

Chapter 2

Residential Energy Efficiency Programs – Department of Natural Resources and Energy Development, NB Power

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Residential Energy Efficiency Programs – Department of Natural Resources and Energy Development, NB Power

Report of the Auditor General – Volume II, Chapter 2 - 2021

Why Is This Important?

- Energy efficiency is a key element to address climate change and reduce the Province's greenhouse gas emissions
- Energy efficiency programs help households spend less on energy bills and have healthier homes
- During 2018-2023 about \$124 million will be invested in energy efficiency programs in New Brunswick, mostly on residential programs

Overall Conclusions

- The Department was not effective in providing oversight regarding energy efficiency programs
- NB Power's energy efficiency programs were not equally accessible to all New Brunswick residents
- NB Power is effective in delivering its current residential energy efficiency programs to those who can participate

What We Found

Insufficient oversight from the Department

- The Department has no energy-saving targets set for NB Power's energy efficiency programs
- The Department did not challenge NB Power's decision to lower electricity-saving targets
- The Department had no sustainable funding source for all-fuel residential energy efficiency programs in place

NB Power's Current Programs are Not Equally Accessible to All New Brunswick Residents

- Moderate-income households may have difficulty accessing NB Power's energy efficiency programs, due to lack of financing mechanisms
- New Brunswick is one of only two jurisdictions in Canada without financing mechanisms for energy efficiency programs
- Fewer households with a primary heating source other than electricity participated in the programs

NB Power effectively delivers current residential energy efficiency programs to those who can participate

- NB Power has an adequate process for determining eligibility and calculating incentives
- NB Power has reasonable monitoring and evaluation processes
- NB Power did not publicly report its finalized electricity-saving targets
- Finalized targets were 60% lower than those publicly reported

Major changes to energy efficiency landscape since 2015

- The Province shifted funding responsibilities for energy efficiency to NB Power in 2015
- According to NB Power's interpretation of the *Electricity Act*, it requires a third-party funding for non-electric customers
- NB Power's top priorities of keeping low and stable electricity rates and reducing debt affect its investments in energy efficiency programs

Key Findings and Observations Table

Paragraph	Key Findings and Observations
Insufficient Oversight from the Department	
2.34	<i>NB Power energy efficiency mandate is legislated in the Electricity Act</i>
2.37	<i>Both the Department and NB Power have responsibility for implementation of Item 33 - energy efficiency related actions in Climate Change Action Plan (CCAP)</i>
2.38	<i>The Department did not set energy-saving targets and secure sustainable funding for all-fuel programs</i>
2.38	<i>The Department did not mandate NB Power to implement a financing mechanism</i>
2.40	<i>The Department stated that it was not in a position to mandate NB Power with the implementation of government's strategic directions and to set energy-saving targets</i>
2.41	<i>NB Power's interpretation of the Electricity Act is that third-party funding is required for those whose primary heating source is not electricity</i>
2.52	<i>NB Power has to balance energy efficiency spending with its other competing priorities</i>
2.53	<i>Budget cuts to Efficiency NB coupled with folding it into NB Power resulted in a reduction of energy efficiency customers</i>
2.55	<i>New Brunswick energy efficiency programs compared poorly to other Maritime provinces</i>
2.56	<i>Item 33 of the CCAP is still not fully implemented</i>
2.57	<i>Sustainable funding model for energy efficiency programs has not been developed</i>
2.60	<i>NB Power lowered its electricity-saving targets</i>
2.64	<i>New Brunswick's annual energy savings have not been in line with performance levels in leading jurisdictions</i>
2.67	<i>It is concerning that the Province approved NB Power's plans to lower its long-term electricity-saving targets</i>
2.68	<i>The Department did not sufficiently exercise its oversight authorities as the owner of NB Power on behalf of the Province</i>

Key Findings and Observations Table (Continued)

NB Power's Current Programs are Not Equally Accessible to All New Brunswick Residents	
2.70	<i>NB Power did not adequately address the barriers of low- and moderate-income New Brunswickers to access residential energy efficiency programs</i>
2.74	<i>NB Power's Total Home and New Construction programs are more easily accessible to those able to pay upfront</i>
2.77	<i>New Brunswick's program spending per household in energy poverty was six times lower than in PEI</i>
2.78	<i>New Brunswick is one of only two jurisdictions in Canada without financing mechanisms for energy efficiency programs</i>
2.82	<i>NB Power did not implement financing mechanisms for energy efficiency programs as per the Province's Climate Change Action Plan</i>
2.84	<i>Non-electric households had no access to residential energy efficiency programs for two years</i>
2.85	<i>The Province shifted funding responsibility for energy efficiency to NB Power in 2015</i>
2.88	<i>The uptake of non-electric customers in the current energy efficiency programs remains low</i>
NB Power Effectively Delivers Current Residential Energy Efficiency Programs to Those Who Can Participate	
2.92	<i>NB Power has detailed implementation plans for residential energy efficiency programs</i>
2.94	<i>NB Power did not publicly communicate final energy efficiency targets</i>
2.95	<i>Transparency of energy-saving targets diminish as they get finalized</i>
2.98	<i>NB Power has an adequate process for determining eligibility and calculating incentives</i>
2.99	<i>NB Power does not perform quality assurance on the work of energy advisors</i>
2.103	<i>Document requirement for the LIESP application could be more flexible to alleviate the burden of applicants</i>
2.108	<i>NB Power's evaluation budget is below the industry best practices</i>
2.109	<i>NB Power generally adhered to its evaluation plan</i>
2.110	<i>NB Power has a monitoring system for all its residential programs</i>
2.112	<i>NB Power did not comply with annual reporting principles in relation to energy efficiency programs</i>

Recommendations and Responses

Recommendation	Department's response	Target date for implementation
<p>2.58 We recommend the Department work with NB Power to develop a sustainable funding model for all-fuel energy efficiency programs.</p>	<p><i>The Department agrees with the recommendation. Work is underway with NB Power on developing a sustainable funding model for all-fuel energy efficiency programs.</i></p>	<p><i>April 1, 2023</i></p>
<p>2.69 We recommend the Department fully exercise its oversight authority over energy efficiency programs delivered by NB Power, through:</p> <ul style="list-style-type: none"> • mandating NB Power with implementation of the government's strategic directions on energy efficiency; and • setting relevant short, medium and long-term performance expectations. 	<p><i>The Department agrees with the recommendation.</i></p> <p><i>DNRED will provide strategic direction on energy efficiency and will set relevant short, medium, and long-term performance expectations.</i></p>	<p><i>April 1, 2023</i></p>
<p>2.83 We recommend NB Power develop and implement a plan for energy efficiency financing mechanisms and other measures to reduce financial barriers for moderate income households, including:</p> <ul style="list-style-type: none"> • assessing the needs of moderate income households; • identifying and addressing regulatory and funding barriers to financing mechanisms; and • designing appropriate energy efficiency programs to meet the identified needs. 	<p><i>NB Power will conduct a non-participant/hard-to-reach barrier study which includes a jurisdictional scan, best practices, and recommendations to increase participation of low- and moderate-income households as well as non-electrically heated households.</i></p> <p><i>NB Power will work with the Government of New Brunswick, the Government of Canada, and other interested stakeholders to ensure New Brunswickers are aware of the Federal Greener Home interest-free loan program.</i></p>	<p><i>June 30, 2023</i></p>

Recommendations and Responses (continued)

Recommendation	Department's response	Target date for implementation
<p>2.89 We recommend NB Power develop and implement a plan to improve non-electric households' access to energy efficiency programs, including:</p> <ul style="list-style-type: none"> • assessing energy efficiency needs of non-electric households; • identifying and addressing regulatory and funding barriers to all-fuel energy efficiency programs; and • reviewing and adjusting all-fuel program offerings to meet the identified needs. 	<p><i>NB Power will continue to assess the energy efficiency potential and barriers of all fuels and all sectors as part of its market studies. This includes a 2022/23 refresh of the NB Energy Efficiency Market Potential Study.</i></p> <p><i>NB Power will work with the Government of New Brunswick to address funding requirements and regulatory barrier to sustained funding for non-electric programs. NB Power will conduct a non-participant/hard-to-reach barrier study which would also include a jurisdictional scan, best practices, and recommendations to increase participation of low- and moderate-income households as well as non-electrically heated households. NB Power will continue target marketing and mass marketing awareness to ensure that all New Brunswickers are aware of EE program, regardless of fuel type.</i></p>	<p><i>March 31, 2023</i></p>
<p>2.102 We recommend NB Power perform sufficient quality assurance over the work of service organizations involved in Home Energy Evaluation.</p>	<p><i>NB Power will undertake an assessment of quality assurance/quality control processes for each program in the portfolio. NB Power will conduct a jurisdictional scan to identify quality assurance/quality control best practices. NB Power will implement new quality assurance/quality control processes to address deficiencies.</i></p>	<p><i>September 30, 2023</i></p>

Recommendation	Department's response	Target date for implementation
<p>2.107 We recommend NB Power develop a plan with concrete steps and timelines to ensure easy access for all applicants of the Low Income Energy Savings Program.</p>	<p><i>NB Power will conduct a non-participant/hard-to-reach barrier study which would also include a jurisdictional scan, best practices, and recommendations to increase participation of low- and moderate-income households as well as non-electrically heated households. NB Power's plan and recommendations will be shared with the Department of Social Development prior to implementation.</i></p>	<p><i>March 31, 2023</i></p>
<p>2.118 We recommend NB Power publish in its annual report consistent performance indicators connected to short, medium and long-term energy efficiency objectives and New Brunswick Climate Change Action Plan.</p>	<p><i>NB Power will establish short, medium and long-term energy efficiency performance indicators and will report against those in its annual report.</i></p>	<p><i>July 2023</i></p>

Audit Introduction

- 2.1** Energy is fundamental to the lives of New Brunswickers. It is used in most products and services, such as home heating, lighting, transportation, production, health care, education, etc. Many products and services use more energy than they need through inefficiency and energy waste.
- 2.2** Energy efficiency reduces energy consumption while delivering the same products or services. By cutting energy waste, it reduces greenhouse gas (GHG) emissions and energy bills. One of the key benefits of energy efficiency improvements is slowing the rate of growth in energy use and reducing GHG emissions. Residential energy use in Canada increased 6% since 1990 but would have increased by 60% without energy efficiency improvements¹. Energy use accounts for 92% of GHG emissions in New Brunswick.²
- 2.3** NB Power has been responsible for energy efficiency programs in New Brunswick since 2015. It offers energy efficiency programs for residential, commercial and industrial sectors.
- 2.4** Programs for the residential sector currently include:
- cash incentives for home retrofits and new buildings;
 - low-income energy savings program; and
 - community outreach program.
- 2.5** The New Brunswick Climate Change Action Plan (CCAP) requires the Department of Natural Resources and Energy Development (the Department) and NB Power to take specific actions related to energy efficiency to reduce GHG.

¹ *Energy and Greenhouse Gas Emissions (GHGs)*. [Department of Natural Resources, Government of Canada](#).

²Item 33, New Brunswick Climate Change Action Plan. (2016). Government of New Brunswick.

- Why we chose this topic** **2.6** We chose to audit residential energy efficiency programs because:
- these programs are a key element in addressing climate change and reducing greenhouse gas emissions;
 - the residential sector is the largest in terms of NB Power’s energy efficiency program budget. NB Power plans on spending 70% of its \$123.7 million energy efficiency budget on the residential programs between 2018 and 2023. The total budget includes funding from the Federal and Provincial governments;
 - energy efficiency programs help households spend less on energy bills and have healthier homes; and
 - New Brunswick has one of the highest incidents of energy poverty in Canada³.
- Audit Objectives** **2.7** This audit had two objectives:
- to determine if the Department provides effective oversight to ensure NB Power fulfils its energy efficiency mandate; and
 - to determine if NB Power effectively delivers the residential energy efficiency programs.
- Audit Scope** **2.8** We examined how the Department communicates its directions and expectations about energy efficiency to NB Power. We also looked at how it monitors NB Power’s performance.
- 2.9** We also examined how NB Power plans, executes, and monitors its residential energy efficiency programs. We analyzed program data, reviewed documents and interviewed key stakeholders.

³ Households that spend more than 6% of after-tax income on home energy costs are considered in energy poverty according to the [2020 Provincial Energy Efficiency Scorecard](#), page 56, Efficiency Canada.

- 2.10** We focused our testing on fiscal years 2018-2019 and 2019-2020 to exclude the impact of COVID-19 pandemic on the energy efficiency programs. Our conclusions on the delivery of the residential programs apply to this period only. The remaining conclusions apply to the six-year period from 2015 to 2021. Commercial and industrial programs are out of scope of this audit.
- 2.11** To gain a more complete understanding of the subject matter of the audit, we also examined certain events that preceded the six-year period from 2015 to 2021.
- 2.12** More information on the audit objectives, scope and approach can be found in the Appendices I and II.

Conclusions

2.13 We concluded:

- The Department was not effective in providing oversight regarding residential energy efficiency programs;
- NB Power is effective in delivering its current residential energy efficiency programs to those who can participate;
- While progress has been made toward implementing energy efficiency actions from the New Brunswick Climate Change Action Plan, the Department has not set energy-saving targets for energy efficiency programs;
- The Department and NB Power have not developed a sustainable funding model for all the sectors and all fuel types to improve access to energy efficiency programs;
- There was a two-year break from fiscal year 2016-2017 to 2018-2019 in all-fuel programs delivery due to:
 - The Province shifted funding responsibilities for energy efficiency to NB Power in 2015. The bridge funding was only provided to NB Power for the fiscal year 2015-2016;
 - According to NB Power's interpretation of the *Electricity Act*, all-fuel programs should not be funded through electricity customers; and
 - There is still no sustainable funding source for non-electric programs.
- Some homeowners may have more barriers than others to participate in NB Power's energy efficiency programs.
 - New Brunswickers who do not have upfront capital to invest in retrofitting their homes could not access NB Power's energy efficiency programs; and
 - Participation of non-electric customers is low. In New Brunswick, 21% of all households use oil, gas, or propane as their primary energy source for heating. However, only 13% of participants in the Total Home Energy Saving Program were non-electric (primarily used oil, gas, or propane for heating).

Background Information

- 2.14** Overall, our conclusions indicate energy efficiency programs fall short of providing wider access to energy-saving opportunities for New Brunswickers. Without effective oversight from the Department, it would be difficult to make significant progress in New Brunswick’s energy efficiency and reduction of GHG emissions and energy costs.
- 2.15** As well, these conclusions have important implications as energy is a fundamental need in the lives of New Brunswickers and reducing GHG emissions is an ongoing issue for the environment. Our conclusions also demonstrate that better oversight and broader access are needed to ensure that all New Brunswickers can benefit from residential energy efficiency programs. We make several recommendations in this chapter to address these concerns.
- 2.16** Energy efficiency is an important energy resource. It has the potential to service 40% of Canada’s energy needs in 2050⁴. It is a cost-effective way to address the growing demand for energy. It costs less to eliminate energy waste and inefficiencies than to build new energy generation facilities. However, energy efficiency requires significant up-front investments.
- 2.17** Energy efficiency is widely recognized for its comprehensive social and economic⁵ benefits including:
- lower energy bills;
 - healthier and more comfortable homes;
 - improved physical and mental health;
 - better business productivity and competitiveness; and
 - a boost to the economy by increased spending and new jobs in energy efficiency – “green jobs”.

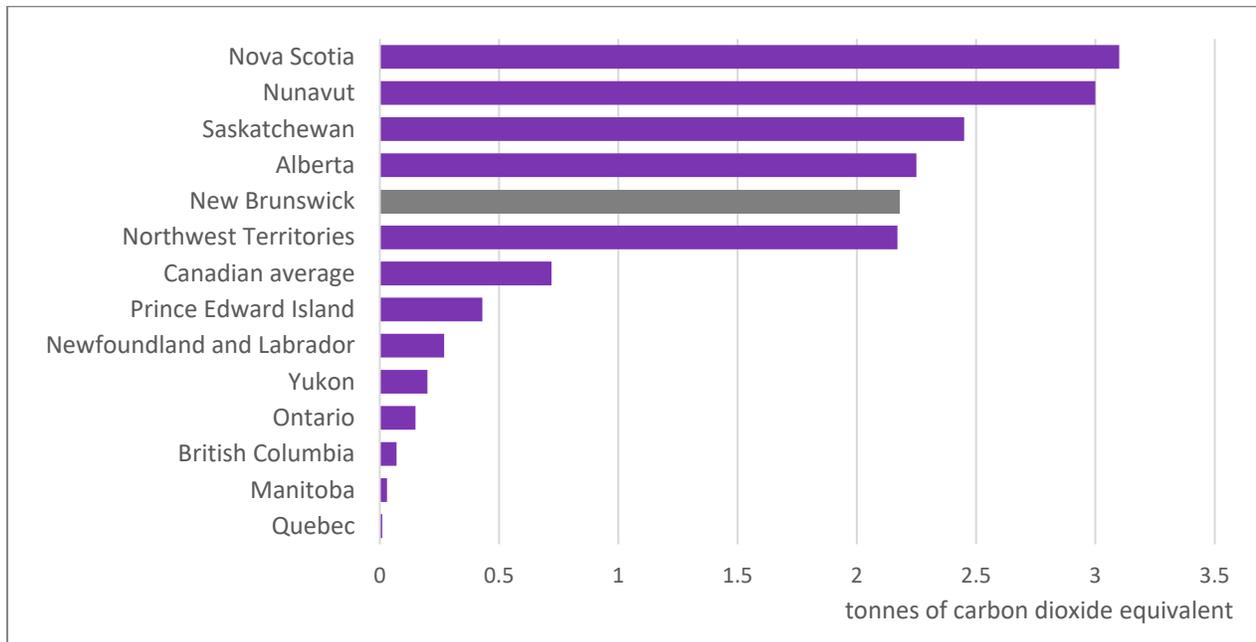
⁴ *Study Shows Canada’s Efficiency Resource Potential*. Efficiency Canada, 2018.

⁵ [*Less is More*](#). *Economic Impact Study by Efficiency Canada*, 2018

2.18 Electricity generation is one of the largest GHG emitting sectors in New Brunswick, along with transportation and oil and gas. The largest consumer of electricity in New Brunswick is the residential sector⁶.

2.19 As seen in Exhibit 2.1, New Brunswick was ranked fifth among other provinces and territories for its GHG intensity associated with electricity consumption. This demonstrates the importance and urgency of energy efficiency programs in the residential sector to reduce GHG emissions.

Exhibit 2.1 – Estimated Per Capita GHG Emissions Associated with Residential Electricity Consumption (2015)



Source: Prepared by AGNB with information from the Market Snapshot: Greenhouse gas emissions associated with residential electricity consumption vary significantly by province and territory. Canada Energy Regulator.

⁶ *Provincial and Territorial Energy Profiles – New Brunswick.* [Canada Energy Regulator](#). Accessed on November 25, 2021

Each jurisdiction has its own approach to energy efficiency

2.20 Each jurisdiction has its own approach to energy efficiency. Provincial governments have jurisdiction over policy areas, such as public utility regulations and building codes. In addition, energy savings are also affected by factors specific for each jurisdiction, including among others:

- type of primary energy source;
- type of heating; and
- population density.

Exhibit 2.2 shows the different approaches to energy efficiency program administration among Atlantic provinces.

Exhibit 2.2 – Administrators of Energy Efficiency Programs in Atlantic Provinces

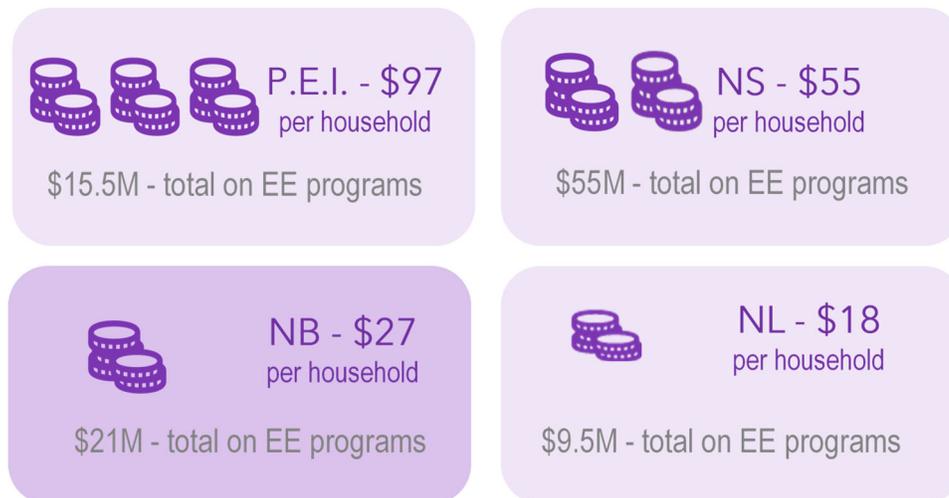
Province	Utility Regulator	Energy Efficiency Program Administrator
New Brunswick	Energy & Utilities Board	NB Power (government owned)
Newfoundland & Labrador	Public Utilities Board	Newfoundland Power (investor owned) Newfoundland and Labrador Hydro (government owned)
	Non-regulated	NL Government
Nova Scotia	Utility and Review Board (electricity programs only)	Efficiency One (franchise)
	Non-electric programs are governed by a fee-for-service agreement with the Province	
Prince Edward Island	Island Regulatory and Appeals Commission	Efficiency PEI (government owned)

Source: Energy Efficiency Program Administration, Efficiency Canada Database

- 2.21 Between 1999 and 2005, the Government of New Brunswick undertook several studies of energy-saving potential in the Province. Significant potentials were identified across all fuels and all sectors, with the residential sector holding the largest energy efficiency potential (37%).
- 2.22 Given these significant energy efficiency opportunities, in 2005, the Province established a dedicated Crown corporation - Efficiency NB, as the primary energy efficiency agency. In April 2015, the Province transferred the responsibility for energy efficiency to NB Power.
- 2.23 On average, energy efficiency programs in New Brunswick cost \$18 million per year⁷. Efficiency Canada ranked New Brunswick fifth in Canada in terms of per capita spending on energy efficiency programs in 2021. Exhibit 2.3 shows New Brunswick’s per capita spending on energy efficiency programs was significantly lower than in other Atlantic provinces, except Newfoundland and Labrador.

On average, energy efficiency programs in New Brunswick cost \$18 million per year

Exhibit 2.3 – Annual Total and Per Capita Spending on Energy Efficiency (EE) Programs in Atlantic Canada (2020)

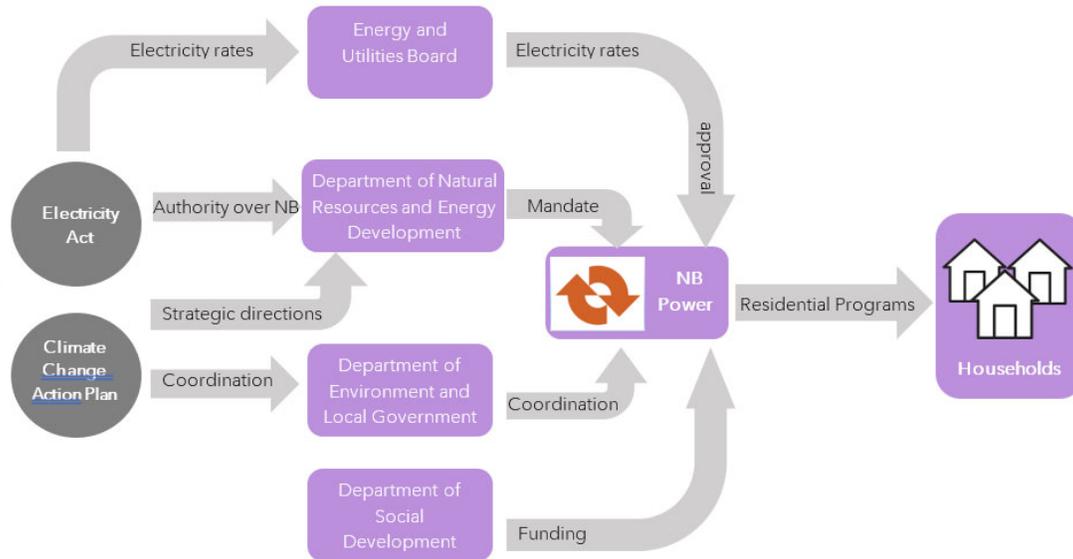


Source: 2021 Provincial Energy Efficiency Scorecard Efficiency Canada

⁷ Average expenditures on energy efficiency programs for all sectors for the six-year period from fiscal year 2015-2016 to 2020-2021.

2.24 There are other key stakeholders involved in residential energy efficiency programs in New Brunswick. Their relationships are illustrated in Exhibit 2.4.

Exhibit 2.4 – Residential Energy Efficiency Programs, Key Stakeholder Relationship Map



Source: Created by AGNB

2.25 As of September, 2021, NB Power offered four residential energy efficiency programs:

- Total Home Energy Savings Program (Total Home);
- New Home Energy Savings Program (New Home);
- Low Income Energy Savings Program (LIESP); and
- Community Outreach Program.

In our audit, we selected samples to test from the first three programs: Total Home, New Home and LIESP.

2.26 Total Home offers money back to homeowners who implemented efficiency upgrades recommended by a Home Energy Evaluation. The Home Energy Evaluation is completed by a certified energy advisor. It evaluates existing energy use in the house and recommends energy efficiency upgrades to save energy and money. These upgrades can include everything from insulation, air-sealing, high efficiency central heating systems, windows and doors.

- 2.27** On average, over 1,300 customers per year participate in Total Home. Overall, since 2015, over eight thousand households benefited from the program. The amounts of incentives vary based on the upgrades completed. For example, a household can get between \$400 and \$700 for installing a mini split heat pump. A typical R-24 basement insulation can get approximately \$1,700 incentive. The program is open to both electric and non-electric customers.
- 2.28** New Home is a performance-based program that incents builders and homebuyers to build homes that are at least 55% more efficient than the EnerGuide⁸ reference house. There are two levels of incentives with specific building envelope and heating system requirements. To be eligible, a house must have an electric primary heating system.
- 2.29** About 300 customers participate in this program annually. Since its start in 2018, over 800 participants benefited from it. This program offers incentives up to \$10,000 for energy efficiency improvements.
- 2.30** The LIESP is funded by the Government of New Brunswick and administered by NB Power. This program assists low-income homeowners to reduce their energy consumption and energy costs through targeted energy efficiency retrofits. Upgrades such as basement insulation and heat recovery ventilation are offered to the homeowner free of charge and are completed by a contractor selected by NB Power. On average with the \$2 million budget, 275 homes annually receive energy efficiency upgrades. In fiscal year 2020-2021, 486 households benefited from this program due to additional funding from the Provincial Climate Fund.
- 2.31** It is important to note, NB Power had to temporarily suspend its residential energy efficiency programs in response to the COVID-19 pandemic. This had a negative impact on its programs' uptake. The programs are now resumed.

⁸ The EnerGuide label shows the estimated total annual energy consumption in Gigajoules (GJ) and compares this consumption to a Reference House. The Reference House is based on what the energy consumption would be if the house had been built to the current National Building Code. ([New Home Energy Savings Program Guidelines](#))

Insufficient Department Oversight over Energy Efficiency

2.32 It is important for the government to provide effective oversight of Crown agencies to ensure government priorities and objectives are being carried out as intended.

2.33 We assessed effectiveness of the oversight provided by the Department of Natural Resources and Energy Development (the Department) over residential energy efficiency programs delivered by NB Power. We did this by examining:

- what strategic directions and performance expectations the Department mandated to NB Power's energy efficiency programs; and
- how the Department monitors NB Power's performance.

NB Power energy efficiency mandate is legislated in the Electricity Act

2.34 NB Power's high-level energy efficiency mandate is legislated in the *Electricity Act*. According to section 117.1 of the Act NB Power's responsibilities include:

- promoting efficient use of energy;
- developing and delivering energy efficiency programs and initiatives, including those paid by the Province (for low-income homeowners) or by a third party;
- promoting the development of an energy efficiency services industry; and
- implementing demand-side management (DSM) and energy efficiency plans.

This mandate is very similar to that of Efficiency NB, the former Crown corporation responsible for energy efficiency programs.

2.35 The New Brunswick Climate Change Action Plan (CCAP) released in December 2016, outlines a summary of Provincial Government efforts to combat climate change. This plan includes over 100 action items lead by various Government departments and Crown corporations. New Brunswick Climate Change Secretariat coordinates the overall implementation of the Plan.

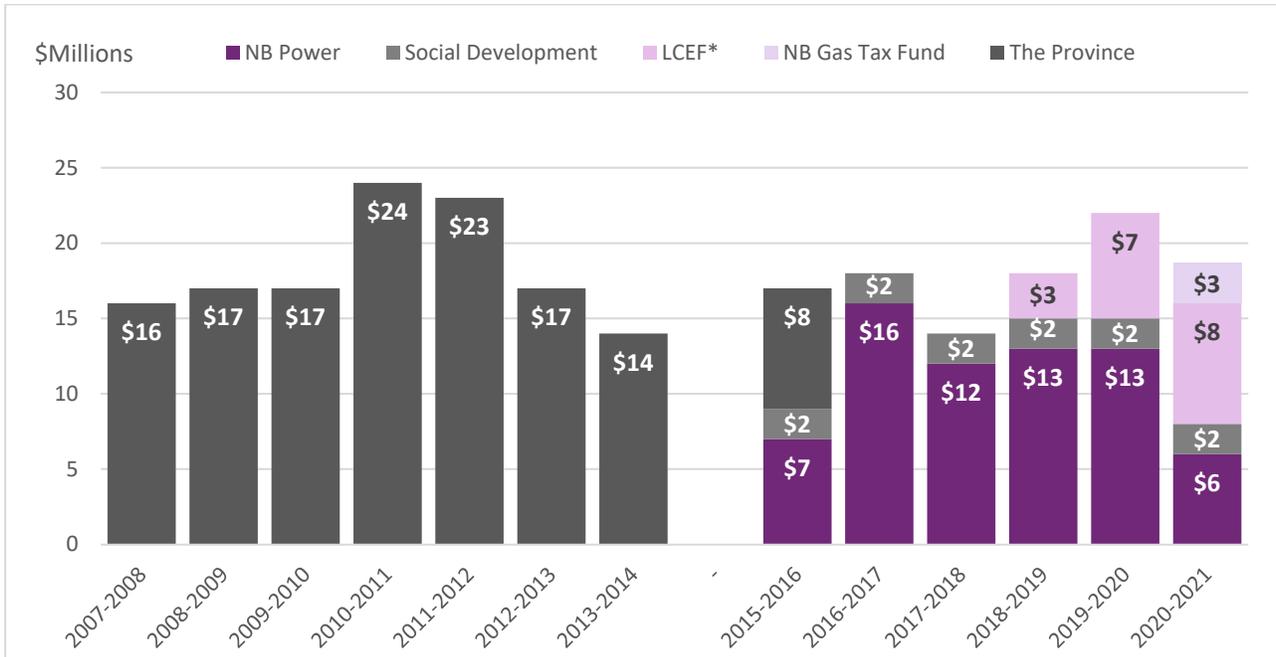
- 2.36** Action Item 33 of this plan outlines Government's strategic direction on energy efficiency. It calls for a broader and more aggressive suite of energy efficiency programs to reduce reliance on fossil fuelled electricity generation, GHG emissions and energy costs. Item 33 includes specific directions for the Department and NB Power, as the Province's primary energy efficiency agency, on improving energy efficiency in New Brunswick. Appendix III provides more information regarding Item 33.
- Both the Department and NB Power have responsibility for the implementation of Item 33 – energy efficiency related actions in Climate Change Action Plan (CCAP)**
- 2.37** The Department is expected to enable NB Power, as the primary energy efficiency agency, to implement its respective actions from Item 33. It is the Department's responsibility to secure sustainable funding for all-fuel programs, set performance targets and address any legislative and regulatory barriers. It is also expected to provide the Government's strategic directions via annual mandate letters and a Memorandum of Understanding. According to Section 3(3) of the *Accountability and Continuous Improvement Act*:
- "A mandate letter...shall include*
- a) strategic and operational direction within the authority of the responsible minister,*
 - b) performance expectations of the Crown body, and*
 - c) any other information required by Executive Council."*
- The Department did not set energy-saving targets and secure sustainable funding for all-fuel programs**
- 2.38** We found that the Department did not carry out its responsibilities under certain actions of Item 33 of the Climate Change Action Plan. Specifically, it did not:
- set energy-saving targets for NB Power, as per action a);
 - provide sustainable funding source for all-fuel programs, as per action b); and
 - mandate NB Power, or any other entity, to implement a financing mechanism, as per action b) of Item 33.
- The Department did not mandate NB Power to implement a financing mechanism**
- As a result, it is unclear when all the actions from Item 33 will be fully implemented. Appendix IV provides a more detailed comparison between Item 33 and NB Power mandate letters from 2015-2016 to 2020-2021.

- 2.39** We noted the Province established a Priority Delivery Unit (PDU) for Item 33 in 2017. We reviewed the Unit’s monthly summary status reports provided by the Department. The Unit tracked progress towards achieving Item 33 on a monthly basis. Tracking stopped in January 2020 when the Province shifted away from using PDUs. While the Unit completed many tasks related to Item 33, its last status report indicated “*funding for customers of other fuel sources remains an issue*”.
- 2.40** *The Department stated that it was not in a position to mandate NB Power with the implementation of government’s strategic directions and to set energy-saving targets* The Department stated it was not in a position to mandate NB Power with the implementation of Item 33 and to set energy-saving targets. The Department indicated the main reason for this inaction is the absence of a sustainable funding source for programs serving non-electric customers.
- 2.41** *NB Power’s interpretation of the Electricity Act is that third-party funding is required for those whose primary heating source is not electricity* NB Power’s interpretation of section 117.1 (d) of the *Electricity Act* is that third-party funding is required for energy efficiency programs serving customers whose primary heating source is not electricity (non-electric, or all-fuel, programs), since non-electric energy savings should not be funded through NB Power’s electricity customers.
- 2.42** Nova Scotia has a different funding model for energy efficiency programs. EfficiencyOne received \$34.4 million from Nova Scotia Power in 2020 to provide electricity efficiency services. It also received \$22.6 million from the Province of Nova Scotia under a fee-for-service agreement to support non-electric efficiency and low carbon services⁹.
- 2.43** This split of funding sources for electric and non-electric programs did not exist before the responsibility for energy efficiency programs was transferred from Efficiency NB to NB Power in 2015. Energy efficiency programs under Efficiency NB were entirely funded by the Province at \$20 million per year on average.

⁹ 2020 Annual Report. EfficiencyOne Nova Scotia.

2.44 As seen in Exhibit 2.5 below, funding from the Province has decreased significantly since NB Power became the primary delivery agency of energy efficiency programs. After providing a bridge funding of \$8 million in fiscal year 2015-2016, the Province only contributed \$2 million annually through the Department of Social Development for the LIESP.

Exhibit 2.5 – Annual Spending on Energy Efficiency Programs by Source (\$ Millions)



Source: Prepared by AGNB with information from NB Power (unaudited)

* Low Carbon Economy Fund (LCEF) is a Federal funding for energy efficiency initiatives.

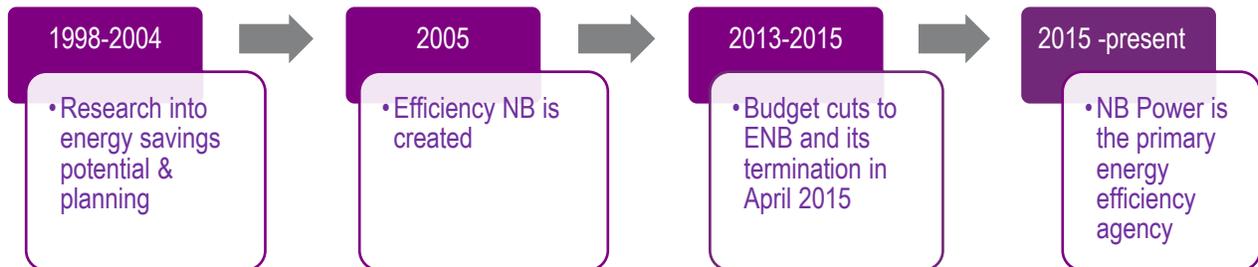
** No data available for the fiscal year 2014-2015.

2.45 Since the fiscal year 2016-2017, NB Power funded energy efficiency programs largely from its own revenue generated by its electricity customers. However, this has changed over the years with leveraged funding from the Federal Government – the Low Carbon Economy Fund (LCEF).

- 2.46** LCEF was announced in June 2017 by the Federal Government. The fund supports projects from provinces and territories, municipalities, Indigenous governments, businesses and other organizations. Examples of funded projects include incentives to retrofit homes and rebates for installing energy efficiency equipment. Funds are allocated on a per capita basis with maximum \$50 million available to New Brunswick. NB Power told us that the annual amount received from the Fund is determined at the end of each year. The amount is based on actual NB Power expenditures on program participants whose primary fuel is not electricity. It also includes any expenditures for electricity participants that exceeded NB Power's planned program budget.
- 2.47** LCEF funding is set to expire in 2024 and, therefore, the Department does not consider it a sustainable funding solution for non-electric programs.
- 2.48** In 2020-2021, NB Power also started to receive funding from New Brunswick's carbon tax fund. This funding is allocated to approved projects annually. The Province invests carbon tax revenue into climate change initiatives, including projects to increase energy efficiency in buildings. NB Power received \$ 2.95 million for its energy efficiency programs. Nearly half of this investment (\$1.5 million) was dedicated to low-income programming. This allowed eliminating the waiting list for its Low-Income Energy Savings Program (LIESP).

2.49 Exhibit 2.6 illustrates the transition of the Energy Efficiency Agency. Between 1998 and 2005, the Province conducted several studies, established committees and a task force on energy efficiency potential in New Brunswick. In 2005, the Province created a dedicated Crown corporation – Efficiency NB – to address growing energy demand and environmental concerns¹⁰. The Province repeatedly cut the budget for Efficiency NB since the fiscal year 2012-2013. The Province terminated this dedicated energy efficiency agency in 2015 and designated NB Power as the primary energy efficiency agency. The Province also shifted funding responsibility for energy efficiency to NB Power since 2015.

Exhibit 2.6 – Transition of Energy Efficiency Agency in New Brunswick



Source: Prepared by AGNB

2.50 According to Efficiency NB annual reports¹¹, it was one of the national leaders in energy efficiency. Efficiency NB reported its residential new construction program had kept New Brunswick in the leading position for the proportion of new homes built up to the energy efficiency standards for two consecutive fiscal years (2010-2011 and 2011-2012). More than 30% of all new homes being built in the province in those years¹² were energy efficient.

¹⁰ White Paper on an Energy Efficiency System. 2004. Government of New Brunswick.

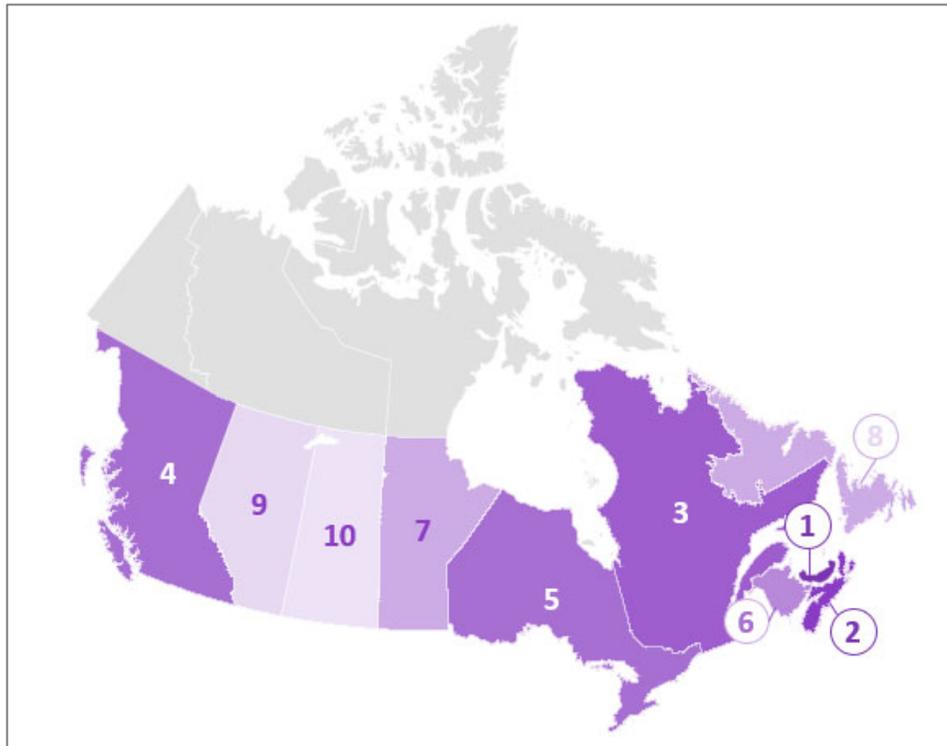
¹¹ Efficiency NB Annual Reports: 2006-2007; 2009-2010; 2010-2011; 2011-2012.

¹² Efficiency NB Annual Reports: 2010-2011; 2011-2012, information for recent years is not available according to NB Power.

- 2.51** Starting in 2013-2014, the Province significantly cut Efficiency NB's budgets. As a result, Efficiency NB suspended four programs and laid off half of its employees¹³.
- 2.52** *NB Power has to balance energy efficiency spending with other competing priorities* This transition brought predictable funding for energy efficiency programs from NB Power's own revenue and allowed longer-term planning for NB Power. However, NB Power has to balance energy efficiency spending with multiple other priorities such as low and stable power rates and debt reduction. NB Power states energy efficiency is a key component to ensuring customers bills are manageable, rates remain low and stable over the long-term and debt reduction is achieved as planned.
- 2.53** *Budget cuts to Efficiency NB coupled with folding it into NB Power resulted in a reduction of energy efficiency customers* The budget cuts experienced by Efficiency NB coupled with moving the responsibility for energy efficiency programs from one agency, Efficiency NB, to another, NB Power, resulted in a reduction of energy efficiency program uptake during the transition.
- 2.54** In 2019, Efficiency Canada, a research organization based at Carleton University's Sustainable Energy Research Centre, started producing an annual Provincial Energy Efficiency Scorecard.
- 2.55** *New Brunswick energy efficiency programs compared poorly to other Maritime provinces* In the 2021 Scorecard, New Brunswick was ranked sixth out of 10 Canadian provinces for the overall results of its energy efficiency programs, as seen in Exhibit 2.7 below. New Brunswick was ranked eighth in 2019 and seventh in 2020. However, it is still behind Nova Scotia and Prince Edward Island.

¹³ Efficiency NB Annual Report 2013-2014.

Exhibit 2.7 – Canadian Provinces Ranked by Overall Energy Efficiency Program Performance¹⁴, 2021



Source: Prepared by AGNB using information from Table 6, 2021 Provincial Energy Efficiency Scorecard. Efficiency Canada

Item 33 of the CCAP is still not fully implemented

2.56 We found that five years since the release of the CCAP in December 2016, Item 33 is still not fully implemented.

¹⁴ Overall performance of energy efficiency programs includes: program energy savings, program spending, equity and inclusion, and savings targets.

Sustainable funding model for energy efficiency programs has not been developed

2.57 In its most recent DSM plan, NB Power stated it has the capabilities to act as the primary organization for the promotion and delivery of energy efficiency, energy conservation, and demand side management across all fuel types in the province of New Brunswick. NB Power also recognized:

“... that funding for non-electric DSM programs requires a third-party funding mechanism since non-electric savings should not be funded through NB Power’s electricity customers. NB Power management is currently working with the Government of New Brunswick on potential funding models¹⁵”.

However, such a funding model has not been developed yet as of the writing of our report.

Recommendation

2.58 **We recommend the Department work with NB Power to develop a sustainable funding model for all-fuel energy efficiency programs.**

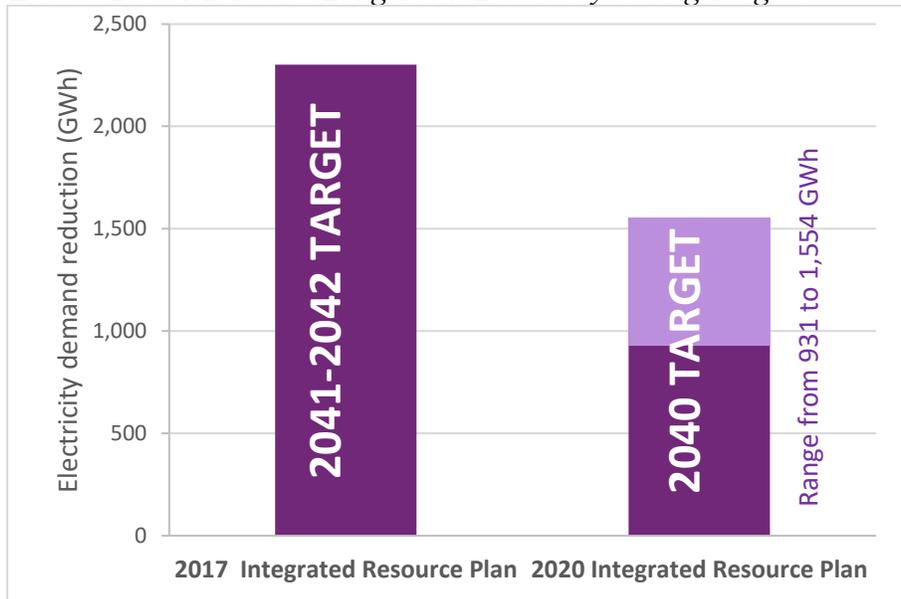
2.59 In the absence of performance expectations from the Department, NB Power developed its own. NB Power reported long-term electricity-saving targets in its integrated resource plans (IRPs).

NB Power lowered its electricity-saving targets

2.60 We found NB Power had lowered its self-set electricity-saving targets, as seen in Exhibit 2.8. These long-term electricity-saving targets are projections and are subject to revisions every three years to reflect the changing energy landscape and customer expectations.

¹⁵ Page 11, NB Power DSM Plan 2018-2019 – 2020-2021

Exhibit 2.8 – NB Power Long-Term Electricity Saving Targets



Source: Prepared by AGNB using information from NB Power (unaudited)

2.61 NB Power mentioned there is a disconnect and a common misconception about the government’s strategy to reduce GHG and NB Power’s DSM strategy. While both strategies use the same tool (energy efficiency programs), their goals are different. NB Power also indicated while energy efficiency programs help to reduce GHG emissions, create green jobs, and reduce energy poverty, these are not the drivers of its energy efficiency targets. NB Power uses energy efficiency programs to manage its supply of electricity and must make choices based on priorities such as rates and debt reduction.

2.62 The long-term targets set in the 2017 IRP were still achievable for NB Power. A DSM Potential Study commissioned by NB Power in 2019 states:

“Current DSM programs have the potential to achieve the 2017 Integrated Resource Plan (IRP) electricity savings target for the 2020-2034 period, albeit at higher costs and covering a broader range of eligible measures than is stated in NB Power’s current (2017) IRP.”¹⁶

¹⁶ Page XX, NB Power DSM Potential Study Vol 1 (2019)

2.63 The Study further stressed:

“Due to the current carbon intensity of electricity generation in New Brunswick, reducing electricity consumption shows the greatest GHG reduction potential of all fuels.”¹⁷

New Brunswick’s annual energy savings have not been in line with performance levels in leading jurisdictions

2.64 New Brunswick ranked in the low- or mid-pack nationally for the annual electricity-saving targets over most of the past five years from 2016 to 2020. New Brunswick’s annual energy savings have not been in line with performance levels in leading Canadian jurisdictions, as action a) of Item 33 directed. Exhibit 2.9 below compares New Brunswick’s electricity savings and national ranking to other Atlantic provinces.

Exhibit 2.9 – Annual Electricity Savings and National Ranking in Atlantic Provinces

Atlantic provinces	Electricity savings as % of domestic sales (national ranking)				
	2016	2017	2018	2019	2020
Nova Scotia	1.2% (1)	1.2% (2)	1.3% (1)	1.2% (1)	0.9% (1)
Prince Edward Island	n/a	n/a	0.2% (9)	1.1% (2)	0.8% (2)
New Brunswick	0.3% (7)	0.4% (7)	0.6% (3*)	0.6% (5)	0.4% (5)
Newfoundland and Labrador	0.2% (8)	0.4% (6)	0.5% (4)	0.5% (6)	0.4% (6)

Source: 2021 Provincial Energy Efficiency Scorecard. Efficiency Canada

* There was no data for Ontario and British Columbia for 2018. In previous years, these two provinces were ranked higher than New Brunswick.

2.65 Lowering the electricity-saving targets does not align with the government strategic direction, which

“recognizes the significant untapped potential to improve New Brunswick’s energy efficiency, thereby reducing GHG emissions and energy costs”¹⁸

¹⁷ Page XXi, NB Power DSM Potential Study Vol 1 (2019)

¹⁸ New Brunswick Climate Change Action Plan (2016), page 9.

- 2.66** The Department acknowledged that energy efficiency has to compete with other priorities of NB Power. It also stated that it does not want to put NB Power in a position where it would have to increase its rates or compromise its ability to reduce debt. As long as energy efficiency programs are delivered cost-efficiently, it satisfies the Department, regardless of what contribution they make to the GHG emissions reduction.
- It is concerning that the Province approved NB Power's plans to lower its long-term electricity-saving targets*** **2.67** The Province approved NB Power's 2020 IRP plan in which NB Power lowered its long-term electricity-saving targets by nearly a third compared to its 2017 IRP plan. We found this concerning. Not pursuing higher electricity savings does not align with the objective of Item 33 of the CCAP to bring energy-savings in line with leading jurisdictions.
- The Department did not sufficiently exercise its oversight authorities as the owner of NB Power on behalf of the Province*** **2.68** As the sole shareholder of NB Power on behalf of the Province and the department responsible for the implementation of Item 33 of the CCAP, it is the Department's responsibility to set directions and expectations for NB Power with regards to the energy efficiency programs. We found the Department did not fully exercise its oversight authority to ensure NB Power set targets and implement residential energy efficiency programs in accordance with the government objectives outlined in Item 33 of CCAP.
- Recommendation** **2.69** **We recommend the Department fully exercise its oversight authority over energy efficiency programs delivered by NB Power, through:**
- **mandating NB Power with implementation of the government's strategic directions on energy efficiency; and**
 - **setting relevant short, medium and long-term performance expectations.**

NB Power’s Current Programs are Not Equally Accessible to All New Brunswick Residents

NB Power did not adequately address the barriers of low- and moderate-income New Brunswickers to access residential energy efficiency programs

- 2.70** We found NB Power did not adequately address the barriers of low- and moderate-income New Brunswickers to access residential energy efficiency programs.
- 2.71** Those households whose income is higher than the LIESP threshold, as shown in Exhibit 2.10, can apply for the Total Home program. However, the Total Home program requires substantial upfront investments from the participants. These include payments for initial Home Energy Evaluation services (\$99 +HST) and for the prescribed energy efficiency upgrades before receiving money back from NB Power.
- 2.72** On average, households who participated in the Total Home program invested \$9,390 on energy efficiency upgrades, while the average incentive was \$1,290 over the past three years.
- 2.73** The Low-Income Energy Savings Program (LIESP), offers cost-free energy efficiency upgrades to low-income households. To qualify for this program, household income must be at or below the Housing Income Limit (HIL) threshold set by the Department of Social Development as per Exhibit 2.10 below.

Exhibit 2.10 – Housing Income Limits (HIL) Threshold

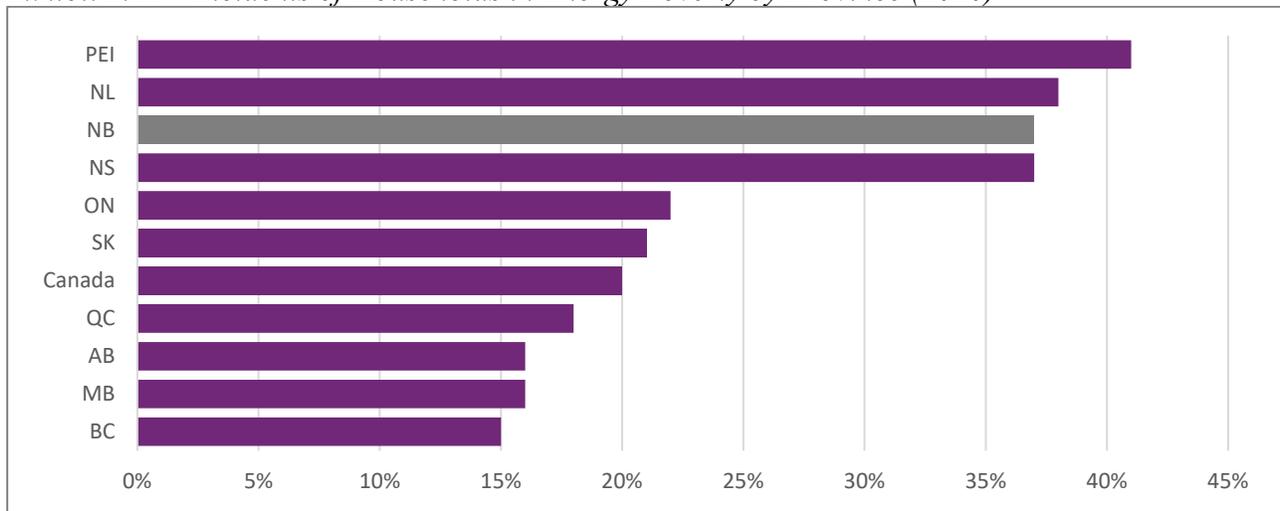
Area	One Bedroom	Two Bedroom	Three Bedroom
Urban	\$29,000	\$36,000	\$38,000
Rural	\$44,000	\$51,500	\$61,000

Source: NB Power – Low-Income Energy Savings Program Guidelines

NB Power’s Total Home and New Construction programs are more easily accessible to those able to pay upfront.

- 2.74** We found NB Power’s Total Home and New Construction programs are more easily accessible to those able to pay upfront. In other words, households whose income is higher than HIL but who do not have available capital to invest, or cannot access it, for example through a bank loan, have a financial barrier to access these energy efficiency programs. NB Power stated that it allows “do-it-yourself” energy efficiency upgrades through its programs to reduce this financial barrier.
- 2.75** This is concerning given that in New Brunswick, over one-third¹⁹ of all households spend more than 6% of their income on energy (these households are considered to be in energy poverty²⁰). Energy poverty affects a much broader population than just households with low-income. Two-thirds of the Canadian households in energy poverty have income above the low-income threshold.
- 2.76** Exhibit 2.11 shows that New Brunswick was third in Canada for the incidence of energy poverty with 37% of all households spending more than 6% of their income on energy.

Exhibit 2.11 – Incidents of Households in Energy Poverty by Province (2020)



Source: Prepared by AGNB with information from the 2021 Provincial Energy Efficiency Scorecard. Efficiency Canada (unaudited)

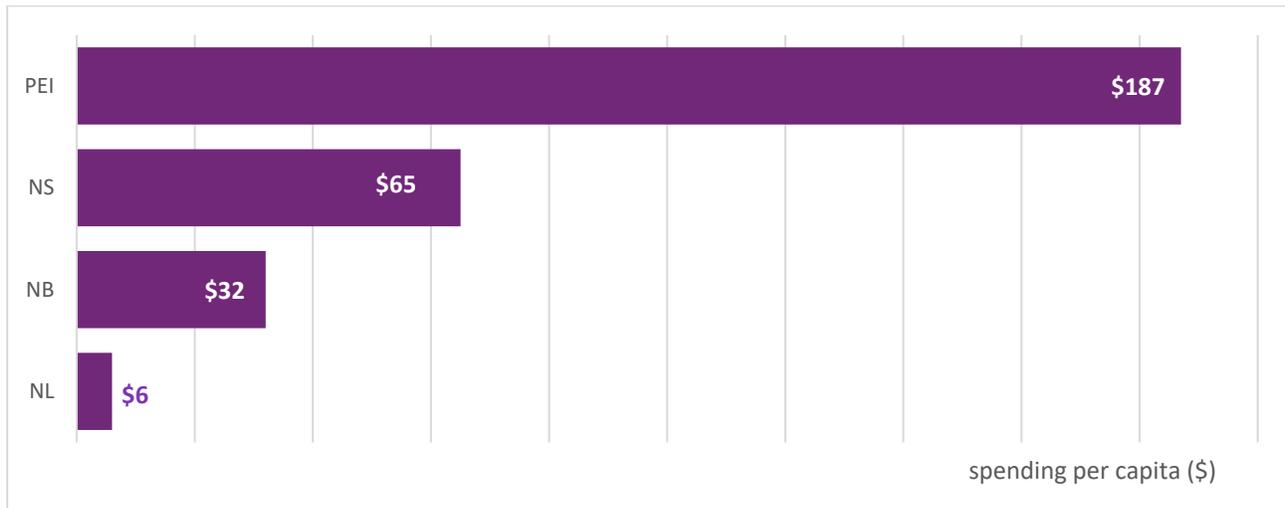
¹⁹Table 20, [2020 Provincial Energy Efficiency Scorecard](#). Efficiency Canada

²⁰Page 56, *Ibid.*

New Brunswick’s program spending per household in energy poverty was six times lower than in PEI

2.77 New Brunswick has a similar rate of energy poverty to Nova Scotia’s. However, New Brunswick’s program spending on energy efficiency programs for households in energy poverty was twice and six times lower than in Nova Scotia and Prince Edward Island, respectively, as seen in Exhibit 2.12.

Exhibit 2.12 – Spending on Energy Efficiency Programs per Household in Energy Poverty, Atlantic Provinces (2019)



Source: Prepared by AGNB with information from the 2020 Provincial Energy Efficiency Scorecard. Efficiency Canada (unaudited)

New Brunswick is one of only two jurisdictions in Canada without financing mechanisms for energy efficiency programs

2.78 Currently, New Brunswick is one of only two jurisdictions in Canada that does not offer financing mechanisms for its energy efficiency programs.

2.79 Financing mechanisms for energy efficiency programs are a widely used and a cost-effective tool to make energy efficiency more accessible to moderate and low-income households²¹.

²¹2021 Provincial Energy Efficiency Scorecard. Efficiency Canada

- 2.80** Financing mechanisms can take many forms but generally are categorized into two groups²²:
- on-bill financing, in which residents repay the cost of energy efficiency upgrades on their utility bill; and
 - property-tax financing, in which the cost is added to the resident’s property tax bill.
- 2.81** NB Power told us it recognizes the value of the financing mechanisms and is open to them. However, per NB Power, its focus is on debt reduction, and it does not have additional resources to fund a financing program. NB Power did not seek third-party funding. According to NB Power, it is not currently pursuing a funding mechanism because the 2021 Federal Budget proposed \$4.4 billion over 5 years, starting in 2021-2022 to help up to 200,000 homeowners complete major home retrofits, though interest-free loans of up to \$40,000.
- 2.82** We concluded NB Power did not implement action b) of Item 33 – financing mechanisms for energy efficiency programs. This leaves energy efficiency programs largely inaccessible for moderate and low-income households.
- 2.83** **We recommend NB Power develop and implement a plan for energy efficiency financing mechanisms and other measures to reduce financial barriers for moderate income households, including:**
- **assessing the needs of moderate-income households;**
 - **identifying and addressing regulatory and funding barriers to financing mechanisms; and**
 - **designing appropriate energy efficiency programs to meet the identified needs.**
- NB Power did not implement financing mechanisms for energy efficiency programs as per the Province’s Climate Change Action Plan*
- Recommendation**

²² *Financing Residential Energy Savings: Assessing Key Features of Residential Energy Retrofit Financing Programs*. M. Brownlee. Sustainable Prosperity Policy Brief, December 2013, University of Ottawa

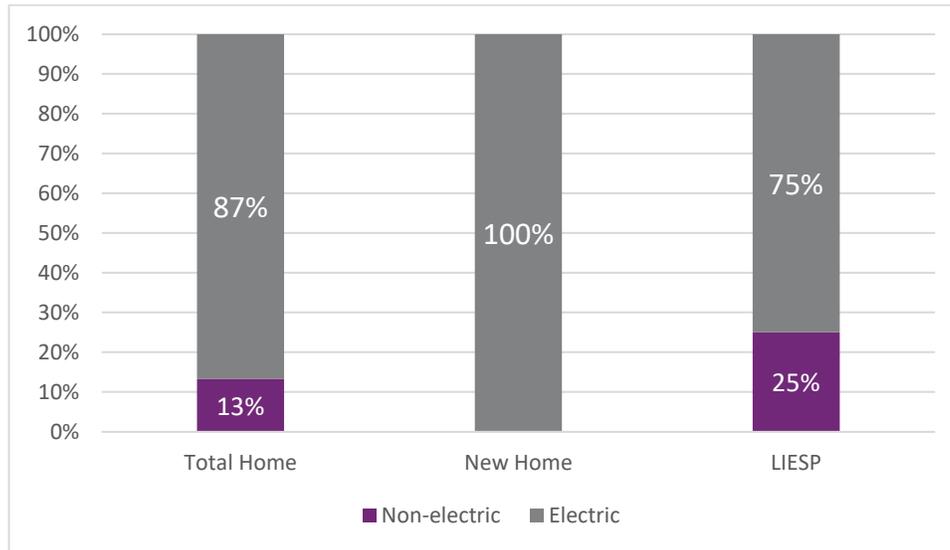
Non-electric households had no access to residential energy efficiency programs for two years

- 2.84** We found NB Power had no funding in place for non-electric customers from the fiscal year 2016-2017 until 2018-2019. This two-year interruption occurred due to:
- The Province shifting funding responsibility for energy efficiency to NB Power in 2015. The bridge funding was only provided to NB Power for the fiscal year 2015-2016; and
 - NB Power’s interpretation of the *Electricity Act* that it should not be funding all-fuel programs through its electricity customers.

The Province shifted funding responsibility for energy efficiency to NB Power in 2015

- 2.85** The Province funded energy efficiency programs delivered by Efficiency NB with the budget varying from \$10 million to \$25 million per year, as seen in Exhibit 2.5. Upon dissolving Efficiency NB in 2015, the only program that the provincial government continued to fund is the LIESP. LIESP budget has been set at \$2 million per year since 2013.
- 2.86** According to NB Power, it did not have a third-party funding source for non-electric customers until the fiscal year 2018-2019, when it started to receive funding from the Federal Low Carbon Economy Fund.
- 2.87** As Exhibit 2.13 shows, two out of the three residential energy efficiency programs are all fuels: Total Home and LIESP. Customers whose primary energy source is natural gas, oil, or other fuel, can apply for these two programs, given that they satisfy other program criteria. The New Construction program is electric only.

Exhibit 2.13 – Participation Rate of Non-Electric Customers in NB Power’s Residential Energy Efficiency Programs, 2015 to 2021*



Source: Prepared by AGNB with information provided by NB Power (unaudited)

*Customers whose primary heating energy source is natural gas, oil products, or propane.

The uptake of non-electric customers in the current energy efficiency programs remains low 2.88

The uptake of non-electric customers in the current energy efficiency programs remains low. We found, in NB Power’s major program – Total Home, non-electric customers constituted only 13% of the total participants, while heating sources of 19% of all households in New Brunswick are non-electric. The New Construction program only allows electric customers to participate. We also noted the LIESP provided a balanced coverage for all types of the heating energy sources with 25% of its participants being non-electric.

Recommendation

2.89 We recommend NB Power develop and implement a plan to improve non-electric households’ access to energy efficiency programs, including:

- **assessing energy efficiency needs of non-electric households;**
- **identifying and addressing regulatory and funding barriers to all-fuel energy efficiency programs; and**
- **reviewing and adjusting all-fuel program offerings to meet the identified needs.**

NB Power Effectively Delivers Current Residential Energy Efficiency Programs to Those Who Can Participate

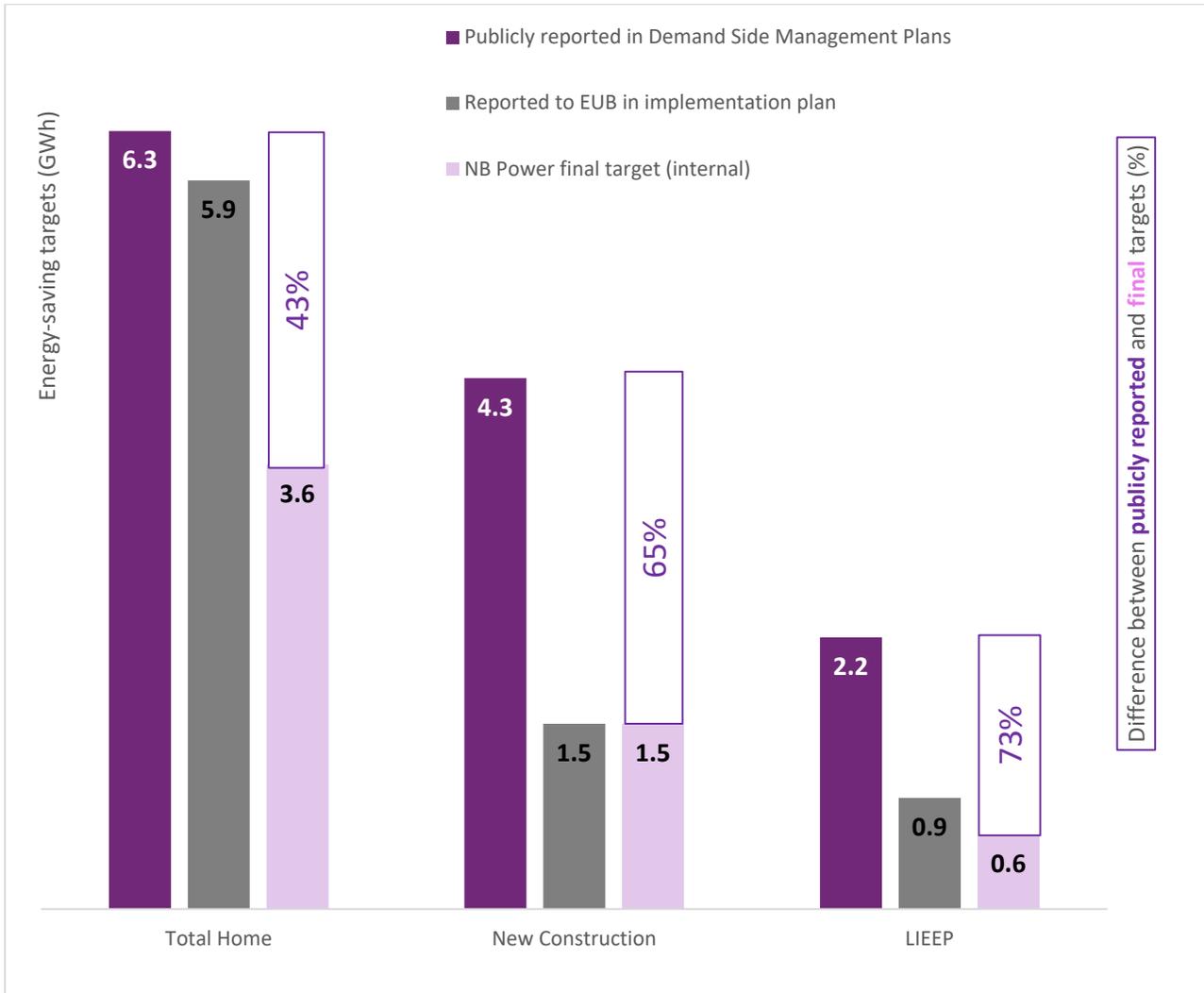
- 2.90** We examined NB Power’s planning, execution, monitoring, evaluation and public reporting of residential energy efficiency programs.
- 2.91** Long-term and medium-term targets for energy efficiency are included in Integrated Resource Plans, and Demand Side Management Plans, respectively. These plans are published on NB Power’s website and the public can easily access them.
- 2.92** NB Power developed detailed implementation plans for each residential energy efficiency program as part of its rate hearing process with the EUB. While these plans can be found at the hearings and decisions section of the EUB’s website, they are not publicly available anywhere else. It may be difficult for the public to find the right documents if they are not familiar with EUB’s hearing process.
- 2.93** We reviewed these plans and found they included key components, such as logic models, staffing requirements, delivery models, schedules and budgets as well as targets and prior year actuals.
- 2.94** The plans included proposed energy efficiency targets that were subject to changes based on the hearing outcomes. However, the plans were not updated and made publicly available to reflect the final targets following the EUB hearing.
- 2.95** Therefore, the final targets can be different from the proposed targets in the initial implementation plans. It is very difficult for the public to know what targets NB Power is exactly aiming for. This diminishes the transparency of the targets as they get finalized. NB Power indicated that it reviews these targets quarterly to further adjust them based on its operational environment.
- 2.96** Publicly reported energy-saving targets for 2019-2020 for the residential programs were 60% higher (average of 43%, 65% and 73%) than the final targets, as seen in Exhibit 2.14.

NB Power has detailed implementation plans for residential energy efficiency programs

NB Power did not publicly communicate final energy efficiency targets

Transparency of energy-saving targets diminish as they get finalized

Exhibit 2.14 – Changes to Energy Saving Targets from Publicly Reported to Final, 2019-2020 (GWh)



Source: Prepared by AGNB based on information provided by NB Power (unaudited)

2.97 We selected a sample of 37 applications from all three residential programs to test whether there are sufficient quality controls to ensure proper incentives are issued to eligible applicants.

NB Power has an adequate process for determining eligibility and calculating incentives

2.98 We obtained and reviewed the process manual for each residential program. These manuals are detailed with clear steps for NB Power staff to follow. Key controls described in these manuals are adequately designed and operated to mitigate risks related to the eligibility of applicants and the appropriateness of incentives. Based on the sample applications we examined, we found correct amounts of incentives were issued to eligible applicants who completed the prescribed energy efficiency upgrades.

NB Power does not perform quality assurance on the work of energy advisors

2.99 We found NB Power relied on energy evaluations performed by service organizations and did not perform specific quality assurance on their work. NB Power hires three service organizations (energy advisors) to perform initial and final Home Energy Evaluations. These evaluations are key to determining whether the home is eligible and what incentive levels are appropriate.

2.100 NB Power mentioned these three companies are licensed through Natural Resources Canada to perform energy evaluations. A company must go through a rigorous federal process to be licensed.

2.101 However, when NB Power engages a service organization to perform key processes or functions, NB Power exposes itself to additional risks related to the service organization's system, such as accuracy and security of data. Although NB Power can delegate energy evaluations to a service organization, the responsibility for the service provided to applicants of the residential energy efficiency programs cannot be delegated.

Recommendation

2.102 We recommend NB Power perform sufficient quality assurance over the work of service organizations involved in Home Energy Evaluation.

Document requirement for the LIESP application could be more flexible to alleviate the burden of applicants

2.103 We found several LIESP applications were rejected during the eligibility assessment stage for various legitimate reasons.

- 2.104** In one case, the application was rejected because the applicant could not provide the personal income tax assessment and property assessment as required. According to NB Power staff, this was not an isolated case. Applicants' inability to provide necessary documents in this program could be related to their physical, social, and financial challenges.
- 2.105** Without the assistance provided by this program, it may not be possible for those households to access other energy efficiency benefits. Moreover, there may be alternative ways to obtain these documents through other government agencies.
- 2.106** NB Power staff told us during interviews they often offer applicants alternative options, in terms of required documents, such as income tax filed rather than income tax assessment. NB Power is aware of this issue and mentioned they are looking for ways to simplify the document requirements for this program.

Recommendation

- 2.107 We recommend NB Power develop a plan with concrete steps and timelines to ensure easy access for all applicants of the Low Income Energy Savings Program.**

NB Power's evaluation budget is below the industry best practices

- 2.108** NB Power has a third-party evaluation process. It spends approximately less than 2% of its total energy efficiency program budget on program evaluation. This is below the industry best practices of 3.5%²³.

NB Power generally adhered to its evaluation plan

- 2.109** NB Power commissioned eight evaluations of its residential energy efficiency programs from 2015-2016 to 2020-2021. We found NB Power generally adhered to its evaluation plan to ensure precision in estimating energy efficiency impacts, as well as continuous improvement of programs. Evaluations were performed by an independent evaluator and included verifications of the program impacts calculated by NB Power.

²³ NB Power evaluation, measurement and verification plan 2015-2016 to 2017-2018, DSM Plan 2016-2018

NB Power has a monitoring system for all its residential programs

2.110 NB Power has a monitoring system for all its residential programs. As part of the monitoring system, residential program scorecards are reported monthly to program leads, energy efficiency management and executives. NB Power also uses a scorecard system for monitoring. Monthly reviews are designed to trigger interventions to adjust programs performance when necessary.

2.111 NB Power reports on the energy efficiency programs to its stakeholders as follows:

- The Department – quarterly;
- EUB (through the annual rate review) – annually; and
- LCEF and Provincial Gas Tax Fund – annually.

NB Power did not comply with annual reporting principles in relation to energy efficiency programs

2.112 We found that NB Power did not fully comply with government’s annual reporting principles when it reported on the energy efficiency programs.

2.113 Since the 2015-2016 annual report, NB Power has significantly reduced the number of performance indicators it reports on for the energy efficiency programs. NB Power gradually stopped reporting on the number of participants, energy savings per household, expenditures by program, and some other indicators. According to NB Power, energy savings per household and program expenditures are found in the evidence provided to the EUB as part of the General Rate Application. However, we believe this information can be more easily accessible by the public if published in NB Power’s annual report.

2.114 The amount of information reported on all energy efficiency programs went down from four pages in the 2015-2016 Annual Report to half a page in the 2019-2020 Report.

2.115 The Government of New Brunswick has an established guideline for annual reports for Crown agencies. The guideline is based on nine reporting principles. Exhibit 2.15 presents the nine principles and our assessment of NB Power’s compliance with them.

Exhibit 2.15 – NB Power Compliance with the GNB’s Reporting Principles for Crown Corporations

Reporting Principle	Compliance	
1. Focus on a few critical aspects of performance	Yes	NB Power reported on two Key Performance Indicators (KPIs): the actual annual energy reductions (GWh) and the generation capacity reduction (MW).
2. Link short-term performance with the big picture	No	Only two reports (2015-2016 and 2017-2018) linked energy savings with a bigger goal of deferring the need for investments in new energy generation capacity in 2027. No further updates were provided.
3. Explain the influence of risk on choices and directions	Yes	Principles 3 to 5 require Crown corporations to explain the influence of risk, capacity and other factors on their decisions and ability to achieve results. NB Power provided brief explanations in its reports.
4. Explain the impact of capacity on the ability to sustain or improve results or meet expectations	Yes	
5. Explain other factors critical to performance (e.g., economic, social, demographic)	Yes	
6. Link goals and resources with strategies and initiatives	No	NB Power did not discuss how its energy efficiency programs relate to the provincial Climate Change Action Plan.
7. Provide comparative information	No	NB Power annual reports did not allow for year-over-year comparison on energy efficiency KPIs. Only the 2018-2019 report had a complete set of annual targets and actual results for the two KPIs discussed in the top row of this table.
8. Present credible information, fairly interpreted	No	NB Power did not report its final energy efficiency targets in the annual reports.
9. State the purpose for the report and the key decisions that have shaped it	Yes	NB Power stated the overall purpose for its annual report and key decisions that shaped it.

Source: Prepared by AGNB using information from NB Power Annual Reports 2015-2016 to 2019-2020.

2.116 We found that NB Power did not fully comply with the Government of New Brunswick guideline for annual reports for Crown agencies. Specifically, it did not comply with four reporting principles.

2.117 We concluded that NB Power's annual reports did not provide complete, accurate, and consistent information, that the public and other stakeholders can use to track the achievement of energy efficiency objectives and to hold NB Power accountable for it.

Recommendation

2.118 We recommend NB Power publish in its annual report consistent performance indicators connected to short, medium and long-term energy efficiency objectives and New Brunswick Climate Change Action Plan.

Appendix I – Audit Objectives and Criteria

The objectives and criteria for our audit of Residential Energy Efficiency Programs are presented below. The Department of Natural Resources and Energy Development and NB Power senior management reviewed and agreed with the objectives and associated criteria.

Objective 1	To determine whether the Department of Natural Resources and Energy Development provided effective oversight to ensure NB Power fulfils its energy efficiency mandate.
Criterion 1	The Department should set expectations for energy efficiency in accordance with applicable legislation and the government's strategic direction.
Criterion 2	The Department should monitor NB Power's performance and reporting on its energy efficiency programs and act, if deemed necessary, to ensure the expected results are achieved.
Objective 2	To determine whether NB Power effectively delivers the residential energy efficiency programs.
Criterion 1	NB Power should have an implementation plan for the residential energy efficiency programs.
Criterion 2	NB Power should have adequate quality controls over the execution of the residential energy efficiency programs.
Criterion 3	NB Power should have a monitoring and evaluation process to ensure residential energy efficiency targets are met.
Criterion 4	NB Power should publicly report the performance of the residential energy efficiency programs.

Source of Criteria: Developed by AGNB based on:

- Relevant Acts and regulations
- Strategic plans and action plans developed by the provincial government in relation to energy efficiency
- Performance review and best practice studies conducted by leading industry institutions and academia
- NB Power's strategic and evaluation and monitoring plans
- Past audit reports (AGNB and other jurisdictions)
- NB Power's internal procedure manuals and other documents

Appendix II – About the Audit

This independent assurance report was prepared by the Office of the Auditor General of New Brunswick on the Department of Nature Resources and Energy Development and NB Power on Residential Energy Efficiency Programs. Our responsibility was to provide objective information, advice, and assurance to assist the Legislative Assembly in its scrutiny of the Department of Natural Resources and Energy Development and NB Power on Residential Energy Efficiency practices.

All work in this audit was performed to a reasonable level of assurance in accordance with the Canadian Standard on Assurance Engagements (CSAE) 3001 – Direct Engagements set out by the Chartered Professional Accountants of Canada (CPA Canada) in the CPA Canada Handbook – Assurance.

AGNB applies Canadian Standard on Quality Control 1 and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

In conducting the audit work, we have complied with the independence and other ethical requirements of the Rules of Professional Conduct of Chartered Professional Accountants of New Brunswick and the Code Professional Conduct of the Office of the Auditor General of New Brunswick. Both the Rules of Professional Conduct and the Code are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour.

In accordance with our regular audit process, we obtained the following from management:

- confirmation of management’s responsibility for the subject under audit;
- acknowledgement of the suitability of the criteria used in the audit;
- confirmation that all known information that has been requested, or that could affect the findings or audit conclusion, has been provided; and
- confirmation that the findings in this report are factually based.

Period covered by the audit:

The audit covered the period between April 1, 2018 and March 31, 2020. This is the period to which the audit conclusion applies. However, to gain a more complete understanding of the subject matter of the audit, we also examined certain matters that preceded the starting date of the audit.

Date of the report:

We obtained sufficient and appropriate audit evidence on which to base our conclusion on January 25, 2022 in Fredericton, New Brunswick.

Appendix III – Item 33 of Climate Change Action Plan

Clean energy and efficiency programs

As 92% of emissions in New Brunswick are from energy use, there are essentially two dominant ways to reduce GHG emissions: reducing energy consumption and switching to cleaner fuels. There are initiatives, currently being implemented in leading jurisdictions, which achieve this while increasing investments in their local economies and creating jobs. Studies and experience show positive economic outcomes related to this approach.

The potential for energy efficiency in homes, businesses and transportation in New Brunswick is substantial. Leading jurisdictions are achieving efficiency gains by reducing energy waste by 1.5 per cent to 1.75 per cent per year through energy efficiency programs. This crosses all fuels and all sectors. In electricity alone, which is about 30 per cent of energy use in New Brunswick, the energy efficiency potential in electricity has been estimated by NB Power to be equivalent to more than 600 MW. A broader and more aggressive suite of energy efficiency and clean energy programs will reduce reliance on fossil fuelled electricity generation.

Energy we do not use is free of cost and emissions. Through eliminating waste of energy through efficiency measures, we can significantly reduce demand. Investments made within the province in energy efficiency are an attractive alternative to buying imported energy. The provincial government recognizes the significant untapped potential to improve New Brunswick's energy efficiency, thereby reducing GHG emissions and energy costs.

The provincial government will:

33 - Mandate energy efficiency delivery agents to provide energy efficiency initiatives with:

- a) - clear performance-based targets for program-delivery services, in line with potential for efficiency gains in New Brunswick and performance levels in leading jurisdictions; i.e., in the range of 1.5 per cent to 1.75 per cent of sales per year;
- b) - sustained funding, including financial incentives and financing mechanisms, to support enhanced progressive long-term programs;
- c) - expanded capacity and programs to support low-income New Brunswickers;
- d) - active promotion and recruitment of participants to enhance program uptake;
- e) - training for building contractors through partnerships with the New Brunswick Home Builders' Association and other stakeholders;
- f) - coverage of all sectors (i.e., transportation, industry, commercial, residential) and all fuels;
- g) - the scope to include distributed clean energy options such as solar, wind and bio-energy;
- h) - performance auditing and reporting periodically; and
- i) - legislative and regulatory authority to enable energy efficiency delivery agents to meet the above conditions.

Source: NB CCAP (2016)

Appendix IV – Comparison between the Department’s mandate letters to NB Power and Item 33 of Climate Change Action Plan

Item 33, actions ²⁴	The Department’s direction from mandate letters to NB Power	Mandate letters that included relevant direction	Degree of alignment with the Item 33
c - expanded capacity and programs to support low-income New Brunswickers;	Reinstating and expanding home energy efficiency retrofit programs to reduce energy use and lower costs for consumers, with particular focus on working with the DSD to help low-income New Brunswickers.	2017-2018 and 2018-2019	Included
f - coverage of all sectors (i.e., transportation, industry, commercial, residential) and all fuels;	Ensuring NB Power plays a significant role in the province's climate change action plan by promoting Energy Smart NB including initiatives such as electric vehicles, heating alternatives, commercial and industry energy efficiency , and distributed clean energy options such as solar, wind and bio-energy to meet renewable and non-emitting targets and to reduce greenhouse gas emissions from electricity production.	for 2015-2016, 2017-2018 and 2018-2019	Partial – does not include transportation sector and all fuels .
g - the scope to include distributed clean energy options such as solar, wind and bio-energy;		Clean energy was included only in the 2018-2019 letter	Included
h - performance auditing and reporting periodically;	NB Power will set and communicate annual targets for the number of homes that will benefit from these [home energy efficiency] programs.	for 2015-2016, 2017-2018 and 2018-2019	Partial - Limited to only one KPI for the residential sector programs.

Source: AGNB

²⁴ Only the actions included or partially included in the mandate letters are represented in this table. For example, actions a) and b) were never included in the mandate letters to NB Power.