TCFD

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

IN THIS SECTION...

Governance of climate-related risks and opportunities	**63**
Risk management	**64**
Climate-related physical risks	**65**
Transition-related risks and opportunities	**66**
Climate-related scenarios	**69**
Metrics and targets	**70**

For further information and to view the full report, you can access ENMAX's 2021 Environmental, Social and Governance report at enmax.com/esg

Governance of climate-related risks and opportunities

We have risk oversight and management at the Board, executive and management levels.

Board oversight

At ENMAX, the Board of Directors has the highest level of oversight for climate-related risks and opportunities. The Board's role is to oversee ENMAX's strategy and the development of its ESG targets, ensure alignment between ESG efforts and business strategy, and hold responsibility for the organization's risk profile. In 2021, the Board approved the involvement of the Governance Committee in ESG-related matters as an enhancement to our ESG framework.

The Governance Committee supports the Board in fulfilling its role by:

- Reviewing quarterly reports on ENMAX's risk, risk rating and risk tolerance. Our risks include environmental and social risks, climate-related risks and opportunities such as extreme weather events, carbon regulations and transition-related electricity demand changes.
- Discussing and reviewing ESG and climate-related matters at Board meetings;
- Approving the publication of our annual ESG report;
- Making recommendations regarding the development and ongoing refinement of our ESG targets;
- Reviewing our progress and performance against our ESG targets; and
- Reviewing periodic reports related to developments, trends, best practices, risks and issues related to our ESG targets and reporting.

Management's role

To better understand and manage the full spectrum of climate-related risks and opportunities, we have three teams that support our Executive Team. Two teams are focused on risk management and the other on finding opportunities.

The Risk Management Committee (RMC) is an executive-level committee whose role is to oversee our Enterprise Risk Management program. The committee supports business units in identifying and assessing risks, and then consolidates information to be presented to the Governance Committee of the Board. Once risks have been identified, each area of the business where the risks reside is responsible for implementing risk management plans.

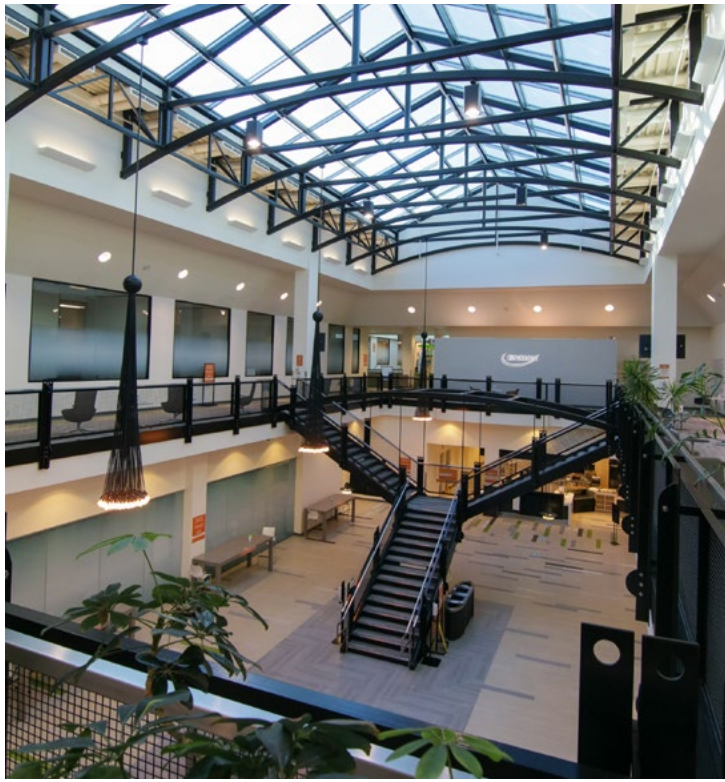
The Commodity Risk Management Committee (CRMC) is similar to the RMC but focuses exclusively on identifying and managing our exposure to natural gas and electricity market risks. This committee oversees our commodity hedging program and manages risks for our offset and Renewable Energy Certificate commercial activities.

The Renewables Business Development Group is evaluating opportunities for commercial and utility-scale renewable energy generation options backed with long-term contracts to help our customers meet their ESG goals.

STORY

TCFD RECOMMENDATIONS

The Task Force on Climate-related Financial Disclosures (TCFD) provides recommendations for effective climate-related disclosures that can promote more informed investment, credit and insurance underwriting decisions. The following pages outline our responses to these recommendations. We recognize that climate change is an important and complex issue that impacts businesses and communities. ENMAX is committed to playing an active role in the energy transition and in addressing climate change.



Risk management

Effective risk management empowers us to actively identify, assess and manage risks to our business. We work to develop, monitor and progress our risk management strategies to ensure they are both representative of key impact areas of our business and address changing environmental and social matters.

ENMAX uses an established Enterprise Risk Management (ERM) program to identify, analyze, evaluate, treat and communicate our risk exposures in a manner consistent with our business objectives and risk tolerance. Our ERM program helps us monitor and evaluate financial, reputational, regulatory, environmental and social risks.

Risk identification

As part of our ERM program, we identify and group risks into 10 categories that include operational, financial, regulatory, customer- and cybersecurity-related risks. Although the categories remain relatively unchanged, the specific risks within each category are reviewed quarterly. To support a broad understanding of risk across the company, we also identify and evaluate emerging risks, which include ESG- and transition-related risks, as well as technology disrupters and innovators. Even if some of those risks do not meet our criteria for top risks, we discuss them with the Executive Team and the Board of Directors quarterly. In 2019, we incorporated climate-related risks into the most impacted risk categories within our existing ERM program. The most relevant physical and transition-related risks are summarized on page 65.

Risk assessment

For each of our identified risks categories, we evaluate the level of residual risks (after mitigation is in place). We also use specific signposts (e.g., results of a local or federal election, publication of a regulation) to ensure consistency of risk evaluation and provide guidelines for risk assessment. Our risk group meets quarterly and updates the Board of Directors on changes to risks assessment and/or new risks each quarter.

Risk integration

We incorporate climate-related risks into different aspects of our business by:

- Providing a quarterly ERM update to our Executive Team and Board of Directors with any new observations or issues related to our key risk areas and an overall assessment of our corporate-wide risk level;
- Considering the impact that new investments have on our greenhouse gas (GHG) emissions profile;
- Incorporating extreme weather events into emergency preparedness (read more on page 26);
- Commodity risk forecasting and management; and
- Severe weather planning at Versant Power to ensure resources are available for potential infrastructure impacts.

Climate-related physical risks

The ENMAX group of companies operates in two distinct geographical regions with different types and levels of climate-related physical risks. While both regions are exposed to winter storms and other severe weather events, Calgary has a more targeted flood preparedness program and Maine a robust tree and vegetation management program, based on their specific regional needs. In the next two years, we plan to develop a more robust climate mitigation plan for both areas.

Our key climate-related physical risks in Alberta include:

FLOOD

After the 2013 Calgary flood, we revised our internal mapping to include flood inundation zones and evacuation zones (provided annually by The City of Calgary). Our flood maps indicate our circuitry, meters, the number of customers affected per zone and in what order. This allows us to search and determine the equipment that would be first impacted by any overland flooding and adjust our response plans accordingly. ENMAX continues to engage closely with Calgary Emergency Management Agency (CEMA) partners to maintain alignment and coordinate responses with these valuable partners. We also review our flood action plan annually.

DROUGHT

Since access to water is essential for several key power generation processes, prolonged drought events could impact our ability to effectively operate our facilities. Although our areas of operation are characterized as low-to-medium baseline water stress[1], our continued aim is to reduce our freshwater use and optimize water use at our operated facilities. We minimize our freshwater use through water recycling and treatment processes and by using 100 per cent reclaimed water at our Shepard Energy Centre. Read more on page 27.

EXTREME WEATHER EVENTS

Our operations control centre proactively monitors and prepares for a variety of weather events that Environment Canada identifies as a "Watch" or "Warning" such as strong winds, heavy rain, severe hail, tornadoes and heavy snowfalls. We categorize any event using the Incident Command System's incident level definitions (1, 2 and 3) and escalate our communications and response accordingly.

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[1] Using the World Resources Institute's AqueductTM Water Risk Atlas, https://www.wri.org/aqueduct.

STORY

PREPARING FOR EXTREME WEATHER EVENTS

To prepare for emergencies, we hold seven to eight emergency response exercises each year, with several focused on weather-related incidents. We also join CEMA to participate in exercises they host.

In 2021, we held three tabletop exercises—two floods and one large snowstorm—involving representatives from field services, senior leadership, communications and system operations. Read more on page 26.

Our key climate-related physical risks in Maine include:

TREE AND VEGETATION MANAGEMENT

On average at Versant Power, two out of three power outages are caused by trees. The trees in Maine can typically grow 25 to 30 metres tall, while the average power pole reaches 10 to 14 metres, meaning trees can easily fall on powerlines. This is why each year Versant Power covers more than 3,000 kilometres trimming trees and working with landowners to remove trees identified as threats to the reliability of the system. To proactively address the issue, about 10 per cent of the operational budget is spent on vegetation management.

EXTREME WEATHER EVENTS

With storms becoming more frequent and severe, extreme weather events pose a key physical risk to the system. These weather events can include heavy winds, rain, ice and heavy snowfalls, and can make the risks of tree falls even greater. Our reliability program includes replacing aging assets, covering conductors and completing a wide range of inspections to inform our maintenance plans. Read more on page 22.

Transition-related risks and opportunities

The electricity sector, as a key player in a lower-carbon future, is experiencing rapid transformation as it responds to the opportunity of electrification, enables growth in distributed forms of renewable energy, and embraces lower carbon sources of energy as part of the energy transition. Advancements in transportation electrification, energy storage and energy efficiency are accelerating this transition, and organizations like ENMAX have a critical role to play in supporting customers and enabling opportunity throughout this transition.

Transition-related risks and opportunities include regulatory, market and technological changes that result from the energy transition and might impact our company. Some of these changes present both a risk and opportunity for our organization.

A component that makes ENMAX more resilient to these changes is that our power generation portfolio is composed entirely of wind power and natural gas-fuelled generation. There is still uncertainty about the pace and detailed implementation of some of the regulatory and policy changes we are mentioning.

At ENMAX, we support a measured approach to the energy transition that maintains continued system reliability and takes into account affordability for customers. We believe that federal and/or provincial funding can support environmental goals while keeping customers' needs in mind.

TREND OR EVENT	WHAT IS THE RISK?	WHAT IS THE OPPORTUNITY?	WHAT IS ENMAX DOING TO MITIGATE THE RISK? OR TO TAKE ADVANTAGE OF THE OPPORTUNITY?
REGULATORY			
Current GHG Regulation We expect GHG regulation to become more restrictive over time. Our power generation facilities could experience higher annual operating costs due to changes in GHG pricing and regulations, such as carbon pricing, and/or other policy changes.	There is some uncertainty in Alberta after 2022, since the current regulation (TIER) is considered equivalent to the federal regulation until 2022. The Federal Direction, outlined in a Healthy Environment and a Healthy Economy is that the carbon tax will reach $170/tonne of CO_2 by 2030. This will increase carbon compliance costs and wholesale power prices.	Increases in carbon costs will have consumers seek options for electrification which will result in an increase in electricity demand and the need for more investment in the distribution system.	We have set a target to reach net-zero scope 1 and scope 2 emissions, with an interim target of 70% reduction by 2030 from 2015 levels. Working towards those targets, we are currently evaluating: – Carbon Capture, Utilization, and Storage (CCUS) – Utility-scale renewables – Batteries – Hydrogen – Investing in grid resiliency
Canada's Commitment to Net Zero by 2050 The Canadian *Net-Zero Emissions Accountability Act* became law in 2021 and is supported by Canada's 2030 Emissions Reduction Plans, published in March 2022.	The main risk is a limit on production of fossil fuels. This can have a secondary impact of reducing industrial electricity demand, which could impact ENMAX.	Any potential reduction in industrial electricity demand is likely to be offset by increases in residential electricity demand as electrification becomes a substitute for fossil fuels in different applications (e.g., passenger vehicles, residential heating).	
Net-Zero Electricity by 2035 As part of Canada's commitment to net-zero emissions, the Federal Government announced its intention for the electricity sector to reach that goal much earlier (by 2035).	This could have a significant impact on ENMAX generation facilities unless CCUS funding is made available that is sufficient to have CCUS installed at our natural gas power generation facilities. This could, in turn, increase rates.	As part of this plan, Canada announced a plan to deploy $5 billion to advance clean power generation, transmission and storage across Canada. If regulatory support is sufficient, it would support the acceleration of progress towards our target.	

TREND OR EVENT	WHAT IS THE RISK?	WHAT IS THE OPPORTUNITY?	WHAT IS ENMAX DOING TO MITIGATE THE RISK? OR TO TAKE ADVANTAGE OF THE OPPORTUNITY?
REGULATORY CONT'D			
Clean Fuel Regulation The Clean Fuel Regulation requires liquid fossil fuel primary suppliers (i.e., producers and importers) to reduce the carbon intensity of their liquid fossil fuels used in Canada from 2016 levels.	The main risk is a limit on production of fossil fuels. This can have a secondary impact of reducing industrial electricity demand, which could impact ENMAX.	This regulation will increase the costs of gasoline and diesel to Alberta users, which may accelerate the move to electric vehicles. This can result in an increase in electricity demand and the need for more investment in the distribution system.	ENMAX is taking steps to quantify the impacts of EV adoption on the grid (read more about our Charge Up pilot) but we believe we are well positioned to support an increase in electricity demand related to electrification of transportation.
Regulatory Support for Hydrogen In 2020, Canada published a Hydrogen Strategy to position Canada as a world-leading producer, user and exporter of clean hydrogen, and to set the country on a path to meet its climate goals.	If the support is not equally applied, the risk might be an uneven benefit to existing or new generation facilities that can be located closer to hydrogen production facilities, which may pose a disadvantage for ENMAX.	This may create financial incentives to replace natural gas with hydrogen (partially or fully) at some of our generation facilities. Our retail natural gas business would have to adapt to the changing landscape and look for opportunities to supply hydrogen services as a substitute.	We are working with equipment manufacturers to study the feasibility of using hydrogen fuel at one of our facilities. Read more
MARKET			
Natural Gas Pricing Market changes will likely result in highly volatile natural gas prices.	Increases in natural gas prices result in an increase to our electricity generation costs. This can impact our electricity and natural gas customers.	As prices are seen as more volatile, the retail contract offering can appeal to customers. By having more electricity volumes under contract, ENMAX can more effectively manage our generation portfolio, load and GHG compliance obligations.	To reduce the risk, we have a hedging program on the power generation side that allows us to manage commodity risk exposures within levels approved by the Board and the President and CEO. Read more about how we are helping vulnerable customers on page 44.
Increases In Renewables Coming On-Stream Renewable power generation (such as wind and solar) is increasing in the province.	An influx of renewable power generation sources coming on-stream could impact the reliability of the grid due to their intermittent nature and will require more electricity transmission infrastructure, which may add costs to customer bills.	More renewable power generation lowers the emissions intensity of the grid overall and offers ENMAX new investment opportunities in emissions-free generation. More renewables may also increase the availability of offsets to be used as compliance tools in achieving our net-zero target.	We plan to invest $60 million with the specific goal to enable a more resilient grid by 2030 while maintaining our reliability levels. Read more on page 5.
Increased Demand For Electricity Beneficial electrification, defined as replacing direct fossil fuel use with electricity in a way that reduces overall emissions, is expected to be a driver for increased electricity demand.	As owners and operators of transmission and distribution assets, risks are related to the investments required to support the transmission and distribution of increased load and generation.	This presents a significant opportunity for our power generation and utility sides of the business.	ENMAX is well positioned to support an increase in electricity demand.
Electric Vehicle Adoption In 2019, sales of electric vehicles (EVs) topped 2.1 million globally, which is a 40 per cent year-on-year increase.	As owners and operators of transmission and distribution assets, risks are related to the investments required to support the transmission and distribution of increased load and generation.	The federal government has announced that more than 50 per cent of all new passenger vehicles sold in Canada will be net-zero vehicles by 2035. The expected pace of EV adoption and the fact that charging will likely be done at home or work is expected to increase electricity demand for utilities like ours.	We are currently undertaking pilot projects, both in our own mobile fleet and for customers, to better understand the impact of this opportunity on the grid.

TREND OR EVENT	WHAT IS THE RISK?	WHAT IS THE OPPORTUNITY?	WHAT IS ENMAX DOING TO MITIGATE THE RISK? OR TO TAKE ADVANTAGE OF THE OPPORTUNITY?
MARKET CONT'D			
Geopolitical Events Conflict between countries can impact global trade and markets and create supply chain disruptions.	Sourcing materials from countries that are impacted by geopolitical events carries the risk of longer delivery times, increased prices, and lack of availability. Lack of availability from preferred suppliers could result in sourcing less sustainable materials and supplies.	Developing alternate supply plans which may more closely align with sustainable procurement practices.	ENMAX has engaged a third-party consultant to support the development of a Sustainable Procurement Strategy and associated actions. This strategy will be considered when sourcing alternate supply caused by geopolitical risks.
TECHNOLOGY			
Advancement in Battery Technology Energy storage will play a larger role in the future as costs for battery storage technologies decline.	Energy storage technology is still in early stages of development (scale and cost challenges) and therefore does not pose a significant risk to our company.	Energy storage can create an opportunity to supplement our portfolio.	We have installed a battery storage system at Crossfield Energy Centre, which turned the facility's existing natural gas turbine into a hybrid electric gas turbine. Read more
Advancement in Other Technologies (Hydrogen, carbon capture technology, advanced metering)	Technology-related risks are related to the timing of investment. Early investment can lead to increased cost. Delayed investment can lead to missed opportunities.	Advancements in technology present great opportunities for us to meet our net-zero target.	We initiated a feasibility study to use hydrogen at one of our facilities. We are also evaluating CCUS feasibility at one of our sites. We support several technology developments, such as: – Two-way power flow – Electric mobile fleet – Advanced metering – Alberta Carbon Conversion Technology Centre Provincial and federal funding can accelerate technology advancements. These advancements reduce technology costs over time and help to maintain energy affordability for customers.
REPUTATION			
Perception Around Fossil Fuel Electricity Generation Increased awareness and societal or investor activism around fossil fuels.	Customer perceptions of fossil fuels are increasing pressure on companies to reduce emissions.	ENMAX has a strong history of continual improvement in emissions reduction and will continue to seek cost-effective ways to reach environmental goals.	We have set a target to reach net-zero scope 1 and scope 2 emissions, with an interim target of 70 per cent reduction from 2015 levels. Read more

Climate-related scenarios

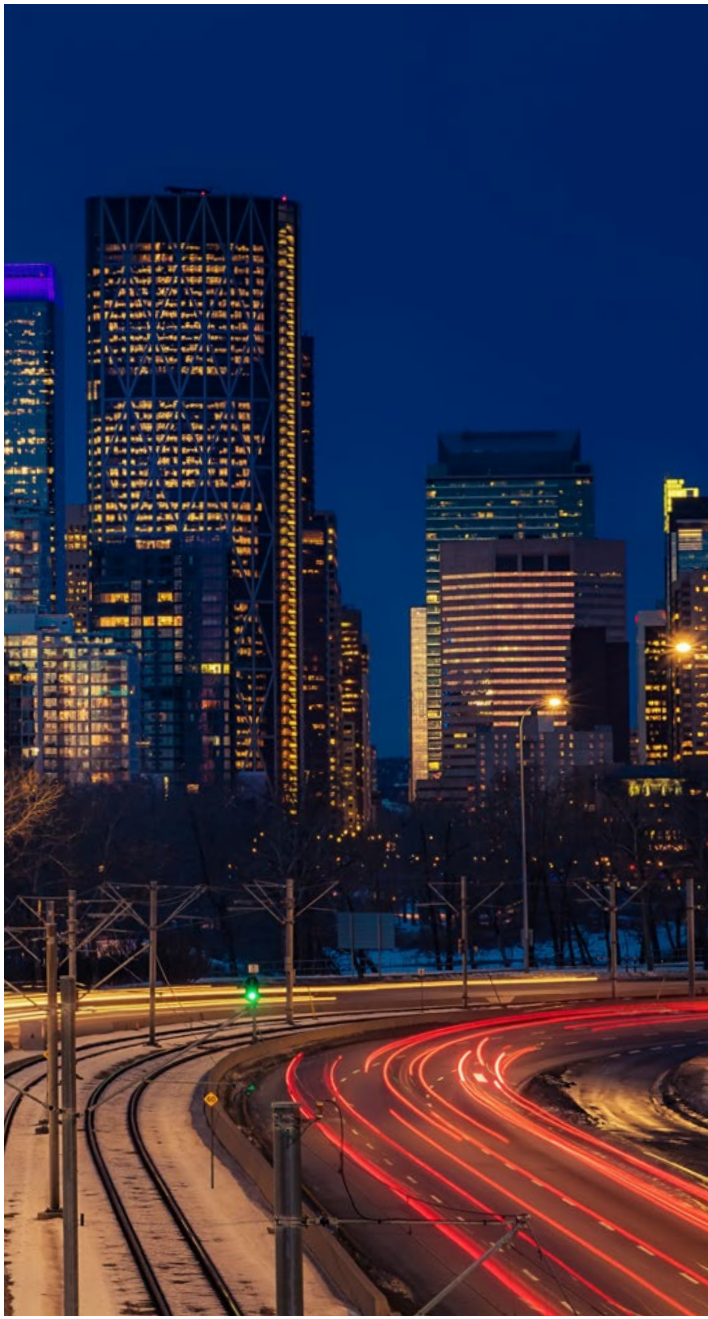
In 2022, we started a preliminary multi-year scenario analysis exercise to examine how the changes described in different transition scenarios could impact our company. As a first step, we looked at transition scenarios since they present the most relevant risks and opportunities to ENMAX in the short- to medium-term.

We began by developing models to assess our resiliency and test our strategy against a range of future possible climate-related policy and market conditions. This work can inform our business planning and enable the incorporation of important climate-related risks into our decision making. The first elements from our scenario analysis to be integrated into our business plan are carbon price, commodity price and policy application. To inform our analysis, we leveraged the energy demand assumptions in the International Energy Agency's (IEA) Stated Policies Scenario (STEPS) and the Net Zero Emissions by 2050 Scenario (NZE). Carbon pricing and future electricity demand were incorporated from scenarios within Canada's Energy Future 2021 (developed by the Canadian Energy Regulator).

We focused some of our discussions on the NZE since it is the most aggressive scenario and provides suggestions for the energy sector to achieve societal goals. It is important to note that the NZE is a normative scenario, which means it answers the question, 'what would need to happen so that the energy sector can achieve net-zero emissions by 2050?' and it does not consider our starting point today. We are encouraged by our learnings from this scenario.

The NZE requires growth in clean energy technology including renewables, electric vehicles (EVs), battery storage, hydrogen-based fuels and energy efficiency. As these technologies advance, development costs will decrease. Fossil fuel use will decrease and remaining natural gas assets used for power generation will be combined with emissions reduction initiatives such as Carbon Capture, Utilization and Storage (CCUS). Energy demand will increase with growth in electrification and population growth but will be partially offset by energy efficiency improvements. The NZE assumes electricity generation will reach net-zero emissions globally by 2040. Sales of new internal combustion engine passenger cars will end by 2035. Carbon pricing or similar policy instruments will be implemented by most countries globally.

Ongoing scenario analysis will enable ENMAX to assess energy transition-related risks and ensure our business strategy evolves to mitigate these risks and take advantage of opportunities. We plan to continue expanding and improving our scenario analysis to better inform how our Enterprise Risk Management (ERM) program addresses climate-related risks, and to support strategic action on climate change.



Metrics and targets

We currently focus on our GHG emissions as our main climate-related risk but continue to incorporate our understanding of other climate-related risks and opportunities into the refinement of our ESG targets.

The table below summarizes our targets that relate to reducing transition risks or physical risks (e.g., water scarcity) and how we are taking advantage of transition-related opportunities.

CLIMATE-RELATED TARGETS	BENEFITS
As a milestone towards achieving our net zero by 2050 vision, reduce or offset 70% of our scope 1 and scope 2 GHG emissions by 2030 from a 2015 baseline.	– Reduces carbon regulation exposure. – Aligns with City of Calgary and Canada commitments.
Offset 100% of our building GHG emissions (scope 1 and scope 2) from 2021 onwards.	– Supports our larger net-zero target and aligns with our values. – Supports renewable energy development.
Electrify 35% of our mobile fleet by 2025 towards our aspirational goal of electrifying 100% of our mobile fleet by 2030.	– Promotes advancements in medium-duty and heavy-duty mobile fleet electrification. – Enables learnings about mobile fleet electrification. – Promotes reduced GHG emissions and longer asset lifecycles. – Reduces overall mobile fleet operating expenses.
ENMAX Power plans to invest $60 million to enable a more resilient grid by 2030 while maintaining our reliability levels.	– Enhances reliability of the grid to extreme weather events. – Supports grid flexibility to adapt to changing customer needs.

ENMAX has been publicly disclosing its scope 1 and 2 GHG emissions since 2009. Below is our performance for the last five years. Read more about our GHG reduction initiatives on page 16.

GHG EMISSIONS (kilotonnes CO_2e)	2017	2018	2019	2020	2021
EQUITY SHARE					
Scope 1 emissions	2,510	2,880	2,899	2,975	**3,125**
Scope 2 emissions	18	15	14	25	**24**
OPERATIONAL CONTROL					
Scope 1 emissions	2,707	3,262	3,362	3,475	**3,451**
Scope 2 emissions	17	13	13	21	**21**