governance of the Muskrat Falls Project
- Engaged in activities to prepare for the integration of Muskrat Falls into the provincial electricity grid and the North American electricity grid
- Continued to explore opportunities to maximize exports and develop the Gull Island Project



Shared Commitments

As indicated throughout the report, the department works closely with a number of other public sector entities in the progression of its strategic goals and objectives. The department's collaboration with Nalcor Energy and its subsidiaries was particularly important in 2015-16, as reflected in accomplishments reported. Also significant was the department's ongoing cooperation with the Federal Government and the C-NLOPB in the joint management of offshore petroleum resources.

Additionally, the department works closely with the Department of Environment and Climate Change on issues related to responsible resource development, the Department of Municipal Affairs on inter-jurisdictional matters as well as issues related to land use, the Department of Finance on matters related to the forecasting and monitoring of royalties and taxation from oil and mining developments, the Department of Justice and Public Safety on legislative and legal matters and other departments on numerous other issues and opportunities.



Additional Highlights and Accomplishments

1. Vale Meets 2013 Terms of the Voisey's Bay Development Agreement

As outlined earlier, Vale has announced its intention to expand its mine at Voisey's Bay to include an underground mining development. In August 2015, the department confirmed that Vale had met the terms of the amended Voisey's Bay Development Agreement⁶ by formally sanctioning construction of the underground mine.

2. Amendments Establish "Polluter Pays" Principle for Offshore

An *Act to Amend the Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act* was proclaimed on February 28, 2016. The legislation established the "polluter-pays" principle and strengthened liability provisions for the offshore. The legislation also requires emergency planning, environmental plans and other documents to be made available to the public. This will ensure that the public can review and understand the steps operators will take to prevent and respond to incidents. Three new regulations - necessary to fully implement the legislation - were also announced in February:

- The *Financial Requirements Regulations* define how applicants must demonstrate that they have the means to cover any claims in the event of an accident or spill.
- The *Administrative Monetary Penalties Regulations* provide the offshore regulatory boards with an additional tool to strengthen compliance and enforcement with regulatory requirements.
- The *Cost Recovery Regulations* establish a framework through which the Canada-Newfoundland and Labrador Offshore Petroleum Board will recover their operating costs from industry and reduce the cost for governments.

The amendments and associated regulations were the result of extensive collaboration with the Governments of Canada and Nova Scotia.

⁶ Vale's commitment to build an underground mine was negotiated by the Provincial Government as part of an amendment made to the agreement announced in March 2013.



Opportunities and Challenges

Opportunities

Resource Potential

Newfoundland and Labrador's rich endowment of mineral and petroleum resources represents one of the province's greatest opportunities. As existing projects progress through their life cycles, new developments will need to come on stream in order to keep resource revenues flowing. For that to happen, new, economically viable resources must be found. Newfoundland and Labrador possesses significant undiscovered and underdeveloped petroleum resources in our offshore area. Similarly, the province's onshore geology is such that the likelihood of discovering new, profitable mineral deposits is high. Continuing with efforts to encourage both existing and new players to explore for new resource deposits remains one of the greatest priorities and focus areas for the department.

Challenges

Cyclic Nature of Global Industries

The natural resource industries are highly dependent on global commodity prices and related patterns of supply and demand. In 2015-16 commodity prices in both the mineral and petroleum sectors remained low, placing negative pressure on the relative profitability of ongoing and proposed developments, as well as on the oil royalties and corporate taxes paid to the Provincial Government. The challenge for the department is to continue to do what it can to support industry during downturns such that activity is maintained in the short term and that conditions are right to encourage new exploration and development when market factors improve.

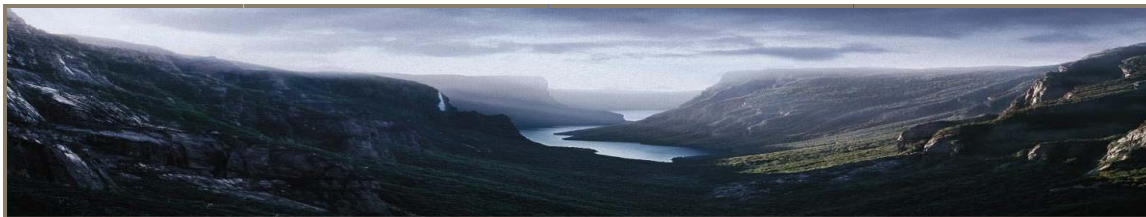


Appendix I: Legislation

1. ***Abitibi Consolidated Rights and Assets Act.*** An act to return to the Crown certain rights relating to timber and water use vested in Abitibi-Consolidated and to expropriate assets and lands associated with the generation of electricity enabled by those water rights.
2. ***Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act.*** Sets out the mechanism for joint federal-provincial management of the Newfoundland offshore area through the Canada-Newfoundland Offshore Petroleum Board; defines the methods of obtaining exploration and production rights, the requirements for safety, resource conservation and environmental protection and the activities that may be regulated. The Act is mirrored in federal statutes.
3. ***Churchill Falls (Labrador) Corporation Limited (Lease Act).*** An act to authorize the Lieutenant-Governor in Council to execute and deliver an indenture leasing certain water powers in Labrador to Churchill Falls (Labrador) Corporation Limited and to make provisions respecting other matters connected therewith.
4. ***Electrical Power Control Act.*** Sets policy with regard to electric power rates and establishes provisions for the determination of such power rates by the Public Utilities Board.
5. ***Energy Corporation Act.*** Establishes the existence of, and sets out the mandate, powers and management structure of the Energy Corporation of Newfoundland and Labrador as a Crown agency.
6. ***Energy Corporation of Newfoundland and Labrador Water Rights Act.*** An act to enable the issuance of water rights to the Energy Corporation of Newfoundland and Labrador for the Lower Churchill River.
7. ***Hydro Corporation Act.*** Continues the existence of, and sets out the mandate, powers and management structure of the Newfoundland and Labrador Hydro-Electric Corporation as a Crown agency.
8. ***Lower Churchill Development Act.*** Authorizes the Minister of Mines and Energy to enter into an option agreement with the corporation guaranteeing the Lower Churchill Development Corporation (LCDC) executive water rights, rights to flood land and a sole option to purchase the Gull Island hydro assets.



9. **Mineral Act.** Defines the rights of explorers and developers of mineral properties, the methodology to be used in obtaining such rights, and the areas where government may regulate activity.
10. **Mineral Holdings Impost Act.** Designed, by imposition of a tax, to encourage holders of mineral properties that do not come under the terms of the Mineral Act to either explore their lands or to surrender them so that they become subject to the Mineral Act.
11. **Mining Act.** Regulates the development, operation and closure of mines in the province; and outlines requirements for development, operational and rehabilitation and closure plans, as well as milling licenses and financial assurance. This Act does not deal with Occupational Health and Safety matters.
12. **Muskrat Falls Project Land Use and Expropriation Act.** Provides the ability to create a statutory easement which could be granted, transferred, mortgaged, leased or otherwise dealt with as real property; establishes a process by which an expropriating authority may, where land is required for the Muskrat Falls Project, expropriate that land on behalf of a proponent in accordance with this Act and an expropriation protocol established in the regulations; confirms that a holder is liable for taxation in respect of the Muskrat Falls Project, except in prescribed circumstances; and approves the use of land by a proponent in the transmission corridor and with respect to the transmission lines for the Muskrat Falls Project, and require that existing and future land use plans and development regulations conform with the approved land use.
13. **Petroleum and Natural Gas Act.** Defines how the rights to explore for and develop oil and gas properties on land may be obtained and maintained; how areas may be assigned for exploration; the scope with which government may regulate activity; and the various royalties that may be due.
14. **Quarry Materials Act, 1998.** Defines the rights of explorers and developers of quarry materials; the methods by which such rights may be required, royalties payable; and areas where government may regulate activity.
15. **Undeveloped Minerals Areas Act.** Enables government to arrange for the exploration of private mineral properties (generally ones which are not covered by the Mineral Act) that in its opinion have not been adequately explored. Properties affected by the Act have been identified by various orders.



Appendix II: Statement of Revenues and Expenditures

Expenditure and revenue figures included in this document are drawn from the Report on the *Program Expenditures and Revenues of the Consolidated Revenue Fund for Fiscal Year Ended 31 March 2016*.

		Estimates		
		Actual (\$)	Amended (\$)	Original (\$)
Executive and Support Services⁷				
1.1.01	Minister's Office	425,507	572,400	423,300
1.2.01	Executive Support	1,699,223	1,902,400	1,902,400
1.2.02	Administrative Support	961,014	1,118,500	1,111,000
	Less: Revenue	(2,772)	(10,000)	(10,000)
Total		3,082,972	3,583,300	3,426,700
Mineral Resource Management				
4.1.01	Geological Survey	5,477,358	5,579,400	5,539,200
	Less: Revenue	-	(4000)	(4000)
4.1.02	Mineral Lands	1,581,227	1,631,700	1,417,800
	Less: Revenue	(610,000)	(610,000)	(610,000)
4.1.03	Mineral Development	2,857,356	3,459,400	3,448,900
Total		9,305,941	10,056,500	9,791,900
Energy Resources and Industrial Benefits Management				

⁷ In 2015-16, a portion of Executive and Support Services – specifically the Financial Operations function – was shared with the Forestry and Agrifoods Agency and the Department of Fisheries and Aquaculture.



		Estimates		
		Actual (\$)	Amended (\$)	Original (\$)
5.1.01	Energy Policy	3,703,673	5,003,800	5,190,800
5.1.02	Petroleum Development	2,008,476	2,141,900	1,945,600
	Less: Revenue	(99,164)	(81,000)	(81,000)
5.1.03	Canada/Newfoundland and Labrador Offshore Petroleum Board	8,835,000	8,835,000	8,835,000
	Less: Revenue	(7,883,501)	(6,626,300)	(6,626,300)
5.1.04	Royalties and Benefits	3,354,902	5,054,800	5,313,800
5.1.06	Energy Initiatives - Capital	760,000,000	760,000,000	760,000,000
Total		769,919,386	774,328,200	774,577,900
Total Department		782,308,299	787,968,000	787,796,500



Appendix III: Entity Reporting to the Minister

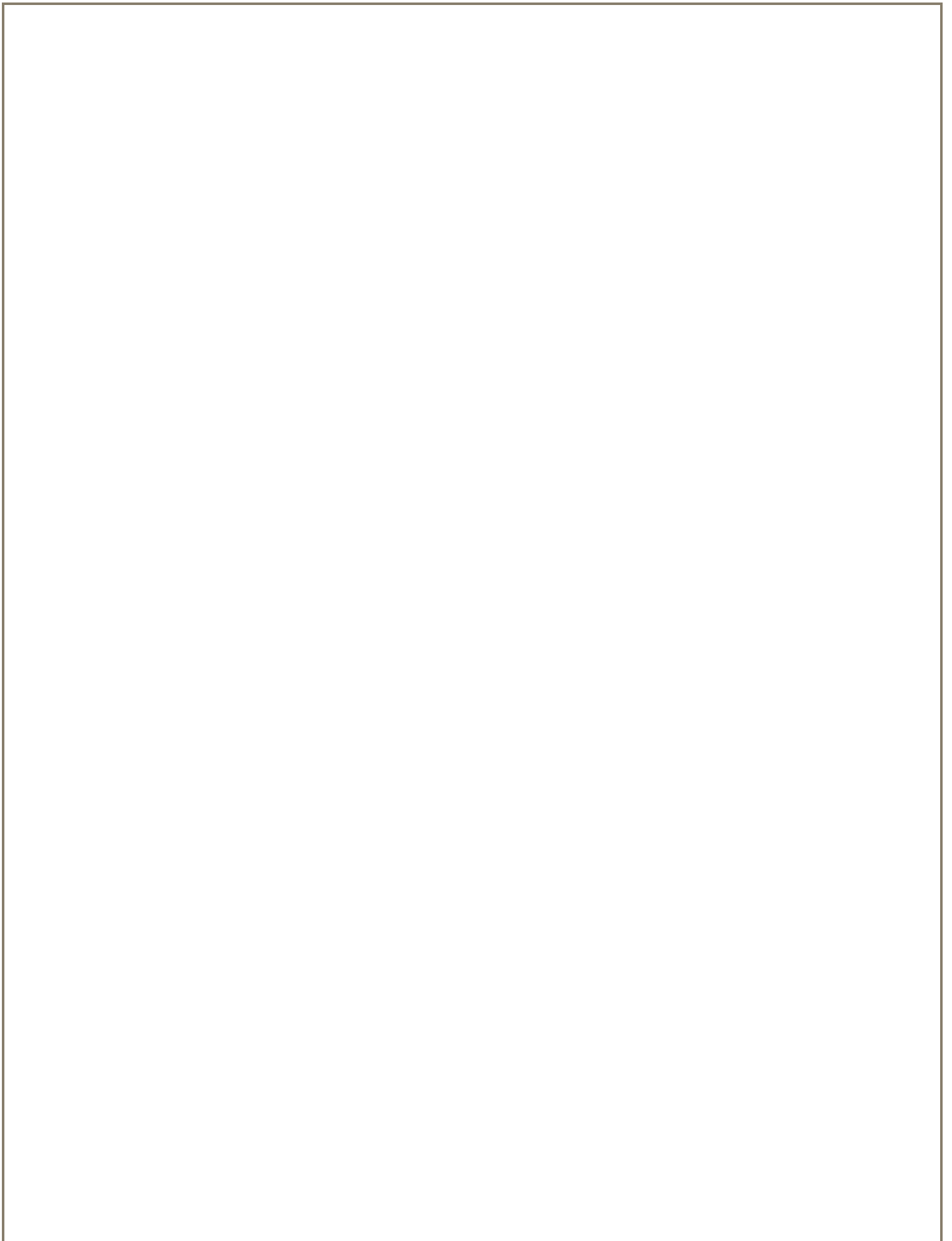
The Mineral Rights Adjudication Board (MRAB) is a category three public body reporting to the Minister of Natural Resources that was largely inactive for the period April 1, 2015 to March 31, 2016. The following information provides an overview on the board's mandate along with an update on the board's status during the year. In the event that this public body becomes fully active, it will prepare, and table in the House of Assembly, an Annual Performance Report.

Mandate

Section 37 of the *Mineral Act* provides for the appointment of a Mineral Rights Adjudication Board. It is the function of the board, and the board has exclusive jurisdiction, to hear and determine a question, dispute or matter arising out of the application of the *Mineral Act* or the *Mining Act* and applicable regulations.

2015-16 Status

Board members were appointed in July 2015 and members began preliminary preparations to hear a grievance. Ultimately, the grievance did not advance to a hearing and the board was not called upon further.





Newfoundland
Labrador

Natural Resources