2023 INTEGRATED RESOURCE PLAN ENGAGEMENT REPORT

Manitoba Hydro
energy for life

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EXECUTIVE SUMMARY

The energy transition is underway in Manitoba. How energy is produced and delivered is changing; how and when customers use energy and the type of energy they use is also changing. Manitoba Hydro's 2023 Integrated Resource Plan (IRP) is a tool to understand and prepare for our province's future energy needs.

After more than two years of conversations with thousands of Manitobans like you, we're proud to share our first-ever Integrated Resource Plan. An IRP is a planning tool to understand and prepare for our future energy needs, so that our electricity and natural gas supply and delivery systems meet the needs of our customers for the next 20 years and beyond. Developing the 2023 IRP involved understanding customers needs and future energy decisions they may make, so we could inform energy planning with a Manitoba context. This engagement also provided transparency in the energy planning process.

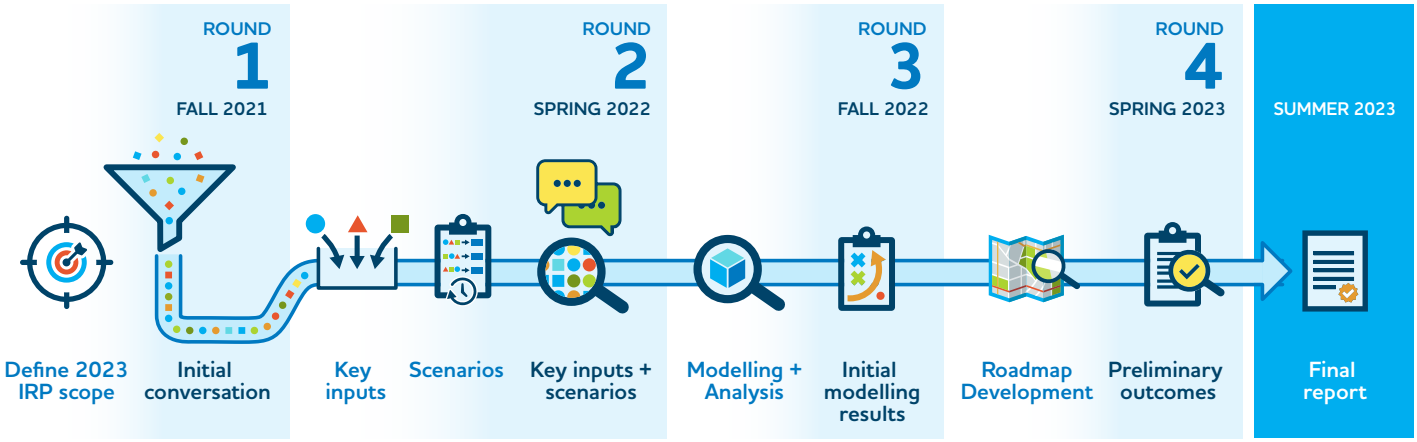
Inclusive and meaningful engagement was foundational to the development of our first IRP and we valued the opportunity we had to learn. It included multiple opportunities to engage in the development of the IRP with our customers and interested parties. We held four rounds of engagement that were multifaceted and spanned 18 months from fall 2021 to spring 2023.

Your voice matters.

Input from our customers and interested parties is crucial to developing the IRP.

Hearing from you helps us better understand your changing needs and priorities. Will you rely on different types of energy than you do today to power your travel or heat your home/buildings? Will you generate your own electricity? Your feedback will help us as we plan for and navigate Manitoba's evolving energy landscape.

We will continue to listen and work together with Manitobans and the energy planning community to navigate the energy transition so we can continue planning for the safe, reliable, and low-cost energy you count on from Manitoba Hydro.



IRP DEVELOPMENT & ENGAGEMENT PROCESS

WHAT WE ASKED

Each round of engagement sought feedback on specific components of the IRP development process.

ENGAGEMENT ROUND	WHAT WE ASKED
1 Initial conversation	• What may be customers' future energy choices? What is important to customers in these decisions?
2 Key inputs & scenarios	• Have we captured the most relevant key inputs that will significantly impact energy needs in the next 20 years? • Are the proposed scenarios reflective of the likely potential energy futures in Manitoba?
3 Initial modelling results	• What other analysis does the model need to consider? • Are there considerations that could significantly impact our understanding of potential energy futures in Manitoba?
4 Preliminary outcomes	• Which near-term actions are a priority for you? • Which signposts do you think will have the biggest influence on the evolving energy landscape in Manitoba? • Are there additional signposts that should be monitored?

HOW WE LISTENED

Each round of engagement sought feedback on specific components of the IRP development process. Several core engagement opportunities included:

INITIAL CUSTOMER SURVEY
14,973 responses

PROJECT WEBSITE
27,616 unique views

INTERESTED PARTIES
14 workshops

PROJECT NEWSLETTER
5,000 subscribers

FOCUS GROUPS
21 participants

CUSTOMER INSIGHTS
20 interviews & surveys

What did we hear and how was it used to develop the 2023 IRP?
Look for this icon throughout the IRP report to see how engagement informed and influenced each step of the development process.

WHAT WE HEARD & WHAT WE DID

ENGAGEMENT ROUND	WHAT WE HEARD	WHAT WE DID WITH FEEDBACK
1  **Initial conversation** **Nearly 15,000 survey participants!**	• Customers strongly motivated by cost and affordability. • Reliability and environmental concerns important. • Engaged and interested in how rates are structured. • Electric vehicles increasingly in near-term plans. • Not looking to electrify their natural gas uses. • Quick adoption of self-generation not expected.	• Confirmed scope of the 2023 IRP. • Informed future development phases.
2  **Key inputs & scenarios**	• Confirmed key inputs creating the most uncertainty and the biggest influence in Manitoba. • Confirmed scenarios are appropriate bookends for the evolving energy landscape, so long as there is a pathway towards net-zero GHG emissions.	• Confirmed scenario 4 allows for a pathway to net-zero GHG emissions. • Refined input details and assumptions.
3  **Initial modelling results**	• More analysis of customer self-generation, solar needed. • Analysis of ground source heat pumps, including use in district heating, needed. • Analysis needed to consider how large customers can help manage peaks. • Further work needed to consider potential of hydrogen production for transportation. • Further analysis needed to consider rate impacts and customer costs.	• Additional sensitivity modelling & analysis completed: customer solar generation, ground source heat pumps, demand response. • Some suggested sensitivities deferred to possible future IRP analysis.

4  **Preliminary outcomes**	• Near-term actions are comprehensive.
	• Some clarifications on scope of near-term actions would help understanding.
	• Government actions will have the biggest influence and are a key signpost to monitor.
	• There is a desire to continue engaging in the implementation of the Road Map.
		• Confirmed IRP Road Map, including near-term actions and signposts.
		• Confirmed intent to continue engaging on energy planning.
		• In the IRP Report:
		  • Clarified descriptions of near-term actions.
		  • Added details into the signposts.

Table of Contents

1.0 INTRODUCTION

Manitoba Hydro is an integrated utility, which supplies and delivers electricity and natural gas to customers across the province. After more than two years of conversations with thousands of Manitobans like you, we're proud to share our first-ever Integrated Resource Plan. An IRP is a planning tool to understand and prepare for our future energy needs, so that our electricity and natural gas supply and delivery systems meet the needs of our customers for the next 20 years and beyond.

As one of the largest integrated electricity and natural gas utilities in Canada, we are uniquely positioned for the combined study of natural gas and electricity solutions to prepare for the energy transition. The results presented in the 2023 IRP are directional in nature, with a focus to understand and plan to meet the future energy demands and not structured to support specific resource development decisions.

Inclusive and meaningful engagement was foundational to the development of the 2023 IRP. Engagement helped us to understand how the future energy needs of the province might unfold and consider unique and diverse customer perspectives and values. We valued the opportunity to listen and have a dialogue with our customers and interested parties that helped inform the 2023 IRP with the Manitoba context. Engagement complemented the development process, with each round of engagement aligned to inform key IRP development milestones.

While there is still much uncertainty in what the future will be, or how fast change will happen, the 2023 IRP has established a foundation through a repeatable process Manitoba Hydro can use to plan for this uncertainty. We will continue to evolve our IRP development process, our engagement and build the energy planning community so we can work together to manage the energy transition for the benefit of all Manitobans.

Supplying Energy for Life in Manitoba

We are a responsive, reliable supplier of electricity and natural gas to our customers.

SERVICE AREA
650,000
square kilometres

NUMBER OF ELECTRIC CUSTOMERS
608,554

NUMBER OF NATURAL GAS CUSTOMERS
293,256

1.1 REPORT OUTLINE

This report provides a detailed description of how engagement informed the development of the 2023 IRP. This report has been divided into the following sections.

Section 1: Introduction – introduces the IRP and provides an outline of this report.

Section 2: Engagement Overview – highlights the overall purpose, process, and engagement opportunities that have taken place to develop the 2023 IRP and summarizes the marketing and communications approach.

Section 3: Rounds of Engagement – details each round of engagement including core objectives, engagement opportunities, outcomes from engagement including what was heard and how it was incorporated in the IRP development process, as well as lessons learned.

Section 4: Next Steps – identifies the next steps for engagement as part of planning and implementation of near-term actions.

2.0 ENGAGEMENT OVERVIEW

This section describes the approach to engagement for the 2023 IRP, including: the goals and objectives; the structure of the engagement process and opportunities to engage; and, the supporting communications approach.

2.1 GOALS AND OBJECTIVES

The focus of the 2023 IRP was to understand the changing energy landscape and how it may impact the way we serve our customers on both electric and natural gas supply and delivery systems. The results presented in the 2023 IRP are directional in nature and not structured to support specific resource investment decisions. The goal of engagement was to connect with customers, interested parties, and the public, to share information throughout the IRP development process and collect feedback to inform the 2023 IRP. Our engagement efforts were focused on: keeping interested parties informed and bringing them along the journey of developing an IRP; seeking specific feedback and listening to what was shared; seeking a diversity in perspectives engaged; and, providing updates on how feedback informed the 2023 IRP.

The approach to engagement not only accounted for the broad analysis of the 2023 IRP, but also sought to inform the 2023 IRP with a Manitoba context. The overall objectives of engagement were set to reflect the scope of the 2023 IRP:

- inform customers, interested parties, and the public about the IRP, including building understanding around key concepts of energy planning.
- engage Manitobans to better understand customer needs and perspectives related to current and future energy use to inform the IRP.
- initiate a dialogue with interested parties that includes diverse perspectives on the evolving energy landscape in Manitoba.
- inform Manitobans of the 2023 IRP outcomes and establish a repeatable process that could be built upon to continue informing future energy planning.
- develop and implement an engagement process that was valid, meaningful, and inclusive. This includes increasing openness and transparency in the process through the development of plain language and user-friendly engagement materials.

The approach to engagement within the 2023 IRP was guided by the International Association of Public Participation's (IAP2) pillars for effective engagement. This included the use of the spectrum of public participation as shown in Figure 1. The IAP2 spectrum is a tool used as part of designing an engagement process; it supports the formulation of specific public participation goals, describes the commitment to the public, and guides engagement practitioners in selecting appropriate engagement tactics and tools. Each level of engagement reflects a different level of impact members of the public have on a decision-making process. The goals and objectives for

engagement determine the "Promise to the Public" with respect to the level of impact the public will have on decision making.

INCREASING IMPACT ON THE DECISION

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

Figure 1 - Spectrum of Public Participation (©International Association of Public Participation)

Given the nature of the IRP engagement goals and objectives, we planned engagement with customers and interested parties at the "inform" and "consult" levels of participation on the IAP2 spectrum. For each round of engagement, we evaluated the specific level of participation by considering the specific goals of the engagement round, audiences targeted, and feedback sought. Following this evaluation, we selected engagement methods and tools for sharing information and receiving feedback to inform the IRP.

2.2 ENGAGEMENT PROCESS

The design of our IRP development process identified major milestones where engagement could be received and considered. This allowed us to inform the 2023 IRP with valuable feedback as it was developed and enable meaningful participation in the process.

There were multiple opportunities to engage in the development of the 2023 IRP. We held four rounds of engagement that spanned 18 months from fall 2021 to spring 2023. We designed each round of engagement to inform key stages of the IRP development process, shown in Figure 2.

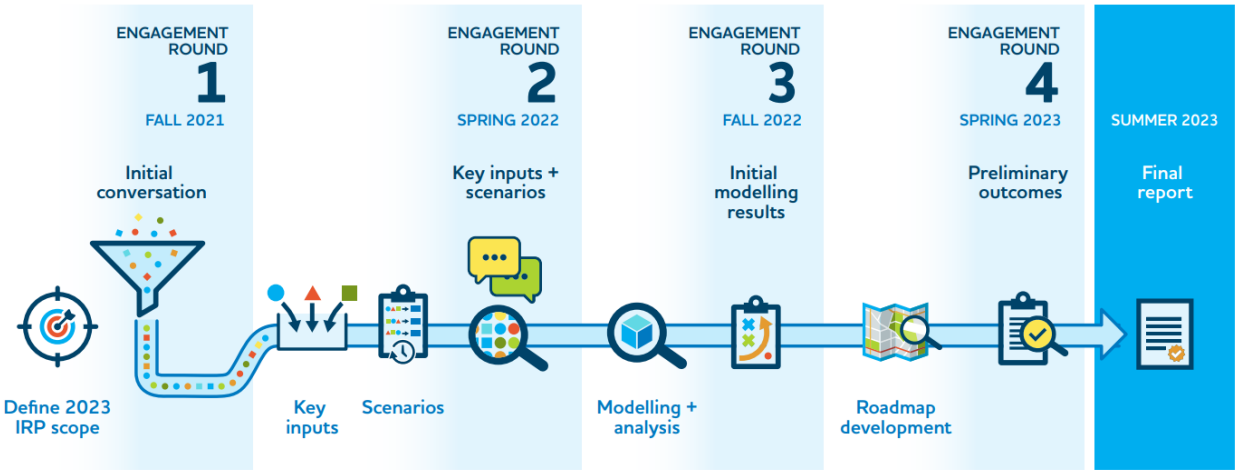


Figure 2 - 2023 IRP Engagement & Development Process

Engagement opportunities varied by group and were responsive to feedback received throughout the process to improve clarity and support effective participation. A summary of engagement opportunities for each phase is provided below.

The design of the engagement process accounted for changing public health guidance related to the COVID-19 pandemic. Most engagement opportunities used virtual techniques to encourage participation among those who might otherwise have been hesitant to attend an in-person event. Using a virtual approach not only addressed health related concerns but also allowed for participants across the province to contribute without the need for travel.

2.3 ENGAGEMENT OPPORTUNITIES

Different engagement opportunities were developed for each round of engagement to support specific steps in the development of the 2023 IRP. Each engagement opportunity was designed for the specific audiences engaged. Table 1 below provides a summary view of the core engagement opportunities that informed the IRP.

	GOAL	PURPOSE	ENGAGEMENT OPPORTUNITIES	TIMING
ROUND ONE INITIAL CONVERSATION	Start the conversation and understand what customers value and any future energy decisions they may be contemplating.	Understand Manitobans' values, perspectives and intentions related to current and future energy use.	• Customer Survey • IRP Website Launch • E-mail Subscription Launch	November-December 2021
ROUND TWO KEY INPUTS AND SCENARIOS	Ask for feedback on the key inputs and scenarios that form backbone of IRP modelling and analysis. Seek perspectives from typically underrepresented populations and large customer segments to understand future planning and decision making that should be considered in the 2023 IRP.	Confirm which key inputs will significantly influence Manitoba's energy future, and which combination of future scenarios capture a reasonable range of energy futures for Manitoba.	• 3 Focus Groups (typically underrepresented populations) • 20 Large Customer Conversations and Targeted Surveys • 5 Online Workshop Sessions • Self-Serve Recorded Presentations on IRP Website • Subscriber E-mail • Customer Survey	March-May 2022
ROUND THREE INITIAL MODELLING RESULTS	Help participants understand the 2023 IRP modelling process and review the initial modelling results. Seek feedback on additional modelling and analysis that should be considered within the 2023 IRP.	Inform participants about energy use in Manitoba, the 2023 IRP modelling process and how it informs energy planning.	• 1 Online Information Session • Self-Serve Recorded Presentations on IRP Website	November 2022
		Share initial modelling results for feedback and identify other sensitives that should be modelled.	• 5 Online Workshop Sessions • Self-Serve Recorded Presentations on IRP Website • Subscriber E-mail • Customer Survey	December 2022
ROUND FOUR PRELIMINARY OUTCOMES	Share completed modelling and analysis results and how additional analysis informed the 2023 IRP road map. Present the draft road map. Seek feedback on what near-term actions were most important and what signposts would have most influence.	Present and get feedback on draft preliminary findings including the road map learnings, near-term actions and signposts.	• 4 Online Workshop Sessions • Self-Serve Recorded Presentations on IRP Website • Subscriber E-mail • Customer Survey	April-May 2023

Table 1 - Engagement Opportunities Overview

2.4 ENGAGED PARTIES

Careful consideration and use of the IAP2 spectrum helped define the public's role and participation goals within the engagement process. The IAP2 spectrum supported the overall design of the engagement process and influenced the selection of appropriate engagement tools and techniques. Several groups were identified as being important to engage with as part of developing the 2023 IRP. The table below summarizes the general approach by group.

We followed a step-by-step process to engage with different groups for each round of the engagement process:

Step one: Connect with key departments from the Province of Manitoba to inform them of the content for the specific round of engagement. Share planned engagement opportunities, as well as to coordinate engagement opportunities for public sector staff.

Step two: Discussions with Efficiency Manitoba to support alignment.

Step three: Engagement with identified audiences to share information and seek feedback. Efficiency Manitoba and Province of Manitoba were invited to observe interested parties' sessions.

Step four: Province of Manitoba departments were invited to dedicated engagement opportunities for public sector staff.

Step five: Updates were provided to the general public through our dedicated project website and emails to our nearly 5,000 subscribers.

ENGAGED GROUP	ENGAGEMENT APPROACH
GENERAL PUBLIC	Broad engagement efforts focused on members of the public in Manitoba. • Round one customer survey, supported through marketing, such as paid media, bill inserts, direct emails, and distribution of paper-based surveys. • Members of the public who subscribed to the IRP emails (approximately 5,000 subscribers) received updates with self-serve presentation content, customer surveys to provide input, and engagement summaries sharing what was heard in each round of engagement. • The public website also featured all materials used in IRP engagement, including presentation content, supporting materials, and engagement summaries. A link was also available for any members of the public who wanted to subscribe to the IRP emails at any point throughout the development process.
INTERESTED PARTIES	Interested parties are any individual or group with a representative voice and demonstrated interest in participating in the development of the 2023 IRP.

	The interested parties engagement focused on bringing diverse perspectives together from a variety of specific groups: • Academia • Associations – Sector and Community • Economic Development Organizations • Efficiency Manitoba • Indigenous Organizations • Manitoba Hydro Commercial and Industrial Customers • Non-governmental Organizations – Social and Environmental • Public Institutions (Municipalities, Government Departments) Approximately 120 groups were invited to participate in the interested parties engagement as they met the following criteria: • Could bring representative or collective perspectives to the discussion. • Had a role or focus (through mandate or research) on energy planning, or knowledge of key factors that could influence energy demand in Manitoba. • Important for them to understand the IRP development as part of their organization's mandate and objectives. • Had a demonstrated interested in energy planning or energy policy. Several interested parties that identified an interest were added during the process and large customers who participated in round two customer research interviews were also invited to join this group.
PROVINCIAL GOVERNMENT DEPARTMENTS	Pre-engagement meetings were held with the Department of Finance and the Department of Environment and Climate in advance of each external engagement round. The purpose of these meetings was to communicate what would be shared in engagement, how engagement was taking place, who would be engaged, and understand if there were any areas of misalignment. These pre-engagement meetings were also an opportunity to understand how the Government of Manitoba would like to be further engaged in the round of engagement to provide feedback into the development of the IRP. For engagement rounds two, three and four, dedicated public sector workshop sessions were held for any government departments interested in participating. The sessions used the same materials as for the interested parties' workshop and sought the same feedback. Staff from the Department of Finance and the Department of Environment and Climate were invited to observe interested parties workshop sessions.
EFFICIENCY MANITOBA	We regularly engage and collaborate with Efficiency Manitoba. The focus for IRP engagement was on incorporating efficiency programming and plans into the 2023 IRP. Before the interested parties' workshops, the materials were shared with Efficiency Manitoba to ensure alignment of the results and messaging. Staff from Efficiency Manitoba were invited to observe interested parties workshop sessions.

Table 2 – Engaged Group and General Engagement Approach

WHO WE HEARD FROM

Throughout the engagement process, we worked to gather diverse perspectives from a broad range of customer segments and interested parties across Manitoba. The table below focuses on who participated in the 2023 IRP engagement process.

FORUM		DESCRIPTION

Round One – Customer Survey
• November – December, 2021
		14,973 public survey respondents.
		• 93.4% residential customers, 3.8% customers working or living on a farm, 1.4% other, 1.1% commercial customers, 0.3% industrial customers.
		• Responses were geographically comparable to Manitoba Hydro service districts. 56% Winnipeg, 15% South Central, 12% Eastman, 6% Parkland West, 7% Interlake North.
		• Survey responses included an under-representation from the following groups:
		  • People identifying as female
		  • Lower income households
		  • Youth (Under 35)
		  • People identifying as Indigenous
		These underrepresented groups were targeted through focus groups in round two engagement activities.

Round Two – Focus Groups • March 22-24, 2022		21 Manitoba Hydro customers participated in three virtual focus groups including a mix of under-represented population segments identified in the public survey. • Three focus groups were held, two conducted with Manitobans aged 18-25, one with women ages 26+ • Each group included seven participants for a total of 21 participants. • In each group, at least three participants self-identified as Indigenous, and at least three came from low-income households (less than $75,000 combined household income)

<table>
<tr><th>FORUM</th><th colspan="2">DESCRIPTION</th></tr>
<tr><td>Round Two – Large Customer Research Interviews
April-May, 2022</td><td>  </td><td>20 large industrial and commercial customers, including public sector customers as well as large transportation users and those with fleets were invited to participate in an interview or respond to a survey.</td></tr>
<tr><td rowspan="2">Interested Parties Workshops

Round Two:
Interested Parties Workshops: April 20 & 21, 2022
Academic Workshop May 9, 2022
Round Three:
Interested Parties & Academic Information Session: November 17, 2022
Interested Parties Workshops: December 2 & 7, 2022
Academic Workshop: December 5, 2022</td><td>  </td><td>Approximately 120 groups that met the established criteria in Table 2 were invited to participate, in total 55 groups participated in the interested parties engagement throughout the development of the 2023 IRP.</td></tr>
<tr><td colspan="2">Academics and Academic Institutions:

Each of Manitoba's 14 post-secondary institutions were contacted, asking them to identify individuals who were experts in net-zero and/or energy planning. In addition, three known academic experts were directly invited. For rounds two and three, academics were provided with dedicated sessions. In order to work towards building a shared understanding of perspectives, academics were incorporated as part of the broader interested parties group for round four.

The following 9 academic institutions attended at least one engagement session:
Assiniboine Community College
Canadian Mennonite University
University of Winnipeg
University of Winnipeg Office of Sustainability
Red River College Polytech
University College of the North
University of Manitoba
University of Manitoba Office of Sustainability
University of Victoria</td></tr>
</table>

FORUM	DESCRIPTION
Round Four: • Interested Parties Workshops: April 26 & May 9, 2023	**Municipalities:** A broad invitation was sent to general contact emails at municipalities across Manitoba as part of round one. The following 5 municipalities attended at least one engagement session: • City of Brandon • City of Portage La Prairie • City of Steinbach • City of Winnipeg • City of Winkler
	Indigenous Organizations: A broad invitation was sent to Indigenous organizations that met the identified criteria. The following 3 organizations attended at least one engagement session: • Manitoba Keewatinowi Okimakanak • Manitoba Métis Federation • Southern Chiefs Organization
	Associations: A broad invitation was sent to associations that met the identified criteria. The following 22 associations attended at least one engagement session: • American Society of Heating, Refrigeration and Air-Conditioning Engineers • Bioscience Association of Manitoba • Building Owners and Managers Association of Manitoba • Canadian Fuels Association • Canadian Gas Association • Canadian Hydrogen and Fuel Cell Association • Canadian Manufacturers and Exporters • Electrical Contractors Association of Manitoba • Keystone Agricultural Producers • Manitoba Aviation Council • Manitoba Contractors Association of Manitoba • Manitoba Electric Vehicle Association • Manitoba Energy Council • Manitoba Environmental Industries Association

FORUM	DESCRIPTION
	• Manitoba Geothermal Energy Alliance • Manitoba Heavy Construction Association • Manitoba Home Builders Association • Manitoba Industrial Power Users Group • Manitoba Motor Dealers Association • Manitoba Sustainable Energy Association • Manitoba Trucking Association • Northern Association of Community Councils
	Economic Development Groups: A broad invitation was sent to economic development groups that met the identified criteria. The following 8 economic development groups attended at least one engagement session. • Business Council of Manitoba • Communities Economic Development Fund • Economic Development Winnipeg • Manitoba Chamber of Commerce • Northern MB Sector Council • Rural Manitoba Economic Development Corporation • Steinbach Chamber of Commerce • Vehicle Technology Centre
	Environmental Non-Governmental Organizations: A broad invitation was sent to environmental organizations that met the identified criteria. The following 8 environmental organizations attended at least one engagement session: • Climate Change Connection/Climate Action Team • Climate West • Eco-West/Eco-Ouest • Energy Sector Alliance Manitoba • Green Action Centre • International Institute for Sustainable Development • Manitoba Eco-Network • Manitoba Energy Justice Coalition • Sustainable Building Manitoba

FORUM	DESCRIPTION	
	Non-Governmental Organizations with Social Mandate: A broad invitation was sent to non-governmental organizations with a social mandate that met the identified criteria. The following 3 organizations attended at least one engagement session. • Canadian Centre for Policy Alternatives • Social Planning Council of Winnipeg • Public Interest Law Centre	
	Invited Large Customers from Round Two Engagement: As part of the large customer interviews, several industrial and large customers (including governments) were invited to attend the interested parties sessions. The energy consumption of our top energy users has a significant impact on our energy systems. Collecting feedback and data from these customers helps inform the IRP with a more accurate Manitoba context.	
Provincial Public Sector Workshops • May 12, 2022 • December 13, 2022 • May 10, 2023		To enhance coordination with the Province of Manitoba any departments interested to attend dedicated public sector workshops sessions throughout engagement rounds two, three and four were invited to attend. The following public sector attendance took place over three workshops: • Round two - 23 attendees from 16 unique departments. • Round three - 10 attendees from 7 unique departments. • Round four - 22 attendees from 14 unique departments.
Efficiency Manitoba Workshops • May 5, 2022 • December 1, 2022 • April 21, 2023		To enhance coordination and collaboration, Efficiency Manitoba engagement included key groups in dedicated workshop sessions throughout engagement rounds two, three, and four. • Round two - 10 attendees • Round three - 6 attendees • Round four - 5 attendees
Public Utilities Board Information Sessions • January 11, 2023 • October 3, 2023		Two informational presentations were made to the Public Utilities Board to provide comprehensive information on the 2023 IRP development process. The first session followed the third round of engagement, and a second presentation took place to present the completed 2023 IRP.

2.5 MARKETING AND COMMUNICATIONS

Several different methods were used to communicate throughout the IRP development process. Generally, the subscriber emails and project website were used to communicate more broadly. Direct emails were used to connect with interested parties engagement participants. Any materials referenced or linked in these direct emails was posted on Manitoba Hydro's website, to ensure everyone had access to the same information. All project materials were translated to French. Efforts were made to accommodate accessibility through document design and by making transcripts available for recorded presentations. The following project communications efforts supported the IRP development:

Project Branding: An IRP globe graphic was created and is featured on most of the communications materials for the 2023 IRP. This globe represents how the world is changing through strategically placed energy resource options such as wind, solar, and hydropower, along with an electric vehicle. This branding was created to establish a unified, easily recognizable visual identity for the 2023 IRP so all material worked together to cumulatively promote awareness and engagement in the IRP development process. Additional graphic design components featured within most presentations and website further established this visual identity, including infographics used to provide simple, clear illustrations of related concepts or processes, such as how each round of engagement conversations informed the 2023 IRP development process.

27,616 Unique Visits

Project Website: The 2023 IRP website: www.hydro.mb.ca/future hosted publicly available information, including educational and self-serve engagement materials from each round of engagement. Throughout the project, the website received nearly 28,000 unique visitors. The website featured recorded video presentations, which have had a combined total of over 500 views, several plain language documents clarifying key details, as well as What We Heard documents that summarize engagement feedback. The website also enabled people to sign-up for the IRP email subscription.

4,927 Subscribers

Subscriber Emails: The public was invited to sign up to receive subscriber email updates through the round one engagement customer survey and directly through the website. Nearly 5,000 subscribers requested and received email updates throughout the development of the 2023 IRP. Subscribers demonstrated a high level of interest with an average of 76% opening emails. At each round of engagement, we tailored the information shared and welcomed their feedback through customer surveys or by emailing a dedicated IRP email address (IRP@hydro.mb.ca).

3.0 ROUNDS OF ENGAGEMENT – YOU SHARED, WE LISTENED

This section provides a detailed overview of what occurred in each round of engagement and how it informed the 2023 IRP. For each round of engagement, we describe the following:

- **Goals and objectives:** articulates the focus of each engagement round.
- **What we asked:** core questions asked, and input sought for each engagement round.
- **How we listened:** engagement methods selected and summary of participation.
- **What we heard:** a description of feedback sorted by engagement method including a summary the key findings.
- **What we did:** a summary of how engagement feedback informed the 2023 IRP.
- **Lessons learned:** opportunities identified for improvement.

3.1 ROUND ONE – INITIAL CONVERSATION

This section provides an overview of round one engagement. Supporting materials for this round including the customer survey and survey analysis can be found in **Appendix A – Supporting Materials**.

GOALS AND OBJECTIVES

As part of starting this initial conversation in November 2021, our goal was to understand what customers value and any future energy decisions they may be contemplating. The objectives for the first round of engagement included:

- Raise awareness about the 2023 IRP.
- Understand customer values and perspectives related to the energy they use today and plan to use in the future.
- Confirm key considerations within the IRP scope.
- Build a group of interested customers who want to learn more about energy planning and continue to share their unique perspectives to inform the IRP development process.
- Provide a broad engagement opportunity that was easy to access across the province.

WHAT WE ASKED

As part of launching the initial conversation in November 2021, a broad customer survey was widely promoted and available in both English and French (**Figure 3**). The survey invited customers to share their views on energy supply, emerging energy technologies, electric vehicles, and time of use rates. The survey questions focused on two main themes:

- What future energy decisions are being contemplated by customers?
- What energy planning considerations are important to customers?

Figure 3 - Survey bill insert delivered to customers (English and French)

HOW WE LISTENED

A broad customer survey was selected as the most appropriate method to meet the above goals and objectives for the round one engagement. A survey enabled the scale of engagement needed and supported the ability to gather a broad range of perspectives. The approach to survey design and distribution is further described below.

ENGAGED GROUP	SELECTED ENGAGEMENT METHODS	PARTICIPATION
General Public	**Customer Survey** – A broad customer survey was used to initiate an energy conversation with customers to seek perspectives on current and future energy decisions they may be contemplating.	Customer Survey **14,973** Responses

ROUND ONE CUSTOMER SURVEY

DESIGN

The customer survey was the first step in engaging with external interested parties in the development of the IRP.

- A survey was chosen as the engagement method to best meet the round one engagement objectives and reach a wide audience to receive high volumes of feedback. The survey was not a random sample, and the goal was not to generate statistically significant data.

The survey was designed as an engagement tool to allow as many Manitobans as possible to participate and was distributed widely.

- The survey was meant to be inclusive, which in this context meant that every customer in Manitoba could choose to share their thoughts, opinions, and input.
- The survey was available in both English and French.
- The survey incorporated information that sought to inform participants on the process and aid them in providing informed responses.
- The survey utilized multiple choice questions, which were developed to allow respondents to identify answers that were important to them.
- The survey also included options for free-form long answers which allowed respondents the opportunity for broader input and feedback.

DISTRIBUTION

The initial customer survey was open from November 2 to December 16, 2021. While the survey was open, it was widely promoted to customers across the province, with an invitation to participate, through a range of communication tools and languages, using both direct and indirect methods:

- **Advertising:** A broad advertising campaign was developed to promote the launch of the IRP development process and the customer survey to all Manitobans. Social media (Instagram, Facebook, Twitter), digital, radio, and newspaper advertising were all used. A QR code was featured in the advertisements, which took the viewer directly to the Manitoba Hydro website to take the survey.

Figure 4 - Social Media Advertisement

- **Bill inserts and on bill messaging:** Approximately 350,000 bill inserts were distributed to paper billed customers in their November 2021 bills to share information about the customer survey, along with a QR code to take the customers directly to Manitoba Hydro's website. As well, during November 2021 billing period, all bills (paper and online) in the bill messages section advertised the round one survey in a short, 50-word message.
- **Email outreach**: Direct email invitations to participate in the customer survey were distributed to approximately 200,000 online billing customers. This mass email was the first time Manitoba Hydro reached out to this large of a customer group using email. This method of advertising was responsible for nearly 12,000 responses to the customer survey.
- **Direct mailer:** A direct mailer of paper surveys was distributed to the 16,000 residential customers in First Nations communities. These customers could participate by returning the

survey, which was sent with a postage paid return envelope, or online via the QR code which was placed at the end of the introduction letter.

The distribution of the survey generated 21,000 visits to the 2023 IRP website. Nearly 5,000 participants subscribed for further communication about the 2023 IRP. In total, 14,973 survey responses were received from November 2 to December 16, 2021. This included over 25,000 long answer comments received, themed in 85 different categories. Analysis was conducted on 13,775 responses which met data cleaning criteria:

- Over 18 years of age
- MB postal code
- Completed energy related survey questions

WHAT WE HEARD

This section provides an overview of key findings from round one.

ROUND ONE CUSTOMER SURVEY

Nearly 15,000 customers provided valuable insights into their perspectives on future energy choices. Below is a summary of those key insights from our survey findings:

IMPORTANT FACTORS FOR FUTURE ENERGY PLANNING:

Respondents shared perspectives on important factors that should be considered when planning to meet future electricity and natural gas needs:

IMPORTANT FACTORS FOR FUTURE ENERGY PLANNING	
ENERGY RATES	• 87% of respondents indicated electricity and natural gas rates were important factors to consider when planning to meet future energy needs. • Customers are engaged and interested in how rates are structured.
ENERGY RELIABILITY	• 78% of respondents indicated reliability is an important factor to consider in future energy planning.
ENVIRONMENTAL IMPACTS	• 70% of respondents indicated environmental impacts are important considerations for future planning.
REDUCING EMISSIONS	• Over half of respondents (54%) identified that emissions reductions are important for future energy planning.
SOCIAL RESPONSIBILITY	• Social responsibility in future decision making of the corporation is important to more than a third (38%) of respondents.

RATE CONCEPTS:

Currently, customers are charged the same rate regardless of when electricity is used. Time varying rates can help some customers lower their costs by shifting electricity use to times of day when overall demand is lower. The customer survey asked respondents perspectives related to time varying rates and found that the topic generated high interest and diverse opinions. The broad range of perspectives indicates a need to have further discussions on these topics to better understand unique customer perspectives and needs. Most customers are engaged on this topic with only 2% indicating they do not care how their rates are setup.

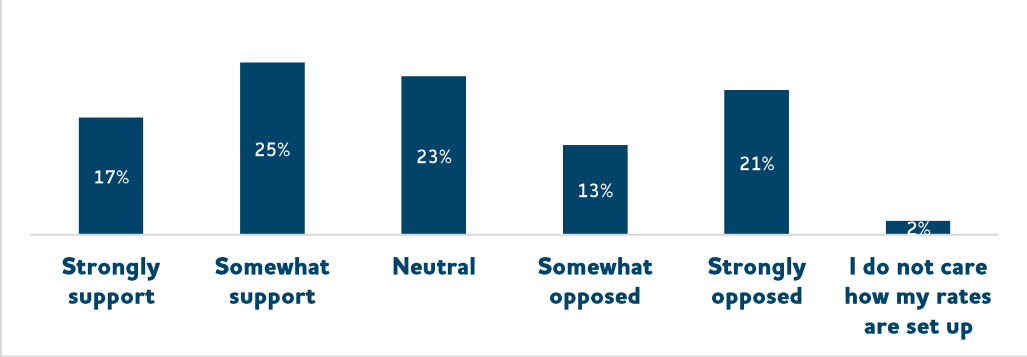


Figure 5 - What is your opinion of Manitoba Hydro consideration time varying rates?

Customers that indicated they were opposed to time varying rates were asked about their perceived barriers. The top three reasons selected as barriers to adoption by these customers were the inability to change when they use electricity, concerns that it would end up costing more overall and preferring the simplicity of a flat rate approach.

Customers were then asked about motivators for encouraging behaviour change related to time varying rates. Customers selected cost savings, convenience, and ease of use with accompanying technology as the top motivators supporting behaviour change.

PERCEPTIONS ON ELECTRIC VEHICLES:

- While only 4% of respondents reported owning an electric vehicle, 40% indicated they were thinking of buying or leasing one and 73% of these customers said they were planning to make this decision within the next five years.
- The main barriers to electric vehicle adoption included the high cost of purchase/lease (48%) and concerns about the ability to charge a vehicle away from home/work (44%).

CURRENT AND FUTURE NATURAL GAS USE:

- There were 58% of survey respondents that identified they currently use natural gas. Of those, 11% identified that they are thinking of shifting that energy use to electricity.

- When asked about timing for shifting this energy use, 80% of those that identified they are planning to shift to electric supply identified that they intend to make this switch within the next five years.

CUSTOMER SELF-GENERATION:

- Few respondents (13%) identified that they are considering generating their own energy. Of the respondents that are thinking about self-generation, 73% identified they plan to generate their own energy sometime in the next five years.

WHAT WE DID

Based on the feedback received, the IRP team used the customer survey results to inform the key inputs, scenarios, and to shape the overall approach to the development process:

WHAT WE HEARD	WHAT WE DID
Customers are strongly motivated by cost and affordability.	The input from the customer survey helped confirm the scope of the 2023 IRP. Customer values confirmed through the survey were considered throughout each stage of the development process (e.g., confirming modelling & analysis objectives). Some areas such as specific rate concepts were not within the scope of the 2023 IRP because those topics are addressed in other processes. Customer survey findings provided a strong starting point to develop the key inputs and scenarios proposed for discussion in round two engagement. This included key inputs such as the adoption of electric vehicles, the evolving role of natural gas, and the evolving role of customer self-generation. More details can be found in our round one what we heard summary.
Reliability, environmental, and social concerns are important to customers, and they would like to see these factors inform the approach to energy planning.	
Customers are engaged and interested in how energy rates are structured.	
Electric vehicles are increasingly in customers plans, with 40% of respondents considering a purchase in the near future.	
Customers are not actively looking to switch from using natural gas to electricity. Only 11% of survey respondents indicated they have plans to change their appliances from gas to electric.	
Quick adoption of self-generation is not expected, with 13% of respondents indicating they are thinking of self-generation.	

Table 3 - Round One - What We Heard & What We Did

These initial customer survey findings provided a strong starting point to develop the key inputs and scenarios proposed for discussion in round two engagement. This feedback, along with further research and analysis, informed the development of a proposed list of key inputs that reflected

Manitobans' needs and perspectives. This proposed list was then confirmed through additional conversations with customers and interested parties in the round two engagement, before establishing specific estimates and values for each key input.

LESSONS LEARNED

There was significant interest in the initial engagement opportunities, with nearly 15,000 survey responses and nearly 5,000 interested customers registering for the 2023 IRP email subscription.

While the initial customer survey was not intended to be representative of Manitoba's population, it was found to be under-representative of feedback from women, low-income households, young adults (18-25), and Indigenous identifying respondents. As such additional efforts were placed on engaging with these underrepresented voices as part of the second round of engagement.

3.2 ROUND TWO – KEY INPUTS AND SCENARIOS

In spring 2022, the second round of engagement provided information on the IRP development process and asked for feedback on the draft key inputs and proposed scenarios.

This section provides an overview of round two engagement. Supporting materials for this round include: focus group report, large customer research interviews report, a copy of the round two customer survey and survey analysis. These materials can be found in **Appendix A – Supporting Materials**.

GOALS AND OBJECTIVES

Round two engagement was designed with goals to engage with several different groups to seek feedback from a broad range of perspectives on the draft key inputs and proposed scenarios that would form the backbone of the 2023 IRP modelling and analysis. This included a focus on understanding future planning and energy related decisions of large customers that would need to be considered within the 2023 IRP.

Manitoba Hydro retained the services of Prairie Research Associates Inc. (PRA), to support 2023 IRP engagement efforts in this round of engagement and going forward. PRA's scope was to provide advice in developing the engagement process and to support the engagement efforts through reporting. PRA also facilitated the focus groups and interested parties' engagement as a neutral third party.

The objectives for the second round of engagement included:

- Gather information from a variety of customer segments including large and industrial customers to understand values, intentions, and perspectives related to current and future energy use.

- Seek a broad range of perspectives to provide feedback by engaging several different organizations and groups.
- Build a shared understanding with interested parties representing a diversity of perspectives and interests.
- Share the process of developing an IRP and build knowledge around energy planning terms and concepts.

WHAT WE ASKED

The second round of engagement presented five draft key inputs and four proposed scenarios that would form the backbone of the modelling and analysis central to the energy planning process. Key questions asked included:

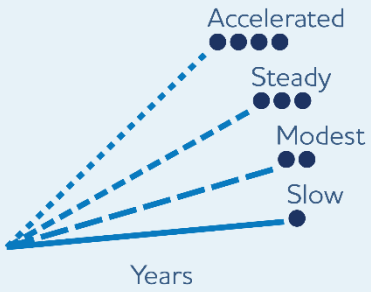
- Have we captured the key inputs that will significantly impact energy needs in the next 20-years?
- Are the scenarios reflective of the potential energy futures in Manitoba?

KEY INPUTS have the potential to cause the most *significant* changes to future energy needs in Manitoba and have significant uncertainty.

Five draft key inputs were proposed in round two engagement.

A SCENARIO represents a specific energy future and has a specific combination of key inputs to describe that future.

Four scenarios that capture a reasonable range of potential energy futures were proposed in round two engagement.



Read more about the key inputs and scenarios in the 2023 IRP.

HOW WE LISTENED

The conversation in round two continued through focused discussions with customers, workshop sessions with interested parties, and large customers who were invited to share perspectives and insights on future planning and decision making that should be considered in the 2023 IRP. Targeted email communications and a second customer survey were sent to the 5,000 subscribers.

Engagement methods were selected for each group based on the engagement objectives for round two. Table 4 provides an overview of selected engagement methods and participation for round two by group, with the approach and design further described below.

ENGAGED GROUP	SELECTED ENGAGEMENT METHODS	PARTICIPATION
Interested Parties	**Online Workshop Sessions** – Workshops were chosen as a way for interested parties to keep informed, share feedback, and hear diverse perspectives from each other. Round two engagement sought feedback on the draft key inputs and proposed scenarios. Five workshop sessions were held, two with interested parties groups, a dedicated session for academics, a session for government departments, and a session with Efficiency Manitoba.	 Interested Parties Workshops **5** Sessions
Large Customers	**Customer Interview and Survey** – Twenty large industrial and commercial customers (including public sector customers and large transportation users or those with fleets) participated in structured interviews or completed surveys so we could understand their unique perspectives and plans related to current and future energy use.	 Customer Insights **20** Interviews
General Public	**Email to 5,000 subscribers** – Emails were sent to inform on progress of the IRP development and provide opportunities to share feedback. Emails included links to self-serve content, a second customer survey, and a summary of what was heard in round one engagement. Email subscribers were highly engaged with a 79% open rate.	 Newsletter & Survey **5,000** Subscribers

	Customer Survey – A second customer survey was used as an engagement method to seek feedback on draft key inputs, proposed scenarios, and provide feedback on preferred methods for engagement communications and updates. The survey was sent to the 5,000 subscribers and posted on the project website.	
	Self-serve presentations – Recorded presentations using the same presentation content from the interested parties workshop were developed with transcripts to provide opportunities for people to view presentation content at their own pace.	
	Focus groups – Three focus groups were conducted to seek perspectives of underrepresented voices identified in the initial customer survey. Three focus groups were held, two conducted with Manitobans aged 18-25 and one with woman ages 26+. In each group, at least three participants self-identified as Indigenous, and at least three came from low-income households (less than $75,000 combined household income).	

Table 4 - Selected Engagement Methods - Round Two

INTERESTED PARTIES WORKSHOP SESSIONS

To receive feedback on the draft key inputs and proposed scenarios, phase two engagement involved five virtual workshop sessions conducted with representatives from various invited organizations.

For interested parties engagement, PRA coordinated pre and post session email correspondence, registration, session facilitation, post session surveys, and summarizing session outcomes.

GOALS

- To build opportunity for shared discussions of perspectives and opinions related to drivers of the evolving energy landscape, key inputs, and scenarios.
- To inform and seek feedback on the five draft key inputs and four proposed scenarios.
- To develop the 2023 IRP with the Manitoba context.

DESIGN

Balancing technical details and working to create accessible content was a focus for engagement. Since the content and materials required explanation and further discussion, workshops were selected as the chosen method for engagement, with specific interested parties invited to attend.

Each workshop session involved a similar approach and lasted 2.5 to 3 hours. Potential participants were asked to register for sessions. A link was provided to registered participants by email in advance, and they were asked to log in at a specific time. The session began with a land acknowledgement, and was followed by a brief introduction, the agenda for the session, and some housekeeping rules. It was emphasized that the main purpose of the session was to get participants' perspectives on the draft key inputs and proposed scenarios. The workshop involved a detailed presentation divided into five main sections:

1. Overview of the IRP development process
2. Summary of round one engagement
3. Draft key inputs
4. Proposed scenarios
5. What's next

The presentation shared outcomes from round one engagement, and informed participants how the learnings from the initial customer survey were used to develop the draft key inputs and proposed scenarios presented for discussion.

Throughout the session there were defined opportunities for participants to ask questions and discuss the material. Participants were asked to provide feedback on the draft key inputs and proposed scenarios, either in smaller breakout sessions or with the group as a whole. A copy of the presentation was shared following the session.

WORKSHOP ATTENDANCE:			
In total, 86 participants representing at least 46 unique organizations and 16 government departments attended five workshop sessions. A total of 17 participants responded to the post-session survey.			
Session Type:	**Date:**	**Attendees:**	**Unique Organizations:**
Interested Parties	April 20, 2022	16	38
Interested Parties	April 21, 2022	25	
Interested Parties (Academics)	May 9, 2022	12	7
Efficiency Manitoba	May 5, 2022	10	1
Government of Manitoba Departments	May 12, 2022	23	16

LARGE CUSTOMER RESEARCH INTERVIEWS

Direct conversations and surveys with some of our larger customers were used to help understand potential future energy needs and changes among some of our top energy users.

20
Interviews & Surveys

GOALS:

The energy consumption of Manitoba's top energy users has a large impact on Manitoba Hydro's energy systems. The purpose of these interviews was to better understand large customers' unique perspectives and plans related to current and future energy use. Specific engagement goals for large customers included:

- Discover whether our largest customers anticipate major changes in the type, source or quantity of energy they may use over the next 20 years.
- Understand what is motivating these anticipated changes (e.g., ESG goals, decarbonization, economics) and whether changes are contingent on certain assumptions (e.g., funding, rising carbon price, energy rates).
- Determine what may drive changes to happen earlier or later than planned.
- Reflect learnings in the key inputs and scenarios for the 2023 IRP to understand how these potential changes may impact Manitoba Hydro's systems.

DESIGN:

Structured one-on-one interviews and self-completed questionnaires were conducted with 20 large customers from both industrial and public sector customers. This included large transportation users and those with fleets. Some of these large customers operate in competitive

markets and therefore engagement took place with the understanding that specific identifying information and customer names would not be shared publicly. This information is not shared to protect their identity and to avoid jeopardizing any competitive advantages they may have.

This focused engagement supported an understanding of customers' major drivers impacting energy supply and delivery systems. Understanding if, how, and when large customers' energy needs could significantly change and what factors may accelerate or delay those changes is critical to understanding of how their energy related decisions may impact the evolving energy landscape.

Structured discussion questions explored several key topics:

- Current sources of energy use (electricity, natural gas, other).
- Anticipated changes in energy use, including amount of future energy that may be needed and expected timing. This included discussions of potential changes that might impact or shift future plans, as well as factors that could speed up or delay these plans.
- Emissions reductions targets or commitments, and any actions planned to meet them.
- Specific influences on energy choices decisions.
- Considerations around impacts that may influence decisions to stay in Manitoba.

FOCUS GROUPS

Targeted focus groups were identified as the preferred engagement method to seek perspectives from underrepresented groups identified in the round one customer survey.

21

Participants

GOALS:

Although the customer survey received close to 15,000 responses, demographic analysis of respondents indicated that women, youth (18-25), lower-income, and Indigenous Manitobans were under-represented. The focus groups, led by PRA were designed to centre on topics included in the initial customer survey to better understand customer preferences and expected energy futures, as well as to understand how Manitoba Hydro can successfully engage in the future with these under-represented groups.

DESIGN:

Three focus groups were conducted by PRA virtually; two were conducted with Manitobans aged 18-25, and one with women ages 26 and up. Each group included seven participants for a total of 21 participants. In each group, at least three participants self-identified as Indigenous, and at least three came from low- income households (less than $75,000 combined household income).

During the guided discussion, the focus group participants offered their responses to specific discussion topics:

- **Considerations for meeting future energy needs:** A poll was followed by a discussion of what factors are most important for Manitoba Hydro to consider when planning to meet future electricity and natural gas needs.
- **Energy-use changes**: Participants discussed whether they were considering changes to their energy use such as switching from natural gas to electricity, purchasing electric vehicles, or generating their own energy.
- **Rate structures:** Participants shared their perspectives on rate structures following an explanation of what a fixed-rate approach versus a variable-rate pricing structure could look like.
- **Integrated Resource Plan:** Participants shared initial impressions of the IRP and the level of interest in the plan going forward, Participants discussed and if they had any considerations for development of the plan, including perspectives on approach and importance of engagement, who Manitoba Hydro should engage with on energy planning and on which topics.

ROUND TWO CUSTOMER SURVEY

GOALS:

- Seek perspectives on draft key inputs and proposed scenarios.
- Ask for feedback on preferred methods for ongoing IRP communications and engagement.

Customer Survey
1,185
Responses

BACKGROUND AND METHODOLOGY:

The round two customer survey was open from July 28-August 12, 2022. The survey was distributed by direct email to our mailing list of nearly 5,000 subscribers. This mailing list had been established by individuals that identified they would like to be included in future engagement opportunities following the round one customer survey. New respondents were also invited to participate in the survey through a link on the Manitoba Hydro website. Over the survey period, 1,185 responses were received.

WHAT WE HEARD

This section provides an overview of key findings from round two.

INTERESTED PARTIES WORKSHOP SESSIONS

FEEDBACK ON DRAFT KEY INPUTS AND PROPOSED SCENARIOS:

- Participants shared feedback on key inputs and identified factors they wanted considered as part of the key inputs that shape the scenarios. These factors included reconciliation with Indigenous Peoples, sustainable development, grid resiliency and reliability, demand side management and additional economic factors such as recession.
- The majority of participants supported the five draft key inputs and four proposed scenarios, agreeing they captured the most influential factors and the range of potential energy futures that Manitoba Hydro should consider. Participants also indicated further review may be needed to ensure the scenarios were flexible and could accommodate more combinations of inputs, and that it is especially important to consider for scenarios where inputs increase and decrease independent of each other.
- For scenario four, the scenario anticipating the most aggressive decarbonization effort, participants suggested it should allow for a pathway to net-zero emissions.
- Participants asked for clarification around Provincial energy policy as compared to the focus and scope of the 2023 IRP.

LARGE CUSTOMER RESEARCH INTERVIEWS

The interviews and surveys confirmed large customers are considering a very wide range of potential futures. Those who are changing their energy use are being driven by external factors, including but not limited to government regulations and greenhouse gas (GHG) pricing. Where customers are looking to decarbonize, some perceive renewable natural gas (RNG) as a solution.

Expectations of change in the type or amount of energy usage varied significantly, bookended by those expecting little change or only change based on demand for their product, to those actively electrifying their operations, with the rest in between.

KEY INSIGHTS INCLUDED:

- **Expected changes in industrial energy use cover the full spectrum of possibilities.** Some customers do not anticipate significant changes to their energy needs, while others plan to electrify. Most have net-zero targets, or environmental, social, and governance (ESG) goals and related actions planned. Some are motivated by regulations. Depending on their current energy use, some perceive RNG or natural gas as a solution.
- **Changes in industrial energy use are primarily driven by carbon pricing and GHG reductions.** Carbon pricing is driving change now or may in the future. Many are taking

action or developing plans based on corporate emission reductions goals. Energy efficiency will limit growth in energy consumption, even when production grows.

- **Expected changes in government energy use are driven by net-zero GHG commitments.** Population growth and economic development will increase energy use. A focus on achieving net-zero emissions will shift the type of energy used. Federal government plans to electrify operations; provincial and municipal energy plans are developing. Most anticipate fleet electrification to be among the first shifts in energy use.
- **Early decarbonizers viewed changes as adding brand value to their business.** Some customers noted the brand value of going green using clean energy, while others need to demonstrate bottom line cost savings (or funding support) to justify fuel switching.
- **The pace of change is most impacted by carbon pricing and government funding.** The pace of carbon pricing increases and the availability of government funds to support energy transition will have the biggest impact on the size and timing of energy changes. Availability and price of renewable natural gas as well as lead time for electrical interconnection will also affect the pace of change.

The following factors were identified that would speed up, delay, or altogether change expectations of future energy requirements:

- **Carbon pricing** - rate of increase will impact energy choices
- **Funding** – availability for energy efficiency and/or decarbonization efforts
- **RNG** - availability and cost competitiveness amongst alternatives
- **Regulations** – new regulations impacting operations, future energy requirements, and potential demand of some products
- **Energy prices** – change in prices will influence pace of transitions
- **ESG ratings or sustainability factors in capital financing** – impact speed and depth of emissions reductions, energy and water use, and waste production
- **Electrical interconnection** – for those increasing electrical use, lead times may impact timeline for changes and/or the magnitude of change.

FOCUS GROUPS

KEY FINDINGS FROM FOCUS GROUP PARTICIPANTS INCLUDED:

- Costs play a bigger role in their decision-making. Across focus groups, participants identified electricity and natural gas rates, and environmental impacts as the two most important factors for Manitoba Hydro to consider. Several participants also perceived reliability of energy to be the most important factor.

- Participants had generally high interest in considering their next vehicle purchase to be electric and indicated this would occur in the near future (next five years).
- There was little interest in customer self-generation, though for those that were considering this option, the interest was primarily for solar. The participants felt barriers such as up-front costs, reliability and limited knowledge were keeping them from considering self-generation.
- Many young participants were not aware of how Manitoba Hydro charged for energy use and most focus group participants preferred the current fixed-rate structure. However, some participants liked the idea of a variable-rate pricing option, noting they would change some of their behaviours to use power when it is more affordable.
- More information was needed about the IRP and terminology needed to be plain language, yet they were interested to learn more details about the goals of the IRP.
- Social media was indicated as the preferred method of communication.

ROUND TWO CUSTOMER SURVEY

FEEDBACK ON DRAFT KEY INPUTS AND PROPOSED SCENARIOS:

- As key inputs, Decarbonization Policy and Electric Vehicles were expected to have the biggest impact on the Manitoba energy landscape. Over one quarter (27%) of survey respondents identified decarbonization policy as the driver that will have the largest impact on Manitoba's energy landscape in the next 20 years.
- Nearly one quarter (27%) of respondents selected scenario two (modest decarbonization and modest decentralization) as the most likely to happen in the next 20 years.

FEEDBACK ON ENGAGEMENT:

- Respondents indicated interest in learning more about alternative energy supply sources (65%) and customer self-generation (46%).
- Respondents shared preferences for reviewing and sharing future IRP information:
    - Websites (66%) and written reports (41%) were the most popular formats for reviewing future IRP information.
    - Email (90%), website (34%), and bill inserts (21%) were identified as the most popular ways of sharing information updates.
- 17 respondents from the 41 participants that attended the interested parties sessions completed the round two customer survey following the session. Sent through PRA, this survey had additional detail around the clarity of the session.
    - Three quarters of respondents (13) reported the background presented was clear or very clear, with most (12) finding the key inputs clear or very clear. Nearly half (8) found the presentation on scenarios only somewhat clear or not very clear, suggesting more needs to be done to explain the features of these scenarios.

- As part of the workshops, participants were asked to take part in discussions about whether the key inputs and scenarios were reasonable and relevant. Participants were asked if workshop discussions allowed them to meaningfully contribute to the IRP development process. Almost all (16) felt their contribution was meaningful, if only somewhat so.
- Participants were informed that the IRP development process is not static and requires ongoing consultation and planning. Participants were asked how likely they would be to attend a future workshop about the IRP (if it was at a time and date that worked for them). All respondents said they definitely or probably would take part in the future.

WHAT WE DID

Based on the feedback received throughout round two, the IRP team was able to confirm the key inputs and scenarios that would be used for the modelling and analysis, and to refine the approach to engagement:

WHAT WE HEARD	WHAT WE DID
Engagement participants were interested in understanding the process and all of the inputs that go into the modelling and analysis.	A plain language Key Input Assumptions document was developed to explain the detailed assumptions made for each of the key inputs. A Q&A document was developed to help answer the questions heard throughout round two engagement.
Most participants felt the list of key inputs and their respective factors were comprehensive. Participants suggested factors they wanted to see specifically identified as part of the approach to planning, including within the key inputs and scenarios. Factors suggested by participants included reconciliation with Indigenous Peoples, sustainable development, grid resiliency and reliability, demand side management, and additional economic factors such as recession.	Confirmed that the key inputs identified were the ones with the most significant potential to impact energy use in Manitoba. Participant feedback on additional factors was used to refine key inputs where possible and informed the detailed analysis used to understand how different drivers may impact our modelling results.
Participants confirmed that scenarios were appropriate bookends for the evolving energy landscape, so long as there is a pathway towards net-zero greenhouse gas emissions represented in the scenarios. Participants indicated further review may be needed to ensure the scenarios were flexible and could accommodate more combinations of inputs.	Scenario four was confirmed to allow for a path to net-zero emissions. Other suggestions were considered for sensitivities as part of the modelling and analysis, such as alternative space heating technologies, policy impacts, and climate risk.

WHAT WE HEARD	WHAT WE DID
Participants asked for clarification around Provincial energy policy as compared to the focus and scope of the IRP.	Manitoba Hydro's mandate was reiterated during the workshop, as well as the specific scope of the IRP.
Some groups indicated the terminology used was highly technical and difficult to understand.	Further efforts were made in subsequent rounds to define terminology more clearly and to increase the use of plain language wherever possible. In round three, additional focus was placed on building further understanding of energy planning concepts.

Table 5 - Round Two - What We Heard & What We Did

Round two engagement confirmed the five key inputs expected to have a significant impact on Manitoba's energy future, and the four scenarios that represent the range of anticipated energy futures for the province. More detail on what was presented and heard in round two engagement, see our round two detailed summary.

LESSONS LEARNED

Through round two engagement, we heard feedback that emphasized the importance of clarifying terms and complex topics in the energy planning process. A key input assumptions document was developed to summarize the assumptions made for the key inputs, as well as a summary of questions with answers heard throughout engagement. We increased the efforts for round three engagement to use plain language and to step back to build an understanding of the energy planning process for explaining the modelling process and initial modelling results.

Focus groups were an effective way to seek out underrepresented perspectives that may not respond to other broad engagement methods or have the capacity to participate in more time intensive engagement opportunities.

3.3 ROUND THREE – INITIAL MODELLING RESULTS

In fall 2022, the third round of engagement described the modelling and analysis process and shared initial modelling and analysis results for feedback. Modelling and analysis is the technical work done to simulate the energy system and study a range of future scenarios, to help understand what may happen. The results help inform potential actions for meeting our customers' changing energy needs.

This section provides an overview of round three engagement. Supporting material for this round can be found in **Appendix A – Supporting Materials** and includes a copy of the customer survey. Being a shorter survey, the analysis summary is incorporated in the text below.

GOALS AND OBJECTIVES

Round three engagement focused on sharing, building understanding, and seeking feedback. Goals and objectives included:

- Share what was heard in round two and how it was incorporated.
- Build knowledge of energy planning and the IRP modelling and analysis process.
- Share initial modeling results.
- Seek feedback on additional modelling considerations.
- Communicate next steps for modelling and analysis.

WHAT WE ASKED

Manitoba Hydro asked about additional modelling and analysis that could be considered within the 2023 IRP. Key questions included:

- What additional analysis would you like to see considered?
- Are there considerations that could significantly impact our understanding of potential energy futures in Manitoba?

HOW WE LISTENED

The third round of engagement focused on communicating the IRP modelling process through an information session provided to interested parties, as well as online workshops focused on sharing initial modelling results and seeking feedback on additional analysis the IRP should consider. Targeted email communications with links to self-serve presentations and a third customer survey was sent to the nearly 5,000 subscribers who had previously signed up to receive updates.

Engagement methods were selected for each group based on the engagement objectives for round three. Table 6 provides an overview of selected engagement methods and participation for round three by group, with the approach and design further described below.

ENGAGED GROUP	SELECTED ENGAGEMENT METHODS	PARTICIPATION
Interested Parties	**Online Information Session** – A two-hour information session was offered to interested parties to inform participants about the IRP modelling process and provide background on energy use in Manitoba. This was a primer in advance of the online workshop. The background information was to support a better understanding of the initial modelling results.	 Interested Parties **1** Information Session

	Online Workshop Sessions – Workshops were chosen as a way for interested parties to keep informed, share feedback, and hear diverse perspectives from each other. Round three engagement provided a background on energy-use in Manitoba, presented initial modelling results, and asked for feedback on additional analysis that may need to be considered. Five workshop sessions were held: two for interested parties groups, a dedicated session for academics, a session for government departments, and a session with Efficiency Manitoba.	 Interested Parties Workshops **5** Sessions  IP Survey **16** Responses
General Public	**Email to 5,000 subscribers** – Two emails were sent to inform on 2023 IRP development progress and provide information on the modelling process and the initial modelling results. Emails included links to self-serve content, a third customer survey, and a summary of what was heard in round two engagement. Email subscribers were highly engaged with an average of 77% of subscribers opening both e-mails.	 Newsletter & Survey **5,000** Subscribers
	Customer Survey – A third survey asked subscribers to provide their opinions on Manitoba Hydro's proposed 2023 IRP sensitivities.	 Customer Survey 3 **59** Responses
	Self-serve presentations – Recorded interested parties workshop presentations with transcripts were posted on the website.	 Self-Serve Presentations **141** Views

Table 6 - Selected Methods - Round Three Engagement

INTERESTED PARTIES MODELLING INFORMATION SESSION

As part of the round three engagement for the 2023 IRP, we shared details of the modelling and analysis process. The presentation was to provide information on how the modelling and analysis process works in advance of sharing initial modelling results.

GOALS

The information session was designed with the goal of informing interested parties about the IRP modelling and analysis process and to provide background on current energy use in Manitoba.

Interested Parties

1

Information Session

DESIGN

Balancing technical details and ensuring plain language was a focus for engagement. As the topic was complex and there was no feedback sought, an information session was selected as the chosen method to build understanding amongst interested parties.

Interested parties invited during the round two sessions were invited to register through the Prairie Research Associates Inc. (PRA) online portal and asked to identify the name of the organization they represented. The online information session took place on November 17, 2022 over 1.5 to 2 hours. A link was provided to participants by email in advance, and they were asked to log in at a specific time. The session began with a brief introduction, the agenda for the session, and some housekeeping rules. It was emphasized that the main purpose of the session was to share information on the modelling and analysis process, but that there would be opportunities to ask questions throughout.

The workshop involved a detailed presentation divided into five main sections:

1. Background – Modelling in our energy planning
2. What we heard: Round two engagement
3. Energy use in Manitoba
4. Modelling process
5. What's next

There were opportunities for participants to ask questions following each section. Questions were encouraged both verbally and through the chat function. A copy of the presentation was made available following the session.

WORKSHOP ATTENDANCE:			
In total, 35 participants representing at 25 unique organizations attended the information session. A total of 16 participants responded to the post-session survey.			
Session Type:	**Date:**	**Attendees:**	**Unique Organizations:**
Interested Parties	November 17, 2022	35	25

INTERESTED PARTIES WORKSHOP SESSIONS

GOALS

Following the information session which provided an introduction to the IRP modelling and analysis process, the initial modelling results session was designed to:

- Share initial modelling and analysis results and seek feedback on other analysis that should be considered as part of the modelling and analysis.
- Build opportunity for shared discussions of perspectives and considerations related to drivers, inputs, scenarios, and modelling and analysis in the 2023 IRP.
- Seek feedback on future communications and engagement.

DESIGN

With specific goals in mind to present the initial modelling results and seek feedback and further discussion on potential for additional analysis, workshops were selected as the chosen method for engagement with specific interested parties invited to attend.

The workshops used a similar design process to round two sessions, with the sessions taking place over 1.5 to 3 hours. A link was provided to registered participants by email in advance, and they were asked to log in at a specific time. The workshop involved a detailed presentation divided into four main sections:

1. Background – IRP and Round two engagement; modelling process; and energy use in Manitoba
1. Initial modelling results
2. Initial modelling results – sensitivities
3. Next steps

There were opportunities for participants to ask questions during and after each section. Questions were encouraged either verbally or through the chat function. Following the third section of the presentation, which focused on sensitivities, participants were asked what other sensitivities or "what-ifs" could significantly impact the IRP modelling results and our understanding of potential energy futures. A copy of the presentation was made available following the session. Questions posed during the workshop were also kept and developed into a Q&A document in plain language and posted on the website to help support broader understanding.

WORKSHOP ATTENDANCE:			
In total, 49 participants representing at least 33 unique organizations and 7 government departments attended 5 workshop sessions. A total of 16 participants responded to the post-session survey.			
Session Type:	**Date:**	**Attendees:**	**Unique Organizations:**
Efficiency Manitoba	December 1, 2022	6	1
Interested Parties	December 2, 2022	16	32
Interested Parties (Academics)	December 5, 2022	4	
Interested Parties	December 7, 2022	15	
Government of Manitoba Departments	December 13, 2022	10	7

ROUND THREE CUSTOMER SURVEY

GOALS

- Ask for feedback on the workshop and recorded presentation to inform ongoing communications and engagement efforts.

BACKGROUND AND METHODOLOGY:

The round three customer survey was open from December 16, 2022 – January 16, 2023. Following the interested parties workshop sessions. An email was distributed to those who participated in the workshops, those who had been invited to the workshop but did not attend, and by direct email to our mailing list of nearly 5,000 subscribers. The email shared the presentations from both round three sessions and invited recipients to participate in a 5-minute survey to share their perspectives on the workshop/recorded presentation.

WHAT WE HEARD

This section provides an overview of key findings from round three.

INTERESTED PARTIES INFORMATION SESSION

As this was an information session intended to provide engaged participants with context and answer questions, there were no specific key findings from this engagement.

Participants asked questions related to a variety of topics: climate change, energy efficiency, reducing natural gas usage, water rental rates, ground source heat pumps and district heating, hydrogen generation, reduction of GHG Emissions, reconciliation, energy supply and demand, IRP flexibility, and energy reductions from buildings. Where possible, questions were answered during the session, and a plain language Q&A summary was been developed based on questions asked throughout round three.

INTERESTED PARTIES WORKSHOP SESSIONS

Below is a summary of the additional analysis suggested for consideration by participants. Some feedback was incorporated through additional analysis in the 2023 IRP, while some suggestions did not align with the scope of the 2023 IRP and have been noted for consideration in future planning. A more detailed summary has also been compiled summarizing what we heard from round three, and how we used it.

CUSTOMER SELF-GENERATION THROUGH SOLAR

- A sensitivity to double the assumption of solar customer self-generation in scenario four was included.

GROUND SOURCE HEAT PUMPS, INCLUDING FOR USE IN DISTRICT HEATING

- This suggestion was included in sensitivity analysis through greater uptake of ground source heat pumps. A district heating system provides heat generation from a central location to a network of connected buildings and homes through a grid of insulated pipelines. We do not have the proper data at this time to investigate district heating, so this specific analysis will be deferred to future planning.

HOW LARGE CUSTOMERS CAN HELP MANAGE PEAKS

- The 2023 IRP included sensitivity analysis of demand response, when large customers reduce energy use during peak demand times. Demand response will be modelled to flatten the existing peak demand.

HYDROGEN PRODUCTION INCREASES FOR TRANSPORTATION DECARBONIZATION

- Hydrogen production in the model was limited to its use for generating electricity through a thermal plant. Further work is needed to understand the full potential of the future hydrogen economy. This analysis could be considered within future planning.

RATES IMPACTS AND CUSTOMER COSTS

- Analysis of rate impacts and even total customer costs is complex, in part due to the different rate structures between the gas and electric systems. We are still investigating how best to represent these costs.

ROUND THREE CUSTOMER SURVEY

A total of 75 respondents (16 interested parties, 59 general public) completed the survey. Most respondents rated each of the following sections of the presentation as clear or very clear:

- Background of the IRP and engagement process (87%)
- IRP modelling process summary (76%)
- IRP initial modelling results (74%)

Most others thought the presentation was at least somewhat clear.

16 respondents from the 35 participants that attended the interested parties sessions completed the round three customer survey following the session, providing feedback on the approach to engagement:

- Suggestions were made as to additional information that would have helped clarify the presentation including the use of plain language, avoidance of jargon, and the provision of materials in advance of the presentation.
- All participants indicated that the discussion about other sensitivities allowed them to meaningfully contribute (at least somewhat) to the IRP development process.
- Overall, participants expressed interest in the information presented and appreciation of the detail included in the presentations.
- Participants suggested that distributing the survey shortly following the session would enhance feedback while the presentation material is fresh in participants' minds.
- One participant noted they would probably not attend an IRP session in the future, noting they did not find the information that useful.
- Several suggestions were made to enhance promotion and content within the sessions such as including experts from outside the province, consideration of broader promotion or advertising of the IRP, and consideration of one-on-one interviews with participants to clarify their positions or concerns.

WHAT WE DID

Through round three engagement, Manitoba Hydro was able to collect feedback on the initial modelling and analysis results and hear perspectives on additional analysis that could be considered. **Table 7** below details how this feedback was considered within the 2023 IRP.

WHAT WE HEARD	WHAT WE DID
Customer self-generation – Different sensitivities were suggested for greater uptake of customer self-generation through solar generation.	A sensitivity was included with double the uptake of customer self-generated solar in initial modelling. For details, see Appendix 5 – Analysis Results for discussion on: • Distributed Solar Photovoltaic (PV) Generation
Demand Side Management (DSM), fully selectable – A sensitivity was suggested to remove all assumptions around Efficiency Manitoba programming and allow the model to optimize to the maximum possible amount of DSM.	A sensitivity was included to allow the model to optimize the amount of DSM selected. For details, see Appendix 5 – Analysis Results for discussion on: • Optimization of Energy Efficiency • Ground Source and Air Source Heat Pumps • Lower Customer Incentive Level for Energy Efficiency • Distributed Solar Photovoltaic (PV) Generation
Demand response –It was suggested demand response could have a significant positive impact on peak demand, particularly for large customers that may have flexibility in their electricity usage (i.e., running in off-peak).	A sensitivity was included on demand response to investigate the potential impacts to the initial modelling results. For details, see Appendix 5 – Analysis Results for a discussion on: • Demand Response (DR)
Dual fuel – It was suggested that the assumed -10C temperature for a dual fuel system cut-over from the air source heat pump to natural gas space heating should be lower since such air source heat pumps are currently available.	A sensitivity was added with a - 20C cut over temperature. For details, see Appendix 5 – Analysis Results for a discussion on: • Dual Fuel for Heating
Fully renewable energy – Only non-emitting generation would be allowed, and no natural gas could be used for space heating.	A sensitivity constraining the model from picking any emitting thermal generation was developed. Assumptions included in scenario

WHAT WE HEARD	WHAT WE DID
	four already included switching from natural gas space heating to electric. For details, see Appendix 5 – Analysis Results for a discussion on: • No New Natural Gas Turbines
Ground source heat pumps – There were several suggestions to consider further modelling of ground source heat pumps. Modelling extensive community networked ground source heat pumps was suggested.	Using Efficiency Manitoba's market potential studies, a sensitivity looked at achieving the maximum market potential of ground source heat pumps. Individual ground source heat pumps were modeled, not networked systems. For details, see Appendix 5 – Analysis Results for a discussion on: • Ground Source and Air Source Heat Pumps
Import/exports – It was suggested there may be material changes for future import and export prices, so sensitivity analysis around those assumptions would be needed to understand the impact to the initial modelling results.	A sensitivity analysis around future market prices was developed. For details, see Appendix 5 – Analysis Results for a discussion on: • Reduced Imports • Low Export and Import Market Price

Table 7 - Round Three What We Heard & What We Did

Other suggested sensitivities required more investigation or were out of scope for the 2023 IRP. More detail on what was shared and heard can be found in our round three detailed summary.

3.4 ROUND FOUR – PRELIMINARY OUTCOMES

In spring 2023, round four engagement shared the 2023 IRP preliminary outcomes including the completed modelling and analysis results and the draft road map including learnings, near-term actions, and signposts.

This section provides an overview of round four engagement. Supporting material for this round includes a copy of the customer survey which can be found in **Appendix A – Supporting Materials**. Being a shorter survey, the analysis summary is incorporated in the text below.

GOALS AND OBJECTIVES

Goals and objectives of round four engagement included:

- Report on how feedback from round three informed decision-making.
- Share completed modelling results including updated sensitivity analysis.
- Present the draft 2023 IRP road map including learnings, near-term actions, and signposts for feedback.
- Communicate how external engagement perspectives and interests have been reflected and influenced the 2023 IRP development process.
- Seek feedback on the draft 2023 IRP road map.

WHAT WE ASKED

Round four engagement focused on several key questions:

- Is any clarification needed on the completed modelling and analysis results?
- Which near-term actions are a priority for you and why?
- What signposts are likely to have the biggest influence on Manitoba's evolving energy landscape?
- Are there additional signposts that should be monitored?

The ROAD MAP is a directional strategy to help prepare for the future, it is not a specific development plan. It details how Manitoba Hydro can navigate a transition from today's energy system to a future energy system while continuing to serve customers with safe, reliable energy at the lowest cost possible. The road map is the outcome of the IRP and it consists of learnings, near-term actions, and signposts.

HOW WE LISTENED

The final round of engagement focused on sharing the completed modelling results and draft road map with interested parties through online workshop sessions. Targeted email communications with links to recorded self-serve presentations and a fourth customer survey were sent to the 5,000 subscribers.

Engagement methods were selected for each group based on the engagement objectives for round four. **Table 8** provides an overview of selected engagement methods and participation for round four by group, with the approach and design further described below.

ENGAGED GROUP	SELECTED ENGAGEMENT METHODS	PARTICIPATION
Interested Parties	**Online Workshop Sessions** – Workshops were chosen as a way for interested parties to keep informed, share feedback, and hear diverse perspectives from each other. Round four engagement provided an overview of the completed modelling and analysis and presented the draft road map for feedback. Four workshop sessions were held: two for interested parties groups with academics incorporated into the larger group, a session for government departments, and a session with Efficiency Manitoba.	 Interested Parties Workshops **4** Sessions
General Public	**Email to 5,000 subscribers** – Emails were sent to inform on 2023 IRP development progress and provide opportunities to share feedback. Emails included links to self-serve content, a fourth customer survey, and a summary of what was heard in round three engagement. Email subscribers were highly engaged with a 73% open rate.	 Newsletter & Survey **5,000** Subscribers
	Customer Survey – A fourth survey asked subscribers to share their priorities on the draft 2023 IRP road map.	 Customer Survey 4 **78** Responses
	Self-serve presentations – Recorded interested parties workshop presentations with transcripts were posted on the website.	 Self-Serve Recorded Presentations **63** Views

Table 8 - Selected Methods - Round Four Engagement

INTERESTED PARTIES WORKSHOP SESSIONS

GOALS

The specific goals for the workshop session are consistent with the overall goals and objectives for round four engagement:

- Report on how feedback from round three informed decision-making.
- Share completed modelling results including updated sensitivity analysis.

- Present the draft IRP road map including learnings, near-term actions, and signposts for feedback.
- Communicate how external engagement perspectives and interests have been reflected and influenced the IRP development process.

DESIGN

In advance of the workshop, participants were provided with two handouts by email to help them prepare in advance of the session. This included a completed modelling and analysis results handout as well as a power-up handout to help new participants review what was discussed with participants to date. It was indicated that the modelling and analysis results handout included the complete results; however, only selected results would be highlighted during the presentation. Participants were encouraged to ask questions about any of the completed modelling and analysis results during the session.

Each workshop session involved a similar approach and took about 2.5 hours. An online link was provided to participants and they were asked to log in at a specific time. The session began with a brief introduction, followed by a detailed presentation divided into the following sections:

1. Background
2. Modelling and analysis
3. IRP Roadmap: Learnings
4. IRP Roadmap: Draft Near-Term Actions
5. IRP Roadmap: Proposed signposts
6. Next steps

There were opportunities for participants to ask questions during and after each section. Questions were encouraged through the chat or verbally after each section. Following the near-term actions and proposed signposts time was allotted for discussion. A copy of the presentation was made available following the session

WORKSHOP ATTENDANCE:			
In total, 62 participants representing at least 26 unique organizations and 14 government departments attended 4 workshop sessions. Following the session, 6 participants completed the post-workshop survey.			
Session Type:	**Date:**	**Attendees:**	**Unique Organizations:**
Efficiency Manitoba	April 21, 2023	5	1
Interested Parties	April 26, 2022	12	25
Interested Parties	May 9, 2023	13	
Government of Manitoba	May 10, 2023	22	14

ROUND FOUR CUSTOMER SURVEY

GOALS

- Understand priorities for the near-term actions within the road map.
- Seek perspectives on which signposts will have the biggest influence on the evolving energy landscape in Manitoba.
- Ask for feedback on the workshop and recorded presentation to inform ongoing communications and engagement efforts.

BACKGROUND AND METHODOLOGY:

The round four customer survey was open from April 26-May 30, 2023. Following the interested parties workshop sessions, an email was distributed to those who participated in the workshops, those who had been invited to the workshop but did not attend, and by direct email to our mailing list of nearly 5,000 subscribers. The email shared the presentation and invited recipients to participate in a 5-minute survey to share their perspectives. In addition, if participants had any other comments or questions about the IRP development process or the IRP preliminary outcomes, an email address for the IRP team was provided.

WHAT WE HEARD

This section provides an overview of key findings from round four engagement.

INTERESTED PARTIES WORKSHOP SESSIONS

QUESTIONS AND CLARIFICATIONS:

- Participants asked questions about the additional sensitivity analysis conducted as a result of suggestions made by participants in round three. Some suggested that the team should revisit and consider the incorporation of other sensitivity analysis including solar and wind, district geothermal, and consideration of a Western Canada energy grid.
- Clarifying questions were asked to understand how the model works and what it considered, as well as the scope of the 2023 IRP.
- There was a concern that the 2023 IRP development process and approach to engagement did not meet industry standards impacting the scope and outcomes.
- Another participant congratulated Manitoba Hydro on its pragmatic approach.

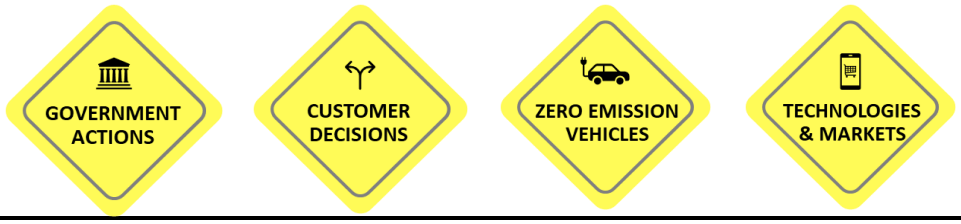
FEEDBACK ON ROAD MAP:

- There were several questions about near-term actions, and participants indicated that clarification around the scope would support their understanding, there were also questions about specific actions.
- Some suggestions for additional near-term actions including use of export electricity to generate hydrogen, greater emphasis on energy efficiency, inclusion of demand reduction,

district geothermal, and the need to consider workforce implications to facilitate changes (licensed HVAC professionals for example).

INFLUENCE OF SIGNPOSTS:

- Polls were conducted during the workshop sessions asking participants to share which signposts they thought would have the biggest influence on the evolving energy landscape in Manitoba. The majority of respondents felt government actions will have the biggest influence and are a key signpost to monitor. No additional signposts were identified, though additional details were incorporated into the signposts based on the feedback from the interested parties workshops.



Poll Results	43%	18%	14%	25%

ROUND FOUR CUSTOMER SURVEY

Among interested parties who attended the workshop, 6 completed at least some of the online survey. Among those who were not at the workshop but did review the presentation online, 72 completed at least some of the survey. The findings presented below are overall results for the survey.

CLARITY OF THE PRESENTATION:

Most respondents who attended the workshop session or read/watched the presentation online rated each of the sections of the presentation as *clear* or *very clear* (see **Figure 6** opposite). Most others thought the presentation was at least *somewhat clear*.

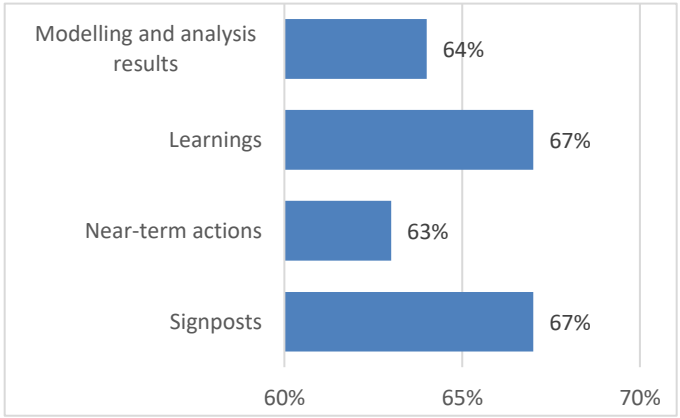


Figure 6 - Clarity of presentation - Clear/Very Clear

A number of respondents made suggestions as to the additional information that would have helped clarify the presentation, including sharing the presentation prior to the session. Some said the format of the workshop (i.e., being online, the nature of the presentation, or the amount of time for discussion) made meaningful participation difficult. That said, the majority of those who attended the workshop and replied to the survey indicated that the discussion allowed them to meaningfully contribute (at least somewhat) to the IRP development process.

PRIORITIES AND PERSPECTIVES ON NEAR-TERM ACTIONS:

- Sharing timelines for near-term action implementation would support external groups with their planning efforts and increase their ability to work with Manitoba Hydro as a strategic partner.
- Sharing more details, especially examples and outcomes, would provide direction and support understanding of participants.
- We asked respondents which five of the 19 near near-term actions are most important to prepare to meet Manitoba's changing energy needs. The top five were:

1.2	Pursue high-value energy efficiency measures in collaboration with Efficiency Manitoba (chosen by 59%);
5.3	Explore potential long-term role for new technologies such as energy storage, carbon capture and storage, hydrogen fueled combustion turbines, biomass, small modular reactors (43%);
2.5	Develop grid modernization and expansion strategies to enable future peak demand growth and enhance operations (39%);
3.2	Investigate hydrogen blending feasibility and market potential (39%); and
4.2	Develop a framework to evaluate total energy-related costs to help Manitobans understand the implications of future energy choices (34%).

- Each of the 19 actions were chosen by at least some participants, suggesting that all actions are seen as important and relevant.

INFLUENCE OF SIGNPOSTS:

Survey respondents were asked to select which signposts they felt were influencing their energy decisions. As shown in **Figure 7**, participants were split, with a similar number (43% to 50%) selecting each of the signposts. Among interested parties this was more heavily weighted towards government action (80%) and technology and markets (60%).

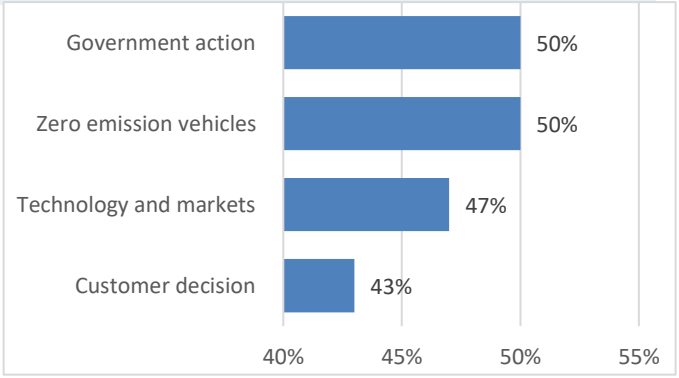


Figure 7 - Influence of Signposts

When asked if there are other signposts to monitor, many provided suggestions, or additional information about how the signposts were currently influencing them. Most suggestions were items that could be subsets of the four signposts. Details were included including types of actions or aspects to monitor were incorporated into the signposts.

FEEDBACK ON ENGAGEMENT:

Six respondents of the 25 participants that attended the interested parties sessions completed the round four customer survey following the session. While many said they thought the methodology worked well and provided them the information they needed, others had suggestions for how to improve future IRP engagement:

- Adapt the material so it is easily understood, using non-technical language. The goal should be to support knowledge translation, not merely dissemination. Some said the presentation was too technical and used too much jargon for the average person to easily understand the content. This was compounded by the fact that many participants had limited background knowledge but were being provided highly technical material.
- There was too much information to digest in a short period of time, making it difficult to provide meaningful comments or questions, or have a meaningful discussion. It was suggested that a half-day session involving more discussion around pertinent questions would be valuable.
- Consideration of broader and best practice engagement techniques. For example, in-person sessions were seen as superior to ones held virtually, but participants recognized this would require sessions to be conducted locally across the province.
- More workshop sessions could be conducted with smaller groups. For example, it was suggested that some larger customers would be able to participate in a dedicated session more effectively with more of their team members present.

WHAT WE DID

Feedback received throughout round four provided perspectives on the draft road map and considerations for future communications and engagement. **Table 9** provides an overview of how this feedback informed the 2023 IRP.

WHAT WE HEARD	WHAT WE DID
Participants asked questions and sought clarification on the completed modelling and analysis results and identified additional sensitivities that could be considered.	A completed modelling and analysis handout was developed in advance of the workshops to share details of the results, with time allocations for clarification during the round four engagement session. Suggestions for additional analysis will be considered as part of future potential IRP analysis.
Participants provided feedback on the IRP process related to quality of engagement, consideration of focus on net-zero, and regarding the planned frequency of IRP updates.	Feedback will inform when and how we communicate as the road map is implemented and new analysis is completed. It will also be considered as the IRP development and IRP engagement processes evolve before the next IRP.

Participants viewed the near-term actions as comprehensive, thought some clarifications on their scope would help understanding. Near-term action priorities shared included high-value energy efficiency measures (1.2), exploring new technologies (5.3), and development of a framework to evaluate total costs (4.2).	Feedback confirmed intent to continue engaging on energy planning. In the IRP report, clarifications were made in the descriptions of the near-term actions based on feedback.
Most participants agreed that the signposts cover everything that Manitoba Hydro should be monitoring. Government actions will have the biggest influence and are a key signpost to monitor.	Additional details incorporated into the signposts. Continue monitoring of identified signposts will be part of ongoing IRP updates.

Table 9 - Round Four What We Heard and What We Did

LESSONS LEARNED

Feedback has been consistent that sharing materials prior to sessions supports participants in contributing more effectively to the conversation. While the completed modelling results handout was shared in advance for this round of engagement, the presentation was not shared until after the session. We will continue to make a concerted effort in supporting engaged parties by providing the plain language materials and knowledge translation support they need to participate effectively.

Participants also asked for a variety of engagement formats to suit varying levels of technical knowledge/interest, including in-person opportunities to both come together and connect more directly one-on-one. Moving forward, we will consider incorporating a variety of engagement opportunities in response to this feedback.

4.0 ENGAGEMENT NEXT STEPS

The 2023 IRP road map has the flexibility to adapt as the future unfolds, so we can continue to be responsive as energy landscape continues to change. We are committed to communicating on implementation of the 2023 IRP road map, including on the progress of near-term actions, monitoring of signposts, and new analysis when material changes occur.

We are also committed to continuing the conversation after the 2023 IRP is published, as we see engagement as fundamental to navigating these changes today and into the future. This will include a customer survey which will be distributed in Fall 2023 to help us gain insight into customer questions on the future of energy in our province and collect feedback to understand perceptions on the IRP to inform our approach to engagement moving forward. We will evolve our engagement to ensure it continues to provide meaningful input into the development of future IRPs.

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Available in accessible formats upon request.