Appendix 4

Policy Landscape

To request the document in French, email irp@hydro.mb.ca.
To request accessible formats visit hydro.mb.ca/accessibility.

Manitoba Hydro
energy for life

Table of Contents

List of Tables

1 Introduction

This appendix provides an overview of the energy policy landscape Manitoba Hydro operates within, based on information available as of December 1, 2024, when modelling for the 2025 IRP began. A brief description of how each policy is considered in the 2025 IRP is provided.

1.1. Implications of Energy Policy for Integrated Resource Planning

Government actions are one of the most significant factors influencing the evolving energy landscape Manitoba Hydro operates within, shaping both customer and utility energy decisions. Most sectors of the Canadian economy, including the Canadian energy sector, operate in environments with regulation and legislation aimed at reducing greenhouse gas emissions (emissions) and limiting negative impacts on people and natural environments, while also seeking to encourage positive economic development. Government incentives, research funding, loan guarantees, and tax structures are examples of other policies that often complement legislation and regulations. Combined, these government actions influence both the supply, demand, and cost of energy within and outside Manitoba.

The 2025 IRP analysis was conducted based on enacted and pending government energy policy; however, the energy policy landscape is dynamic and continues to shift with changes in political leadership and/or priorities. This potential for change is reflected in the range of scenarios and sensitivities studied in the 2025 Integrated Resource Plan (IRP).

2 Overview of Energy Policy in Manitoba

As a provincially owned Crown corporation, Manitoba Hydro is required by The Manitoba Hydro Act "to provide for the continuance of a supply of power adequate for the needs of the province, and to engage in and to promote economy and efficiency in the development, generation, transmission, distribution, supply and end-use of power...". Manitoba Hydro's costs to provide electricity and natural gas are recovered through rates that are approved by the Manitoba Public Utilities Board (PUB). In addition to the provincial acts and associated regulations, Ministerial mandate letters, directives, and policy documents provide direction to Manitoba Hydro that is incorporated in its integrated resource planning. A summary of planning guidance provided as of December 1, 2024 in The Manitoba Hydro Act, the 2023 mandate letter to the Manitoba Hydro-Electric Board, directives to Manitoba Hydro, The Affordable Energy Plan, and The Efficiency Manitoba Act and mandate letter are provided below.

2.1. The Manitoba Hydro Act

The Manitoba Hydro Act instructs Manitoba Hydro to prepare and submit an IRP for government approval that covers a planning period of at least 10 years and includes:[1]

a) "the corporation's load forecast for the planning period;

b) the anticipated impact on load of the savings targets to be achieved under an approved efficiency plan under The Efficiency Manitoba Act;

c) supply-side options considered by the corporation and those it has chosen or recommends for implementation;

d) if the plan includes the development of a major new facility during the planning period or within the next 10 years, a report on the status of any review required by section 16 or 16.0.1 in relation to that development or of any planning for such a review;

e) any key assumptions relied on by the corporation in developing the plan

f) a description of the stakeholder consultations carried out by the corporation in development of the plan;

g) any other information the corporation considers relevant or is required by regulations."

[1] The Manitoba Hydro Act https://web2.gov.mb.ca/laws/statutes/ccsm/h190.php?lang=en

An IRP must also consider:

- any relevant mandate letter or directives issued,
- regulations and directives issued under The Financial Administration Act,
- published provincial energy and environmental policies, and
- the socio-economic impacts of implementing the plan,

In addition, the IRP must be developed in accordance with sound principles of risk management and economic and environmental sustainability. The Manitoba Government reviews and approves an IRP and may ask the PUB to review and provide advice before it requests changes and/or renders a decision. Regulations providing further guidance for the development of IRPs are not in place but may be created in the future.

2.2. Manitoba Hydro Directives and 2023 Mandate Letter

Following the provincial election in October 2023, a new Manitoba Hydro-Electric Board was appointed and received its mandate from the Manitoba Government.[2] This mandate includes a goal to "keep rates low for families, support our province's economic development potential, advance Indigenous reconciliation and move Manitoba into a clean energy future." In relation to integrated resource planning, the letter asks that Manitoba Hydro:

- "Develop a plan to align Manitoba Hydro with our government's clean energy targets of a net-zero energy grid by 2035 and a roadmap to a carbon-neutral economy by 2050."
- "Examine options for increasing low-carbon energy generation and storage, including wind and solar, to grow Manitoba's electrical supply to meet energy transition and clean grid requirements without the need for new natural gas plants."
- "Work with Efficiency Manitoba to advance geothermal home energy retrofits and other energy efficiency initiatives that can free up electricity to be devoted to other uses in Manitoba."

In addition to this mandate letter, a Directive Respecting Electric Service to Cryptocurrency Operations was issued, instructing Manitoba Hydro to suspend the processing of requests for electric service intended to be used for cryptocurrency operations until April 30, 2026, which was the second time successive governments issued similar directives.[3] As such, the 2025 IRP does not have any additional future load growth related to cryptocurrency operations.

[2] https://manitoba.ca/asset_library/en/executivecouncil/mandate/hydro_mandate_letter_2023.pdf

[3] A Directive Respecting Cryptocurrency Operations https://manitoba.ca/asset_library/en/proactive/20242025/directive-hydro-cryptocurrency-operations.pdf

2.3. The Affordable Energy Plan

On September 20th, 2024, the Provincial government released Manitoba's Affordable Energy Plan (AEP) outlining provincial energy policy direction through seven objectives, and 26 actions.[4] Several actions in Manitoba's AEP are expected to directly impact the demand for electricity and natural gas in Manitoba, and several actions address how these changing energy needs can be met. Highlights of the 26 actions outlined in the AEP that have most impact on the 2025 IRP, and have been considered in the assumptions in this IRP include:

- Issuing an expression of interest for up to 600 MW of Indigenous majority-owned wind generating projects;
- Refurbishing hydropower generating stations to unlock up to 200 MW;
- Reinvesting in aging Manitoba Hydro infrastructure to maintain reliability;
- Developing opt-in demand management options like innovative discounted rates and investing in advanced metering infrastructure;
- Providing rebates for EVs, increasing availability and reliability of public EV chargers, and introducing 'EV-Ready' requirements in building codes;
- Developing a clean heat strategy for buildings, supporting the adoption of air and ground source heat pumps, and exploring the feasibility and expanded use of ground source district heating systems;
- Expanding the scope of energy efficiency initiatives; and
- Strengthening energy codes for homes and buildings.

[4] Manitoba's Affordable Energy Plan https://www.gov.mb.ca/asset_library/en/energyplan/mb-affordable-energy-plan.pdf

2.4. The Efficiency Manitoba Act Mandate

The Efficiency Manitoba Act instructs Efficiency Manitoba to cost-effectively develop and support energy efficiency initiatives that will reduce provincial consumption of electrical energy by 1.5% and natural gas by 0.75% annually, compared to what would have occurred in the absence of Efficiency Manitoba's programming.[5] To achieve these targets, Efficiency Manitoba creates 3-year energy efficiency plans for review and recommendations by the PUB and approval by the Minister responsible for Efficiency Manitoba. The Minister may also grant an extension to an existing plan. Per The Efficiency Manitoba Act, Manitoba Hydro provides Efficiency Manitoba with the funding necessary to implement its approved energy efficiency plans.

Efficiency Manitoba's 2024 mandate letter includes direction to: support the Manitoba government's climate change and net-zero commitments; deliver a new Affordable Home Energy Program; target beneficial electrification; support adoption of ground and air source heat pumps; investigate support for district geothermal; work with Indigenous Nations to reduce energy burden; work with Manitoba Hydro to recognize energy efficiency as a resource; develop initiatives to reduce electrical demand; and support economic development and maintain energy affordability.[6]

The 2025 IRP load projections, for both electricity and natural gas, incorporate reductions due to Efficiency Manitoba's programming, as provided by Efficiency Manitoba.

2.5. Captured Carbon Storage Act

The Captured Carbon Storage Act (Bill 31) received Royal Assent on June 4, 2024. The Act establishes the legal framework for licensing, exploration, development, and permanent sequestration of captured carbon and hydrogen in geological formations, which is considered in the 2025 IRP for some generation resource options (i.e., both hydrogen combustion turbines and generation that incorporates carbon capture and storage), some industrial decarbonization, and potential negative emission technologies - all of which may have a role in future net-zero scenarios.

[5] https://web2.gov.mb.ca/laws/statutes/ccsm/e015.php

[6] https://manitoba.ca/asset_library/en/executivecouncil/mandate/efficiency_manitoba_mandate_march_2024.pdf

3 Other Levels of Government Energy Policy

Manitoba's municipal and Indigenous Nations governments can make decisions that influence energy use in community buildings and operations. They can also create policies, by-laws and programs that shape energy use and development within their communities. Information from these levels of government often come from various engagement opportunities within and between IRP cycles. This breadth of views on the future use of electricity and natural gas use are reflected within the scenarios and sensitivities considered within the 2025 IRP.

Through the engagement activities, we heard that several cities have developed, or are actively developing, policies that impact energy use. Some municipalities and Indigenous Nations have goals to reduce emissions to address climate change, and some have adopted climate adaptation plans. As was noted by these groups, work continues toward achieving these goals; however, it has been challenging due to financial and capacity constraints.

Some communities are developing or seeking to implement emission reduction initiatives. Conversely, some other communities currently without access to natural gas are seeking to have this service expanded in their communities so residents can access lower cost heating options and/or attract industries that rely on natural gas.

Several communities within Manitoba are taking steps to access funding through the federal Housing Accelerator Fund. The Housing Accelerator Fund's goal is to establish conditions for communities to build more homes faster, supporting affordable, diverse, and climate-resilient communities.[7] To access these funds, some communities needed to make changes to their zoning and permitting processes, for example, to allow for denser forms of urban housing and infill developments near transit corridors. Accelerated housing development, particularly multi-residential housing which tends to be electrically heated, has potential to impact the need for new electrical infrastructure and was considered within load growth projections. Funding has been announced for several municipalities and Indigenous Nations in Manitoba, including Winnipeg, Brandon, Emerson Franklin, Brokenhead Ojibway Nation, Sioux Valley Dakota Nation, and Treaty One Nations. These various initiatives help to inform potential trends which may impact Manitoban's future energy usage.

[7] https://www.cmhc-schl.gc.ca/professionals/project-funding-and-mortgage-financing/funding-programs/all-funding-programs/housing-accelerator-fund

4 Overview of Canadian Energy Policy

4.1. Canada's Emission Reduction Targets

The Canadian federal governments' environmental legislative and regulatory agenda (to December 1, 2024) has been shaped by its commitments to reduce emissions under the United Nations Framework Convention on Climate Change Conference of the Parties (COP21) 2015 Paris Agreement.[8] The Paris Agreement "aims to strengthen the global response to the threat of climate change…by holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change." In the Agreement, Canada originally committed to reduce its emissions by at least 30% from 2005 levels by 2030 and achieve net-zero emissions by 2050. In April 2021, Canada increased its near-term climate ambition, committing to reduce emissions by 40% to 45% from 2005 levels by 2030, aligning with scientific advice of what is needed to meet the Paris Agreement.[9]

Canada's commitments to reduce emissions are formalized in the Canadian Net-Zero Emissions Accountability Act which requires national emission reduction targets to be set by the Minister of Environment & Climate Change for 2030, 2035, 2040 and 2045, with the goal of attaining net-zero emissions by 2050.[10] Within the Act, "net-zero emissions means that anthropogenic emissions of greenhouse gases into the atmosphere are balanced by anthropogenic removals of greenhouse gases from the atmosphere over a specified period."

Beyond defining net-zero, the Act also sets legal requirements for the federal government to create emission reduction plans, report progress, and course correct towards meeting net-zero emissions by or before 2050. The first emission reduction plan (ERP) was published in March 2022 titled, 2030 Emission Reduction Plan: Clean Air, Strong Economy to outline the new and existing actions government would take to reduce emissions by 20 per cent below 2005 levels by 2026 and 40 per cent below 2005 levels by 2030.[11] Several government actions included in the 2030 ERP could result in not only a significant increase in demand for electricity, but also a decrease in natural gas use.

The subsequent sections highlight the major federal government policies and programs that have been or were being developed to meet the federal government's emission reduction goals as of December 1, 2024, that are considered within Manitoba Hydro's integrated planning.

[8] https://unfccc.int/sites/default/files/english_paris_agreement.pdf

[9] https://www.un.org/en/climatechange/net-zero-coalition#:~:text=To%20keep%20global%20warming%20to,reach%20net%20zero%20by%202050

[10] https://www.laws-lois.justice.gc.ca/PDF/C-19.3.pdf

[11] https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/emissions-reduction-2030.html

4.2. Regulations Restricting Emissions from Electricity Generation

Canada has two existing regulations that directly limit emissions in the electricity sector. The Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity regulations will phase out coal-fired electricity generation by January 1, 2030, except for coal-fired generation that captures emissions through carbon capture and sequestration, or generation covered under provincial equivalency agreements.[12]

In addition to the coal-fired generation regulations, Canada also set performance standards for new and modified natural gas-fired generation.[13] The relevant aspect for Manitoba Hydro's resource options is that the standards prohibit new single cycle gas turbines greater than 150 MW if they have a utilization factor greater than 33%.

While these two regulations were in place as of December 1, 2024, the coal-fired generation regulations would be repealed January 1, 2035, and the natural gas-fired generation regulations would be repealed January 1, 2050, by the federal government's proposed Clean Electricity Regulations.

4.3. Clean Electricity Regulations

In August 2023, Canada published draft Clean Electricity Regulations to limit, but not prohibit, emissions from electricity generation that uses fossil fuels. Final regulations were published on December 18, 2024.[14] The regulations restrict how Manitoba Hydro can operate its existing and any potential future natural gas generating units; however, they also allow for an ongoing, limited role for some fossil fuel generation past 2035, to maintaining affordability and reliability during a goal of a transition to a net-zero economy 2050.[15] Manitoba Hydro included an emissions constraint in the modelling for all scenarios and sensitivities, ensuring alignment with the regulations.

[12] https://laws-lois.justice.gc.ca/eng/regulations/sor-2012-167/index.html

[13] https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-261/page-2.html#h-857535

[14] https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/clean-electricity-regulation.html

[15] https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/clean-electricity-regulations-public-update-what-we-heard.html

4.4. Greenhouse Gas Pollution Pricing Act

A key component of Canada's emission reduction strategy is a national benchmark price on emissions. The Greenhouse Gas Pollution Pricing Act (2018)[16] established a federal emission pricing backstop through two mechanisms: a fuel charge on fossil fuels corresponding to their carbon content; and an output-based pricing system applicable to facilities in emissions-intensive trade-exposed (EITE) sectors to limit their emission pricing burden.[17] The Act creates a price signal that influences customer decisions. It is expected that the Act will cause decarbonization to accelerate within residential, commercial, and industrial sectors as the carbon charge increases over time

4.4.1. Consumer Carbon (Emission) Charge

As of December 1, 2024, the fuel charge on fossil fuels (the 'consumer carbon charge', which is a price on emissions) was equivalent to $80 per tonne of carbon dioxide equivalent (CO_2e) emitted. The consumer carbon charge is scheduled to increase annually by $15 per tonne per year until a maximum of $170 per tonne in 2030.[18] This benchmark price applies in Manitoba, as an equivalent provincial pricing system has not been established. The fuel charge applies to many different fossil fuels, most notably affecting the cost of transportation fuels like gasoline and diesel, as well as natural gas used for heat. An increasing carbon price is intended to influence Canadians' personal and business decisions when it comes to using different types of energy. This policy was considered in development of load projections for the 2025 IRP.

[16] https://laws-lois.justice.gc.ca/eng/acts/G-11.55/

[17] https://laws-lois.justice.gc.ca/eng/acts/G-11.55/

[18] https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/carbon-pollution-pricing-federal-benchmark-information/federal-benchmark-2023-2030.html

4.4.2. Output-Based Pricing System (OBPS)[19]

Rather than pay the fuel charge, facilities in emissions-intensive, trade-exposed (EITE) sectors are subject to the OBPS Regulations (or similar provincial systems deemed equivalent by Environment and Climate Change Canada (ECCC)). This regulatory pricing system for large emitters is designed to address competitiveness and leakage risks while still providing a strong incentive for these facilities to reduce emissions.[20] There are thirty-three EITE facilities in Manitoba with emissions large enough to be registered in the OPBS. Under the OBPS, these facilities only pay for emissions above an established performance standard. If emissions are lower than the performance standard, they can earn credits to save for use in future years or to sell to other facilities participating in the OBPS. Output-based standards were originally set at 80% to 95% of the average emissions intensity for a sector (tonnes CO_2e/GWh) and tighten by 2% (or 1% for sectors at high risk of competitiveness impacts) per year for all standards, except for electricity generation using fossil fuels which does not change.[21] Proceeds of the OBPS are returned to the jurisdictions in which they are collected through the Decarbonization Incentive Program that supports industrial decarbonization projects or the Future Electricity Fund.[22]

The OBPS has different standards for new and existing fossil-fuel fired electrical generating units. The standard for existing units applies to emissions from Manitoba Hydro's Brandon Generating Station, which combusts natural gas in two of its generating units.[23] Manitoba Hydro must pay for natural gas-fired generation emissions from the Brandon Generating Station above a performance standard of 370 tonnes CO_2e/GWh. For natural gas-fired units built after 2020, the performance standard declines over time from 370 tonnes CO_2e/GWh to 0 tonnes CO_2e/GWh in 2030, resulting in these units paying the full $170 per tonne price for all emissions in 2030, which impacts the frequency with which natural gas-fired generation is called upon to support customer load. The federal government is considering changing the output-based standard for existing natural gas-fired generating units[24]. Discussion of the application of OBPS pricing in 2025 IRP modelling and analysis is in Appendix 7.1.

[19] https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/output-based-pricing-system.html

[20] Leakage refers to the risk of an industrial facility moving from one jurisdiction to another to avoid paying a price on carbon pollution and/or being subject to more stringent climate policies.

[21] https://gazette.gc.ca/rp-pr/p2/2023/2023-11-22/html/sor-dors240-eng.html

[22] https://www.canada.ca/en/environment-climate-change/services/climate-change/carbon-pollution-pricing-proceeds-programming/output-based-pricing-system-proceeds-fund.html

[23] These units can also operate on diesel fuel, which has a performance standard of 550 tonnes CO_2e/GWh.

[24] https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/proposed-frame-clean-electricity-regulations.html

4.5. Canadian Government Actions Driving Transportation Electrification

As part of its Action Plan for Clean On-Road Transportation,[25] Canada is taking a multi-pronged approach to transition transportation in Canada to lower emission modes, including through regulations and financial incentives (see Table A4.2). The intent of this plan is two-fold: to achieve emission reductions, and to stimulate economic growth associated with zero emission vehicles (ZEV) from mining to mobility. The transition to greater electrification of transportation would increase demand for electricity in Manitoba and therefore impacts electric load projections. The timing and pace of transportation electrification will be influenced in part by these government actions. Transportation accounts for approximately 30% of end-use energy in Manitoba, with most vehicles powered by refined petroleum products.[26] Transportation sector emissions account for approximately 40% of Manitoba's total emissions and 25% of Canada's total emissions.[27, 28]

4.5.1. Electric Vehicle Availability

In December 2023, Canada published regulations Amending the Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations, which introduced The Electric Vehicle Availability Standard.[29] The Electric Vehicle Availability Standard requires auto manufacturers and importers of light-duty vehicles (e.g.: cars, SUVs, and light-duty trucks) to achieve annual zero-emission vehicle sales targets. The targets begin for the 2026 model year, with a requirement that at least 20% percent of new light-duty vehicles offered for sale in that year be ZEVs and increases annually until achieving 100 percent of new vehicle sales in 2035 (see Table A4.1 for details). The Standard defines a ZEV as a vehicle that either produces no tailpipe emissions or has the potential to produce no emissions, including fully electric vehicles (EVs), plug-in hybrid vehicles, and fuel-cell vehicles. Given that the average age of a vehicle is 15 years, putting in place a 100 percent ZEV sales target by 2035 will result in very few light-duty internal combustion engines vehicles to be on the road in 2050. This would increase the demand for electricity to support transportation electrification and is considered in the 2025 IRP load projection assumptions. In calendar year 2024, 5.3% of new vehicle registrations in Manitoba were ZEV[30].

[25] https://tc.canada.ca/en/road-transportation/publications/canada-s-action-plan-clean-road-transportation

[26] https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/provincial-territorial-energy-profiles/provincial-territorial-energy-profiles-manitoba.html

[27] https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/inventory.html

[28] https://apps2.cer-rec.gc.ca/energy-future/?page=landing&mainSelection=&yearId=&sector=&unit=&view=&baseYear=&compareYear=&noCompare=&priceSource=&scenarios=&provinces=&provinceOrder=&sources=&sourceOrder=

[29] https://gazette.gc.ca/rp-pr/p2/2023/2023-12-20/html/sor-dors275-eng.html

[30] https://tdih-cdit.tc.canada.ca/en/search/20100024?appgw_azwaf_jsc=31lKnMElOHcxA7VBodoXz4nevaanD2rWJM5bBdoN-Fw

Table A4.1 - ZEV Sales Targets

Model Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
ZEV sales targets	20%	23%	34%	43%	60%	74%	83%	94%	97%	100%

Although regulations have yet to be drafted, Canada's 2030 Emission Reduction Plan indicated the federal government would also launch an integrated strategy for medium and heavy-duty vehicles. The goal of this strategy would be for nearly all medium and heavy-duty vehicles sold by 2040, "where feasible", to be ZEVs, with an interim goal to achieve 35% medium- and heavy-duty ZEV sales by 2030.[31]

4.6. Increasing Production and Use of Alternative Fuels

The federal government recognizes that electrification is not the only means of reducing emissions in buildings, transportation, and industry. Switching to alternative fuels like biomethane and some types of hydrogen are also options. To complement the Clean Fuel Regulations, Canada launched a Clean Fuels Fund to: de-risk capital investment in new or expanded clean fuel production facilities, such as for biomethane and hydrogen; support the establishment of biomass supply chains used to produce clean fuels; and, address changes in codes, standards and regulations. The Energy Innovation Program provides funding for industrial fuel switching, as well as production of alternative fuels for use in sectors where it is most difficult to reduce emissions. The Canada Infrastructure Bank also offers special financing to support increased production of alternative fuels.

Building on strategies announced by the provinces of British Columbia, Alberta, Ontario, and Quebec, Canada released a national hydrogen strategy in late 2020. The strategy indicates that to increase the cost competitiveness of hydrogen produced with low or no emissions compared to traditional fossil fuels, investments in research and development, as well as the supportive policies and regulations will be needed to support industry adoption. Since that time, the federal government has introduced several programs to increase demand for and supply of hydrogen, including funding through its Net Zero Accelerator initiative and Clean Fuels Fund. A Clean Hydrogen Investment Tax Credit is also in place, providing a credit of up to 30% for equipment used to produce hydrogen through certain processes. Policies to encourage the production and use of alternative fuels support the consideration of alternative fuel resource options as well as the use of alternative fuels by some natural gas customers considered within net-zero load projections.

[31] https://publications.gc.ca/site/eng/9.909338/publication.html

4.7. Government of Canada Incentive Programs

As of December 1, 2024, there were a multitude of Government of Canada energy or climate related financial support programs. Some initiatives can have longer duration due to multi-year funding arrangements while others have limited funding and expire when the initial funds are depleted. Decisions to start and stop funding programs at all levels of government can significantly impact pace of change within the energy landscape as they can alter behaviour and drive adoption of technology. The 2025 IRP considers these factors in decisions of the development of the scenarios and sensitivities. Of all the programs, two of the programs with the most notable impact on the 2025 IRP assumptions were the Incentives for Zero-Emission Vehicles (iZEV) Program[32] and federal investment tax credits (ITCs).

- iZEV: Incentives of up to $5,000 for consumers who buy or lease an eligible battery electric, hydrogen fuel cell, or longer-range plug-in hybrid vehicle.

[32] https://tc.canada.ca/en/road-transportation/innovative-technologies/zero-emission-vehicles/incentives-zero-emission-vehicles-izev?utm_campaign=tc-zev-hub-ongoing&utm_medium=doormat-link&utm_source=zev-hub-incentives-page-en&utm_content=izev-program-light-duty-vehicles

5 Influence of Policy in the MISO Electricity Market

Manitoba Hydro buys and sells electricity within the Midcontinent Independent System Operator (MISO) region. Within MISO's diverse regional footprint, utility members are making plans to build, refurbish and/or retire generation, energy storage and transmission assets, which are influenced by federal, state and local government energy, climate and tax policies. For example, at the federal level, production and investment tax credits can lower the cost to build resources like solar, wind, and energy storage, influencing their inclusion within utility resource development plans. At the state level, legislation aimed at reducing emissions in the electricity sector has had the most impact on the MISO electricity market. Historically, this was achieved through state-level "renewable energy standards" or "renewable portfolio standards" (RPS) which required retail electricity providers to supply a specified minimum percentage of customer demand with eligible sources such as wind, solar, and or hydroelectric generation. More recently, states have shifted to use 'carbon-free' or 'clean' electricity standards, which expand eligible resources to include options like nuclear, energy storage, and fossil fuel generating facilities with carbon capture and sequestration towards achieving net zero electricity. For example, Minnesota has a requirement for 80% of retail electricity sales in 2030 to come from carbon-free sources, increasing every 5 years to reach 100% by 2040[33]

Historically MISO was heavily reliant on coal to produce electricity, but government policy, fuel and resource prices have resulted in a significant build-out of natural gas combustion turbines, wind generation, and solar photovoltaics, to predominantly replace aging coal plants[34]. A January 2025 MISO report projects the MISO system could approach 56 per cent annual electricity generation from wind and solar by 2030[35]. This changing resource mix impacts the price Manitoba Hydro will pay in the future to import electricity from MISO as well as the price it will receive for its exports of surplus electricity.

The load MISO must prepare to serve in the future is also changing. MISO predicts that government policies which have led to more electrification of building heating systems and transportation, along with customers' adoption of behind-the-meter solar generation, will cause utilities that currently reach peak load in the summer, to also reach a similar peak in the winter in the future. A shift to a dual summer and winter peak for utilities in the northern region of MISO could reduce the amount of excess winter capacity available to Manitoba Hydro as a resource option and may increase its price.

[33] https://mn.gov/commerce/news/?id=17-563384#:~:text=View%20entire%20list-,Governor%20Walz%20Signs%20Bill%20Moving%20Minnesota%20to%20100%20Percent%20Clean,Minnesota%20carbon%2Dfree%20electricity%20standard

[34] https://cdn.misoenergy.org/MISO%20Futures%20Report538224.pdf

[35] https://cdn.misoenergy.org/2024%20RRA%20Report_Final676241.pdf