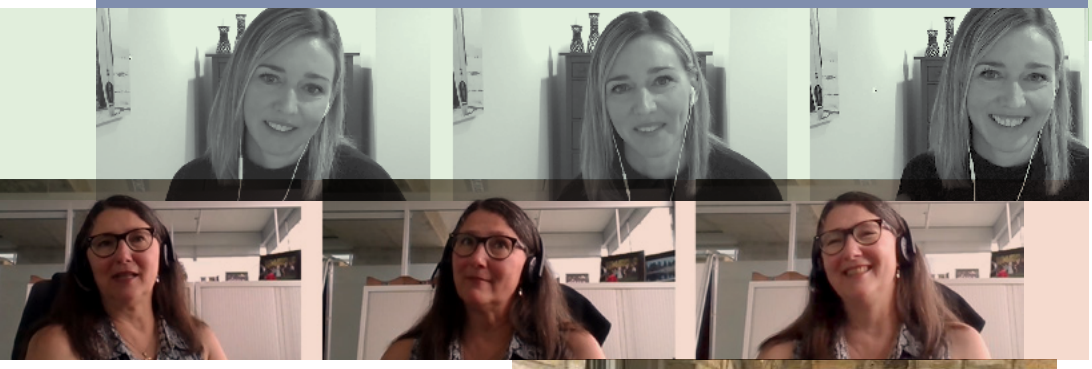
How we work

Manitoba Hydro's Corporate Social Responsibility Report

For the year ended March 31, 2021



Manitoba Hydro

Strategically adapting to our changing future

Today, more than 4,900 Manitoba Hydro employees work across our province in 80 different career streams, supporting the delivery of your energy services. These 4,900 individuals are members of your families. They are your neighbours. They are the volunteers that support community events or coach local sports teams.

Every single Manitoba Hydro employee has a vested interest in serving our customers and province - because we are also customers and Manitobans. We take seriously the trust placed in us to responsibly carry out our operations so that environmental and social impacts are minimized and benefits to our customers across Manitoba are maximized.

Together, we are working to build a strong Manitoba and adapt to changes today and into the future to ensure our reliable, trusted service for years to come.

Manitoba Hydro has a presence right across Manitoba – on Treaty 1, Treaty 2, Treaty 3, Treaty 4 and Treaty 5 lands – the original territories of the Anishinaabe, Cree, Oji-Cree, Dakota, and Dene peoples and the homeland of the Métis Nation. We acknowledge these lands and pay our respects to the ancestors of these territories. The legacy of the past remains a strong influence on Manitoba Hydro's relationships with Indigenous communities today, and we remain committed to establishing and maintaining strong, mutually beneficial relationships with Indigenous communities.

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Message from Jay Grewal, President & CEO

As the province's largest energy provider, almost every Manitoban relies on our service in some fashion each day, and in many different ways that they may not even be aware of. In their homes for lighting, heating, cooking, cleaning, entertainment, and increasingly in the past year, for working and schooling virtually. In businesses and industries to produce goods and provide services. In communities to support health care and other essential services day in and day out.

Manitobans count on our reliability, and we are committed to anticipating the changes coming in our future to best position our organization to strategically adapt and meet the needs of our customers and our province.

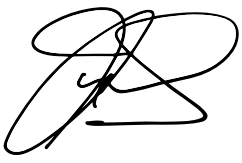
In the last year, I have seen many tangible changes in the way we work – many necessitated to ensure the safety of our employees, customers and public during the pandemic. We quickly applied operational changes, implemented new safety protocols and, where possible, moved to a virtual work environment. Our employees rose to these challenges and learned new ways of working, using new tools and technologies – all while maintaining reliable service.

While we embraced new ways of working – our work itself didn't change. We maintained a steadfast focus on our values – to always work in the best interests of our customers, to engage Manitobans in our work and strengthen our Indigenous relationships, and to ensure care and protection for our environment in a socially responsible manner.

While uncertainty about the future remains, at Manitoba Hydro we are looking forward to anticipate and address these changes, through Strategy 2040 – our 20-year plan that will help shape our energy future.

We've renewed our focus on our core business and our commitment to customers. We have reorganized our business model to become more nimble and responsive. We have shifted and adapted the ways we work, and the ways we give our time and energy to our volunteer interests and charitable organizations that help the communities we live and work in flourish.

At the heart of all of these changes, are the 4,900 individuals whose efforts across our company collectively help ensure that every time a child logs into their classroom, or a small business owner opens their doors, our energy is there for them — now and into the future.



Jay Grewal, President & CEO

Supporting our employees, our customers, and our province through pandemic

"Shamattawa First Nation inquired if we could connect new residences to help with spacing people for isolation purposes," said Ed Danyluk, manager of Manitoba Hydro's Interlake North Department. "When the pandemic situation worsened, our crews stopped going into First Nation communities to reduce risks of transmission - unless it was an emergency, like a house fire or a power outage."

Shamattawa First Nation is a community located about 360 kilometres east of Thompson, Manitoba. In response to the ask, a line crew was flown into the remote community to connect a six-unit residence originally built to house teachers.

Shamattawa wasn't the only First Nation to call on Manitoba Hydro. Chief and Council from both Bunibonibee Cree Nation and Wasagamack First Nation in north central Manitoba also asked for service connections to new houses to help with their local COVID-19 responses.

"Throughout all this work, our crews were mindful not to interact with anyone in the communities to reduce risks of transmission and followed safety guidelines to do our work," said Ed.

Supervisor Marshall Shust added, "Our people take a lot of pride in their work. These trips to First Nation communities show their willingness to do whatever it takes for our customers - wherever they are."

During their time in Shamattawa, our line crew - Jared Flaman, Kyle Froese, Zechariah Sather, Jayde Petrowski, Alex Bates and Shawn Melsted - also took the opportunity to safely deliver 40 boxed lunches to the community's nursing station as pictured here.

"The COVID-19 outbreak changed how we work quickly," said Chuck Steele, Director of Safety, Health and Environment for Manitoba Hydro. "From the onset, we followed the latest information and recommendations from provincial health authorities to make significant changes to our operations to reduce the risks of transmission to our employees, customers or the public."

On March 13, 2020, when the Manitoba provincial government announced the first three presumptive cases of COVID-19 in our province, our organization activated its multi-stage emergency pandemic plan.

As the global and Canadian response to COVID-19 rapidly progressed, Manitoba Hydro remained focused on providing our service, knowing our customers needed the energy we provide — perhaps more than ever. Whether they were ill and needed care, or at home juggling a new work/life balance, our energy enabled our province and every Manitoban to proceed as normally as possible in these extraordinary times.

Our response included adaptations to maintain emergency and essential services, implementing protocols to reduce transmission and slow the spread, and accommodating flexible payment arrangements, where possible.

Maintaining emergency and essential services

Through our social media channels, we broadcast and informed customers about our contingency plans to help ensure emergency and essential services — and public safety issues — were addressed and provided regular updates to inform the public what work or services were suspended or changed. We reached out to Indigenous communities to make them aware of our plans and to make sure we had up-to-date emergency contact information.

To reduce contacts with our customers and the public, we closed offices to external visitors and traffic and closed our cash payment counters. Customers were encouraged to use other options to make bill payments, and we provided regular communication via news media, our website and social media channels to ensure they had the information they needed.

Employees are provided with all appropriate Personal Protective Equipment to reduce risks.

Recognizing that individuals may be struggling financially because of the pandemic, we worked with customers to arrange flexible payment plans and suspended late-payment charges for up to six months," said Paul Chard, Director of Customer Care and Marketing.

Emergency work continued, with employees always following current COVID-19 protocols to protect themselves and Manitobans.

"Our measures continue to evolve based on advice from public health authorities, including wearing personal protective equipment (PPE) should we need to come into your house or business during an emergency or safety-related call," said Chuck.

"These are the people I'm most proud of, because they go into peoples' homes," said Victor Diduch, one of Manitoba Hydro's gas dispatchers. "They don't have a choice. This is a service Manitoba Hydro provides to keep people safe — going right into the heart of it."

When a customer calls for a natural gas emergency (no-heat, a leak, etc.), a contact centre representative asks if anybody is self-isolating or infected. Our first responders ask again when they arrive. If a customer is infected or isolating, they're asked to move to a separate room or sit in their vehicle while we work. The crew also wears PPE for extra caution.

If the job requires paperwork, our first responders complete it with their own pens and paper and leave it there. No customer touches any of our equipment.

"I think as a company we've done quite well," said Victor. "This caught everyone off-guard. It's been good what we've been able to accomplish in such a short time."

Stopping the spread

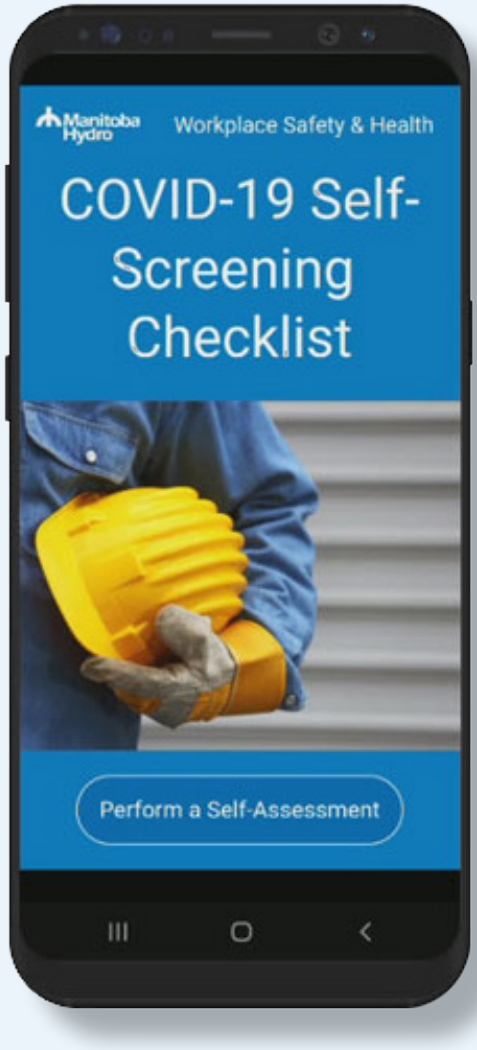
To impede the spread of the virus, our protocols remain in place and are always based on the latest guidance from public health authorities and government.

This starts with reminding employees to wash hands frequently, practice physical distancing, conduct meetings virtually, avoid shaking hands, and maintain at least a two-metre separation in person.

From the onset of the pandemic, we:

- implemented a specialized governance system for monitoring the COVID-19 situation and our response to it, including communications, work practices, employee health and decision making processes.
- adopted protocols recommended by Public Health, including protocols for post-travel internationally and provincially return-to-work (for personal and business travel) and other potential sources of contact with carriers of COVID-19;
- encouraged employees to work from home wherever possible;
- closed our offices to the public;
- dispatched employees directly from their homes using mobile workforce technology;
- called off all non-essential business travel for staff;
- provided employees with hand and surface sanitizer, and other personal protective equipment (PPE), as appropriate to the job;
- implemented enhanced cleaning protocols for our facilities and vehicles;
- increased physical separation between workstations for job roles that cannot be performed from home.

"In October, we launched our COVID-19 Self-Screening app that our employees could use on their mobile device before reporting for work or entering Manitoba Hydro facilities," said Wayne Bartley, Workplace Safety & Health Department Manager for Manitoba Hydro. "The new app was developed to help make self-assessments easier for our employees to complete and to receive follow-up support."



To best support the physical, mental health and well-being of all employees, our organization launched "It's Me; Let's Connect" — a comprehensive summary of available mental health resources provided via direct mail and online.

"A new Our Workspace website was also launched to ensure all employees had access to the most current pandemic protocols and information," said Wayne. "Safety and Health training, procedural and protocol updates and PPE requirements will continue to be monitored, updated and improved or revised as we move through the pandemic."

Performing a self-assessment for COVID-19 symptoms is required prior to entering any Manitoba Hydro workplace regardless of time or date.

"Building relationships with the Northern Regional Health Authority's (NRHA) Chief Medical Officer and public health nurses was crucial for guidance through the day-to-day situations/questions, the ever-changing COVID stages/waves and for education during tabletop exercises and town hall discussions," said Bo Hancox, Projects Officer for the Keeyask Project in northern Manitoba. "NRHA support and guidance was invaluable during these times of uncertainty and continues to this day."

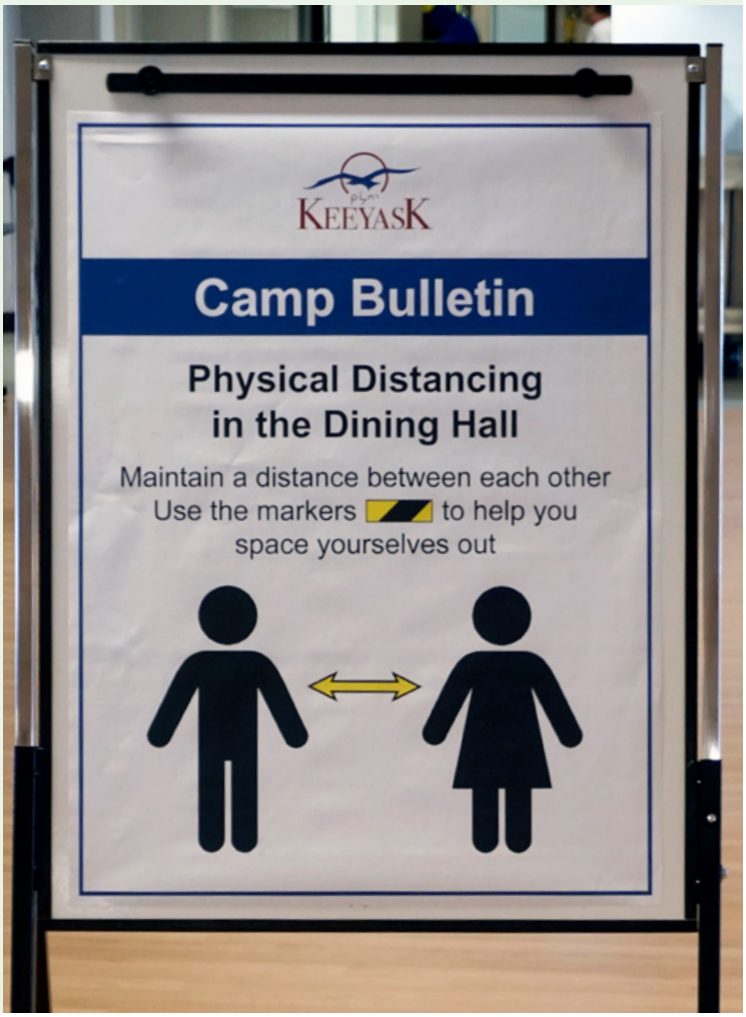
Once the pandemic was declared, the Keeyask Project - where Manitoba Hydro is the project manager - took immediate action to protect the health, safety and well-being of Keeyask site workers, and the project's partner - and surrounding - communities.

Manitoba Hydro activated its' pandemic plan and protocols to help reduce the risk of COVID reaching site and spreading to other communities.

"In terms of functional measures, the project contracted for PCR testing – the gold standard of testing for early detection of the COVID virus – for all of the workers," said Bo. "As the province rolled out and promoted vaccinations, so did Keeyask. As more testing became available and the COVID situation peaked, the project engaged a medical director and occupational health physician to help provide guidance as the needs of the pandemic became more complex.

"Another key aspect was regular communication and discussions with the Keeyask Cree Nations partners which provided insight into community concerns and for feedback.

"That communication is ongoing, with continual sharing of regular updates about what's happening at the project site and in the communities. The open lines of communication are especially useful for anticipating changes to future processes and protocols."



VALUE FOR MANITOBANS

"Telephone response is critical to serving our customers," said Karen Brown, Manager, Customer Contact Centre, Manitoba Hydro. "And now especially, when so many of our customers are facing stress and anxiety."

"Through those early days of the pandemic and all the changes going on, we had to be there for customers," said Karen. "On top of the restrictions, there were a lot of weather-related outages, gas emergencies, a larger than normal number of moves, a number of scams, customers concerned they may not be able to pay their bills, and our in-person customer service and payment centres were closed."

"Normally we have 70 staff with various schedules responding to calls and email on the fourth floor of 360 Portage, but due to physical distancing measures we had to move staff to three separate locations as well as setting up folks to work from home," said Karen. "all while using new technologies and maintaining our level of customer support, which we did — pretty much seamlessly."

Between March and April 2020, our Contact Centre handled approximately 34,000 calls and 5,900 emails from customers.

"We are on a mission to ensure that our customers' rapidly evolving needs and expectations are at the core of everything we do," said Shahzad Chaudry, Director of Customer Strategy and Experience at Manitoba Hydro. "Our aspiration is to serve Manitobans with consistent care, compassion and competence and meet their current and future energy needs in a cost-efficient manner, while demonstrating elevated reliability and responsiveness."

Manitobans depend on our service and we have proven our commitment to reliability through challenges and change, while maintaining some of the lowest rates in North America. Growing strong communities and our economy starts with serving our customers and ensuring everyone has reliable, affordable energy.

"Manitobans increasingly want channels that are easy to access, convenient to use, and are digitally enabled," says Shahzad. "Our aim is to engage with our customers transparently to earn their trust and understand their evolving needs and expectations and continue to be more reliable, efficient, responsive, and affordable. We are Manitobans helping Manitobans. We will always be there for them."

VALUE FOR MANITOBANS

Number of electric customers
600 991

Number of gas customers
290 592

Number of communities with natural gas service
132

Total number of active, electrical customer accounts on First Nations reserve lands:
21 392

Total number of active, natural gas customer accounts on First Nations reserve lands:
16

Performed
68 855
scheduled line locate requests received from *Click Before You Dig MB*

95% ** of customers satisfied with field service

85% * of customers satisfied with overall service

Electric capital expenditures:
$1.275 Billion

Gas capital expenditures:
$37 Million

* From our Customer Service Tracking Study (a quarterly relationship survey to assess overall satisfaction with service. Since 1999, 500 Manitobans queried every quarter via telephone survey).

** Data from our Voice of the Customer program (2020/21 fiscal year).

Delivering reliable, essential service

Our newest piece of equipment — the Bronto Sky Lift — takes our reliability to new heights.

"The new aerial equipment is used to help repair high voltage lines such as our Bipole I, II, and III lines. It can extend 60 metres (200 feet), so it reduces our need to take costly outages to make repairs," said Jeffrey Laninga, Transmission Line Maintenance, Manitoba Hydro. "One planned outage to a Bipole line can cost approximately $400,000 a day."

Jeffrey also points out that safety features of the unit help identify potential hazards, providing extra security for crews using it.

"Day-to-day, our reliability can be tested by adverse weather conditions, wildlife contacts, and other incidents that can result in unexpected outages. Our field crews apply their expertise and skill to resolve these outages safely and quickly," said Shannon Johnson, Director of Distribution and Operations Maintenance, Manitoba Hydro.

One way we track our electric service quality is through our system average interruption duration and frequency indexes, or SAIDI and SAIFI (see below), which measure the average annual service interruption times and rates per customer, based on an international standard of the Institute of Electrical and Electronics Engineers (IEEE).

The Canadian Electricity Association's (CEA) 2020 Public Attitudes Research survey showed Manitoba Hydro among the highest-rated Canadian utilities in overall customer satisfaction and service experience.

SAIDI (System Average Interruption Duration Index):

2019-2020 target: **116**
2019-2020 actual: **299** minutes
2020-2021 target: **148**
2020-2021 actual: **159** minutes

SAIFI (System Average Interruption Frequency Index):

2019-2020 target: **1.4**
2019-2020 actual: **1.2**
2020-2021 target: **1.59**
2020-2021 actual: **1.58**

Infrastructure renewal and modernization

To build our energy future from our strong foundations, we re-invest in, repair, restore and where necessary expand our infrastructure to ensure safety, reliability and capacity to meet the growing energy needs of our province. We spend $482 million annually on renewing our electrical distribution system, and $37 million annually on renewing our natural gas distribution system.

"Winter weather forced generation outages and high load demand across the electricity system in the United States," said Tom Tonner, Manager of Manitoba Hydro's System Control Centre. "The intent of the delays was to stabilize Manitoba Hydro's grid which is interconnected to the United States and to avoid any action that could potentially contribute to the strain already weighing on the system to the south."

On February 14, as lights began to go out across Arkansas, Louisiana, Mississippi and Texas in the United States, Manitoba Hydro suspended planned maintenance across our transmission, generation and high voltage direct current (HVDC) systems in response to a call by the Mid-Continent Independent System Operator (MISO).

The action also allowed Manitoba Hydro to maximize its generation, providing surplus electricity to the broader MISO power pool to help meet shortfalls in affected areas.

MISO operates one of the world's largest electricity markets across 15 US states and Manitoba – including some of the states hardest hit by the freak cold temperatures.

When Conservative Operations took effect, Manitoba Hydro supplied the United States with an average of 550 megawatts (MW) of generation with peaks up to 1,000 MW.

Access to additional sources of electricity is one of the key benefits of having transmission interconnections to other utilities and membership in a regional power pool such as MISO. If one member or a group of members is experiencing a capacity shortage because of a weather event or unforeseen equipment failure, they can turn to other members to make up that energy shortfall.

Manitoba Hydro customers have benefitted from this relationship on a number of occasions. One of the most significant came in 1996 when a windstorm tore down 19 towers on the Bipole I and Bipole II HVDC lines just north of the Dorsey Converter Station. Cut off from more than 70 per cent of the province's electricity generation, Manitoba Hydro turned to neighbouring utilities for the electricity needed to avoid blackouts.

"Our customers count on the reliable delivery of natural gas and electrical services to power their homes and businesses. To help ensure reliability into the future, we are building the Keeyask Generating Station to provide additional energy and capacity to our system, and the St Vital Transmission Complex to ensure we can meet demand in one of the fastest growing areas of our province," said Lorne Midford, Hydro's Vice-President of Asset Planning and Delivery.

"We continually re-invest in our system to update, rehabilitate, and expand it as needed to meet your growing energy needs."

Natural gas distribution system

"As an agricultural rep, I work with farm customers," said Brian Rempel, one of Manitoba Hydro's many representatives in our Customer Energy Services department.

"A Hutterite colony near Killarney had been using a mix of coal, propane and electricity for all their needs, including things like grain dryers and for heating barns and shops that consume a lot of energy.

"In October 2020, we started one of the biggest single customer gas main extension jobs – a project that will have long-term benefits for both the customer and the environment.

"This project allowed the colony to remove their coal-fired boilers and install high efficiency natural gas boilers because they now had connection to our natural gas main. Through an incentive from Efficiency Manitoba, they will likely realize close to $100,000 a year in energy savings."

By replacing propane and coal with clean burning natural gas, which produces 45 per cent less carbon dioxide than coal, the colony is also significantly reducing their greenhouse gas emissions, another major benefit.

"Helping our customers lower their energy costs helps their operations remain economic and helps them grow – benefiting them and Manitoba overall," says Brian.

The Manitoba Hydro natural gas system uses 10,673 km of natural gas lines to supply 290,502 customers.

"Our natural gas system has an excellent record of safety and reliability, and our customers rely on natural gas availability," said Tim Starodub, Gas Engineering & Construction, Manitoba Hydro. "The design, construction, operation and maintenance of our natural gas distribution system is primarily under the regulation of the Manitoba Public Utilities Board (PUB)."

To ensure we meet regulatory requirements, our **Natural Gas Safety & Loss Management System** and a **Natural Gas Pipeline System Integrity Management Program** provide direction for work activities; and our **Natural Gas Quality Assessment Program** reviews work to confirm that it is done in compliance.

"Planning for replacement of critical assets is necessary, and system load growth will require additional pipe and systems to meet increased system demands. Changes in technology provide opportunities to introduce selected system automation that will improve emergency response and provide operating advantages," said Tim. "As a natural gas distribution utility, Manitoba Hydro will be required to meet the requirements of the Canadian Hydrogen Strategy and the 2050 Net Zero agenda which have goals to reduce the carbon intensity of energy, including natural gas."

Maintenance and inspections

Over 25 inspection and maintenance programs examine and monitor the safety and integrity of our pipeline system and identify issues for evaluation and remediation. Key programs include:

- **Leak inspections**
- **Depth of cover surveys**
- **Customer meter set survey**
- **Pipeline in-line inspection**
- **Cathodic protection system monitoring**
- **Valve maintenance**
- **Meter compliance**
- **Geotechnical surveys**

"The condition and performance of our natural gas system remains very good and the requirement for planned system renewal is minimal. Pipeline installations to provide increased system capacity are performed on an as required basis," said Tim.

Currently, typical annual replacements or re-construction of the identified natural gas assets includes:

- **Gas meter replacements** - generally in the range of 10,000 to 20,000 meters per year.
- **Primary and pressure regulation station upgrades** – approximately six stations are upgraded every year.
- **Farm tap replacements** - replace or abandon approximately 10 farm tap assemblies per year.
- **Customer service upgrades** – targeting remediation of 100 commercial services and 2,000 to 3,000 residential services a year to address issues found during surveys.

Electricity transmission and distribution

NESS AVENUE PROJECT

"Our Ness Avenue renewal project in Winnipeg is replacing old poles and infrastructure along Ness Avenue to improve reliability in the St. James area," said Eric Wickstrom, Station and Program Project Management, Manitoba Hydro. "Work began in February 2021 and is slated to finish in spring 2022. Since poles are along the road, lane closures are required to work safely — affecting businesses and residents in the area."

While rehabilitating and improving our system is part of our everyday job, as a socially responsibly organization we wanted to ensure that everyone living or working in the area could plan for road closures and understand the benefit of this work. To do that, we developed a comprehensive outreach campaign that included:

- A webpage explaining the work, a work schedule, and tracking the progress of the project.
- A video explaining the work and why it was necessary, posted to our website and social media.
- Hand-delivered letters to affected businesses and customers.
- Automated phone calls to affected businesses and customers.
- A letter to the city councilor about the work and how it will benefit the area.
- Phone calls to area businesses.

A video explaining why the Ness Avenue work was necessary was viewed collectively over 70,000 times on our website.

Re-energizing our electrical grid

"Our electrical grid is an intricate system that enables our business to provide our product safely and reliably to our customers around the clock," said Shannon Johnson, Director, Distribution Operations and Maintenance, Winnipeg. "We are continuously expanding, renewing and modernizing the components of our transmission and distribution system to continue to meet our proven standards for safety and reliability, and add capacity to meet the growing need for electricity."

To ensure your energy supply is reliable for years to come, we inspect, repair, and replace parts of our electricity system across Manitoba that were built over 60 years ago, including:

- **One million wood poles** – we replace approximately 8,000 annually; and inspect and treat more than 85,000 annually to extend their life.
- **2,200 underground utility vaults** – we replace approximately 20 annually.
- **240 kilometres of duct lines** – we are replacing 200 metres in the next year.
- **23,500 padmount transformers** – we replace approximately 50 annually.
- **10,000 kilometres of underground cables** - rehabilitating 94 kilometres in the next year and replacing 30 kilometres where rehab is not an option.
- **Building new distribution supply centres** – since 2001, we have built more than 60 new distribution supply centres - smaller, compact versions of traditional substations.
- **Replacing substations** - we planned to replace or upgrade 20 substations by 2020 and reached our target. An additional 13 stations are planned to be replaced or upgraded by 2025.
- **Expanding our transmission system** - our current system expansion projects include electrical stations and transmission lines: De Salaberry East Station Project; Poplar Bluff Transmission Project; St. Vital Transmission Complex.

We deliver more than 30 billion kilowatt-hours of electricity over 11,045 km of transmission lines and 75,320 km of distribution lines on average every year.

SAGE CREEK CONSTRUCTION

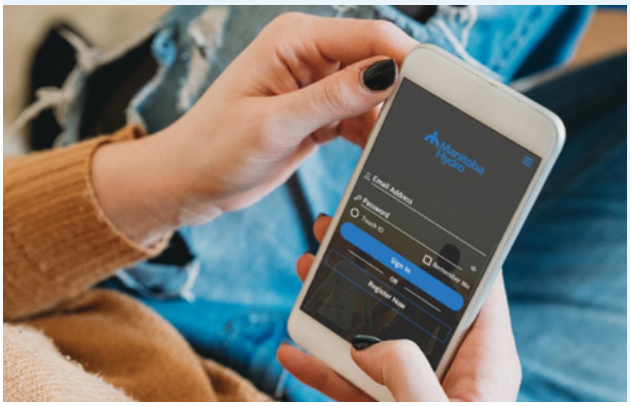
"In June, we started construction of 13 new towers in Winnipeg's Sage Creek neighbourhood as part of the St. Vital Transmission Complex, a transmission project designed to improve reliability of service and address electric load growth in south-central Manitoba," said Maggie Bratland, Manager, Stakeholder Relations..

"To inform residents in advance of the work and how it would be conducted safely, we partnered with the Sage Creek Residents' Association to host a virtual information session using Google Meet and a conference call in June 2020."

Social media directing customers to our website was also used to provide ongoing updates on the progress and address questions or concerns raised by the residents.

Ensuring accessible, affordable service

"Our new online account and app allow for easier outage reporting, personalized service notifications along with the ability to view your energy bill, among other things," said Domenic Marinelli, Customer Experience, Manitoba Hydro. "These tools are the result of a lot of research about what our customers want, and we're going to continue to improve — this is only the first step.



"It's exciting we're making progress that delivers what our customers are asking for and adding benefits like automated customer notifications and more self-service options. It's all part of our long-term strategic goal to focus more on our customers and ensure we meet their needs not just today, but tomorrow as well."

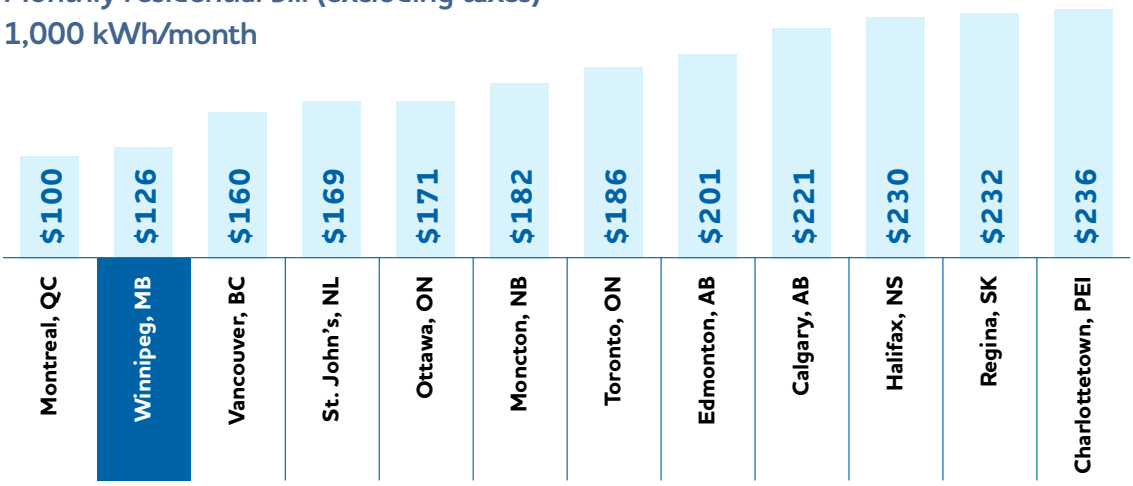
The Manitoba Hydro App is available for free on iOS and Android devices.

"Your home is where you rest, play, and spend time with friends and family. We're here to help make life easier – to help you create a home environment that is energy efficient and comfortable," said Lois Morrison, Director, Sales and Marketing. "To help our customers save energy and money with expert advice, loans and financing. And for those times that our customers may be struggling, to provide connection to support resources and financial aid."

Our mission is to create value for Manitobans by meeting our customers' expectations for the delivery of safe, reliable energy services at a fair price.

We are one of the lowest-cost energy providers in Canada.

Monthly residential bill (excluding taxes)
1,000 kWh/month



ENERGY ON BILL FINANCING and HOME ENERGY PLAN

Our **Energy Finance Plan** offers convenient on-bill financing for upgrades to gas and electrical systems. It is available to Manitoba Hydro residential, small commercial, farm, and seasonal customers.

In 2020-21, our Energy Finance Plan provided financing for 1,472 loans representing $5.096 million.

The **Home Energy Efficiency Loan** is a convenient and affordable financing option to assist residential customers making energy efficiency upgrades to their homes.

We partnered with Efficiency Manitoba to set the energy efficiency requirements for many of the qualifying upgrades including heating systems, windows, doors, insulation, and more.

In 2020-21, the Home Energy Plan provided customers with 3,931 loans worth $18.347 million for qualifying upgrades.

NEIGHBOURS HELPING NEIGHBOURS

Our **Neighbours Helping Neighbours** (NHN) program makes a material impact on the people in our province. Working with the Salvation Army to assist those struggling with energy bills, the program helps lower-income individuals, families, and seniors connect to one-time emergency funding to assist with energy bills, and provides referrals to community support services, counselling and job training. Neighbours Helping Neighbours relies on private and corporate donations to fund its services.

Since 2004, the Neighbours Helping Neighbours program has helped over 9,225 families keep up with utility bills.

"Manitoba Hydro has always been committed to ensuring our customers are treated with dignity and respect," said Carol Thiessen, Recruitment & Diversity, Human Resources, Manitoba Hydro. "Our extensive Accessibility Plan further demonstrates that commitment and is compliant with The Accessibility for Manitobans Act.

"Since 2017, we have further adapted the delivery of programs, products, communications, and services, to meet the needs of individuals; updated a variety of our facilities and building access to ensure customers are able to enter and feel welcome; and improved access to safety information and online customer services.

"We also remain committed to working with job candidates and employees with disabilities to ensure full and effective participation in our workplace, and to ensure we fulfill the obligations under the new Accessibility Standard of Employment."

Your safety and security

"Due to the restriction on large gatherings imposed because of the global pandemic, the 34th Teddy Bears' Picnic — an annual fundraiser of the Children's Hospital Foundation — moved to a live stream on Facebook this year. We've always had a major presence at this event, and this year, we needed to think about how we could still participate and add value — remotely," said Janet Rak, Public Safety & Education Coordinator.

For the first time in 30 years of sponsorship, Manitoba Hydro's mascot, Louie the Lightning Bug, made a virtual appearance at the Teddy Bears' Picnic.

At this year's Picnic broadcast, Louie the Lightning Bug went on a pre-recorded video safety adventure that ended with a bedtime story for Louie and his little bug buddy. In addition to viewing Louie's safety adventure, families tuning in learned how electricity travels to their outlets and switches through an educational video prepared for the event.

At the core of everything we do, safety remains our top priority.

As a socially responsible organization, making sure our customers and others are safe around our electricity and natural gas products, and infrastructure we use to provide them, is a critical aspect of our business.

To that end, we strive to raise awareness and reach Manitobans of all ages through public outreach, advertising campaigns, social media messaging, public service announcements and various community activities.

Whether you are planning a project in your backyard or growing crops to feed families on your farms, it's critical to exercise caution around our facilities and infrastructure, including dams, substations, transmission towers, powerlines, and pipelines.

Click Before You Dig

"Each year, many instances of power outages or gas leaks are caused by contractors and members of the public contacting our underground infrastructure while digging or excavating," says Robert Morrison, Damage Prevention Coordinator. "To counter accidental contacts, we are part of the Manitoba Common Ground Alliance and actively promote the Click Before You Dig MB service."

Click Before you Dig coordinates underground line locations for multiple utilities, including our underground electrical and natural gas lines."

"Our staff assess each request and provide line location marking and notification, ensuring the public, contractors and others have the right information to excavate safely," says Robert.

As well as protecting public safety, the program helps reduce costly repairs, equipment damage, service outages, and environmental pollution.

In 2020, we performed 68,855 scheduled line locate requests via requests received from Click Before You Dig MB.

Carbon monoxide awareness

"Carbon monoxide gas is a concern at any time of the year, but in heating season, the risk of carbon monoxide (CO) exposure increases," says Janet Rak, Public Safety & Education Coordinator. "To ensure widespread awareness, we promote an annual safety campaign during National CO Awareness Week, as well as ongoing multimedia advertising promoting the call to action to install a CO alarm in newspapers, transit ads, billboards, radio, television, public safety announcements, bill insert and online.

During National CO Awareness Week in November 2020, our campaign focused on raising awareness of the risks associated with carbon monoxide gas, how to prevent CO in the home, and the importance of installing CO alarms.

Through a social media contest, we engaged followers through a 'CO question of the day' and a chance to win a CO alarm. Ten CO alarms were awarded to customers who participated in the Facebook contest.

Farm safety

"Among other factors, such as long hours and weather conditions, related to working farmland, the increased size and use of automation in today's farm equipment has increased the inherent risk to life and property. Farm equipment contacts account for 30 per cent of the total public contacts with our equipment annually, with nearly half of these contacts involving cultivators and air seeders," said Cyril Patterson, Manitoba Hydro's Director of Distribution Operations and Maintenance, Rural.

Reminding agricultural producers to be safe while operating equipment around our infrastructure —particularly during the busy seeding and harvest seasons — is a key priority.

Through our **Farm Equipment Clearance Permit** program, customer service employees work with ag producers to inspect routes in advance, ensuring there are no hazards where equipment will be transported.

We also collaborate with the Keystone Agricultural Producers and other stakeholders on farm safety initiatives, in addition to our public awareness campaign.

Our farm safety messages are delivered through television and radio ads, billboard messages, online, bill inserts, news releases, participation in ag events, and through print ads in community newspapers and special farm safety supplements.

Farm equipment contacts with our infrastructure account for 30% of the total public contacts annually. Nearly 46 per cent of these contacts involve cultivators and seeders.

Dam safety

"It was helpful to hear from the Indigenous communities on this project. We had Elders join us on the walking tours that spoke to the long-standing history and significance of the area and encouraged us to remember our responsibility to care for the unique ecosystems that exist throughout the area," said Maria M'Lot, Partnerships & Capital Projects Support, Manitoba Hydro.

A new all-season safety boom that crosses the entire Winnipeg River upstream of the Slave Falls Generating Station will provide a barrier that limits water access around the station to make the area safe for the public. Warning buoys will also be installed on the downstream side of the generating station to alert boaters to the dangerous waterway zone in this area.

The new safety boom will permanently block access to the existing portage route, so a new portage route is being constructed to provide safe passage around the generating station and enable access to the waterway downstream of Slave Falls.

From July 2020 to February 2021, we reached out to local residents, Indigenous and surrounding communities, and recreational waterway users to collect feedback, understand concerns, and assess potential impacts related to the proposed new portage route. This input helped inform our final routing and design of the new portage.

Feedback through this engagement process was obtained through an on-line survey, virtual meetings, emails, phone calls and walking tours. Indigenous engagement provided insight into the longstanding history and significance of the area to Indigenous peoples and potential routing constraints to be aware of.

Following a Public Water Safety Around Dams safety review at Slave Falls Generating Station, the existing safety boom and portage route around the station is being moved.

We also work with external safety groups such as the Manitoba Lifesaving Society and Canadian Red Cross to promote water safety. Manitoba Hydro is an active member in the Canadian Dam Association (CDA) — a group of dam owners, operators, regulators and engineers who are interested in all lifecycle aspects of dams, including planning, design, construction, operation and maintenance.

Dam Safety Emergency Plans are in place and maintained for each Manitoba Hydro generating station or control structure. These provide information on recognizing, planning for, and responding appropriately to dam safety emergencies, in cooperation with external authorities.

Instilling safety in the next generation

As schools moved to remote learning in 2020, we changed our approach to participate in virtual community events and create online resources to support educators and families.

- **Virtually reached children and their families** at the 34th Annual Teddy Bears' Picnic in Winnipeg, with educational information about how to avoid electrical hazards in their daily lives.
- **Created online learning activities** to support educators in teaching students about safety around electricity and natural gas, how electricity is produced in Manitoba and how it gets to our homes.
- **Engaged families through social media** with online interactive activities on electrical and natural gas safety.

Fraud and scam awareness

We strive to protect our customers from fraud by actively informing and alerting them about evolving scams, through direct mail, social media, our website, and public service announcements.

"One example is 'spoofing' phone scams – where the caller claims to be Manitoba Hydro and wants to discuss a customer's account with them to gain information," said Bruce Owen, Media Relations Officer at Manitoba Hydro. "The caller has used software to hide their real identity by showing a fake phone number on a target's call display. The software can replicate actual numbers on the call display, making people think the call is from a reputable business. We want to be sure our customers know about these types of scams and do not fall victim."

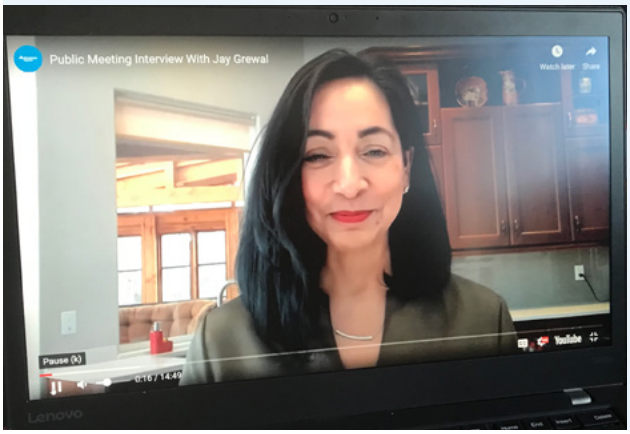
"To enhance our customer protection and stay current with evolving frauds, in 2019, we joined **Utilities United Against Scams** (UUAS) — an alliance of more than 100 U.S. and Canadian electric, water, and natural gas companies, and their respective associations. Together we work with regulators, law enforcement, and telecommunications partners to raise awareness about scams targeting all utility customers."

Keeping you informed

"Annually, our senior leadership take part in public accountability meetings with our customers to provide the opportunity for questions and sharing information – typically in an open house or townhall format. During the pandemic, our meetings were held virtually so that we could still have a conversation with as many customers as possible," said Scott Powell, Director of Corporate Communications.

During the week of February 22, a series of videos from Jay Grewal, our President & CEO, and other members of our executive leadership team were posted to Manitoba Hydro's website.

"To facilitate the two-way dialogue that makes these meetings so valuable, we asked our customers and the public to submit questions to us ahead of time. A sample of the most frequently asked questions were answered in our video updates, which also touched on some of our recent successes and challenges over the past year, as well as what our focus will be over the next 12 months."



Simple, effective communications are a critical component of providing trusted, reliable customer service. We do our best to actively update and inform our customers about their energy options and communicate information about our products, services, people and work in their communities across a number of platforms.

We also strive to engage in two-way, real-time conversations via social media — particularly during emergencies and outages — to reduce risk and provide a comforting connection when the heat and lights are interrupted.

Day-to-day, we use social media to inform you about our products and services, our people and the diverse range of work we do around the province, with links back to our website hydro.mb.ca for more information and stories on our external blog.

Energy Matters, our printed monthly newsletter, ensures widespread reach to our customers in every energy bill mail-out to provide corporate news, product information, and safety tips.

Social media followers:

- Facebook: ***38,143***
- LinkedIn: ***26,000***
- YouTube: ***2,090***
- Twitter: ***37,780***
- Instagram: ***5,202***

Real-time outage and emergency response

When service interruptions occur for maintenance or because of an emergency, we do our best to give advanced notice or real-time information on the duration and estimated restoration time. Communication to those affected by planned or scheduled outages happens in advance via our automated voice dialing system and text messaging supported by social media and mass media notification where required.

Social media posts and responses aim to share real-time information about the extent, cause and estimated duration of the outage, and important safety tips such as how to prepare for an extended outage or what to do around downed lines.

PEOPLE POWER OUR PROVINCE'S GROWTH

"It was awesome to receive this," said Paul Moore of ImagineAbility Inc., who received a donation of a commercial bread box, freezer and toaster from Manitoba Hydro. "[These donations] directly help the people we support. The bread box is perfect for one of our individuals to make sandwiches when we are able to have groups of people coming back."

WE DONATED
22 PIECES
OF COMMERCIAL KITCHEN EQUIPMENT TO **SEVEN** WINNIPEG ORGANIZATIONS

Paul Moore, Imagineability Inc. receives a bread box for sandwich making.

Seven Winnipeg community organizations received over 20 appliances donated by Manitoba Hydro in 2021. Vacated cafeteria spaces at four of our facilities left an opportunity to re-purpose the space – but also left a surplus of commercial kitchen equipment.

"With COVID-19 putting pressure on the restaurant industry, more of these types of equipment are coming into the market and value is dropping. After an attempt to auction the equipment with no bids placed, it became clear that the greatest return would be to donate the equipment to local social service agencies and community organizations that could make use of it in their programming," said Lance Winters of Manitoba Hydro's Corporate Facilities group.

"It was an easy way to do something good for the communities we all live and work in."

To ensure safety and compliance with COVID-19 protocols, we moved and delivered all the equipment from our four buildings to the seven community organizations. (See infographic)

"Manitoba Hydro has a long, proud history and tradition of service. Our people live, work and raise their families in communities right across this province," said Sharon Harrald, Vice-President, Human Resources, Manitoba Hydro. "We are equally invested in the future of our province and fulfilling our commitment to operate in the best interest of all Manitobans – because we are customers too."

We provide employment to over 4,900 individuals in our organization. Our interactions and how we conduct our business and do our work also reflect our values to promote a culture of safety, ethics, diversity, and respect.

Bringing people together collaboratively extends to all people, interested parties and communities across Manitoba. We recognize our stewardship role and our responsibility for considering the needs and perspectives of all Manitobans to reduce the impacts of our operations and ensure decision-making that benefits those directly involved.

"Volunteerism, community investments and sponsorships honour, celebrate and recognize the events and activities important to Manitobans, and help individuals and our communities flourish," said Sharon. "Our employees champion many causes across the province with support from Manitoba Hydro."

OUR PEOPLE

4,954 Employees **959** Indigenous employees

Diversity of employees

Indigenous — province-wide workforce	2020-21 target:	18%	actual:	20.2%
Indigenous — northern workforce	2020-21 target:	47%	actual:	48.4%
Indigenous — in management	2020-21 target:	8%	actual:	10.4%
Persons with disabilities	2020-21 target:	6%	actual:	7.7%
Visible minorities	2020-21 target:	9%	actual:	9.5%
Women — in workforce	2020-21 target:	30%	actual:	22.9%
Women — in management	2020-21 target:	30%	actual:	28.9%

Safety

Accident Severity Rate	Target:	12	result:	26.3
Accident Frequency Rate	Target:	0.6	result:	1.51
Serious Injury/Fatality Incidents	Target:	0	result:	1
Serious Injury/Fatality Potential Incidents	Target:	0	result:	5

Our people

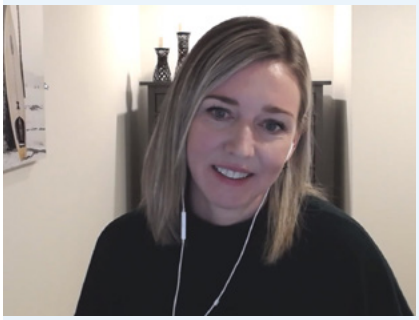
"Collaboration is the key. Even though we may be working at home, we're not alone," said Nancy Van Nierkerk, Human Resources & Supply Chain, Manitoba Hydro. "We have some amazing tools but there are so many… and they are changing so quickly that it can be a little overwhelming. Often, it's hard finding time to learn them."

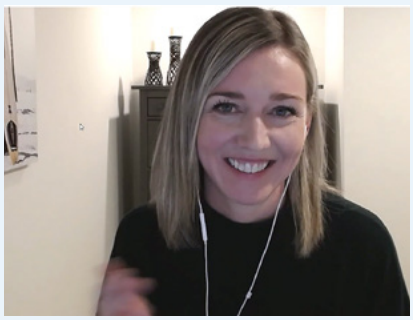
To combat the technology learning curve, Nancy started a grassroots effort for our administrative professionals to learn something new each week — for their own learning and to support the work across our operations.

"I thought that I'd better step up my technology skills," said Nancy. "And I was sure other admin professionals were feeling the same way at the start of the pandemic – trying to learn new digital tools on the fly without much instruction. It made it easier to learn together and share what was working and what wasn't."

"They really leaned into the challenges and leveraged technology," said Sharon Harrald. "They've helped create a whole new way of working. And the way they've adapted and have helped their groups adapt, may be what helps pave the way for working remotely in the future – post pandemic."

The group started by our administrative professionals is just one of many internal Communities of Practice where together, our people are learning invaluable skills and new and complex software together as our digital transformation continues to take shape.






"Year after year, we are recognized provincially as a top employer and nationally as a top diversity employer," said Lisa Leochko, Diversity & Recruitment Department Manager, Human Resources, Manitoba Hydro. "Most importantly, we are committed to achieving and maintaining a workforce that reflects the demographics of the communities we serve. Our diversity goals are one method we use to check our progress."

Diversity goals by percentage

Designated group	Workforce goals
Indigenous peoples	18%
Visible minorities	9%
Persons with disabilities	6%

More than 4,900 Manitobans work for Manitoba Hydro. in 80 different career streams. at locations across the province, doing diverse and challenging work. Supporting our employees includes providing ongoing training and skills development, and an atmosphere recognizing the importance of a work/life balance. This promotes mental health for wellbeing and improved safety on the job, time to raise our families, and contribute to our communities through volunteerism.

"Manitoba Hydro's **Code of Conduct** sets out the fundamental values and expectations of the corporation with respect to ethical business conduct," said Leo Wong, Chief Ethics and Compliance Officer at Manitoba Hydro. "The Code highlights a number of fundamental guiding principles including respect for others, diversity and inclusion, harassment-free workplace, safety, environmental stewardship, integrity and accountability, legal compliance, fairness in human resource management and in procurement."

Translation and application of these principles are put into practice to each subject.

"Awareness and notice are achieved through regular **mandatory ethics training** and coursework, and Manitoba Hydro has in place robust mechanisms to encourage and receive reports of violations," said Leo. "We investigate, remedy, and effectuate continuous improvement to prevent recurrence using standard protocols developed with authorities and stakeholders based on legal requirements - such as The Public Interest Disclosure (Whistleblower Protection) Act) - and industry best practices."

We also have a dedicated **Respectful Workplace office** to sustain a safe, inclusive and respectful work culture and environment.

"Our policies and procedures regarding **Discrimination and Harassment Free Workplace** and Reasonable Accommodation are continuously reviewed and improved to align with legal requirements," said Felicity Forbister, Respectful Workplace Officer. "These include The Human Rights Code and the Workplace Health and Safety Regulation, jurisprudence and industry best practices, provincial "no-wrong-door" policy, and also in more recent times, public health orders."

"Each of us has a story to tell. Understanding each other's perspectives and stories is a journey of learning that creates a foundation of respect and appreciation for all cultures. It's a foundation that we can take to other parts of our lives and our homes and share with others," said Maria M'Lot, Partnerships and Capital Projects Support.

In Indigenous culture, storytelling has enabled generations of people to pass on and share their traditional knowledge, cultural beliefs, values, history, and ways of life. It is through storytelling that Manitoba Hydro's **Indigenous Awareness Circle (IAC)** continues to share Indigenous history, culture, and current issues within our community.

June 2019 marked a significant highlight of the IAC's efforts to promote greater awareness of Indigenous cultures and history within the Manitoba Hydro workforce.

"We set up displays in the 360 Portage Avenue main floor gallery and each of us brought in things to talk about and show, in recognition of National Indigenous Peoples Day [June 21]," said Melanie Gamache, Energy Supply Planning. "It was a good day to have such a vibrant presence in our lobby and to be seen — to be part of everything out in the open. Twenty or thirty years ago, this wouldn't have happened and that is not so long ago."

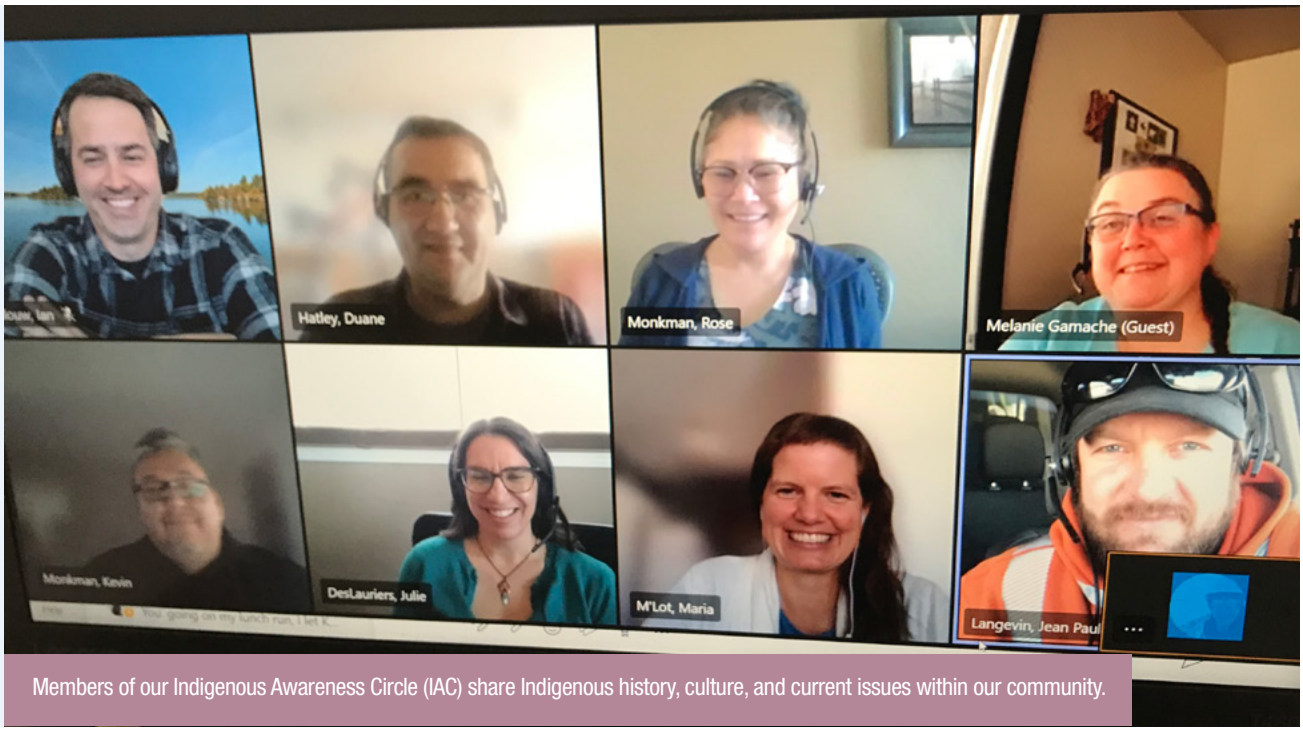
National Indigenous Peoples Day displays in the 360 Portage Avenue main floor gallery in June 2019.

Celebrating her culture and heritage and sharing it through IAC activities with Manitoba Hydro's support fuels Maria's commitment.

"Being able to celebrate ourselves, as Indigenous people, within our community and our organization really shows Manitoba Hydro has come a long way," said Maria.

"My culture is embedded in me and not something I have to think about before I do — it defines who I am, which is a privilege that is not always been afforded to everyone.

"Manitoba Hydro is striving to provide an environment where we can celebrate our culture and heritage together."



Members of our Indigenous Awareness Circle (IAC) share Indigenous history, culture, and current issues within our community.

"Our workforce needs to be highly skilled and effective and reflect the diversity of our province – this is one of our corporate goals," said Alicia Malawski, Employment Strategy Advisor, Recruitment & Diversity. "Both our **pre-placement programs for women and Indigenous persons** really open the doors for individuals to consider a career at Manitoba Hydro, and actively show them that the organization is behind their success by supporting their development right from the start.

"Some schools do not offer high school physics, for example, so it can be difficult for individuals to meet the pre-requisites for certain trades programs."

Our programs aim to help address barriers to employment head-on by providing individuals with an opportunity to gain specific hands-on experience and technical skills upgrading.

- Power line technician pre-placement program for women
- Power electrician pre-placement program for women
- Indigenous power line technician pre-placement program
- Indigenous power electrician pre-placement program

Indigenous representation in our workforce has grown to 20 per cent, in large part from our pre-placement programs, from 7 per cent in 2000.

Generating bright futures

Supporting the education and training of the next generation helps prepare them for opportunities today and into the future. We offer many opportunities to students through:

- **Summer employment**

  More than 200 university, college, and high school students find work with us between their full-time studies.

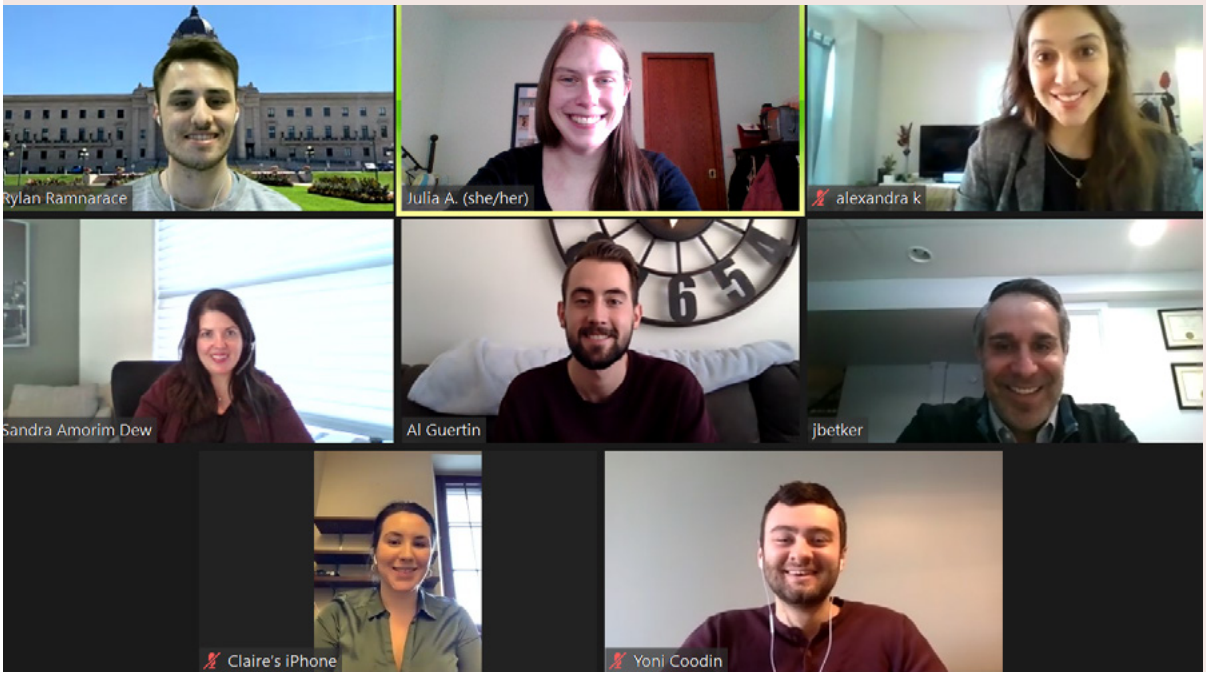
- **Co-op programs**

  Offered through various educational institutes, students are offered paid work terms related to their academic pursuits.

- **Scholarships and bursaries**

  To support youth in their education and training aspirations, each year we provide over $70,000 in bursaries and scholarships to high school, college, and university students across Manitoba in programs related to our corporate operations.

"We were pleased to meet with Jeffrey Betker, Vice-President of External and Indigenous Relations and Communications, and Sandra Amorim-Dew, Manager of Government Relations and Corporate Issues," wrote Rylan Ramnarace, one of six interns with the Manitoba Legislative Internship Program 2020-2021. "They gave a presentation of Manitoba Hydro's governance model, strategy 2040 [long-term strategic plan], various stakeholders, and large Hydro projects. Jeff then answered some questions we had submitted prior to the meeting. This seminar helped us expand our knowledge of Manitoba Hydro's operations."



The Manitoba Legislative Internship Program provides recent university graduates an opportunity to experience the legislative process first-hand.

"Meeting with recent grads through this internship program provides a way to help mentor the next generation of leaders and also potentially spark their interest in a career with Manitoba Hydro," said Jeff Betker. "There are a multitude of roles and career paths that individuals can pursue that they may otherwise be unaware of.

"Wherever possible, our Executive Leadership Team and management are happy to meet with youth and the future leaders of tomorrow."

Safety is our top priority

"It's normal to feel sadness, anger, and everything in between," said Lucy Byzio, Occupational Health Nurse. "We might not be sure what to do right now, but if you're feeling sadness or anger, they're normal reactions since our routines at work and home are disrupted."

In June, Health & Disability Management launched new Let's connect online resources to support employees through isolation and challenges affecting their mental health and well-being. All employees were sent a personalized letter and card mailed to their homes with directions on how to access the resources and other supports, such as the Employee Assistance Program (EAP). The mailout ensured reach to all Manitoba Hydro employees confidentially.

"As employees, many of us have been physically distant from our workspace, colleagues, and friends, or practicing physical distancing while remaining in a Hydro workspace. Supporting each other through this time and knowing where to turn to for support can seem more difficult when we're apart," said Lucy. "These resources are here to help individuals manage and it is critical that they know how to access them."

"The health and safety of our people comes first in everything we do. It is our responsibility to provide a safe work environment for our employees and ensure compliance with safe work practices and environmental standards throughout our operations," said Chuck Steele, Director, Safety, Health & Environment.

Our extensive range of tailored job-specific programming, training and apprenticeship opportunities, and policies and practices to ensure the safety of every individual who works at Manitoba Hydro.

"Whether it be ensuring every repair in the field starts with on-site job planning before work begins, or training to ensure adherence to Hazardous Material Management handling regulations and best practices, our Safety Management System identifies and tracks our safety performance and provides directions on what actions are necessary to ensure the safety and health of employees," said Wayne Bartley, Workplace Safety & Health.

We strive to continuously improve our safety performance. Over the past 12 months, we introduced and updated the following tools and programming to further drive improvement:

- **Leading Indicator Key Performance Indicator (KPI)** targets for proactive safety measures to assess safety activities, including completion of mandatory ergonomic training and completion of corrective actions.
- **Internal safety communications strategy** to promote a safety culture and consistent safety messaging.
- **Safety Awareness Week** organization-wide event to address the peak occurrence of injuries throughout our organization.
- **EHSM Resources and Support for Supervisors** to assist supervisors completing the investigation process and entry into EHSM, including a glossary of investigation terms, a technical user's guide for EHSM entry.

Our Health & Disability Management area has addressed over 50,000 employee queries, since we implemented a seven-day COVID call-in line at the start of the pandemic.

Members of our Health and Disability Management team from left to right: Anita Louizos, Deane Thibodeau-Land, Dawn Turner, Tanya Shotton and Dawn Rossman

Engaging with communities

"Having a cottager walk up to their chest in the water to talk with me while I was on a boat highlighted how important the waterway was to people who lived there and also how a boat made for a great new way to socially-distance engage with people!" said Dale Hutchison, Waterways Approval & Monitoring, Manitoba Hydro.

Throughout 2020, work continued at the Slave Falls Generating Station, some of which may have a lasting impact on the people who inhabit or use the area.

"At the core of this work is our ongoing commitment to the safety of the public and maximizing value to our customers," said Dale. "Any decisions made with respect to Slave Falls – including lowering water levels – will affect local residents, Indigenous resource users, recreational waterway users, and visitors to Whiteshell Provincial Park."

Public and Indigenous engagement plans to get feedback to inform our work plan, helps us find ways to avoid or limit impacts where possible.

Starting in July 2020, we:

- informed anyone who might be affected by the planned or potential work at Slave Falls;
- invited those who live along or use the waterway to provide feedback through an online survey;
- provided tours and presentations, and met with cottage association reps and the Member of the Legislative Assembly (MLA);
- surveyed docks and boathouses on all properties between Slave Falls and Pointe du Bois generating stations to get a better appreciation of what would be required to ensure waterway access for people;
- met with Indigenous communities to further discuss potential concerns and impacts of future works at Slave Falls.

"Hearing what matters to an Indigenous community early on, before any major decisions are made, provides valuable insight for Manitoba Hydro to plan appropriately so any potential concerns might be avoided or minimized," said Maria M'Lot, Partnerships and Capital Projects Support, Manitoba Hydro.

"The dock survey also provided a good "socially distanced" way to engage with waterway residents," shared Dale.

The feedback gained from the engagement process will be used to develop a work plan that considers potential safety, environmental, social, and economic impacts under different scenarios.

Engaging with Manitobans applies to all communities impacted by our work. In our approach to new project development, we focus on broad, early engagement with communities, organizations, landowners, other interested parties, and the public.

We strive for respectful, meaningful engagement to incorporate feedback and viewpoints into our planning and delivery of projects and services.

The Birtle Transmission Project included construction of a 230-kV transmission line from Birtle Station, south of the community of Birtle, to the Manitoba–Saskatchewan border.

BIRTLE TRANSMISSION PROJECT

"The value of engagement on our Birtle Transmission Project really came through, when a previously opposed project landowner reached out to their liaison to express thanks for the professional work by all crews working on-site," said Lindsay Thompson, Licensing and Environmental Assessment. "As a result of all the interactions they had with us and our contractors, we changed this customer's initial perspective on the project, and in turn, Manitoba Hydro."

By implementing a landowner-liaison process, where each landowner along the proposed Birtle Transmission route was assigned a specific liaison, each landowner had a direct contact to help them navigate through the construction process and address and respond to their questions or concerns.

"It's been a concerted effort by our project teams, including knowledgeable property staff and on-site construction support, that's led to a significant improvement in the level of customer satisfaction on recent transmission projects," said Lindsay.

Our community

"The fact that this grant is available to our employees tells you what kind of company Manitoba Hydro is. It puts power in hands of individuals — rather than an organization just donating money, this puts a face on it, and I find that much more meaningful," said Stephen Dueck, Business Solutions.

For over five years, Stephen has volunteered approximately 200 hours helping prepare meals for Agape Table – an independent, charitable, non-profit organization established and maintained to help feed Winnipeg's most vulnerable people.

By applying for the Employee Volunteer Grant in 2020, Stephen received $200 for Agape Table.

"That $200 is huge – it purchased juice boxes to go with breakfast meals. Small, tactile comforts can really help a person reset. A small treat like a juice box could be a 'day changer' to someone living on the street," he said. "And I think that's part of the Manitoba Hydro ethos and story. We're real people trying to do the right thing in the communities we're involved with - personally and professionally."

Stephen enlisted the help of Manitoba Hydro colleagues Dawn Nedohin-Macek, Transmission Services & Compliance, Jason Kuyp, Decision Support Systems) and Tim Oman, Manitoba Hydro International, to process turkeys for Agape Table. (These photos taken prior to COVID-19.)

"As a major player in Manitoba's economy, we have an interest and responsibility to give back to our communities. For over 60 years, we have actively supported various non-profit organizations, local events and specialized programs across the province," said Gary Shingleton, Community Investment, Manitoba Hydro.

Through our **Community Giving Program** our employees make meaningful impacts and support the causes they care about:

- Via donations through **myCharity payroll deduction**;
- Through volunteerism in the **Volunteer Grant Program**; and
- As **Employee Champions** for organizing fundraising initiatives and activities.

myCharity

Our employees can make individual contributions to as many as 30 local, regional and provincial Manitoba charities by opting-in to the myCharity payroll deduction initiative. Manitoba Hydro matches all employee contributions dollar for dollar. Employees can direct the corporate match to one of four regional community foundations or one of two United Way organizations. Located in Brandon, Dauphin, Lac du Bonnet, Selkirk, Thompson and Winnipeg, these entities enable each employee to double the reach and impact of their personal donation.

In 2020, combined employee and corporate payroll donations to communities across our province exceeded $1,100,000.

Employee Champions and volunteerism

"I went up to our Keeyask Project up North, and hadn't shaved in a few days, my beard was scratchy and ugly looking, and a colleague asked me when I was going to 'shave that thing'," said Tom Tonner, System Control. "When I came home, my kids thought I should keep growing my beard but have people bid on what to shave it into and that created an idea."

Every year since April 2002, when he was diagnosed cancer-free from Stage II Hodgkins Lymphoma, Tom has gone door-to-door in his neighbourhood raising money for the Canadian Cancer Society. Tom's scratchy beard inspired a hair-raising fundraiser to replace his canvassing.

For a donation, individuals could vote on the style Tom would shave his beard into. This grassroots fundraising idea resulted in raising $12,445 in funds for the Canadian Cancer Society.

With the votes tallied, Tom followed through and had his much-talked-about-beard shaved into a monkey tail. He even added a blue stripe as promised if he reached over $10,000 donations. Blue is one of the Canadian Cancer Society logo colours.

Our employees are active volunteers in their communities. Manitoba Hydro recognizes employees who co-ordinate fundraising activities and initiatives to raise funds for a registered charity by donating an additional $500 towards that charity.

In 2020, $8,000 was donated to 16 employee-championed events, and $2,000 to 10 volunteer grants to local charities.

Making a difference in our communities together with the United Way

One way we fulfill our commitment to positively impact as many communities as we can, is through our long-standing relationships with the United Way of Winnipeg, rural United Ways and several community foundations across the province.

United Way
For a Better Winnipeg

Within our organization, a dedicated group of employees on our **Manitoba Hydro United Way Committee** focus on planning and executing fundraising and awareness events throughout the year in support of the United Way of Winnipeg.

Sponsorships

"Annually, the Winnipeg Santa Claus Parade brings together a multitude of volunteers and activities in preparation leading up to the event in November. It's always a very exciting time, involving the work of many people to be a success," said Gary Shingleton, Community Investment. "This year, we all had to approach it differently and brought the spirit of the parade to the comfort of Manitobans' homes online, thanks to the efforts of the organizers and many volunteers involved in the production.

As a major sponsor, Manitoba Hydro contributed to the video where Santa Claus was joined by Jeff Betker, Vice-President of External and Indigenous Relations and Communications, and local guests Al Simmons, Mark Neufeld, and Filbert the Bear.

Opportunities for our community to come together are important to make Manitoba an exciting and interesting place to live, work and visit.

The COVID-19 pandemic limited the opportunity for us to come together in person — creating opportunities for new, innovative ways to connect and broadcast much-needed entertainment during periods of isolation, and provide safety information in a less formal, more engaging way.

"Our sponsorship of the Winnipeg Symphony Orchestra (WSO) Holiday Tour provided opportunities for individuals who may never have been able to attend – to watch and listen this year," said Jackie Britton, Community Investment. "Normally the symphony would go on the road and perform a holiday concert in several rural communities, but as these performances were restricted, the WSO provided a live stream, ultimately reaching more communities in more remote areas.

"Additionally, invitations were extended to Personal Care Homes in these communities providing them with an opportunity they likely would never have experienced."

STRENGTHENING INDIGENOUS RELATIONSHIPS

"The areas around the Assiniboine and Qu-Appelle River Valleys are rich in history, highly valued and culturally important to many Indigenous communities in the area," said Sarah Coughlin, Senior Environmental Assessment Officer. "It was critical that Manitoba Hydro work hand-in-hand with Indigenous communities and representatives to make sure their perspectives were respected through the development of our Birtle Transmission Project."

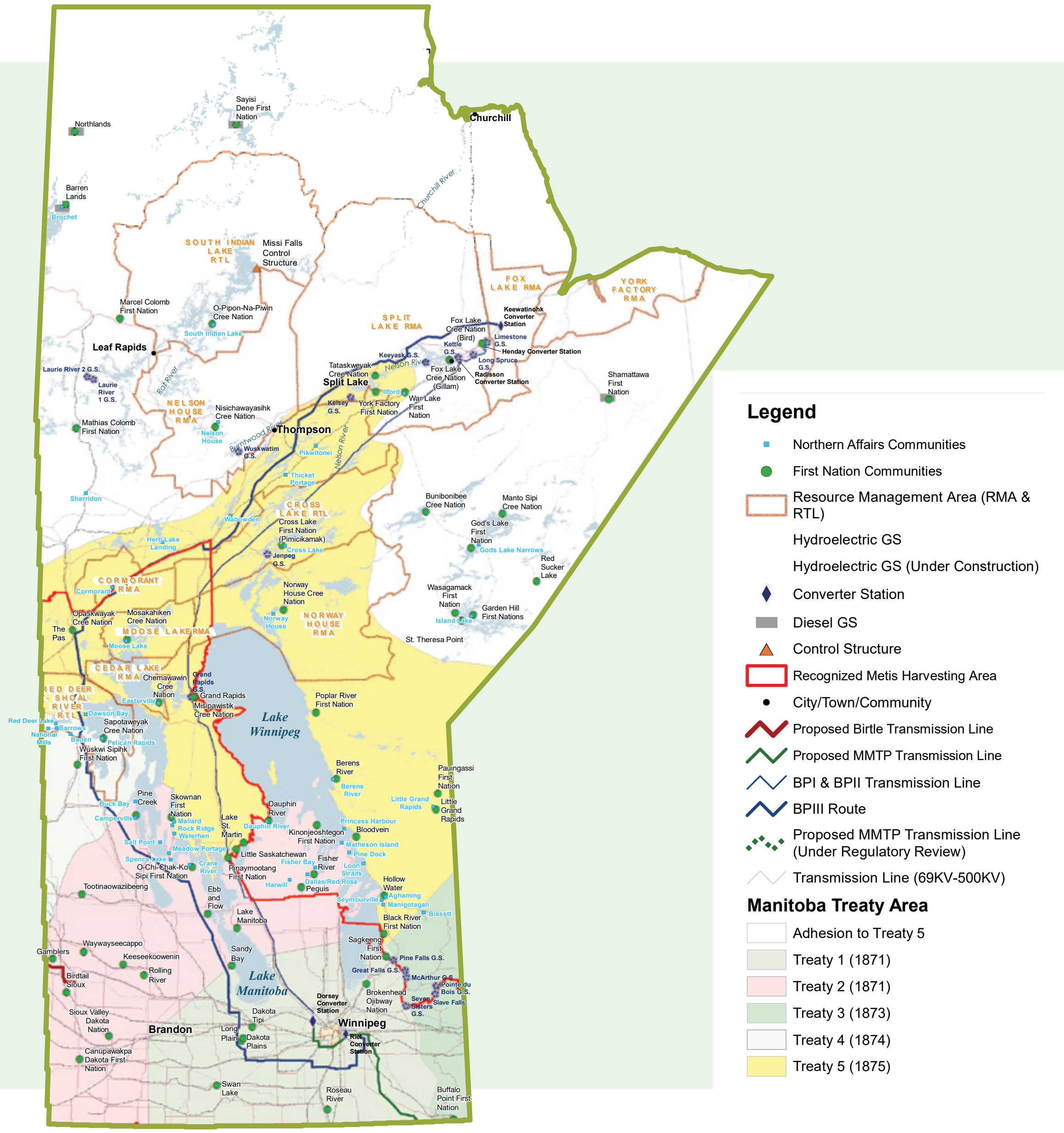
During Indigenous engagement for the Project, communities including Anishinaabe Agowidiiwinan (Treaty 2), Birdtail Sioux Dakota Nation, Canupawakpa Dakota Nation, Gambler First Nation, Manitoba Metis Federation, Peguis First Nation, Sioux Valley Dakota Nation and Waywayseecappo First Nation, shared their perspectives on the importance and sensitivity of the Birtle Project area.

"We also formed a Heritage and Culture Review (HCR) Team with representatives from the Indigenous communities, and the project archaeologist," said Sarah. "The HCR team hired two Culture and Heritage Indigenous Monitors to monitor construction in the Spy-Hill Ellice Community Pasture."

Keith Kowall from the Manitoba Metis Federation and Jeff Sutherland from Peguis First Nation monitored activities daily in the community pasture. Keith and Jeff received training from two archaeologists and began work on November 30, 2020. The monitors recorded daily field observations and prepared biweekly summary reports shared with the HCR team, and a final report shared with communities that will help inform future projects.

A closing ceremony will be scheduled for the project.

Entrance area at Ste. Madeleine – an area identified as valuable to Indigenous community representatives participating on the project.



"The waterways we rely on to run our generating stations are critically important to Indigenous communities," said Vicky Cole, Director Indigenous and Community Relations. "We recognize the importance of addressing the historical impact of our operations and of building strong working relationships with Indigenous peoples."

Manitoba Hydro operates throughout Manitoba, on the traditional territory of the Anishinaabe, Cree, Dakota, Dene, and Oji-Cree Peoples, and on the homeland of the Metis Nation. Our developments have affected Indigenous communities along developed waterways, including the Saskatchewan, Nelson, Churchill, Rat, Burntwood, Laurie and Winnipeg Rivers.

Our organization first established mitigation programming in the late 1970s to address the past, present and ongoing effects of historical hydroelectric development. Mitigation and compensation related to hydroelectric development is provided through settlement agreements with communities and resource-user organizations, as well as programming, and remedial works.

"We provide learning opportunities and resources for all employees to learn more about Indigenous cultures and the history of hydroelectric development in our province," said Jeff Betker, Vice-President of External and Indigenous Relations and Communications. "Including a mandatory e-learning course and a two-day in-person Indigenous Cultural Awareness workshop that all employees are encouraged to attend."

"We strive to provide opportunities for all staff to learn and ask questions in an open and non-judgmental environment — it's part of creating a welcoming, culturally safe workplace for our many Indigenous employees."

We have a number of agreements designed to address the impacts of hydroelectric development and strengthen working relationships with Indigenous communities, including the 1977 **Northern Flood Agreement** (NFA), **Comprehensive NFA Implementation Agreements**, and other community settlement agreements. There have also been adverse effects settlement arrangements with various trapping and fishing associations, as well as individual settlements for personal property loss and damage.

Programming and mitigation

"From about mid-June to October every year, 40 seasonal employees in 13 northern communities play a critical role in navigational safety on our northern waters," said Ryan Ault, Indigenous and Community Relations. "Boat patrollers map, install markers and record safe travel routes; mark deadheads and reefs and other navigation hazards; locate debris work areas; and collect floating debris and other navigation hazards.

"Our 2020 season was delayed by three weeks to minimize COVID-19 pandemic-related risks."

A COVID-19 Safe Operating Procedure was developed specifically for waterways management field operations to ensure the safety of employees and resource users and to protect northern communities.

"Operating practices were modified to reduce physical contact, for example, non-Hydro passengers were not permitted on vessels, we reduced some boat patrol support for other project activities, and non-essential activities were reduced or eliminated," said Greg Szocs, Field Safety Officer. "Each boat patrol crew was provided COVID-19 kits which included all required PPE (gloves, masks, sanitizer, gloves, surface cleaner), and all transportation requests were suspended for the season to ensure physical distancing practices were adhered to while in boats and vehicles."

We have implemented or funded a range of programs and mitigation measures to address adverse effects, including the construction of weirs, shoreline stabilization work, archaeological programming, collaborative sturgeon conservation programming, and the Waterways Management Program.

During the 2020 season, waterway patrols travelled a combined 54,000 kilometres of our northern waters.

Created in 1998, our Waterways Management Program was established to support and promote the safety of people traveling on waterways affected by our operations, and now includes:

- a northern **Boat Patrol Program** which employs approximately 40 local community members annually from June to October and one extended boat patrol agreement due to internal requirements;
- a **Debris Management Program** (17 program agreements signed in 2020-21: 12 summer/fall, including 5 multi-year; 6 winter);
- a winter **Safe Ice Trails program** (14 of which were in place for the 2020-21 season);
- a comprehensive **Water Level Forecast Notice Program**.

Community-specific programming

"This summer we didn't do any fishing through the pandemic, so it's been good for the fishermen because there's work, not everyone has a second job. Most of us only have fishing," said Albert Ross, president of the Grand Rapids Fishermen's Co-op.

Manitoba Hydro has an agreement with the Grand Rapids Fishermen's Co-op which includes hiring them to clean up tree and branch debris that gets in the river (and potentially fishermen's nets) whenever we open the spillway at Grand Rapids Generating Station. The Grand Rapids Fishermen's Co-op is also involved in fish salvaging with Manitoba Hydro when the spillway gates close.

High water levels in June 2020, caused the spillway to be opened, requiring cleanup work.

"It's a nice feeling to see when everyone kind of just clicks together and we're all working together as a team, and there's not any rocky points along the way," said Brian Fox, Manager, Western Generation.

Pursuant to its settlement agreements, Manitoba Hydro funding is also used to implement various programs within Indigenous communities. These range from safety programming, to domestic and alternative food programming, recreational programming, and programming for resource users like fishers and trappers.

Business opportunities

"Every year grass fires throughout the province cause damage to Manitoba Hydro's infrastructure and impact electrical reliability for our customers," said Ryan Riddell, South Central. "Fire-damaged poles also increase the exposure of electrical hazards to the public and to Manitoba Hydro staff."

"Our organization pursues partnerships with Indigenous communities for the installation of the fireshields," said Ian Blouw, Indigenous Relations.

"Besides increased safety and reliability, the program contributes to a community's economic development and strengthens its relationship with Manitoba Hydro," said Ian. "The project hires local resources in First Nations communities to install the fireshields and we provide training to First Nation contractors on the installation requirements. The work stays local and the benefit is to the entire community."

Fireshields have been installed in Skownan First Nation, Sapotaweyak Cree Nation, Sagkeeng First Nation, Peguis First Nation, Waywayseecappo First Nation, Fisher River Cree Nation and Ebb & Flow First Nation.

To date, 776 fireshields have been installed across our province, with 601 in the queue for 2021.

Since the 1980s, Manitoba Hydro has had a Northern Purchasing Policy in place to encourage the participation of northern Indigenous people in Manitoba Hydro business opportunities. Over the years, Manitoba Hydro has completed hundreds of millions of dollars in contracts with Indigenous businesses throughout the province, on projects large and small.

Manitoba Hydro awarded 167 contracts to 41 different Indigenous vendors in 2020/21, with a total awarded value of approximately $23 million.

Working together in partnership

"Our most recent hydropower projects have been completed in partnership and with involvement from Indigenous communities right from the development and planning stages, to understand and incorporate their perspectives and create employment and business opportunities," said Jeff Betker, Vice-President, External and Indigenous Relations and Communications. "This approach continues into operations with a commitment to long-term environmental monitoring based on local Indigenous Knowledge and technical science."

Since operations began in 2012, there have been almost 23,000 hours of work associated with environmental monitoring.

Wuskwatim - a new way forward

"The Wuskwatim Generating Station became fully operational in October 2012 and continues to provide employment opportunities for Nisichawayasihk Cree Nation members through community-led environmental monitoring work, as well as direct employment at the station," said Suzanne Ketcheson, Partnership Implementation.

Wuskwatim Power Limited Partnership (WPLP), a legal entity involving Manitoba Hydro and Nisichawayasihk Cree Nation (NCN) through its wholly owned Taskinigahp Power Corporation (TPC), developed the Wuskwatim Generating Station on the Burntwood River in northern Manitoba.

Monitoring activities include; semi-aquatic fur bearer mercury sampling, spring larval fish sampling, waterfowl aerial surveys, commercial fishery monitoring, fish movement monitoring, beaver lodge and dam surveys, breeding bird surveys, acoustic monitoring, sediment trap and habitat truthing and monitoring of sensitive plants, benthic macroinvertebrates, water quality and fish community.

Building Keeyask builds opportunities

"Seeing how my uncle ran his business and getting to be a part of that when I worked for him — opening and closing his shop, doing inventory — it was very interesting," said Jaimee Cook, who joined the Keeyask Project in 2016 as a lounge server with Sodexo. "I enjoyed being a part of a big project at Keeyask, I would love to work for a big company with the education I received at Yellowquill and then bring all my education back home and maybe start a business there."

In 2020, Jaimee, a community member of Tataskweyak Cree Nation; Billy Beardy, a community member of York Factory First Nation; and Justice Stove, a community member of York Factory First Nation; were each awarded a bursary from the Keeyask Worker's Opportunity Fund (KWOF).

Created to provide opportunities to support education, training, and employment for members of the four Keeyask Cree Nation (KCN) partner communities, KWOF has provided ten bursaries since 2019.

The Keeyask Project is a 695-MW hydroelectric generating station being developed in a partnership between Manitoba Hydro and four Manitoba First Nations – Tataskweyak Cree Nation, War Lake First Nation, York Factory First Nation and Fox Lake Cree Nation – working collectively as the Keeyask Hydropower Partnership Limited (KHLP).

The Joint Keeyask Development Agreement (JKDA) was signed by Manitoba Hydro and the partners in 2009, to govern project development and sets out understandings related to potential income, training, employment and business opportunities.

The Keeyask Project has exceeded the employment and contracting targets set in the JKDA with the four partner First Nations and provided significant employment to Indigenous people across Manitoba.

As the construction winds down, employment transition services are being provided for the project workers in partnership with the Northern Manitoba Sector Council.

4.4 million
KCN labour hours and
10.8 million
Indigenous hours worked on the Keeyask Project.

Total employment:
29,407
total hires to the project.
- 70 per cent Manitoba residents.
- 40 per cent Indigenous Peoples.

On-the-Job-Training (OJT) (Generating Station only)
- **183** KCN participants trained in OJT Programs with a total of **244,865** training hours.
- **154** other Indigenous participants trained in OJT Programs with a total value of **286,931** training hours.

22 contracts
have been awarded to the partner First Nations, with a total value of exceeding
$777 million

Partner First Nations' businesses have also received work on the Keeyask Project through subcontract agreements: a total of five subcontracts for a total value exceeding
$24.5 million

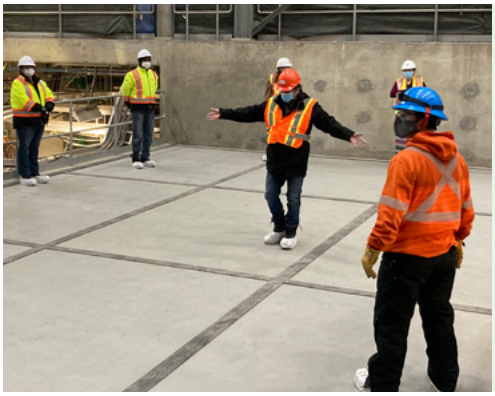
"Beyond the legacy of clean, renewable energy the Keeyask Project will create, it is creating a legacy of skills and opportunities for individuals within our province," said Dave Bowen, Director, Keeyask Project. "2020-21 was a big year for the project — we completed the assembly of the first of seven generating units; impoundment started on August 31 and was completed on September 5; and on February 16, the first unit was brought online and connected to the Manitoba Hydro power grid.

"This is really a product of all the people – from organizations to communities to individuals – who came together to reach this goal. It took hard work and perseverance to tackle and overcome multiple challenges. We are creating a legacy that will provide benefits to Manitobans for decades to come.

"We also acknowledge that these milestones come with profound changes to the lands and waters near the Keeyask site and has affected those who have traditionally used this area," said Dave.

"An important part of marking the progress and changes at Keeyask is through ceremonies conducted by **Employee Retention and Support Services** (ERS), a contracted service provided by two of the partner First Nation communities," said Diana Mager, Partnership Implementation.

The ceremonies honour the water element for its life giving, life sustaining and healing gifts, and acknowledge the permanent changes to the ancestral homelands of the four partner First Nation communities and the sacred relationship people have with the Nelson River.



"In December 2019, the Keeyask Caribou Coordination Committee formed a caribou monitoring network to collectively monitor migratory caribou from the Southern Hudson Bay subpopulation moving through the project region," said Rachel Boone, Environmental Licensing and Protection, Manitoba Hydro. "The purpose of this network was to monitor caribou movements in the area surrounding the project site in advance of impoundment, which at the time was scheduled for early 2020."

The Keeyask Caribou Coordination Committee (KCCC) includes members from Tataskweyak Cree Nation, War Lake First Nation, York Factory First Nation and Fox Lake Cree Nation and Manitoba Hydro and is a sub-committee of the project's Monitoring Advisory Committee.

The monitoring network brought together caribou observations from partner First Nations resource users out on the land, on-the-ground Aboriginal Traditional Knowledge (ATK) monitoring being carried out by each of the partner First Nations, aerial surveys being done under the technical science Terrestrial Effects Monitoring Plan (TEMP), Keeyask site staff and Provincial wildlife managers.

"The observations collected through the network were compiled on a weekly basis through to mid-March, with the intent of supporting a decision on whether impoundment needed to be adjusted to avoid an effect on migratory caribou," said Rachel. "On March 17, a decision was made to delay impoundment to early fall 2020, so no mitigation was needed for migratory caribou moving through the project region in the winter."

Environmental monitoring includes a collaborative monitoring approach by the Keeyask Partnership - with community monitors and technical science staff working together - during key construction activities. In 2020-21, collaborative activity focused on jointly monitoring caribou, ice conditions, and water levels during winter water-up activities in March and April; and wildlife and water levels during reservoir impoundment in late August/early September.

Manitoba Hydro will continue to work with the communities to understand and share knowledge of project effects from both Indigenous and technical science perspectives.

"In summer 2020, efforts continued at the Keeyask Project site to return areas disturbed by construction back into forest," said Kaela-Mae Rose, Environmental Licensing and Protection. "Across approximately 38 hectares, 104,400 trees were planted - Jack Pine in the dry, sandy sites, and Black Spruce in the wet sites."

Tree planting was done by 20 community members from Tataskweyak Cree Nation, War Lake First Nation, and Fox Lake Cree Nation., and coordinated with Iron North, an Indigenous-owned contractor.

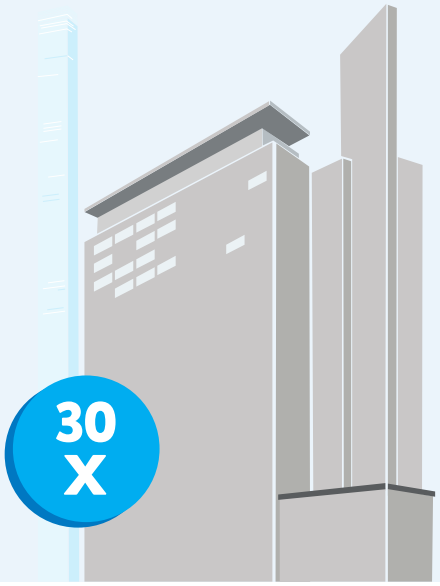
In summer 2020, 104,400 trees were planted at the Keeyask Project site to return areas disturbed by construction back into forest.

CARE, RESPONSIBILITY AND PROTECTION FOR THE ENVIRONMENT

"Transforming from paper-based processes to digital ones can represent a huge advantage," said Rob Lanyon, Director, Information Technology Services. "The manufacturing of paper and associated ink and toner cartridges negatively impacts the environment in a variety of ways, including the production of huge amounts of waste, the use of precious natural resources, as well as the release of air pollution into the atmosphere.

"The business cost of printing includes the paper handling, the storage of printed paper, the shredding, and document security - those things are harder to measure but represent the hidden and significant costs of printing.

"Every dollar saved helps increase the value we provide for our customers."



The stack of printed pages Manitoba Hydro employees have saved over the last 5 years would be as tall as 30 Manitoba Hydro Place towers stacked on top of each other.

It would also almost be as tall as the highest mountain in the Canadian Rockies.

Since 2016, internal print reduction campaigns have reduced printing by approximately 29.4 million pages over five years.

"There's no question we will need to adapt so that we can continue to meet Manitobans' energy expectations, but to also do so responsibly to ensure care for the environment is maintained in everything we do," said Kristina Koenig, Water Resources Department.

As earth's climate changes, our environment is also changing, which can affect water supply, infrastructure, and energy demand. Although the large and geographically diverse nature of the drainage basins that supply water to our hydroelectric facilities helps reduce the risk of drought, we continue to **identify, assess, prioritize and study climate change** and its effect on our world and our business.

"Along with adapting, we help to mitigate the impacts associated with climate change by producing the renewable, clean hydroelectric power that continues to play a critical role in reducing GHG emissions within our province, and to helping our world meet carbon reduction goals," says Kristina.

As a **member of the Canadian Electricity Association (CEA)**, our organization is an active participant in their Sustainable Electricity Program, an industry-wide sustainability initiative developed and implemented by CEA and its utility members. We adhere to the practices outlined in our sustainable development policy and have developed and implemented an environmental management system (EMS) that aligns with the ISO 14001 international standard for environmental management.

"Manitoba Hydro has a long history of **environmental mitigation, research and monitoring programs** to study and sustain the natural habitats, species and vegetation native to our province," said Shelley Matkowski, Environmental and Licensing Protection. "We are working to address past environmental effects, as well developing our new projects with environmental and socio-economic studies to assess project impacts. Working with Indigenous partners and communities, we also are incorporating **Indigenous Traditional Knowledge** into our project planning, monitoring and environmental assessment to complement Western scientific approaches."

Over

97%

of the electricity generated in Manitoba is from renewable, virtually emission-free hydropower with an additional

2%

from wind generation.

Environmental non-compliance notices:

1

In 2020, our total direct GHG emissions were approximately

96

kilotonnes

of carbon dioxide equivalent (CO_2e), which is

82%

below our *voluntary target threshold of

520

kilotonnes

CO_2e, based upon a

6%

reduction below the 1990 emission levels.

Recycling:

Our Waverley Service Centre coordinated the recycling of

1,014

metric tonnes

of non-hazardous materials.

We recycled

19

metric tonnes

of paper from through the Confidential Shredding and Toss Recycle Information Management Programs.

We donated or recycled over

1,400

pieces of computing equipment.

The total energy consumption from renewable and non-renewable sources:

99.9%

*The remainder (0.1 %) is from gas generation (non-renewable).

GHG emissions avoided through net exports:

7.9

megatonnes

*Manitoba Hydro has a voluntary annual corporate greenhouse gas (GHG) emission target threshold of 520 kilotonnes (kt) of carbon dioxide equivalent (CO2e), representing GHG emissions 6 per cent below 1990 levels.

Our activities result in emissions of CO2, CH4, N2O, SF6 and CF4. These GHGs are expressed in CO2e as calculated using their appropriate Global Warming Potential (GWP) factors. While CO2 is the primary GHG emission from our operations, accounting for roughly 66% of total emissions, CH4 accounted for approximately 31% of emissions, and N2O, and SF6/CF4 accounted for approximately 1% and 2% respectively.

Climate change

"After 60 years of service, we began decommissioning of our Selkirk Generating Station in July 2020," said Shane Mailey, Vice-President, Operations. "With Keeyask on-schedule, and Bipole III and the Manitoba Minnesota Transmission Project energized, we can supply more than enough power with our hydroelectric stations, and we no longer need the extra capacity Selkirk provided. It makes good economic and environmental sense for the utility and for our customers."

The 132 MW thermal electric plant first generated electricity from coal in 1960 and was converted to burn natural gas in 2002.

"It's estimated the plant's closure – full decommissioning will take several years – will save our organization approximately $5 million per year," said Shane. "More importantly, it will also lower our average greenhouse gas emissions by around five kilotonnes per year, helping lower global emissions and slow climate change."

Once Selkirk Generating is fully decommissioned, our average greenhouse gas emissions will be reduced by approximately five kilotonnes per year.

"As part of our climate change strategy, we work with leading scientists in climatology and hydrology through memberships, working groups, and research and development projects to determine how climate change may affect our core business and the environment in which we operate," said Efrem Teklemariam, Water Resources.

We are currently involved in the following collaborations:

- An affiliated member of the Ouranos consortium
- Manitoba's Provincial Inter-Departmental Climate Adaptation Working Group.
- Natural Resources Canada's Climate Change Impacts and Adaptation Division - Adaptation Platform – participant in the Plenary (coordinating forum) and the Energy Working Group.
- Canadian Electricity Association Climate Change Adaptation Committee.
- Centre for Energy Advancement through Technical Innovation (CEATI) Hydropower Operations and Planning Interest Group working group

"We monitor changes in the regional climate and hydrology using meteorological and hydrometric information. This information includes measurements of temperature, precipitation, wind speed, and streamflow provided by our Hydrometrics Program Environment, Climate Change Canada, and other gridded and modelled datasets," said Efrem. "We also continually look at how wind, solar and a wide array of emerging electricity technologies such as batteries and bio-energy systems may fit in future energy supply planning."

As the energy landscape evolves, Manitoba Hydro continues to monitor trends in the electrification of transportation, as well as the adoption of heat pumps, geothermal systems and other energy-related technologies that will be significant going forward.

Our role in achieving Net Zero

With abundant green, clean, renewable hydropower, Manitoba is poised to lead the country under proposed federal legislation to reduce greenhouse gas (GHG) emissions as part of the fight against climate change.

The new *Canadian Net-Zero Emissions Accountability Act*, which became law in June 2021, requires that national targets for the reduction of GHG emissions be set for the years 2030, 2035, 2040, and 2045 with the goal of attaining national net-zero GHG emissions by 2050. GHG emission reduction plans, progress reports, and assessment reports will need to be tabled in Parliament for each milestone to ensure transparency and accountability in meeting these targets.

GHG emissions from Manitoba Hydro's electricity and natural gas operations are also less than one per cent of total provincial GHG emissions, and the province as a whole contributes less than three per cent of Canada's national GHG emissions.

Manitoba Hydro's total GHG emissions were 0.10 megatonnes - which equates to less than 0.12 per cent of national electrical generation emissions.

Addressing environmental impacts

Some historic Manitoba Hydro projects left construction debris behind and some sites were contaminated by fuel spills. For remote projects, construction debris and equipment were sometimes buried at site, rather than transported elsewhere for disposal. Addressing these historic areas through further debris removal and remediation activities is an important, ongoing initiative for our organization.

"In the early 2000s, Manitoba Hydro and Norway House Cree Nation (NHCN) discovered metal debris and fuel-contaminated soils near the 2-and 8-Mile Channels, which were built in the 1970s as part of the Lake Winnipeg Regulation works," said Shauna Zahariuk, Environmental Licensing and Protection. "Since the early 2000s, we have worked in partnership with NHCN to clean up these sites."

Manitoba Hydro and NHCN have entered into agreements that set out a phased approach to investigate and remediate the sites. In 2020, Manitoba Hydro and NHCN completed subsurface environmental investigations to confirm areas of soil and in-water sediment contamination in former construction areas. The investigations identified contaminated in-water sediment and soils near the outlet of 2-Mile Channel, and contaminated soil near the inlet of 8-Mile Channel. Manitoba Hydro and NHCN are working together to implement plans to remediate these sites.

Mitigation and programming

"It's not abnormal for us to deal with wildlife calls – but they're usually about re-locating foxes or bears - this was a new one for us!" said Kim Bryson, Keeyask Site Environmental Site Lead Supervisor, upon the discovery of three frogs in the Keeyask Powerhouse – an exciting twist to the Manitoba Hydro site environmental team's usual workday.

The team provides environmental monitoring to ensure everyone working on the Keeyask Project follow the environmental protection plan requirements.

"Our best guess is that these three must have hibernated in some equipment or supplies stored outside that was later brought inside in fall. At that point the frogs likely thawed out and came out of hibernation," says Kim.

The species of frog – later identified as Boreal Chorus Tree Frogs - normally hibernates under the snow next to the ground.

"We've made them a little habitat for now until we obtain $\frac{1}{4}$ inch live crickets from a pet store or a zoo, as well as a terrarium to keep them in," said Kim. "As soon as we get the supplies, we're going to have to feed each frog individually until we can return them outside in spring."

Environmental Inspectors, Marney Ritchot and Samantha Line, rescued the frogs and were advised to put the frogs in the fridge to slow down their biological processes.

"The 2020 bird deterrent season at our Keeyask Project was not typical because of COVID-19. Due to border closures and isolation requirements, Pacific Northwest Raptors handlers who provide our usual raptor program were unable to come to site," said Rachelle Budge, Keeyask Site Environmental Officer.

To deter birds from nesting, project staff used a physical deterrent - kites that look like raptors. Birds perceive these kites as the real thing and keep their distance as a result.

"Critical to the program were our daily patrols, conducted four times per day, during daylight hours," Rachelle said. "These efforts resulted with no nests or eggs detected in the control zone. Construction was able to proceed as normal, with no negative interactions between birds and workers."

Avian protection

"Birds, nests and eggs are protected by federal and provincial laws. Depending where you are in Manitoba, nesting generally happens from April to September," said Sherrie Mason, Environmental Licensing & Protection. "Our operations and infrastructure dot and crisscross Manitoba's geography, spanning through natural habitats and vegetation, and sometimes overlap with areas where birds are nesting."

Within our organization, environmental staff help guide staff about working near or around nesting birds or areas potentially supporting nesting birds. Manitoba Hydro also works with government representatives to mitigate issues with nests on our infrastructure or related to our projects.

Moose Stewardship

"Moose are the largest member of the deer family and are an important component of Manitoba's natural environment," said Jonathan Wiens, Licensing and Environmental Assessment. "In recent years, moose populations have shown signs of decline in portions of Manitoba."

As partial fulfillment of the Environment Act Licence for the Bipole III Transmission Project, Manitoba Hydro established a new funding program aimed at investigating, enhancing, and sustaining moose populations in Manitoba.

This program was developed with the Province of Manitoba and complements an existing multi-year moose monitoring program that is aimed at understanding the effects of the Bipole III Transmission Project.

In the last three years, 10 projects have been funded with communities including Misipawistik Cree Nation, Opaskwayak Cree Nation, Black River First Nation, and organizations including the University of Manitoba, University of Saskatchewan, Memorial University, and the Manitoba Wildlife Federation. Funds have been used by these communities and organizations for the purposes of moose stewardship and research.

Mitigating aquatic invasive species (AIS)

"Without treatment, zebra mussels could colonize water-handling systems and, in extreme cases, interrupt power generation at unprepared stations," stated Marcus Smith, Senior Environmental Specialist. "We have been monitoring selected Manitoba waters for them since the early 1990's. In 2013, the first live specimens were discovered in Manitoba."

Zebra mussels are an invasive species in North America. The small freshwater mussels clamp onto a variety of materials, such as concrete, iron, plywood and polyvinyl chloride (PVC), and use them as colonization grounds. They reproduce rapidly, and as a result, tend to proliferate in bodies of water. They also readily enter water-handling systems, where they have settled and colonized in other parts of North America.

"As of 2019, zebra mussels were detected throughout the Nelson River system all the way to Limestone Generating Station," said Marcus, "In response, we are installing treatment systems at our generating stations."

We have invested in the design and installation of AIS treatment systems, with the first systems under construction now at Kelsey, Kettle, Long Spruce, Limestone, and Jenpeg Generating Stations. First treatments are expected in September 2021.

Coordinated Aquatic Monitoring Program

"We've partnered with the Province of Manitoba to study and monitor the health of water bodies (rivers and lakes) affected by our generating system through the Coordinated Aquatic Monitoring Program (CAMP)," said Jennifer Van de Vooren, Environmental Licensing and Protection. "CAMP Is the largest holistic ecosystem-based aquatic monitoring program in Manitoba."

CAMP monitors environmental effects associated with hydroelectric operations across Manitoba. "Off-system" waterbodies are also studied to see how other factors, such as climate, affect the aquatic environment.

"The CAMP monitoring components include hydrometric data, water and sediment quality (over 50 parameters), fish community, algae, benthic macroinvertebrates, mercury in fish, aquatic habitat, and physical environment," she said. "All CAMP data are publicly available, and have been used by university researchers, students, Indigenous communities, federal and provincial governments, and environmental organizations."

More information about CAMP can be found at **www.campmb.com**.

Lake Sturgeon stewardship

"Under the Species at Risk Act (SARA), the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) have assessed most Lake Sturgeon populations in Manitoba as Endangered (aside from the Hayes River, which is recommended for listing as 'Special Concern'.)" said Stephanie Backhouse, Environmental Licensing and Protection. "Through a number of studies undertaken and supported by **Manitoba Hydro's Lake Sturgeon Stewardship & Enhancement Program** in 2020-2021, additional knowledge on Lake Sturgeon populations, ecology, and effectiveness of conservation efforts was gained."

Due to intermittent northern travel restrictions related to COVID-19, work was concentrated on the Winnipeg River, and included the Pine Falls, Great Falls and Slave Falls reservoirs, as well as the Seven Sisters Reservoir Lakes area. In addition, the program continues to support research on sturgeon disease with the potential to impact conservation stocking programs. We are also an industrial partner with the University of Manitoba in a Natural Sciences and Engineering Research Council of Canada (NSERC)-funded research program.

The **Industrial Research Chair in Conservation Aquaculture of Lake Sturgeon** is looking at how egg collection and rearing methods influence brood stock health and post-stocking success. New monitoring techniques have been developed and will be used to better assess conservation efforts.

We also provide funding to and are members of the **Nelson River Sturgeon Board, Kischi Sipi Namao Committee** and the **Saskatchewan River Sturgeon Management Board**. Population studies in the Saskatchewan River were completed in 2020/21, but additional population studies (e.g. Upper Nelson River), public outreach activities including school programs (e.g., aquariums, presentations) and several stocking events were postponed due to COVID-19 safety concerns.

Through our operation of the **Grand Rapids Fish Hatchery,** a total of 621 one-year old sturgeon were released into the upper Nelson River in 2020 to support the Nelson River Sturgeon Board stocking initiatives.

"Another 574 one-year old sturgeon were released into the Burntwood River to meet licence requirements for the construction and operation of the Keeyask Generating Station," says Cheryl Klassen, Environmental Licensing and Protection. "Due to COVID-19 safety concerns, no eggs were collected in spring 2020. As a result, 365 sturgeon were kept overwinter for release in spring 2021 at age two."

Keeyask Project: on-going monitoring studies in the Lower Nelson River

As one of the partners in the Keeyask Hydropower Limited Partnership, we are conducting Lake Sturgeon population and movement studies as part of the Aquatic Effects Monitoring Plan.

In 2020-21, studies on Lake Sturgeon population and movement were completed upstream and downstream of the Keeyask Generating Station,"added Carolyne Northover, Environmental Licensing and Protection.

"Results gathered during this last year of construction of the Keeyask Generating Station are compared to similar studies that took place in previous construction years and prior to construction to track any changes and to provide a good understanding of the sturgeon before the station is operating.

"In 2019, an area immediately downstream from the Keeyask powerhouse was turned into Lake Sturgeon habitat so the fish will continue to have an area to spawn and find food," said Jodine MacDuff, Environmental Construction Support, Manitoba Hydro. "This constructed habitat, called a 'spawning shoal', is required because their habitat in Gull Rapids was lost when the generating station was built."

The spawning shoal was constructed by placing blasted rock in a thick layer over the bottom. This rough layer of rock allows fertilized eggs to fall into the spaces between where they are protected until they hatch. Groups of three large boulders were placed seven metres apart over the entire area to provide resting places, out of the strong current, for fish to use during spawning. The total area of the spawning shoal is approximately six hectares, which is equal to ten football fields.

Manitoba Hydro is at the start of a multi-year journey.

We are transforming ourselves into the energy provider you need that is responsive to your needs, now and into the future. We are approaching the future deliberately and strategically, with an eye to the developing technologies to improve your customer experience and to anticipate changes in the energy industry to keep our rates affordable.

Our mission is to help all Manitobans efficiently navigate the evolving energy landscape, leveraging their clean energy advantage, while ensuring safe, clean, reliable energy at the lowest possible cost.

In achieving this mission, and as we embrace change, our customers and our core values will remain at the centre of everything we do. We will continue to work in the best interests of our customers, to engage Manitobans in our work and strengthen our Indigenous relationships, and to ensure care and protection for our environment in a socially responsible manner.

Manitoba Hydro at a glance

Manitoba Hydro is one of the largest integrated electricity and natural gas distribution utilities in Canada. We are a provincial Crown Corporation (owned by the Province of Manitoba) with $2.6 billion in annual revenue and $29 billion in assets.

Over 97 per cent of the electricity we produce is clean, renewable power generated at our 15 hydroelectric generating stations. Our system is fed by a massive watershed which provides predictability and mitigates risks, such as drought.

We have steadily built a reputation of reliability by consistently delivering affordable, renewable electricity to over 590,000 customers, and as a supplier of clean-burning, efficient natural gas to over 280,000 customers.

Our corporate headquarters are located at:

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