



Updates on 2023 Integrated Resource Plan Near-Term Actions

December 2025



The 2023 Integrated Resource Plan (IRP) identified five near-term actions as part of implementing the 2023 IRP road map. These actions are comprehensive and encompassed ongoing energy planning completed at the time to prepare for a range of potential futures. Each action identifies multiple sub-actions with specific work to be completed over the subsequent five years.

This update summarizes the status of the 2023 IRP NTAs as of December 2025, outlining what has been accomplished and what work will continue. Any remaining or active work is being reflected in the next IRP near-term actions, which build on and therefore supersede the 2023 IRP near-term actions. This update offers insight into how the 2023 IRP is being implemented and provides tangible examples of how Manitoba Hydro is working to ensure our electricity and natural gas supply and delivery systems can meet the needs of our customers for the next 20 years and beyond.

These near-term actions include:



NEAR-TERM ACTION 1:

Actively manage increasing winter peak load.

The first near-term action, to actively manage increasing winter peak load, comes from our learning that all scenarios resulted in increased winter peak demand. Addressing the potential challenge of peak demand can be accomplished through sub-actions that help address the need for capacity without adding new resources.



NEAR-TERM ACTION 2:

Pursue near-term options to be ready for potential rapid demand growth.

The accelerated decarbonization and steady decentralization future described in scenario four had the highest electricity demand in the 2023 IRP. Through the process of developing the plan we also confirmed that the energy transition is happening, that the pace of change is uncertain, and that it could be accelerated by policy. This learning further demonstrates that demand for electricity could be significant, and it could be required quickly in the future. The second near-term action positions Manitoba to be ready for rapid growth in electricity demand.



NEAR-TERM ACTION 3:

Develop options to reduce carbon content in natural gas.

Another learning from the 2023 IRP was the need to plan toward net-zero greenhouse gas (GHG) emissions, including consideration of the carbon content in natural gas. The sub-actions under near-term action three explore the opportunity to leverage existing natural gas assets by using low carbon alternative fuels.



NEAR-TERM ACTION 4:

Enhance integrated resource planning to address evolving needs.

Near-term action four includes evolving our engagement conversations as well as preparing for a more complex energy future.



NEAR-TERM ACTION 5:

Continue planning to meet the challenges of deep decarbonization.

The fifth near-term action focuses on work needed now to ensure Manitoba is ready for a future with deep decarbonization. Modelling and analysis results indicated that as the energy transition moves further towards deep decarbonization, there may be a greater reliance on less mature or developing technology resources to meet customer demand.

Updates on 2023 IRP Near-Term Actions – December 2025

The following sections provide an update on the status of each near-term action (NTAs) sub-actions as of December 2025.



NEAR-TERM ACTION 1:

Actively managing increasing winter peak

1.1 Explore the potential for dual-fuel space heating, including development of a pilot project.

Examine how dual-fuel space heating might reduce peak heating demand and effects on Manitoba's natural gas and electricity systems. Develop recommendations for dual-fuel space heating and explore opportunities to further our understanding of potential applications of dual-fuel solutions.



Status: Active

- ▶ Manitoba Hydro is connecting with Red River College (RRC) Polytech, Efficiency Manitoba and the Canadian Forces Housing Agency on research they are doing to evaluate the effectiveness of cold climate air source heat pumps with electric and natural gas backup (i.e. dual-fuel heating) in several houses in Winnipeg.
- ▶ Manitoba Hydro is exploring the potential to conduct a hybrid (electric/natural gas) space heating study to ensure continued alignment with Manitoba's Affordable Energy Plan's objectives of expanding clean heat to improve affordability and minimize environmental impacts, especially greenhouse gas emissions.



Next steps:

- ▶ Manitoba Hydro will continue its collaboration with RRC Polytech on research related to Winnipeg homes.
- ▶ Initiate hybrid (electric/natural gas) space heating study.

1.2 Pursue high-value energy efficiency measures in collaboration with Efficiency Manitoba.

Explored ways to share and integrate analysis within planning processes between Manitoba Hydro and Efficiency Manitoba to identify additional energy efficiency savings opportunities, and ways Manitoba Hydro could support Efficiency Manitoba in achieving its planned savings, including advancing ground source heat pump installations.



Status: Complete

- ▶ Manitoba Hydro and Efficiency Manitoba collaborated on the assumptions and approach used to incorporate and evaluate energy efficiency within the 2025 IRP.
- ▶ Manitoba Hydro also collaborated with Efficiency Manitoba on their approach to study existing district heating systems in Winnipeg.
- ▶ Discussions explored how Manitoba Hydro could further support Efficiency Manitoba in achieving its planned energy savings.
- ▶ Manitoba Hydro and Efficiency Manitoba established regular information-sharing meetings to support the exchange of planning and program-related information.
- ▶ Manitoba Hydro will continue to enhance information used to model extra energy efficiency potential as a resource option, receiving and incorporating updated market potential data, which has been refined by Efficiency Manitoba.

1.3 Develop demand response product options.

Initiate a business case for the development of an enterprise-wide demand response strategy. This will involve creating a Demand Response (DR) strategy road map which leverages existing work and past studies (ex. [DR Market Potential Study, see page 9](#)), Manitoba Hydro's 2023 IRP, and expertise from both Manitoba Hydro and Efficiency Manitoba. This DR strategy road map will set the foundation to seek approval to obtain resources for DR strategy road map implementation.



Status: Active

- ▶ Business case completed for Manitoba Hydro to explore opt-in Demand Response product options in partnership with Efficiency Manitoba. Initial pilot programs are planned to be offered to a small group of customers in 2026.

1.4 Develop rate design options.

Design and develop a rate-focused pilot program aimed at reducing peak electric load for future implementation. The pilot program will be designed to avoid diminishing the effectiveness of existing or planned programs offered by Efficiency Manitoba or Manitoba Hydro (e.g., other programs developed through near-term Action 1.3 - Demand Response or Curtailable Rate Program).



Status: Active

- ▶ Evaluating several demand response concepts related to rates and identifying the most suitable options for near-term implementation.



NEAR TERM ACTION 2:

Pursue near-term options to be ready for potential rapid demand growth.

2.1 Pursue cost-effective enhancements to existing hydropower plants.

Advance planning for supply side enhancement to existing hydropower stations by

1. updating the inventory and corresponding cost estimates of potential supply enhancements for all existing stations for future resource planning and
2. advance planning for enhancements to Lower Nelson River (LNR) stations, including Limestone, Long Spruce, and Kettle, through Manitoba Hydro's Staged Planning Process. This better enables these resource options to be selected in the capacity enhancement model economic optimization.



Status: Complete

- ▶ Undertook long-term resource planning activities that further examined the value of supply side enhancements and updated estimates for supply side enhancements to be included in the next IRP.

2.2 Increase readiness for new resources including minimizing lead times to initiate, plan and construct.

Prepares for an accelerated pace of change by increasing readiness for new resources, including minimizing lead times.



Status: Complete

- ▶ Project schedules are in progress for both wind and dispatchable resources and are being reviewed for schedule optimization. Both wind and dispatchable resources projects are being advanced through necessary reviews and approvals in accordance with policy and regulations and through continuing efforts outlined in future Integrated Resource Planning.

2.3 Prepare detailed plans for high potential near-term new resources, such as wind and dispatchable capacity.

Advance planning for high potential near-term new resources (dispatchable resources and wind) as a near-term option to be ready for potential rapid demand growth. This action was accomplished by advancing technologies through Manitoba Hydro's Stage Planning Process (i.e., from inventory to concept) while completing a joint planning study with Manitoba Hydro Grid Infrastructure Planning & Energy Resource Planning to determine interconnection locations, capacities and costs..



Status: Complete

- ▶ Planning has been advanced for both the wind and dispatchable resource projects, and detailed execution schedules have been created with in-service dates. Both projects are being advanced through necessary reviews and approvals.

2.4 Establish a range of potential resource development plans that meet Manitoba's future capacity and energy needs.

Examine development plans that identify resources, detailing their type, capacity, and sequencing. They will also assess key decision points and outline necessary activities to achieve the in-service dates.



Status: Complete

- ▶ Since publishing the 2023 IRP, Manitoba Hydro continued with ongoing planning activities and completed long term resource planning analysis to help establish the need date for new resources and inform the next IRP.

2.5 Develop grid modernization and expansion strategies to enable future peak demand growth and enhance operations.

Develop grid modernization and expansion strategies to enable future peak demand growth and enhance operations by addressing priority recommendations identified in the Grid Modernization Plan (GMP) road map that can be undertaken in the near-term. Continue to monitor and support the implementation of the GMP and mature grid-level forecasting, modelling and analysis to support the 2025 IRP..



Status: Complete

- ▶ An updated GMP road map was completed. A high-level implementation planning of recommended actions was initiated, ensuring alignment with other corporate initiatives such as advanced metering infrastructure and demand response.



NEAR TERM ACTION 3:

Develop options to reduce carbon content in natural gas.

3.1 Develop renewable natural gas market participation structure.



Status: Merged with 3.2

3.2 Continue investigation of renewable natural gas market and supply potential.

Develop a pathway to serve customers through a renewable natural gas (RNG) distribution-only strategy. Along with an implementation pathway, this action will also include obtaining regulatory approval of the methodology, distribution rate structure and terms and conditions. Depending on priorities, direction, and resource availability, this could also include investigating alternative RNG participation pathways that may be beneficial to Manitoba Hydro.



Status: Active

- ▶ Manitoba Hydro expanded the initial scope to explore additional potential solutions for renewable gas injection to ensure the pathway recommended considers a net-zero electricity grid as outlined in the Affordable Energy Plan and as modeled in the 2025 IRP.

»»» Next steps:

- ▶ Finalize a recommended strategy that considers the 2025 IRP recommended development plan.

3.3 Investigate hydrogen blending feasibility and market potential.

Review and participate in research to inform future projects and evaluate the readiness and effects of blending hydrogen in natural gas distribution networks, including analysis of existing research and projects. This will include an engineering assessment of Manitoba Hydro's natural gas distribution infrastructure, with an associated cost estimate to implement blending, to better understand the feasibility of hydrogen blending within existing infrastructure.



Status: Complete

Manitoba Hydro has undertaken the following actions to better understand market potential, existing infrastructure compatibility, regulatory framework and approval requirements, and value of cost avoidance for GHG reductions:

- ▶ Participating in industry research projects on hydrogen blending for various appliances.
- ▶ Serving on Canadian Standards Association (CSA) committees to develop future codes (Clause 17 of CSA Z662).
- ▶ Attending national conferences on hydrogen blending.
- ▶ Collecting information from other Canadian utilities conducting pilot programs.



NEAR TERM ACTION 4:

Enhance integrated resource planning to address evolving needs.

4.1 Continue building the energy planning community and evolve engagement with interested parties, including Indigenous Nation and community leadership, as well as representation from a variety of customer segments.

Leverage current best practices and seek feedback when designing engagement activities. Support the continuous improvement of IRP engagement by integrating energy planning topics into ongoing engagement processes with customers, Indigenous Nations, municipalities, key customer sectors, and interested parties.



Status: Complete

- ▶ Completed structured interviews with participants of 2023 IRP interested parties engagement to capture lessons learned to inform future engagement approaches. This resulted in the establishment of a 2025 IRP Technical Advisory Committee.
- ▶ Implemented ongoing engagement in energy planning through conversations to better understand future energy needs and goals from large customers, municipalities, and Indigenous leadership.
- ▶ Implemented approaches to evolve Indigenous engagement, including leadership surveys energy planning workshops, and energy planning liaison positions.
- ▶ Advanced strategic opportunities to better understand, learn from, and inform others' energy planning efforts, including the City of Winnipeg.

4.2 Develop a framework to evaluate total energy-related costs to help Manitobans understand the implications of future energy choices.

Develop evaluation frameworks to guide strategic decisions at the utility level and guide how utility and customer decisions affect total energy costs.



Status: Complete

- ▶ Four evaluation themes with associated evaluation metrics have been established and will be implemented in the 2025 IRP.

4.3 Study the evolving role of energy markets and interconnections.

Study changes in the U.S. energy landscape and their potential impacts for incorporation into future planning, including the opportunity to build upon existing interconnections and look for opportunities as energy markets evolve.



Status: Complete

- ▶ Investigated the feasibility of short-term import options.
- ▶ In 2025, secured winter capacity through diversity agreements.

4.4 Advance detailed planning to reflect regional variations across Manitoba.

Advance detailed regional planning to address specific energy needs across Manitoba, foster integration across planning sectors, and develop tools to enhance collaboration by way of understanding the current state of processes and uses for regional planning, outlining challenges and opportunities, and outlining future state and recommended actions.



Status: Complete

- ▶ Manitoba Hydro has designed a sample set to enhance zonal load profiles, and execution has begun with results expected in 2026/27.
- ▶ Discussions on joint load forecasting and regional issues continue between transmission and distribution planning groups within Manitoba Hydro.



NEAR TERM ACTION 5:

Continue planning to meet the challenges of deep decarbonization.

5.1 Determine impacts of integrating variable renewable resources like wind, including transmission requirements.

Prepare for impacts of wind power greater than 500 MW by supporting resource and transmission planning, distribution engineering, and engagement.



Status: Complete

- ▶ Planning has been advanced for incorporating additional wind resources into the existing Manitoba Hydro system and impacts are being evaluated.



Next steps:

- ▶ Additional studies of higher levels of wind or other variable resources on the Manitoba Hydro system will be determined based on the outcomes of the 2025 IRP.

5.2 Identify and assess the potential of hydrogen supply, direct use, storage and other infrastructure.

Evaluate hydrogen supply and production options, assess market potential and infrastructure requirements along with determining the associated greenhouse gas reduction costs to inform decision-making on whether Manitoba Hydro should be a hydrogen direct use supplier or not.



Status: Complete

- ▶ Manitoba Hydro continues to monitor and investigate hydrogen supply and production options, as well as assess market potential and infrastructure requirements.

5.3 Explore the potential long-term role for technologies such as energy storage, carbon capture and storage, hydrogen fueled combustion turbines, biomass, and small modular reactors.

Investigate emerging technologies to meet future demand and the challenges of decarbonization by developing an inventory of technologies to decarbonize the system. This will consider the costs and benefits of different generation sources along with further investigating the feasibility of installing hydrogen combustion turbine technology for electricity generation.



Status: Complete

- ▶ Manitoba Hydro is working with industry partners on:
 - Technologies to support a low carbon grid such as carbon capture sequestration and utilization, nuclear energy, and wind energy.
 - Low carbon and carbon free fuels for combustion turbine generating stations.
 - Energy storage options including chemical, mechanical, and thermal types.
 - Manitoba Hydro monitors emerging technologies for consideration in resource planning processes and will continue to work with industry partners to advance and finalize emerging technology studies.
- ▶ Continue to monitor emerging technologies for consideration in resource planning processes.



Next steps

Near-term actions from the 2023 IRP have provided a structured foundation to advance priority planning initiatives and build organizational readiness for an evolving energy landscape. Through their implementation, Manitoba Hydro has strengthened planning capabilities, enhanced collaboration across internal and external partners, and generated insights that inform future decision-making.

This update concludes the 2023 IRP near-term actions. Any remaining or ongoing work has been integrated into broader planning activities and carried forward into the next IRP. In this way, near-term actions continue to play a critical role in bridging long-term planning objectives with near-term execution. Manitoba Hydro will continue to evolve its integrated resource planning processes by applying lessons learned through the implementation of these actions and adapting to changing system needs, customer preferences, and policy direction.