



2022 Environmental, Social
and Governance Report





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Letter from our CEO

Since joining ENMAX as President and CEO in September 2022, I've seen firsthand the team's dedication to providing safe and reliable energy to our customers—who are at the heart of everything we do.

Cold temperatures, high electricity supply cost and rising inflation have meant some of our customers experienced higher costs in both Alberta and Maine. Our caring teams listened and developed programming to support them, including offering different payment arrangements and installment plans. In Maine, Versant Power also worked closely with state and county programs that qualify customers to receive assistance.

We connected struggling customers to community resources for assistance. Overall, ENMAX invested \$3.7 million in community support in Alberta and Maine, enhancing funding to partner agencies to support energy affordability programs, including essential needs funding, energy efficiency education and conservation programs.

This is a time of change for our industry. And so ENMAX is continuing to deepen our commitment to ESG, including advancing electrification, investing in grid resilience and enabling a diverse and inclusive team.

ENMAX is eager to harness opportunities that support the energy transition for the benefit of our customers. On our path to net zero, ENMAX is working to reduce our emissions by 70 per cent by 2030 (from a 2015 baseline). Our emissions are currently 65 per cent lower than the baseline but have increased slightly over the last five years due to the high utilization rates of our natural gas-fueled generation facilities. We are committed to reducing emissions and are currently evaluating the feasibility of constructing and integrating a carbon capture unit at our Shepard Energy Centre. We are optimistic about the role technology can play in helping us build a lower carbon future.

As enablers of the energy transition, we also need to meet our customers' growing expectations around electrification and choice. Over the last year, ENMAX advanced several projects that enhance the flexibility and resilience of the grid. At the same time, Versant Power brought 260 solar projects on-line, including community and residential rooftop solar installations. We will continue to modernize our infrastructure, improve our ability to meet our customers' needs and, in Alberta, contribute to The City of Calgary's climate goals.

I want to thank the ENMAX team for their work in providing safe and reliable service to our community. I would also like to thank our customers, who trust us to power their lives. We take that responsibility seriously.

As I look ahead, I'm excited about the future and the progress we're making towards achieving our ESG objectives.

Be safe,

Mark Poweska
President and CEO





Looking back: 2022 scorecard

At ENMAX, we are proud of our achievements in environmental, social and governance (ESG) practices and performance. To provide transparency around our ESG performance and activities, we are again sharing a scorecard (below) that shows our targets and progress against them. Details about our initiatives and performance can be found in the rest of this report. See the next page for our targets for 2023 and beyond.

MET
 ON TRACK
 DID NOT MEET

Our 2022 ESG targets cover only our assets and operations in Alberta. We continue to work with Versant Power to incorporate our operations in Maine into more of our target areas. The date stated in our targets indicates by year end of the stated year.

	TARGET	STATUS	PROGRESS
Greenhouse gas emissions and the energy transition	Reduce or offset greenhouse gas (GHG) emissions associated with our power generation portfolio by continuing to invest in efficiency improvements and new technologies.		Completed turbine upgrade at Calgary Energy Centre (CEC) adding 10 MW maximum generation capability. This further increased the efficiency of CEC.
	Offset 100% of our building GHG emissions (scope 1 and scope 2) from 2021 onwards.		Completed offset purchases for 2021. Offset purchases for 2022 will be completed in Q3 2023.
	Electrify 35% of our mobile fleet by 2025 towards our aspirational goal of electrifying 100% of our mobile fleet by 2030.		As of the end of 2022, 3.85% of our fleet is composed of electric vehicles. During the year, we tested two EV cube van prototypes and received a commitment for funding from NRCan to support installation of EV chargers.
Diversity, inclusion and belonging	100% of all people leaders to complete inclusive leadership competency training in 2022.		100% of all people leaders completed inclusive leadership competency training.
	Complete an assessment of our customer and vendor practices by 2023 to identify further opportunities to advance inclusive customer experiences and vendor management processes.		Completed an assessment of our vendor and customer practices.
Reliability and innovation	ENMAX Power plans to invest \$60 million by 2030 to enable a more resilient grid while maintaining its reliability levels.		Exceeded target with a spend of more than \$60 million in 2022 towards enabling a more resilient grid.
Energy affordability	Spend at least 30% of our community investment budget each year on activities and organizations that support customers at the various stages of the energy affordability lifecycle. By 2025, increase the proportion of spending in this area to 40%.		35% of our 2022 community investment budget was directed towards energy affordability. In addition, a one-time emergency fund outside of the community investment budget was donated to the United Way of Calgary and Area for crisis support, which brought the total to 42%.
	Deliver 1,000 energy saving kits to Albertans by 2022.		1,000 energy saving kits were delivered to Albertans by the end of 2022.
	By 2025, conduct four pilot projects to test programs or solutions that work towards removing barriers to energy access and affordability.		Completed two pilots and initiated three.







Looking forward: our targets for 2023 and beyond

As part of our commitment to continual advancement, we reviewed our previously set targets, taking into account relevancy, feasibility and other factors. Based on this review, we adjusted some targets, added two targets and combined two categories. See the "Change" column for details.

* = Target excludes Versant Power

We have worked with Versant Power to incorporate our operations in Maine into more of our target areas. The targets below include Versant Power, unless otherwise noted with an asterisk. The date stated in our targets indicates by year end of the stated year.

	TARGET	CHANGE
 Climate change and the energy transition	Achieve net-zero scope 1 and 2 emissions by 2050.	We combined our GHG emissions and innovation targets into this "Climate change and the energy transition" category as this more accurately characterizes our actions. We replaced the aspirational goal of reducing or offsetting our GHG emissions with a specific and measurable target by 2030. We adjusted our mobile fleet electrification target, extending it by five years. Our former reliability and innovation target was met in 2022. New targets were developed to track progress on initiatives to advance the energy transition. Reliability and innovation projects are discussed on pages 26-28 .
	Achieve 70% reduction of scope 1 and scope 2 GHG emissions by 2030 from 2015 levels.	
	Transition 35% of our mobile fleet to zero emission vehicles (ZEV) by 2030.	
	Offset 100% of our building GHG emissions (scope 1 and scope 2) annually.	
	ENMAX Power, ENMAX Energy and Versant Power each to conduct a pilot project to advance the energy transition by the end of 2023.	
 Diversity, inclusion and belonging	Update and expand categories of workforce diversity measurement and survey all employees by end of 2023.*	We increased our focus on diversity, inclusion and belonging-related targets by adding a target on workforce diversity measurement and continuing to expand our employee training programs.
	Pilot inclusive training to individual contributors by the end of 2023.*	
	Expand training for customer facing teams on communicating with diverse customers and communities by the end of 2023.*	
	Provide training to employees in Canada on the history of Indigenous Peoples by end of 2023.*	
	Versant Power to create a diversity, inclusion and belonging roadmap by end of 2023.	
 Energy affordability	Spend at least 30% of our community investment budget each year on activities and organizations that support customers at the various stages of the energy affordability lifecycle. By 2025, increase the proportion of spending in this area to 40%.	Unchanged
	By 2025, conduct six pilot projects to test programs or solutions that work to remove barriers to energy access and affordability. Versant Power will complete two of the six.	
 Governance	Develop Sustainable Procurement Strategy by the end of 2023.*	We included two new governance targets.
	Maintain Board of Directors composition of at least 30% women and at least one member from an underrepresented group.	



SPOTLIGHT

How we help The City of Calgary meet its climate goals

As a future-oriented essential electricity service provider, we are committed to advancing a cleaner energy future for the benefit of our customers, the communities we operate in and our Shareholder, The City of Calgary. We recognize that climate change is an important and complex issue that impacts everyone. In July 2022, The City of Calgary shared its [Climate Strategy](#), laying out a roadmap for achieving a net zero and climate-resilient Calgary. Some of the ways we are working to help The City of Calgary advance its climate goals include:



ENMAX'S CONTRIBUTION

Preparing for electric vehicle adoption

ENMAX is continuing to invest in studies and programs to understand how Calgarians use EVs and their impact on our electricity system. We launched [Charge Up](#), Alberta's first smart charging pilot program, to test the effectiveness of incentives on influencing what time of day EV drivers charged their vehicles. The pilot, which involved more than 160 EV drivers in Calgary, compared a control group of participants to those who received educational information, and to another group who received a small financial reward for charging their EVs at times that benefit the grid. Read more on [page 27](#).



THE CITY OF CALGARY'S GOALS

Zero carbon neighbourhoods

- Accelerate the transition to zero emissions vehicles
- Develop a process and financial incentives to support at-home charging infrastructure and retrofit EV charging infrastructure in multi-unit residential buildings



THE CITY OF CALGARY'S GOALS

Zero carbon energy transition

- Support on-site and neighbourhood scale low carbon energy projects
- Support the installation of solar on community buildings such as community associations and schools

THE CITY OF CALGARY'S GOALS

Net-zero grid and city

- 60 per cent reduction of GHG emissions below 2005 levels by 2030 for The City of Calgary
- Net-zero emissions by 2050 for The City of Calgary
- Clean the provincial energy supply



ENMAX'S CONTRIBUTION

Net-zero target alignment

ENMAX is committed to playing an active role in the energy transition and in addressing climate change. Our target to achieve a 70 per cent reduction of GHG emissions below 2015 levels by 2030 and net-zero GHG emissions by 2050 is aligned with The City of Calgary's goals. Our net-zero pathway shares the avenues we are exploring and is based on our current understanding of existing, emerging and potential future technologies. Read more on [page 13](#).



ENMAX'S CONTRIBUTION

Installing rooftop solar on community association buildings

ENMAX supported the installation of rooftop solar panels on 13 community association buildings across Calgary in 2022, with 17 more scheduled to be completed in the first half of 2023. This initiative is part of the ENMAX Community Solar Fund, a partnership between ENMAX and The City of Calgary to support renewable energy. ENMAX Energy provides both the solar equipment and oversight of the installation of the solar panels at no cost to the community association. Read more on [page 21](#).



About ENMAX

The ENMAX group of companies is a leading provider of electricity services, products and solutions. We are headquartered in Calgary, Alberta with operations across Alberta and Maine. Through our subsidiaries, ENMAX Power Corporation and Versant Power, we own and operate transmission and distribution utilities that safely and reliably deliver electricity to customers in Calgary and northern and eastern Maine. Through ENMAX Energy Corporation, ENMAX owns and operates power generation facilities and offers a range of innovative electricity and natural gas products and services to residential, commercial and industrial customers across Alberta.

Shareholder value proposition

Environmental, social and governance considerations are at the core of our business and are reflected in ENMAX's value proposition to:

- Deliver a stable, predictable and growing dividend.
- Enhance long-term value of the company.
- Provide industry leadership and corporate citizenship.
- Provide safe, reliable products, goods and services.
- Provide high standards of efficiency and customer service.
- Provide alignment with The City of Calgary economic, environmental and social goals.

Our mission

We power the potential of people, businesses and communities by safely and responsibly providing electricity and energy services in ways that matter to them today and tomorrow.

Our Values



Safety

No one gets hurt



Integrity

Do the right thing with courage and conviction



Accountability

Own it



Service

Act with others in mind



Teamwork

Better and stronger together



Agility

Adapt and act

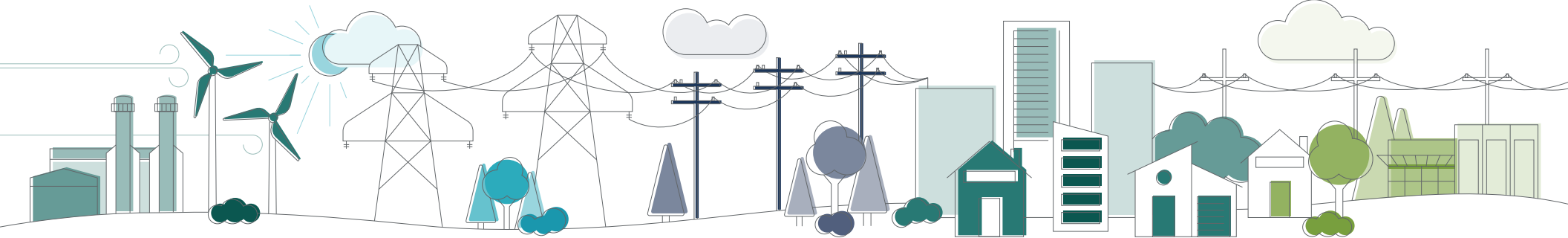


Innovation

Create possibilities



Key statistics (as of December 31, 2022)



ENMAX Energy

ALBERTA

1,522* MW
generation capacity,
equity based

86%
natural gas

14%
wind

* Added 10 MW of maximum generation capability at Calgary Energy Centre.

** Adjusted earnings before interest, taxes, depreciation and amortization; Non-IFRS financial measure. Refer to ENMAX's full 2022 Financial Report.

ENMAX Power

CALGARY

1,089 km²
service territory in and
around Calgary

335 km
of transmission lines

8,629 km
of distribution lines

~549,000
residential, commercial and industrial
customers (i.e., sites)

Versant Power

MAINE

27,000 km²
service territory in northern
and eastern Maine

2,039 km
of transmission lines

10,219 km
of distribution lines

~164,000
customers

ENMAX Energy

ALBERTA

~725,000
residential, commercial,
and industrial customers

>40
municipalities

Provides:
↳ Electricity
↳ Natural gas
↳ Solar power

Key Figures

ALBERTA AND MAINE

~2,100
employees

\$9.7 billion
in total assets

\$737 million
in EBITDA** in 2022

\$82 million
dividend declared to
The City of Calgary in 2023



Where we operate

ENMAX Power

Regulated wires business which owns, operates and maintains the transmission and distribution system in and around Calgary.

ENMAX Energy

Competitive power generation and energy retail business, providing electricity, natural gas and customer care services in Alberta.

5 
 Natural gas power plants

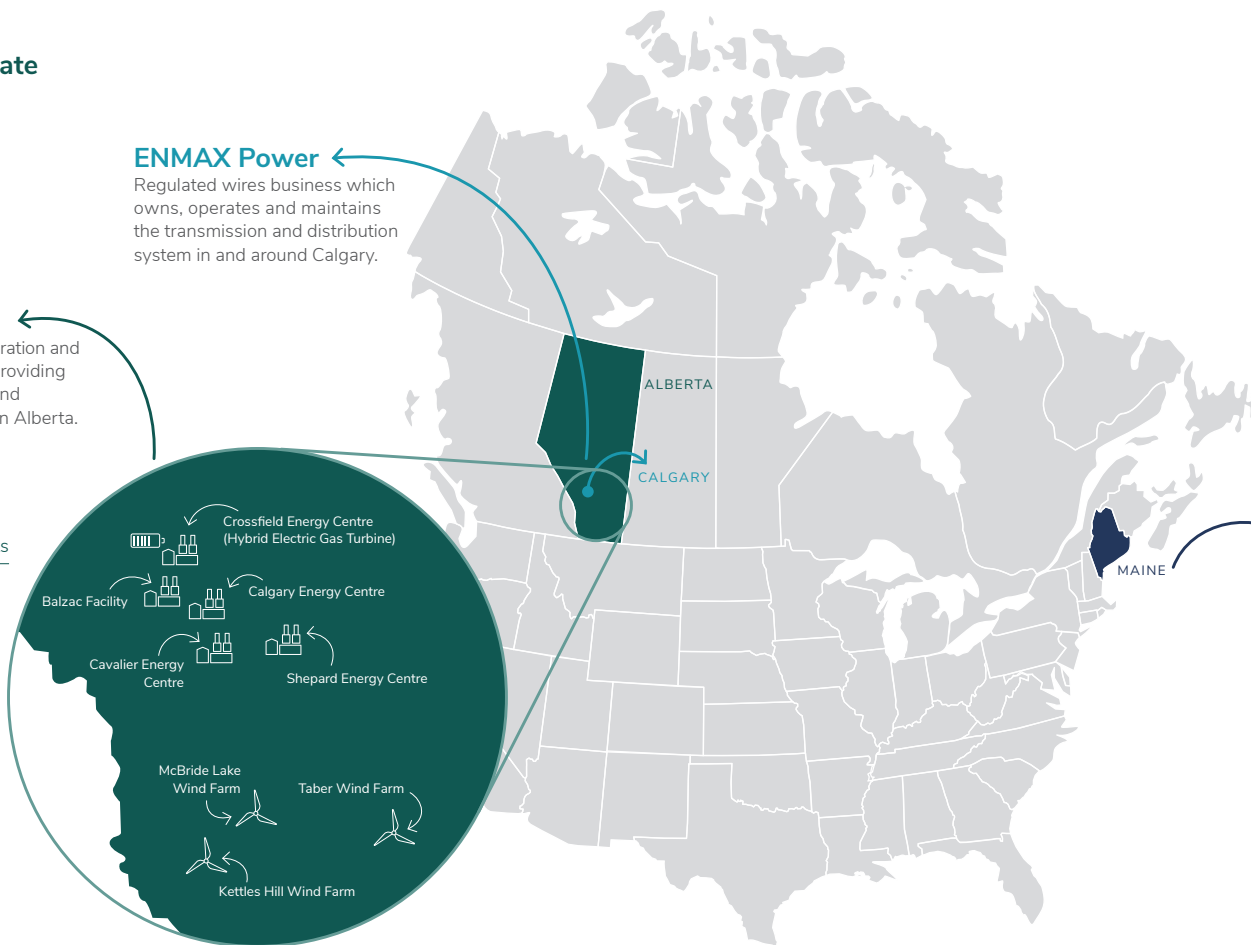
4 operated, 1 non-operated

3 
 Wind power generation facilities

2 operated, 1 non-operated

1 
 Battery storage

1 operated



Land acknowledgment

We acknowledge that we live and work on the traditional lands of Indigenous Peoples in our operating areas. In Alberta, this includes First Nations and Métis Peoples, while in Maine this includes tribal nations. We acknowledge and thank the diverse Indigenous Peoples who live on and steward this land. We are committed to work in partnership with Indigenous Nations in the spirit of reconciliation, through respect and collaboration.

Versant Power

Regulated wires business which provides customer care and electricity services to residential, commercial and industrial customers in Maine.



Our approach to ESG

We are committed to the highest level of accountability to customers, our Shareholder (The City of Calgary), employees and all community members. As part of that commitment, we have publicly disclosed our ESG performance for 16 years, publishing an extensive range of environment, safety, social and governance indicators each year.

We continually evolve the robustness of our sustainability commitments and communications. In 2022, we reviewed our ESG practices, engaged with key individuals to enhance our ESG reporting and identified a new suite of forward-focused ESG targets.

Determining what to report: materiality assessment

The list (shown on the right) is the result of the materiality assessment we conducted in 2020. This assessment included input from subject matter experts across the organization, the executive team and our Board of Directors (the "Board"), as well as external engagement with key customers, our Shareholder (The City of Calgary) and providers of capital. The assessment considered topics suggested by the Sustainability Accounting Standards Board (SASB), the Task Force on Climate-related Financial Disclosures (TCFD) and best practices in reporting within our industry.

It is important to note that materiality in this context is not a judgment on the importance of the topic to our company or to society. For example, our relationships with our customers, the unions that represent our employees and the governments that enact public policy are of utmost importance to us. However, the level of external interest in these relationships is lower than the level of interest in, for example, our impact on GHG emissions or energy affordability. We use these materiality results to inform the level of our reporting.

ESG MATERIAL TOPICS

- ↳ GHG emissions and energy transition
- ↳ Grid resiliency and reliability
- ↳ Diversity and inclusion
- ↳ Energy affordability
- ↳ Employee/contractor safety
- ↳ Public safety
- ↳ Corporate governance

LEVELS OF REPORTING

These are our ESG priority topics. We provide metrics, description of programs and extensive qualitative information for these topics in this report since they are both crucial to our business success and of high interest to our stakeholders. Although all these topics are critical, we have set objectives and targets for topics on which we believe we can make the most meaningful progress.

- ↳ Employee development
- ↳ Economic impact
- ↳ Cybersecurity/data privacy

We provide a comprehensive and balanced discussion of these topics that combine metrics and qualitative discussion.

- ↳ Physical impacts of climate
- ↳ Air quality
- ↳ Water
- ↳ Responsible procurement
- ↳ Occupational health
- ↳ Unions
- ↳ Customer satisfaction
- ↳ Public policy
- ↳ Spills/releases

We include these topics in the report with limited qualitative discussion and data, if readily available.



Environment

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Grid reliability and resiliency	23
Water use and quality	29
Air quality	30
Land and biodiversity	31



GHG emissions

WHY IT MATTERS TO ENMAX

As a future-oriented essential electricity service provider, we are committed to advancing a cleaner energy future for the benefit of our customers, the communities we operate in and our Shareholder (The City of Calgary). For many years, the reduction of greenhouse gas (GHG) emissions has been a key component of our environmental protection and stewardship practices.

2022 HIGHLIGHTS

- ↳ **Completed turbine upgrade at Calgary Energy Centre (CEC) adding 10 megawatts of maximum generation capability. This further increased the efficiency of CEC.**
- ↳ **Met our target to offset 100 per cent of our building GHG emissions (scope 1 and scope 2)¹.**

¹ Completed offset purchases for 2021. Offset purchases for 2022 will be completed in Q3 2023.

Our approach

In 2021, we shared our ambition to achieve net zero scope 1 and scope 2 GHG emissions by 2050. As a milestone towards achieving our net-zero vision, we plan to reduce or offset 70 per cent of our scope 1 and scope 2 GHG emissions by 2030 from a 2015 baseline. To reach our targets, we are identifying efficiencies at our natural gas power generation facilities, offsetting and managing emissions from our corporate and operational buildings, and advancing the electrification of our mobile fleet.

Evolving our generation portfolio

We have already significantly reduced emissions over the past decade due to the transition of our power generation portfolio. When compared to our 2015 baseline, we have reduced the GHG emissions by 65 per cent. Today, we hold no coal-fired generation in our portfolio, and our power generation facilities are a combination of modern natural gas-fuelled power generation facilities and wind generation facilities. Our emissions have increased slightly over the last five years due to the high utilization rates of our natural gas-fueled generation facilities. We are committed to reducing emissions and are currently evaluating the feasibility of constructing and integrating a carbon capture unit at our Shepard Energy Centre. Read more on [page 17](#).

GHG emissions across our business

At ENMAX, the vast majority of our GHG emissions come from our natural gas power generation facilities. Our primary source of GHG emissions is natural gas combustion at these plants, followed by a smaller proportion originating from natural gas and electricity consumption at our corporate and operational buildings,



as well as gasoline and diesel combustion within our mobile fleet (see table below). At Versant Power, the primary source of GHG emissions is gas and diesel combustion from its mobile fleet. The mobile fleet in Maine includes 140 smaller-class vehicles and approximately 120 medium- and heavy-duty vehicles.

ENMAX GHG EMISSIONS CONTRIBUTIONS BY CATEGORY	2022
Power generation	99%
Operational and corporate buildings	0.6%
Mobile fleet	0.4%

VERSANT POWER GHG EMISSIONS [TONNES CO ₂ E]	2021	2022
Scope 1 emissions	4,621	6,890
Scope 2 emissions	1,547	1,370

What are Scope 1, 2 and 3 emissions?

Scope 1: Direct GHG emissions from fossil fuel combustion in power generation, fuel in fleet vehicles, and natural gas for heating.

Scope 2: Indirect GHG emissions from consumption of purchased electricity and transmission and distribution line losses.

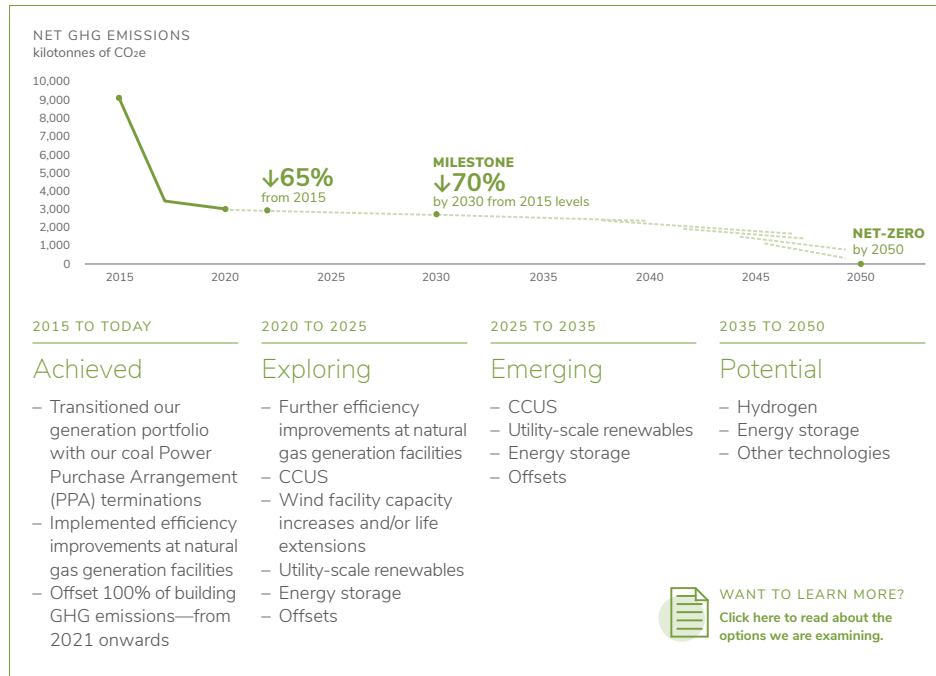
Scope 3: Indirect GHG emissions not covered in Scope 1 and 2 that are generated upstream and downstream of our business.

We calculate our emissions using the equity share approach.



Our net-zero pathway

The illustration below represents a progression we envision to achieve net zero by 2050. While the specifics continue to be developed, the categories we are exploring are based on our current understanding of existing, emerging and potential future technologies. Our pathway will become more defined as technologies advance and become more commercially available and as the energy transition uncovers new possibilities. We plan to update our understanding of these opportunities as they change over time and will provide additional detail on our progress in our next report.



Principles guiding our planning

We use the following principles to guide us as we explore future opportunities.



We keep our customers front and centre

As a customer-facing electricity service provider, we always consider the impacts our decisions have on our customers and on overall energy affordability. We also consider our customers' desire for clean electricity products and a decarbonized grid.



We are open to new technologies

We believe a combination of technologies and solutions including renewables, fuel and energy efficiencies, energy storage and carbon capture, utilization and storage (CCUS) will be required to achieve Canadian and global decarbonization goals. ENMAX will continue to invest in exploring and implementing new technologies.



We collaborate with governments, regulators and other groups

Our pathway assumes a supportive regulatory environment and the availability and commercial viability of technologies, such as energy storage and CCUS. We continue to engage in conversations with a variety of groups to work towards common goals.



We seek broader benefits

Although most projects have a clear environmental benefit, we also consider the social benefits of projects, for example considering community and Indigenous participation in energy projects.



Options we are examining

We are committed to enhancing our ESG performance through the exploration and adoption of technologies that can help reduce the emissions associated with our business. Options we are exploring include:



Efficiencies at natural gas generation facilities

Our commitment to operational excellence means we regularly seek out process efficiencies and incorporate updated equipment as new technologies emerge. Although there is a limit to the emissions reductions that can be achieved through efficiency, we continue to invest in our natural gas-fuelled generation facilities. We do this because these facilities provide baseload power for the Alberta grid and enable the integration of intermittent renewable assets by providing a backstop to the variability of wind and solar generation.



Carbon capture, utilization, and storage (CCUS)

CCUS is not a new technology, but it is experiencing a surge of global interest. According to the International Energy Agency ([IEA](#)), there are currently 35 CCUS commercial facilities around the globe, and the Provincial and Federal Government have committed to providing funding to support CCUS projects. All our power generation facilities are located near advantageous geological formations for storing carbon. While CCUS requires large capital investment, large volumes of CO₂ can be captured and stored. We will be examining the feasibility of carbon capture at our Shepard Energy Centre (read more on [page 17](#)).



Offsets

An offset is a reduction or removal of emissions of carbon dioxide or other greenhouse gases to compensate for emissions made elsewhere. Offsets can play an important role in helping organizations achieve their net-zero goals by neutralizing residual emissions that cannot be addressed through emissions-reduction initiatives alone.

In addition to offsetting our building GHG emissions, we are evaluating the role that offsets can play in helping us achieve our net-zero vision. In 2022, we assessed the location, availability and prices of offsets currently in the market to develop a more structured approach to offsetting. We will continue to prioritize offsets from local and Indigenous communities.



Renewables

We own and operate two wind facilities—Taber and Kettles Hill—and hold a 50 per cent ownership stake in McBride Lake wind farm. We have completed end-of-life studies for our wind facilities and are starting to examine our options for repowering or life extensions. The benefits of life extension include long-term waste reduction (i.e., waste associated with decommissioning) and a potential increased return on capital invested. We are also evaluating adding larger utility-scale solar projects to our generation portfolio to help our commercial and industrial customers achieve their ESG goals by giving them an opportunity to purchase renewable electricity.



Hydrogen

While already widely used in some industries, large-scale hydrogen combustion technology continues to advance within the power generation sector. Already the largest hydrogen producer in Canada, the Government of Alberta released its [Hydrogen Roadmap](#) in November 2021. Hydrogen produces no direct GHG emissions and can be blended with natural gas (often with only relatively minor retrofits to natural gas turbines) to generate lower-carbon power. At the moment, hydrogen is not economically feasible at our facilities, but we continue to monitor advancements and evaluate the opportunities of hydrogen technology.



Energy storage and other technologies

Energy storage using utility-scale batteries increases grid flexibility and reliability. When combined with intermittent power generation, batteries can store and release power when needed, which helps balance the electrical grid. When combined with natural gas generation (such as at our Crossfield Energy Centre) energy storage can also provide standby power without having to burn natural gas. We will continue to stay informed on relevant technology advancements and pursue opportunities that align with our business and net-zero target.

In the longer term, new technologies will emerge and may offer additional emissions reduction solutions.



GHG Action Plans

During 2022, we developed GHG Action Plans for each of our business units (ENMAX Power, ENMAX Energy and Versant Power). Each GHG Action Plan includes specific information on our GHG-emitting facilities and business units. The Plans identify benchmark (2015) and projected GHG emissions that are aligned with our budget and three-year business plans. Each GHG Action Plan identifies potential mitigation actions alongside estimated emissions reductions and costs. We have connected the Plans to the Enterprise Risk Management (ERM) program to verify that mitigation actions are focused on climate-related risks for each business unit. As we work toward net zero, we intend to establish and publish additional milestone targets to keep us on track. These Plans will be updated annually as we adapt to a changing business environment.

A tool to evaluate emissions reduction opportunities

To compare the cost and emissions impact of different projects and technologies, we have developed a marginal abatement cost curve (MACC). MACCs are a useful tool for normalizing a series of projects, providing both the cost and the scale of the carbon reduction opportunity for each initiative. By ranking each project based on the dollar amount per tonne of carbon dioxide (\$/tCO₂) and the tonnes of carbon abated, projects across a wide range of areas can be compared. We use the MACC to help evaluate our options and to identify the largest emissions reduction opportunities with the lowest costs.



ENMAX's Kettles Hill wind farm. Our generation portfolio includes 14 per cent wind power.



Progress in 2022

We are taking the following steps toward achieving our GHG emissions reduction target:

Efficiency improvements at our natural gas power generation facilities

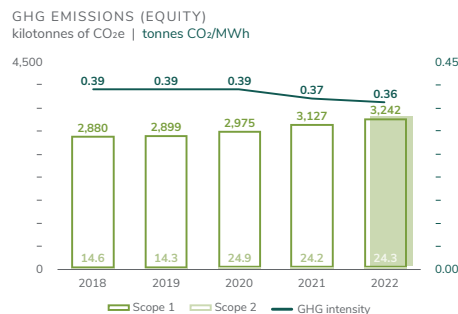
While natural gas is one of the lowest carbon emitting fossil fuel options available for power generation, we are proactively working to find efficiencies and incremental improvements that further reduce our GHG emissions intensity.

Turbine upgrade

As part of our ongoing efforts to improve operational efficiencies, we completed a turbine upgrade and maintenance in 2022 at the Calgary Energy Centre that added 10 megawatts (MW) of maximum generation capability and an efficiency improvement of 2.2 per cent.

FEED study

ENMAX Energy has received a funding commitment from Emissions Reduction Alberta to support a front-end engineering and design (FEED) study to explore the feasibility of constructing and integrating a carbon capture unit at the Shepard Energy Centre (read more on [page 17](#)).



While our emissions intensity has slightly decreased over the past five years, our absolute emissions have increased by 13 per cent in the same timeframe. Absolute GHG emissions are directly correlated to high production at our natural gas facilities due to strong electricity demand.

Notes:

- We report GHG emissions using the equity approach to reflect financial risks and rewards.
- Our GHG emissions are composed predominantly of CO₂. While we include sulfur hexafluoride (SF₆) in our GHG emissions, it represents less than one per cent of our scope 1 emissions.
- Emissions from our substations include all SF₆ releases but only a portion of electricity and natural gas combustion, since not all substations are directly metered.
- This data excludes Versant Power.



As part of our ongoing efforts to improve operational efficiencies, we completed a turbine upgrade and maintenance in 2022 at the Calgary Energy Centre.





SPOTLIGHT

Evaluating the feasibility of carbon capture

At ENMAX, we are working to understand how carbon capture can play a role in helping us achieve our net-zero vision.



Funding in place

In November 2022, the Government of Canada announced that 10 projects, including a potential carbon capture unit at the Shepard Energy Centre, were advanced to Phase 2 in the [Innovation Science and Economic Development \(ISED\)](#), [Strategic Innovation Fund \(SIF\)](#) Net-Zero Accelerator (NZA) process. The companies that advanced were assessed as promising early movers. These companies are primarily focused on delivering critical services and materials, including electricity generation.

Additionally, Shepard Energy Centre received a commitment for just over \$3 million in funding from the Government of Alberta through Emissions Reduction Alberta. The project is one of 11 approved for funding under the Carbon Capture Kickstart: Design and Engineering funding opportunity.



Goals of the study

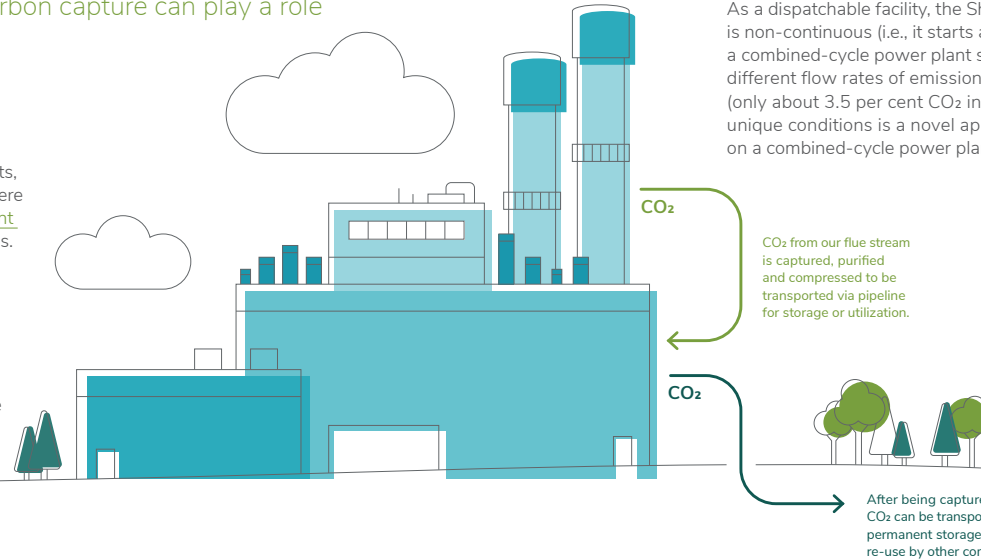
We will conduct a front-end engineering and design (FEED) study to evaluate the technical and financial feasibility of integrating a carbon capture unit at our Shepard Energy Centre. The FEED study will involve highly specialized engineering assessment and design work to evaluate different technologies for capturing CO₂.

The study will provide us with data and insights into these different carbon capture technologies and help to inform potential emissions reduction targets.



Where is the study taking place?

The study is taking place at our largest power generation facility, Shepard Energy Centre¹. Shepard is already the most efficient natural gas-fuelled combined-cycle generation facility operating in Canada today, as measured by tonnes of CO₂ per megawatt hour (MWh). Now, we are assessing the opportunity to make this facility home to one of the first commercial-scale natural-gas combined-cycle carbon capture units in North America.



What are some of the challenges?

As a dispatchable facility, the Shepard Energy Centre's flue gas stream is non-continuous (i.e., it starts and stops with production). Additionally, a combined-cycle power plant such as the Shepard Energy Centre has different flow rates of emissions as well as very low concentrations (only about 3.5 per cent CO₂ in the flue gas). Capturing CO₂ in these unique conditions is a novel application that has not yet been tested on a combined-cycle power plant.



Next steps

Following the study, we hope to select a technology to complete detailed engineering and design for a capture facility, with the goals of further understanding both the technical feasibility and the economic feasibility of capturing CO₂ from the Shepard Energy Centre.



WANT TO LEARN MORE?

[Click here to watch a video from Emissions Reduction Alberta for more information about this project.](#)

Shepard is also home to the Alberta Carbon Conversion Technology Centre (ACCTC)², which uses exhaust gas from the facility to enable research and innovation focused on finding ways to reduce and repurpose emissions. Existing and new clients continue to use the ACCTC to develop, validate and pilot technologies that target carbon capture and utilization.

¹ Capital Power owns a 50 per cent interest in the Shepard Energy Centre through a joint venture agreement with ENMAX Generation Portfolio Inc (EGPI), the facility operator.

² The ACCTC is operated by Innotech Alberta.



Offsetting and managing emissions from our buildings

ENMAX currently owns or leases multiple office and operational buildings and 160 substations across Alberta and Maine. As part of our commitment to reducing our emissions from buildings, we continue to invest in:

Offsetting our building emissions

ENMAX has been purchasing renewable energy certificates for the past 11 years to offset 100 per cent of ENMAX Place (head office) scope 2 GHG emissions. In 2020, we set a target to offset 100 per cent of our building GHG emissions (scope 1 and scope 2) from 2021 onwards. In alignment with our target, ENMAX purchased carbon offsets for our 2021 building emissions. The offsets come through the Verified Emissions Reduction Registry, which is certified by the Canadian Standards Association Clean Projects Registry. We follow several key principles in our annual purchase of offsets (such as prioritizing local offsets) and are developing governance to standardize our approach going forward.

Incorporating solar

To further reduce scope 2 GHG emissions at our facilities we have incorporated rooftop solar installations on ENMAX buildings (read more to the right).



Embracing solar opportunities

Another way we are reducing the GHG emissions from electricity use at our buildings and facilities is through the addition of rooftop solar.

- ENMAX Place (our head office) already has 50.8 kW of installed solar, which eliminates about 30 tCO₂e per year.
- In 2022, we began piloting a solar installation on one of our substations. The pilot includes

integrating the solar installation with existing substation systems, sizing the panels to ensure we meet legislative and technical requirements, and measuring the operational benefits. If successful, the pilot could lead to more solar installations on other ENMAX substations to realize cost savings and support our substation infrastructure in the event of a system outage.

Substations monitoring

Sulfur hexafluoride (SF₆) is a gas used as an electrical insulator in high-voltage switchgear found in substations. As SF₆ is a powerful GHG, ENMAX Power closely monitors and reports all SF₆ releases and has stringent SF₆ management practices in place. ENMAX Power assets include 43 substations of which 79 per cent have SF₆ gas insulated breakers, this gas is monitored by automated alarms and investigated by crews immediately. Any gas loss is documented as part of our regular inspection and reporting process. Additionally, we proactively replace seals to lower the probability of SF₆ leaks from equipment and closely follow industry research to explore alternatives to SF₆ gas. ENMAX Power closely follows the manufacturing industry and other utilities, which have been exploring and testing alternatives to SF₆. Through our participation with organizations, such as the Institute of Electrical and Electronics Engineers and the Centre for Energy Advancement through Technological Innovation, we continue to stay abreast of the best practices and newest technologies in the marketplace.

Versant Power assets include 117 substations, of which only 35 per cent have breakers with SF₆. Versant Power maintains strict control measures to closely manage SF₆ gas releases from its substations and replaces breakers when possible. Versant Power has a specific inspection cycle for breakers containing SF₆ gas and uses a special camera that can detect SF₆ gas leaks.



Electrifying our mobile fleet

We have a mobile fleet of 348 vehicles in Alberta that are used by crews to inspect, maintain and repair our transmission and distribution lines, substations and network underground assets. Some of these vehicles are also used by our meter readers, community investment team members and for other corporate services. Of this mobile fleet, approximately 42 per cent of vehicles are light duty (less than 8,000 kg Gross Vehicle Weight Rating [GVWR]), 37 per cent medium duty (8,000 to 11,793 kg GVWR) and 21 per cent heavy duty (more than 11,794 kg GVWR).

In 2022, we extended our mobile fleet electrification target by five years to “Transition 35% of our mobile fleet to zero emission vehicles (ZEV)¹ by 2030.” The target was revised primarily due to significant supply chain issues in light-duty ZEV manufacturing in the near term and the lack of availability of medium- and heavy-duty vehicles in the longer term. Extending the timeline by five years may allow us to purchase ZEVs at more favourable market prices as supply of light-duty ZEVs improves and continue to avoid retiring our older fleet vehicles before the end of their lifespan. This also allows time for manufacturers to address cold weather performance issues, bring greater product selection to market and reduce costs. It also allows ENMAX to evaluate the performance of medium duty vehicles through our pilot project in our operating conditions.

We remain committed to building a lower carbon future and have progressed toward our target by:

Advancing our medium-duty pilot

We entered the third year of our demonstration project to test EV technology in our mobile fleet, with support of just over \$1 million in funding from Emissions Reductions Alberta. The project—the first of its kind in Canada—is testing two medium-duty fully electric work trucks, which have the potential to reduce 4,300 litres of diesel consumption per vehicle annually. In April 2022, we received the trucks and put them directly into operational duty. We are analyzing their capacity and performance in various conditions, including driving the vehicles in extreme weather conditions to determine the effects on range, testing how long the battery lasts with tools in use, and taking trips on less than a full charge. The vehicles have performed very well and have met our requirements in summer conditions. As the pilot progresses, we will continue to actively engage with suppliers, other utilities and vehicle manufacturers to support the development of the specialized EVs needed to meet our goals.

Testing new technology

We plan to test hybrid solutions for the bucket trucks in our heavy-duty fleet beginning in 2023. The trucks combine a typical internal combustion engine chassis with an Electric Power Takeoff (e-PTO). An e-PTO uses a battery pack, electric motor and hydraulic pump that can raise and lower the boom on a work truck without using diesel. Using e-PTOs reduces mobile fleet emissions and noise on the job site as they decrease vehicle idling and operate on battery power. Decreasing idle time has a number of positive environmental impacts beyond the active idle emissions such as a reduction in reactive and preventative maintenance as well as a potential increase to the life of assets.

Installing and testing charging infrastructure

To help us understand the performance and usage patterns of charging infrastructure, we put into service four additional chargers at our South Service Center in 2022 and two additional chargers at our ENMAX Place corporate office. In October 2022, we received a commitment for \$890,000 in funding through Natural Resources Canada’s [Zero Emission Vehicle Infrastructure Program](#) to support the installation of 68 Level 2 (240 volt) EV chargers and 11 Level 3 (480 volt) EV chargers.

Establishing a steering committee

We formed a steering committee in early 2022 to deliver our mobile fleet ZEV plan, evaluate the outcomes and make recommendations for next steps for fleet electrification initiatives. The plan is updated regularly as technology and market conditions change and outlines our intended progress toward achieving our ZEV target. The committee meets quarterly to review recommendations and make decisions.



ENMAX was selected as one of [Canada’s Greenest Employers \(2022\)](#).

¹ ZEVs are typically considered battery-electric vehicles that are fueled only with electricity; fuel-cell electric vehicles that operate using hydrogen; and plug-in hybrid electric vehicles that can run exclusively on electricity for a specified minimum distance before they transition to operating as hybrid vehicles, using both liquid fuels and electricity.



Quantifying scope 3 emissions

Scope 3 GHG emissions are those generated upstream and downstream of our business. To begin understanding our scope 3 emissions, we conducted a readiness assessment in 2022 using the GHG Protocol's 15 categories of scope 3 emissions. We determined nine categories to be the most material to our business. We then conducted internal interviews and collected and compiled data to prepare an estimated measurement of each of those categories. We estimated emissions using kilometres travelled, dollars spent for goods or services, the amount of electricity or natural gas sold, and others. Metrics are multiplied by emission factors (either provided by vendors or using industry best practices) to estimate the emissions. The readiness assessment identified data gaps and areas where we can improve our data collection and compilation and these are being prioritized and actioned. These are not expected to materially change our overall footprint, however, improved data integrity will allow for better emissions management in the future.

Supporting reductions of customer emissions

Customers' emissions are one of the most significant contributors to scope 3 emissions for companies that have an energy business. Customers' emissions are the GHG emissions associated with electricity and natural gas that we sell and deliver to customers, but do not generate ourselves.

Some of the ways we help customers better understand and manage their energy usage and support renewable energy solutions that meet their needs, aspirations and expectations include:

1. Energy use

We offer My Energy IQ™, a free tool for ENMAX EasyMAX® customers. The tool provides information and reports that enable customers to make informed decisions and better manage their energy use. All residential and small business ENMAX Energy customers have convenient access to the My Energy IQ™ tools, reports and insights as part of their ENMAX Energy online account. My Energy IQ™ enables customers to see how their home energy usage compares to similar homes nearby, build a customized savings plan, receive tips tailored to their home, see bill comparisons and historical use charts, learn what consumes the most energy in their home and how weather impacts consumption.

2. Electricity or natural gas green add-on

ENMAX Energy offers "green add-on" selections for customers to pay an additional variable fee (the amount is chosen by the customer). For electricity consumption, this fee goes towards the purchase of certified Renewable Energy Certificates that support renewable energy generation. For natural gas consumption, this fee goes towards the purchase of carbon offsets.

3. Lower carbon emissions heating

Versant Power encourages customers to switch from using fossil fuels for home heating to using electric heat pumps. Since Maine's grid sources about 79 per cent of its electricity from renewable sources such as wind, solar, hydroelectric and biomass, switching to heat pumps results in lower emissions.





4. Solar installations

As renewable generation continues to expand in Alberta, solar remains the largest source of total installed micro-generation capacity [under five megawatts (MW) in size] at **157 MW** as of the end of 2022. In Alberta, ENMAX Energy has supported the installation of more than 37 MW of solar micro-generation to date.

5. Solar power for Calgary community associations

Calgary is one of Canada’s sunniest municipalities with 2,390 hours of sunshine annually. The ENMAX Community Solar Fund was launched in 2021 to take advantage of this resource, build on our community relationships and support the energy transition. The fund—a partnership between ENMAX and The City of Calgary—provides \$5 million in-kind from ENMAX Energy to designated community associations to support sustainable and affordable energy through rooftop solar installations. ENMAX Energy provides the solar equipment and oversees installation of the solar panels on community halls selected by The City of Calgary at no cost to the community association. The solar panel installations can generate up to 100 per cent of the facility’s annual energy consumption, for an average lifespan of 20 to 25 years. During 2022, we supported the installation of solar panels onto 13 community association buildings across Calgary, with 17 more scheduled to be completed in the first half of 2023. Once the solar panels are installed, the system is turned over to The City of Calgary to allow the community association to begin producing renewable energy. This fund helps The City of Calgary on the path to net zero and benefits Calgary’s community centers by reducing energy costs.



6. Integrating distributed generation into the grid

Across the State of Maine, Versant Power is currently supporting 260 distributed generation projects, the majority of which are solar installations, together with a few hydro projects. The projects range in size from 25 kW to 5 MW of installed capacity.

A dedicated distributed generation team manages each project through its development stages—from application, engineering studies, design and construction to establishing detailed billing. Integrating these renewable energy projects safely and efficiently into Maine’s existing grid is an important part of advancing ENMAX and Versant Power’s shared vision of a cleaner energy future.

Community Solar Fund

Through the ENMAX Community Solar Fund, many Calgary community associations are already benefiting from rooftop solar on their community centers. Together, all the installations—30 when complete—will have the capacity to provide approximately 2.95 MW of renewable energy, which allows for more of their operating funds to enrich our neighbourhoods.

“This solar installation will have a massive impact on our community,” said Anita Raffaele, president of the Ranchlands Community Association—one of the first communities to benefit from the fund. “The pandemic has taken a financial toll on our association. This installation will allow us to save on energy costs, freeing up money to run more great programs for our community.”

“This solar installation will have a massive impact on our community.”

ANITA RAFFAELE, PRESIDENT,
 RANCLANDS COMMUNITY ASSOCIATION



WANT TO LEARN MORE?
 Click here to watch a video about the ENMAX Community Solar Fund program.

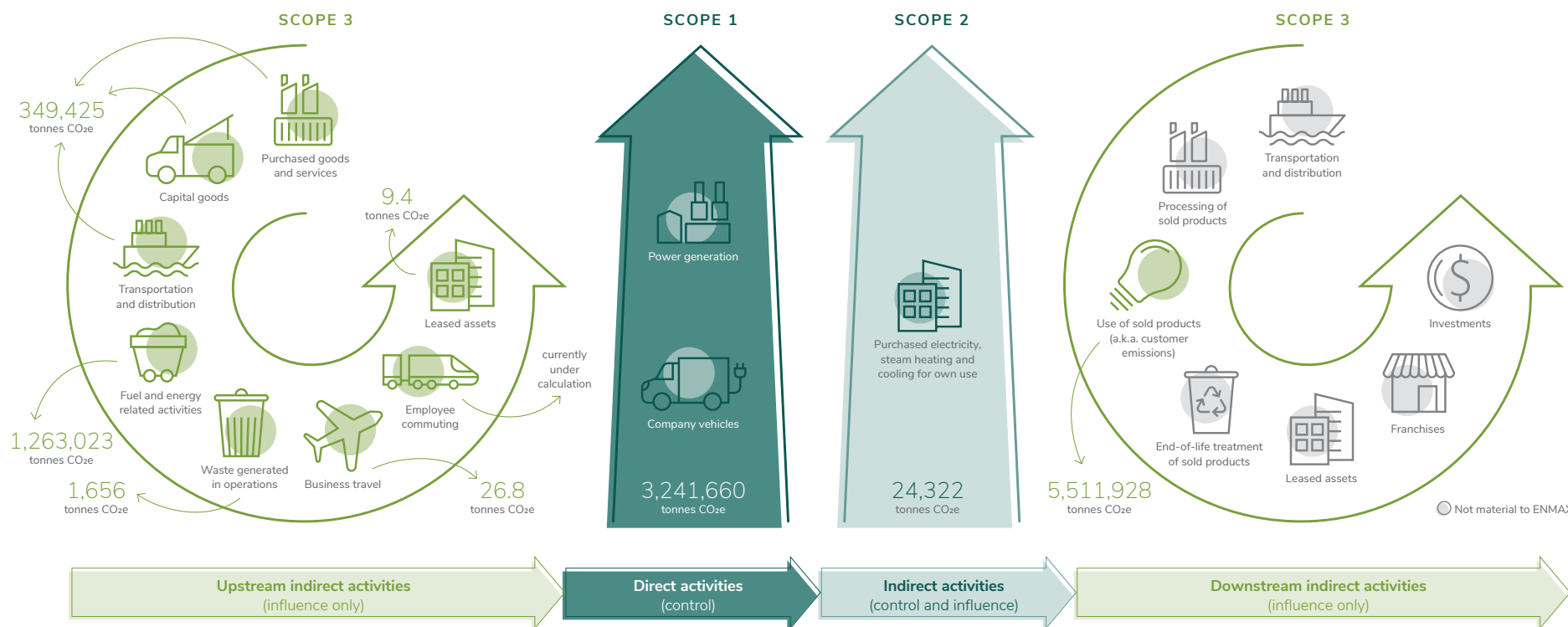


SPOTLIGHT

Understanding our scope 3 GHG emissions

Scope 3 GHG emissions are those generated upstream and downstream of our business. To begin understanding our scope 3 emissions, in 2022 we conducted a readiness assessment using the GHG Protocol's 15 categories of scope 3 emissions. We determined nine categories to be the most material to our business. Our estimates for those categories are noted below.

Use of sold products (i.e., customers' emissions) are one of the most significant contributors to scope 3 emissions for companies that have a consumer-facing energy business. Customers' emissions are the GHG emissions associated with power that we sell and deliver to customers, but do not generate ourselves.





Grid reliability and resiliency

WHY IT MATTERS TO ENMAX

Nearly every aspect of modern life relies on electricity. As an operator of transmission and distribution electricity systems, ENMAX Power is advancing technology solutions that will meet customer electricity needs today and into the future. Our electricity grid must continue to deliver power reliably, while enabling the transition to diverse energy sources, withstanding increasingly severe weather events and adapting to changing customer expectations.

2022 HIGHLIGHTS

- ↳ **Successfully tested smart meters in a few Calgary communities to support the case for city-wide deployment.**
- ↳ **The solar panels in our secondary network pilot are generating electricity and are exporting excess energy back to the grid.**

Our approach

To provide customers with the critical and dependable energy they need, we manage a complex system of infrastructure, equipment and software. We have advanced our ability to predict, detect and respond to outages and are planning and integrating a series of innovative technology solutions to ensure our grid is prepared for the future. We are committed to connecting our customers to safe and reliable electricity through prudent cost management and strategic capital investment to optimize the existing grid in alignment with our focus on energy affordability.

Leveraging data analytics

We also use predictive programs and processes to strengthen the reliability of our system, including:

Planning for load capacity

To support reliable service to customers, we use load capacity planning to identify the existing constraints and upcoming demands on Calgary's electricity system (loads) and to verify that redundancies are in place. Our interactive [Load Capacity Map](#) uses an ENMAX-developed load forecasting model to help communicate the estimated available capacity throughout our distribution system. Using the map, customers can search for an address to quickly identify the system's available capacity.

Simplifying access to complex data

In 2022, we developed a tool called a Risk Analyzer to identify and evaluate the specific risks potentially experienced by different types of customers, should they experience an outage. The tool includes a street view to allow different teams to see and gain insights about various grid components (such as fuses, transformers and switches).



The Risk Analyzer is making the grid more accessible and understandable to different parts of our business, including those without operational backgrounds. ENMAX Power continues to use our complementary System Load Analyzer tool to identify the customer load at risk under a single unplanned outage ([read more about the software here](#)).



A power systems electrician from ENMAX Power conducting switch maintenance.



To remove trees that can impact our wires during storms, our employees use manual tree control, brush mowing, tree trimming within the right-of-way and herbicide application.

Delivering power reliably

Strong reliability is linked to building sufficient capacity across the system, but also to our ability to prevent, withstand and recover rapidly from system disruptions. We are strengthening the reliability of our system through:

Inspections

Visual inspections – We regularly conduct ground line visual inspections to provide a bottom-up look at our assets in Alberta and Maine. Typically, one to two inspectors complete these vehicle or foot patrol assessments from the road with binoculars and often use infrared or corona scanning to look for any signs of degradation. These inspections also include wood pole condition assessments in which we make a small drill hole to determine pole strength and whether there is any rot.

Thermal and acoustic – As electrical connections loosen, a resistance to current can cause an increase in temperature. In Maine, thermal imaging cameras are used to look for these hot spots that can cause components to fail. Versant Power also completes acoustic assessments on its transmission lines that 'listen' for devices that are slowly breaking down and as a result give off radio frequency.

Drones – In Maine, drones are increasingly being used to provide top-down inspections of transmission lines in right of ways. Versant Power has 2,039 km (1,267 miles) of transmission lines, 1,448 km (900 miles) of which are in a right-of-way. The drones can provide an extremely detailed 360-degree look at the assets, identify micro-cracks in porcelain insulators and collect valuable inspection data.

Preventative maintenance and repairs

Assessing assets – In 2022, we introduced ENGIN, a new analytics software to improve our long-term asset management strategy. ENGIN examines our inspection results and historical asset data, enabling us to predict future reliability impacts. The software also uses risk-based evidence to assist with the prioritization of maintenance and replacement of assets. At the end of 2022, we extended the use of ENGIN to include our transmission system in addition to our distribution system.

Replacing aging assets – Each year, certain assets undergo major maintenance or replacement as part of ENMAX Power and Versant Power's Capital Asset Replacement Program. This program helps our assets run optimally and minimizes the occurrence of outages. Assets are prioritized based on condition and other factors.

Covered conductor program – Each year in Maine, Versant Power analyzes line sections that have low reliability metrics and installs covered conductors. If a tree falls on a bare wire, it can result in an outage. With covered conductors, the insulation protects the wire so that a tree-related fault will not cause a short circuit to ground.

Tree and vegetation management – We use a combination of methods—depending on the voltage of the line—to provide effective long-term vegetation control, including manual tree control, brush mowing, tree trimming within the right-of-way and herbicide application. The aim is to remove trees that can impact our wires during storms. Part of this work is to reclaim the full width of the right-of-way if it has become narrowed over time.



Measuring our reliability

We are committed to delivering power safely and reliably. In Alberta, we operate under [Alberta Reliability Standards](#)—the requirements followed by the Alberta Electric System Operator and all electricity market participants to maintain high reliability within the Alberta Interconnected Electric System. We deliver reliability levels that are top quartile in Canada (see data from the [Electricity Canada \(EC\)](#) below).

In Maine, Versant Power’s reliability metrics have trended lower over the last few years (see table on the right). To meet increased customer expectations for power reliability, Versant Power currently invests more than US\$60 million (approximately C\$80 million) annually to maintain and improve its distribution system.

RELIABILITY STATISTICS – VERSANT POWER

	UNIT	2018	2019	2020	2021	2022	5-YR CHANGE
System Average Interruption Duration Index (SAIDI)	hours	6.62	5.04	5.03	3.63	5.43	-18%
System Average Interruption Frequency Index (SAIFI)	# interruptions per customer	2.52	1.96	2.27	1.97	2.46	-2%
Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	hours	2.63	2.58	2.21	1.84	2.21	-16%

Versant Power’s reliability metrics have trended lower over the last few years, however, the intensity of windstorms notably increased in Maine over the last year. In 2022, there were six storms where peak wind gusts exceeded more than 50 miles per hour in Versant’s service territory, compared to zero or one event each year from 2017–2021. This caused a corresponding increase in service interruptions to customers.

Managing and communicating outages

We have an Outage Management System that estimates the origin of an outage to efficiently dispatch a service person to the location for restoration. The system also automatically identifies and posts outage information for customers via Twitter and on an integrated website map (the [Calgary Outage Portal Map](#)), which shows planned and unplanned outages occurring real-time and within the last 24 hours.

Minimizing the impact of outages

Despite our best efforts, some of our customers experience power outages. To minimize the impact on our customers, we invest in:

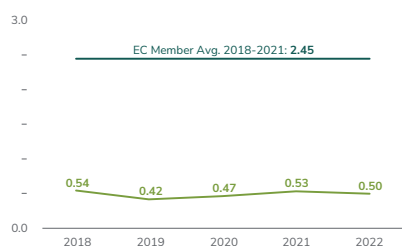
Automated outage restoration

To substantially reduce the duration of outages and the number of customers affected, approximately 48 per cent of Calgary’s non-downtown distribution system uses a technology called Distribution Automation. This system has saved an estimated 30 million minutes of outage time over the past 10 years. Distribution Automation is self-healing and uses SCADA (supervisory control and data acquisition) systems to detect a fault, automatically isolate it and rapidly restore the system.

Intelligent devices

Similar to Distribution Automation in Alberta, Versant Power has installed 65 intelligent devices in Maine since 2019. They require no operator and they automatically detect a fault, isolate it and rapidly restore the system.

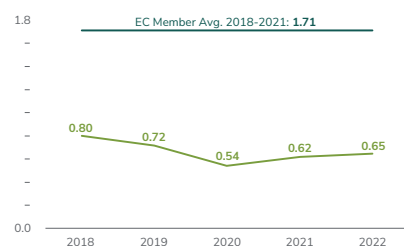
SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI)
hours



SAIDI reflects the cumulative duration (in hours) of sustained repair outages experienced by the average customer in a year. On average, our customers experience less than 30 minutes of power interruption during one year, while customers of EC member companies experience, on average, two and half hours of outages per year.

Note: This data excludes Versant Power.

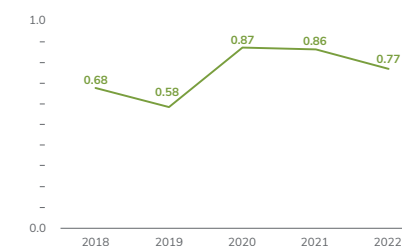
SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEX (SAIFI)
number of interruptions per customer



On average, our customers experience fewer than one outage per year. SAIFI reflects the number of power outages lasting longer than five minutes experienced by the average customer in a year.

Note: This data excludes Versant Power.

CUSTOMER AVERAGE INTERRUPTION DURATION INDEX (CAIDI)
hours



CAIDI reflects the average outage duration (in hours) experienced by the average customer in a year. Unlike SAIDI, this metric includes major event days (for example, extreme weather events).

Note: This data excludes Versant Power.



Progress in 2022

Adapting to the pace of change in our industry while maintaining a reliable and resilient grid requires innovative thinking and strategic investment. We take a prudent approach when investing in reliability initiatives.

Acting today to enable the grid of tomorrow

We are constantly investing to make the grid more flexible, support lower carbon power generation and adapt to changing customer needs.

Enabling customers to export renewable power to the grid

In 2022, ENMAX Power completed construction of our innovative solar pilot with shopping mall owner, operator and developer Cadillac Fairview (CF) and funded in part by Natural Resources Canada and Alberta Innovates. This pilot used two-way technology to enable customers on secondary networks to export excess electricity back to the grid. This was previously not possible for customers in high-density areas (like some shopping malls and our downtown core). These customers get their power from an interconnected web of transformers, known as a secondary network, which provides high reliability but was not capable of exporting power. The project was completed at CF Chinook Centre, Calgary's largest retail complex, and is now in the testing and monitoring phase. This technology will help remove technical and financial barriers to distributed generation, giving residential and commercial customers in urban settings more choice in how they generate and use electricity. We continue to monitor and review the pilot results with the goal of making the technology available to customers in the downtown area as well.



Solar panels recently installed on the roof of Chinook Centre. The innovative technology enables customers on secondary networks to export excess electricity back to the grid, which was previously not possible for customers in high-density areas.

Bringing smart meter technology to all Calgarians

In 2022, ENMAX Power successfully completed our pilot project to test smart meters—known as Advanced Metering Infrastructure (AMI)—in a few Calgary communities. [Read more about the pilot here.](#)

AMI improves our metering capability through an integrated system made up of advanced electricity meters, a wireless communications network, and the data management systems necessary to enable remote two-way communication between utilities and meters. Our successful testing of the complete AMI system in a small area of the city has contributed to regulatory approval to bring AMI technology to all Calgarians.



Drone inspection pilot takes off

ENMAX Power piloted the use of drone technology to perform visual and infrared inspections of our electrical infrastructure in 2022. Licensed drone pilots collect footage and infrared scans to more accurately identify problems such as vegetation encroachments, equipment damage and potential hazards in overhead infrastructure.

Drones improve safety and save time by flying from pole to pole quickly, replacing the need for a crew member to climb a pole or use a bucket truck. The technology is particularly helpful in environmentally sensitive areas or locations with difficult terrain. Using drones is also a more cost-effective and environmentally conscious way to inspect our infrastructure. This proactive approach will help to reduce both power outages and repair costs. ENMAX is assessing the data from this pilot and determining the feasibility to incorporate this approach for future inspections in high-risk and environmentally sensitive areas.



Gathering insights through Grid Sandbox

ENMAX Power is engaging with a very small group of customers to pilot the use of a new online platform called the Grid Sandbox. The Grid Sandbox gathers data from Sense devices that track the power used by individual appliances and equipment in customers' homes. The platform presents this data to customers to provide quick actionable insights on their power usage. Customers can also assess potential energy choices. For example, if they choose to add solar panels onto their homes, or invest in an EV car and charging infrastructure, the platform can virtually show how this might impact their energy bills.

Preparing for electric vehicle adoption

Electric vehicle (EV) adoption is increasing rapidly and EV charging (mostly done at home or work) will increase electricity demand for utilities like ours. ENMAX is continuing to invest in studies and programs to understand how Calgarians use EVs and their impact on our electricity system. In 2022, we launched the next phase of [Charge Up](#), Alberta's first smart charging pilot program, to test the effectiveness of incentives on influencing what time of day EV drivers charge their vehicles. The pilot, which involved more than 160 EV drivers in Calgary, compared a control group to those who received educational information, and to another group who received a small financial reward for choosing to charge their EVs at times that benefit the grid. To analyze the vast amounts of data, we partnered with research teams at the University of Calgary and the University of Alberta. Preliminary results show that off-peak charging behaviours increase the most with financial incentives and that most EV owners only drive an average of 50 kilometres per day, which means that daily top-up charging is not as challenging for the grid to meet. We intend to use these findings to develop programs that incentivize EV charging behaviours that optimize the use of our distribution system.



Versant Power completed two replacements of undersea cable, one in Swan's Island and one in Isleford. The team used an advanced GPS system to find a route with the least amount of rocks and obstructions to prevent future cable damage.

Grid resiliency at Versant Power

In Maine, Versant Power is working to maintain a reliable and resilient grid through two new 2022 initiatives:

- Versant Power is starting to integrate the use of LIDAR technology into its asset inspection program. LIDAR (Light Detection and Ranging) is a remote sensing method that uses laser to measure variable distances of facility assets to the Earth. The technology is being used to monitor vegetation encroachment on transmission lines and to maintain safe distances between transmission line conductors and the ground (as power lines can sag and stretch over time as conductors age and with exposure to the elements).
- In December, Versant Power completed a six-mile undersea cable replacement installation to Swan's Island, which is home to 350 year-round residents. The undersea cables had been severely damaged over the years by tides and rocks. The new cable contains fibres embedded into the cable to allow fibreoptic use to bring low-cost, high-speed internet to the islands in addition to electricity. The cable was laid on the seabed—rather than being buried—which does not disturb marine flora and fauna. The team used an advanced GPS system to find a route along the seabed with the least amount of rocks and obstructions to prevent cable damage. Using the same method, the team successfully replaced another undersea cable to Isleford—an island summer tourist hot spot and home to 100 year-round residents. Versant Power maintains undersea cables for dozens of islands around Maine and expects to complete two more replacement projects in 2023.

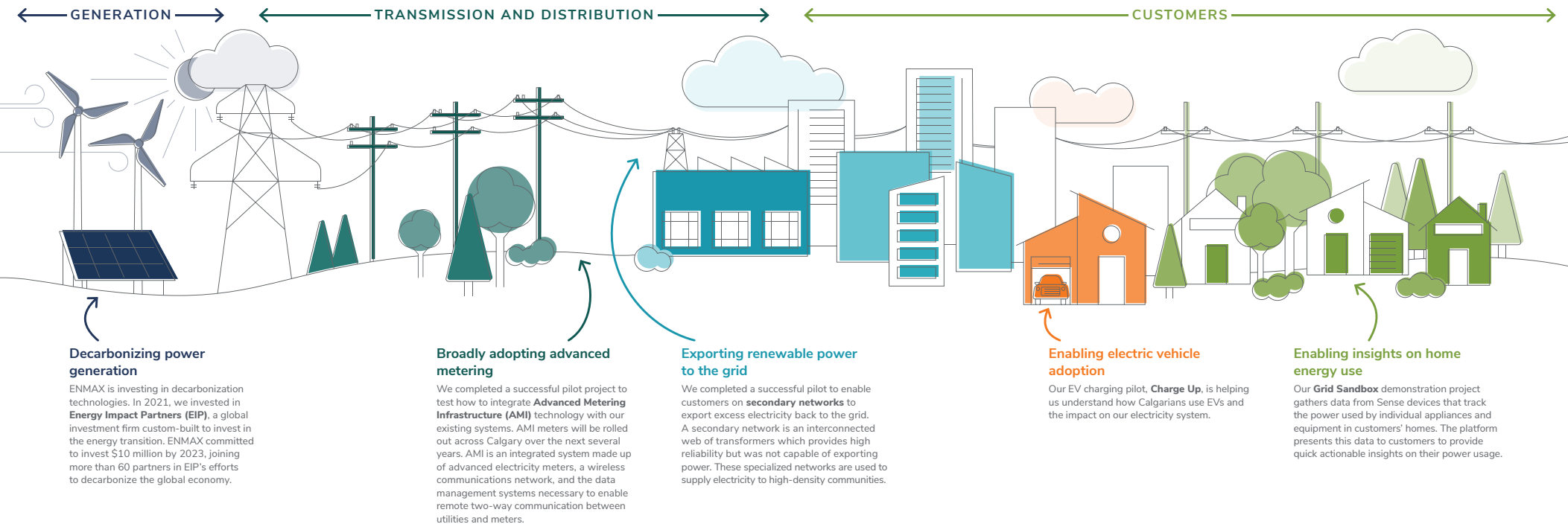


SPOTLIGHT

Becoming the power company of the future

Staying ahead of the rapid disruptions in the energy industry requires future-focused thinking and strategic investment. With our customers at the center of our investment planning, and affordability top of mind, our goal is to deliver value-driven programs to our customers and embrace technology to optimize the full two-way use of our grid. Becoming the power company of the future involves maximizing the potential of our existing assets with new opportunities.

ENMAX is working to improve our core business as it exists today, develop new capabilities and skills, and deliver new products and services. We continue to invest in pilots and studies to test and understand the implications of new models, technologies and energy service offerings. ENMAX is also investing in new technologies and strategic partnerships to enable electrification, so the grid is ready to meet our customers' needs as they choose to electrify. Some of the initiatives and investments we are already exploring include:





Water use and quality

WHY IT MATTERS TO ENMAX

We recognize water is a precious resource that must be used responsibly. We carefully manage our water withdrawals and monitor our wastewater disposal.

Our approach

The majority of our water use is for essential power generation processes. Intake water is used for cooling purposes in cooling towers and the remainder is purified onsite to create steam in our combined-cycle power plants. Combined-cycle facilities extract waste heat from the gas turbine exhaust and use it to create high pressure steam, which produces additional electricity when expanded across a turbine.

Our water reduction initiatives have been focused on reducing facility water intensity by:

Reducing potable water use

We strive to minimize our potable water use by using as much reclaimed water in our operations as practically possible. Reclaimed water is wastewater that has been processed for reuse for an additional purpose before passing back into the water cycle. By design, our largest generating facility, Shepard Energy Centre, uses 100 per cent reclaimed water from The City of Calgary's Bonnybrook Wastewater Treatment Plant for all its power generation needs. Each year, this saves the plant from having to draw nearly six million cubic meters (m³) of freshwater from the Bow River.

Optimizing our water use

We seek to optimize water use at our operated facilities in the following ways:

Shepard Energy Centre

While this facility already uses reclaimed water, we have sought to further optimize its water use. The water used in a power plant declines in quality each time it runs through the facility, wherein every pass through the cooling towers increases the concentration of dissolved substances. After three years of research, observation and innovative lab testing, we found the optimal operating efficiency of the cooling towers. This work, which was [recognized by Electricity Canada](#), has increased the reuse cycles from 3.5 to 5, while still maintaining all cooling water chemistry within required concentration limits. This initiative has reduced the plant's annual wastewater volume by 25 to 29 per cent (compared to 2017 values) and reduces wastewater discharged by 430,000 to 500,000 m³ of wastewater each year.

Calgary Energy Centre

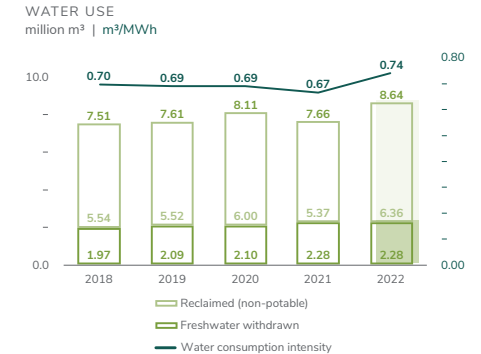
We examined our water use at this facility and determined that the plant is already optimizing its water use to the extent possible with existing technology.

Cavalier Energy Centre

This facility is located just east of Strathmore and sources its water from an irrigation canal connected to the Bow River. While using water from this source presents challenges due to source water quality, Cavalier uses a complex process to recycle and treat water at a very high rate of efficiency, leaving very little that cannot be recycled.

Water quality

We comply with all City of Calgary bylaw requirements for wastewater quality disposal in Calgary, which applies to Shepard Energy Centre and Calgary Energy Centre. This includes directives that set out requirements for handling, treatment and disposal. At Cavalier, wastewater is reused to a point where it can no longer be treated and is disposed of using deep well injection in accordance with provincial regulations. More than 99 per cent of ENMAX's wastewater is treated at The City of Calgary's wastewater treatment plants.



Our water intensity increased over the last year due to the high utilization rates of our natural gas-fueled generation facilities. Most of the water we use is non-potable and for power generation cooling processes.



~74 per cent of our water withdrawn is reclaimed (non-potable) water.



Air quality

WHY IT MATTERS TO ENMAX

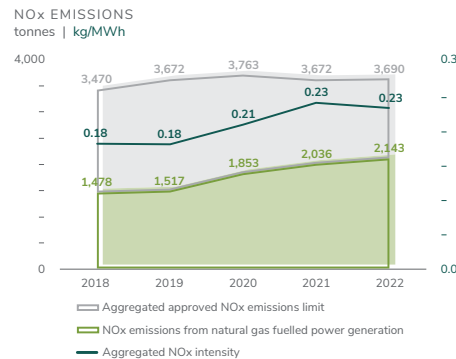
ENMAX Energy operates power generation facilities in Calgary and the surrounding urban area and is committed to helping protect local air quality. In addition to GHG emissions, our operations generate other air emissions that can impact air quality.

Our approach

We diligently track and report air emissions from our power generation facilities. We are working to reduce these emissions by incorporating emissions reduction technologies, adhering to best practices and maintaining our commitment to continuous improvement.

Nitrogen oxides

We operate our facilities below our allowable nitrogen oxide (NOx) levels, which are facility-based NOx limits granted by Alberta Environment and Parks (AEP) and provincial regulations. To maintain these emissions levels, we use a combination of pre- and post-combustion NOx reduction technologies at our natural gas-fuelled power generation facilities. Two of our power generation facilities use post-combustion exhaust gas treatment (ammonia injection) to reduce NOx emissions. Crossfield Energy Centre has installed low-NOx combustors and Cavalier Energy Centre uses water injection into the turbine to control NOx.



We maintain NOx emissions levels from our operated power generation facilities below our allowable NOx levels. However, to reduce excessive wear on equipment, we have had to reduce ammonia injection (one of our NOx reduction methods) and, therefore, have seen an increase in absolute and intensity NOx emissions levels when compared to previous years.

Sulfur oxides

Sulfur oxides (SOx) are no longer a significant source of our overall emissions since the termination of our coal-fired Power Purchase Arrangements in 2016. Our SOx emissions levels vary in relation to the volume of our power generation output.

OTHER AIR EMISSIONS (TONNES)	2018	2019	2020	2021	2022
SOx	16	16	17	13	18
Particulate matter (PM10)	14	15	15	12	16

We generate other air emissions in smaller quantities. While there are no operational approval limits attached to these emissions, ENMAX tracks these quantities annually. Emissions increased in 2022 due to high utilization rates of our natural gas-fuelled generation facilities.

Note: Air emissions data only includes our operated power generation assets.

Partnerships to protect air quality

We participate as an industry member of the Clean Air Strategic Alliance (CASA) and Calgary Region Airshed Zone (CRAZ) to represent our power generation assets. CASA is a multi-agency partnership created to help manage air quality in Alberta. CASA's board of directors has representatives from industry, government and non-government organizations. CRAZ monitors, analyzes, and provides information on air quality and develops strategies to manage air quality issues within the Calgary Region Airshed Zone.





Land and biodiversity

WHY IT MATTERS TO ENMAX

Environmental protection and stewardship are integral components of our strategy embedded across all aspects of our business. We endeavour to provide environmentally responsible energy solutions to the communities we serve.

Our approach

At ENMAX, we conduct our business with respect for living species and the land around our operations.

We have an established environmental management system, clear data collection and reporting processes, and strong internal procedures to manage our environmental risks. Our environmental management system is modeled after [ISO 14001:2015](#), an international standard for environmental management.

Land stewardship

ENMAX Power operates more than 40,360 distribution pad-mounted transformers, 112 high voltage substation power transformers and 43 substations. While we continually work to prevent oil spills in our daily operations, we do experience some releases. In 2022, we had four significant² spills. Cleanup is expected to be complete by the end of 2023. Some of the ways we are working to reduce spills and improve our land stewardship practices include:

Proactive spill prevention and response

Our routine inspection program includes the assessment of oil-filled equipment because leaks can lead to equipment failure, electrical outages, and costly site clean-up and/or remediation. When minor leaks are identified, we increase inspection frequency to allow for ongoing monitoring and assessment of the leak severity. In instances where a leak condition progresses or a major leak or equipment damage is identified, we schedule the repair or replacement of the equipment, including any site clean-up or remediation required. We also have spill response and reporting procedures to address spills due to equipment failure, including damage and releases caused by third parties.

Versant Power experiences very low frequency and volumes of spills, but can experience oil spills from pole-mounted transformers as a result of storms. Over the past several years, Versant Power's diligent tree and vegetation management practices have helped to significantly decrease these types of spills.

Hydrovac slurry management

We use hydro vacuum excavation, or hydrovac, to safely excavate around buried cables that need repairs. Hydrovac uses high-pressure water to loosen the soil and dig a hole. The muddy excavated material, or slurry, is then suctioned into a tank mounted on a specialized truck and taken to a designated facility. ENMAX advanced our work to pretest soils prior to hydrovac excavation in 2022. Pretesting allows us to clearly identify contaminants in soils and determine the best means of disposal or potential for reuse. We have begun pretesting soils on job sites and are examining different treatment options. A performance audit on our record tracking under the new process was completed in Q4 of 2022 and opportunities for improvements will be shared with field teams in early 2023.



Goats provide natural weed control

Our Cavalier Energy Centre welcomed back about 200 goats from Goats for Weeds in 2022. The goats graze on weeds as a means of environmentally friendly weed control. Goats can safely eat noxious weeds and help regenerate the soil by aerating, mulching, and fertilizing.

After repeat visits at our facility, the weed management program with the herd will shift from initial clearing to basic maintenance, saving time, money and reducing environmental impact compared to traditional herbicide treatments.

² A significant spill is defined as more than 500 litres, in alignment with industry standards (including Electricity Canada).



Protecting biodiversity

Across our operations, we work to protect biodiversity while maintaining the reliability of our services. In 2022, ENMAX pre-qualified several environmental consultants to perform a variety of environmental services. Consultants were selected based on a combination of experience and resource availability to ensure that ENMAX project teams have qualified resources to perform specialized biodiversity work when needed.

Preventing disturbance to nesting birds

Birds often use power poles or substation equipment for perching, roosting and nesting. Birds may also nest in areas where project or maintenance work will be carried out. We work to protect birds by identifying high-risk areas, delaying work to accommodate nesting birds and conducting nest sweeps prior to project work. Nest sweeps involve a search of the immediate area by trained biologists to look for breeding birds and nests. After completing a sweep, if nesting birds are discovered, we identify locations where we can complete our work without disrupting the birds and we relocate our crews to these areas. We completed a nest sweep prior to work on the Calgary Ring Road project in 2022. Many different nest sites were identified and we were able to avoid working in the vicinity of the nesting birds without any incidents.



Over the years, Versant Power has built 22 nesting platforms to protect birds while helping to ensure the reliability of its services.

Nesting platforms

In Maine, around coastal areas, ospreys tend to build nests at the top of utility poles, which presents a danger to the birds and raises the risk of disruptions to electric service. After a 2020 incident when an osprey built a nest on a utility pole in Lamoine, Versant Power crews wanted to prevent a future safety risk to the birds while helping to ensure the reliability of its services. Versant Power employees designed and built an alternate osprey nesting platform close by. The platform was built with osprey preferences in mind and required Versant's environmental team as well as the expertise of outside environmental groups, including the Maine Department of Inland Fisheries and Wildlife. Because ospreys like to be at the tallest point above the water, Versant Power crews replaced an existing utility pole with a taller one. Crews installed a square platform with no coverings, as the birds prefer to look down and hunt for fish below without any obstructions. The platform includes a camera (powered by [EarthCam](#)) which is powered entirely by solar energy and is situated on a newly built osprey platform overlooking the Mud Creek.

Versant Power crews installed three more osprey nesting platforms in high-risk areas (Deer Isle, Caribou and Machias) in 2022. Over the years, Versant Power has built 22 nesting platforms in total.

Osprey are also common in Calgary's fish-bearing waterbodies. ENMAX maintains and monitors 17 nesting platforms to provide safe places for osprey to nest. ENMAX installed an additional osprey nesting platform in the newly built community of Rockland Park in 2022.



Social

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ENMAX team members come together for a mini give-back to fill bags with candy for Calgary Distress Centre volunteers (foreground); and birthday bags for children of families accessing The Calgary Foodbank (background).

Employee safety

WHY IT MATTERS TO ENMAX

Safety is a core value that underpins our company culture. A solid safety record is also crucial in attracting and retaining talent and maintaining a positive reputation.

2022 HIGHLIGHTS

- ↳ **Consistently tracked and refined our safety metric—proactive incident rate (PAIR)—to transition our focus from lagging to leading indicators.**
- ↳ **Enhanced our safety culture by embracing human performance philosophy.**

Our approach

Our robust safety policies, procedures and systems guide our work so everyone can go home safe at the end of the day. Our Occupational Health and Safety Handbook sets out our fundamental rules, called the Rules to Live By (commonly referred to in other industries as lifesaving rules). The rules are simple, succinct reminders of the most critical safety hazards that have caused serious injury or worker loss of life in our industry.

A strong safety culture

We encourage a proactive safety culture where every individual takes responsibility and ownership for safety, regardless of their position or work environment. We build our safety culture by continually enhancing our safety communications, broadening our safety awareness and strengthening our safety governance. We also collect employee sentiment on safety, which enables us to establish a baseline for comparison in future years.

Some things we do to improve our safety culture include embedding the concept of human performance philosophy (read more on [page 36](#)) and maintaining strong safety governance. Across ENMAX, we have several Joint Worksite Committees (JWCs) that include a mix of leaders, front line workers and individual contributors who meet monthly to discuss worksite safety, past incidents and lessons learned. We also have an Executive Safety and Environment Committee that includes executives from across the ENMAX group of companies, including Versant Power. The committee provides oversight of safety and environment performance and ensures alignment with policy and strategy.

Additionally, ENMAX is a member of Electricity Canada’s Occupational Health & Safety Committee, which provides opportunities to share and learn from peer companies across Canada.

Our safety processes

Hazard identification and assessment is how we determine and evaluate both the existing and potential hazards in our work. Our key safety processes related to hazards include:

Hazard identification

Our hazard identification program covers activities across all business units. In addition, ENMAX Energy implemented the Assess and Share Knowledge (ASK) program to provide a formal process for workers to proactively discuss how they will perform a job, share knowledge and insights, document the conversation and report findings back to the observer and their supervisor.

An enhanced tailboard process

Workers must also complete a field-level hazard assessment to proactively identify and control hazards in their work areas and environment. At ENMAX Power and Versant Power, these are called tailboards and are completed by our field teams in real-time on electronic devices. We have integrated ENMAX Energy’s work permit process into a single electronic tailboard process and are working towards full implementation. Standardizing and consolidating this process will enable improved tracking of hazard trends and create better alignment across ENMAX.

Hazard ranking

We rank all identified hazards based on their probability, severity and frequency. The rankings enable us to prioritize and maintain quality data around the hazards observed in the field and allow us to prioritize all corrective actions so they can be monitored through to completion.



In November 2022, ENMAX received the [Electricity Canada President’s Award of Excellence for Employee Safety in the Distribution category.](#)

Focusing on high-risk activities and common injuries

We have customized safety programs that target:

Driving

ENMAX mitigates driving risks through the use of: 1) electronic monitoring devices in mobile fleet vehicles that track driver behaviour data to help reduce unsafe driving, 2) extra safety measures for our heavy-duty mobile fleet (greater than 11,794 kilograms) such as licence class audits and specialized driver safety training courses, 3) a driving simulator that teaches about distractions and 4) supplementary training following any driving incidents. Given Versant Power's large service territory, employees must drive long distances for work (6.3 million kilometres in 2022). To reduce the risk of vehicle accidents, Versant Power is diligent about auditing qualifications for specific driver class licences, reinforcing driver skills in its apprenticeship program and assisting workers with driver training. In recent years, we have directed additional focus towards distracted driving awareness for both ENMAX and Versant Power.

Electrical contact

Electrical hazards pose high risks to our employees, contractors and the public. We follow strict lockout/tagout requirements to safely shut down and isolate or disconnect equipment to protect workers from unexpected releases of energy. ENMAX Power's apprentice training program provides new workers with proper supervision and support and, as part of our journeyman refresher program, our Alberta powerline technicians go through annual reviews and assessments of key high-risk activities.

Versant Power has an in-house four-and-a-half-year apprenticeship program for line workers. In 2022, six apprentices completed the program and received their First-Class Line Worker status and 42 are currently in various stages of progression. In addition to apprenticeship training, about 200 operations employees received additional training in 2022 on topics such as Equal Potential Grounding (EPZ), Three Phase Bank Troubleshooting, and new line equipment.

Slips, trips and falls

Slips, trips and falls are a common cause of injuries in Alberta and Maine compounded by winter weather. At our facilities, we invest in housekeeping efforts such as plowing and salting. We provide frequent up-front messaging prior to known hazards, such as windstorms or heavy snowfall. We send bulletins to leaders to speak at safety meetings and provide reminders about common hazards. ENMAX and Versant Power each have employee-based safety committees that provide opportunities to discuss these bulletins and lessons learned from past incidents. We also encourage the use of traction aids, such as proper footwear (like ice cleats) and the use of salt de-icers to place onto snow and ice in high-traffic areas.

Field and office ergonomics

Approximately half of Versant Power's injuries are soft tissue injuries. To help address these, the company has a field ergonomics program in collaboration with an occupational therapist and three internal resources. The program assesses field workers completing tasks and recommends improvements.



Safety training saves a life

Each year as part of its ongoing safety training program, Versant Power provides refresher training on cardiopulmonary resuscitation (CPR) and the use of automated external defibrillators (AEDs) to its line workers.

On a cold winter day in February 2022, a crew of Versant Power line technicians (who had just taken their CPR/AED refresher training that morning) needed these vital skills to save a coworker's life.

Their fellow line worker had suffered a heart attack while shoveling snow near a pole replacement site. Several coworkers immediately performed CPR, used an AED and continued chest compressions until an ambulance arrived. Emergency medical technicians arriving on site indicated that their actions had saved the life of their coworker, who has since recovered and returned to work.



Progress in 2022

To advance our vision of being a leader in proactive safety, in 2022 we progressed our focus on leading indicators and strengthened our safety culture through the normalization of human error.

Moving towards a more proactive approach to safety

Using leading indicators effectively requires a perspective shift—from the traditional approach of minimizing negative safety behaviours to increasing positive safety behaviours. Key ways we are shifting our approach and metrics tracking include:

Tracking and refining our proactive metric

We developed a company-wide proactive incident rate (PAIR) calculation that combines [several leading indicators](#) and measures them as a frequency rate. In developing this metric, we collaborated and leveraged lessons learned from Versant Power, who have measured and linked their PAIR metric to performance for all team members since 2016. We are now tracking a single PAIR metric consistently across the organization using a dashboard. We also formed a company-wide working group in 2022 to examine and refine how we measure PAIR.

Learning from near misses

We take all our near misses seriously and consider them an opportunity to learn and improve before somebody gets hurt. We experienced eight near misses in 2022 that were considered serious. We conducted a root cause analysis for each serious near miss and identified corrective actions and learning opportunities to prevent future incidents.



Enhancing our safety culture

We enhanced our safety culture in 2022 by:

Embracing human performance philosophy

We are integrating the philosophy of human and organizational performance into our safety management approach and processes. The philosophy emphasizes that because human error is normal, we must build processes and procedures that are error tolerant and allow our workers to successfully manage complexity and variability and fail safely when incidents happen. This philosophy is founded on five principles: human error is normal, blame fixes nothing, context drives behaviour, learning is essential, and how leaders respond to errors and incidents matters.

We also circulate communications following incidents, share corrective actions across the organization to promote learning and have developed learning teams to support continuous improvement.

Focusing on high-risk tasks

At ENMAX Power, we have increased our focus on high-risk tasks (HRTs). HRTs are activities that are most likely to result in serious harm or injury, such as live line tasks or work in manholes. We developed an HRT app in 2022 for our field workers to identify and rank the HRTs where we can further mitigate risk. We then developed Learning Teams to find ways to make the work even safer.

SAFETY METRICS – ENMAX
injuries per 200,000 hours worked



While we experienced an increase in our lost time injury frequency rate in 2021, we were able to reduce it in 2022 through our focus on enhancing our safety culture, improving our safety processes, and improving our planning and execution of high risk work.

Note these statistics exclude Versant Power.

SAFETY METRICS – VERSANT POWER

	2020	2021	2022
Proactive Incident Report (PAIR) rate (Proactive measures per 200,000 hours worked)	867	1,020	1,031
Total recordable incident rate (Injuries per 200,000 hours worked)	0.94	0.67	1.63
Lost time injury frequency (Injuries per 200,000 hours worked)	0	0	0

We continue to work to reduce Versant Power's total recordable incident rate by focusing on proactive reporting, additional peer-to-peer training, implementation of the Safety Classification Learning model, and better communication of incident investigations and lessons learned from those events.

Contractor safety

WHY IT MATTERS TO ENMAX

Our contractors are a valued and essential part of our workforce. Taking care to select contractors with best-in-class safety records and effectively managing contractor safety leads to improved engagement, alignment, stronger working relationships and improved safety for all.

2022 HIGHLIGHTS

↳ **Versant Power advanced its implementation of ISNetworld and updated its contractor safety program.**

Our approach

We work alongside contractors who partner and collaborate with the ENMAX team. In some of our business units, we also work with contracted companies, which are third parties that do work on our behalf.

Contractor safety

In our ENMAX Energy-operated generation facilities, the majority of our workers are employed by a single contracted company. The site management teams perform regular site observations and undertake the ASK process to verify that safety protocols and procedures are being followed and the work is safe. At our Alberta corporate office locations, contractors may include security guards, cleaners or crews completing facility upgrades to ENMAX Place or our South Service Centre. We oversee contractors working at our office locations to verify they are performing daily field-level hazard assessments and they have the proper hazard reporting protocols in place.

Working with safe companies

At ENMAX Power and Versant Power, we work with contracted companies that provide construction, maintenance and other services. We hold all contracted companies we work with to high safety standards.

Choosing safe contractors

As part of ENMAX's contractor selection process, each contractor must be registered with [ISNetworld](#), an online contractor and supplier management platform used to prequalify and monitor contractors. Each contracted company must fully demonstrate technical capabilities, adequate safety practices and have appropriate insurance in place.



We meet with selected companies to audit these items and review that they have adequate safety and environmental management systems in place. We ask questions regarding safety practices including their exposure hours, incidents, serious near misses and hazard reporting practices. In some contracts, we ask them to provide us with their improvement initiatives over a three-year period. An internal dashboard allows us to monitor this data and informs decisions. We continually seek opportunities to improve the way we work with our contractors and may periodically re-evaluate our minimum safety requirements.

In Maine, Versant Power advanced its implementation of ISNetworld (read more on [page 66](#)) and updated its contractor safety program to combine environment and safety components, streamlining contractor onboarding.

Contractor management

To promote a consistent approach from the third parties that do work on our behalf:

- Our field inspectors are onsite daily to verify that contractors use the approved safety and work procedures.
- We hold monthly meetings with contracted companies, including a quarterly scorecard review between the contracted company's management and our safety team, supply chain management and management to review incidents, hazard reporting and the status of any corrective actions.
- We monitor all contracted companies to confirm that any incidents are followed up with an investigation, corrective actions and preventative measures.

Emergency preparedness and crisis management

WHY IT MATTERS TO ENMAX

Reliable power generation and delivery depends on both maintaining our assets and on restoring power when outages or emergencies occur. The last several years have intensified our resolve to enhance our resiliency and ensure business continuity and power delivery through a variety of crises.

2022 HIGHLIGHTS

- ↳ **Advanced our business continuity planning through workshops, identifying our critical business processes and impacts.**
- ↳ **Completed 12 emergency exercises and advanced our preparedness for extreme weather events.**

Our approach

We use the internationally recognized [Incident Command System \(ICS\)](#) to manage our emergency response. ICS is a standardized command and control system used to manage emergency incidents. We maintain a regularly reviewed Incident Management Plan, which contains all emergency response plans and protocols. Our emergency preparedness is tailored to our power generation and transmission and distribution teams:

Power generation

Emergency preparedness at ENMAX Energy means ensuring our generation facility control centre, field and power plant employees are equipped to respond safely, while complying with all requirements of the Alberta Interconnected Electrical System. Our employees receive emergency response training as part of their operational training and during regular emergency exercises. Each year, we conduct a combination of full-scale and virtual tabletop exercises, and pandemic-type exercises are now part of our scenarios.

Transmission and distribution

ENMAX Power is a partner member of the Calgary Emergency Management Agency (CEMA), which plans and coordinates emergency services and resources during major emergencies and disasters in Calgary. We participate in all their drills, exercises and preparedness planning, along with our neighbouring utilities. This collaboration supports public and staff safety, minimizes damage to electrical infrastructure, and allows for faster recovery and return to normal operations, resulting in less disruption to our customers. As a key CEMA member, we have seats at their Emergency Operations Centre, which opens during disasters or major emergencies and acts as The City of Calgary's coordination centre. To test the real-time effectiveness of our response, we also complete one full-scale exercise per year with one of our closest mutual assistance partners, EPCOR. These exercises are multi-agency, multi-jurisdictional activities involving the mobilization of emergency personnel, equipment and resources, as if a real incident had occurred. Our aim is to complete one emergency response exercise per quarter.



Employee at our Cavalier Energy Centre conducting daily operations monitoring.



ENMAX team members gather for a tabletop emergency response exercise.



We completed 12 emergency exercises in 2022 and advanced our preparedness for extreme weather events.

Progress in 2022

In addition to expanding our personnel trained in ICS at ENMAX, we completed 12 emergency exercises across all business areas in 2022. The exercises included a combination of cybersecurity exercises and full-scale and/or virtual tabletop exercises.

Preparing for emergencies

Calgary saw both record low and record high temperatures and Western Canada experienced extreme events including forest fires in 2022. Although our assets were not significantly impacted, we dedicated time and focus to prepare for these types of events.

ENMAX Energy and ENMAX Power participated in 12 tabletop emergency exercises during 2022. Tabletop emergency exercises are sessions in which team members discuss their roles during an emergency and their responses to a particular situation, with a facilitator guiding participants through the scenario.

Versant Power completed its annual System Emergency Operations Plan tabletop review exercise in 2022, involving all Emergency Operations Center leads in a storm response scenario. From this exercise, Versant Power incorporated process improvements and learnings into the plan for use in future emergency restoration events.

ENMAX participated in two multi-agency exercises to practice coordination with other agencies:

- The annual province-wide “black start” exercise held by Alberta Electric System operator (AESO). A “black start”-capable power generation facility is a power plant that can provide the first minimum amount of electric power needed to activate the power grid in case of a complete blackout caused by an unforeseen emergency situation.

- The Alberta Coordinated Resilience Exercise (ACRE) organized by AESO. ACRE is a province-wide cyber incident response exercise focused on communications during a response and how the AESO would interface with energy market participants and external entities during such an incident.

We prepare for a variety of incidents including cybersecurity and extreme weather events. Some examples of our 2022 exercise scenarios included heavy rains resulting in river flooding, an extreme cold event, conditions that are conducive to pole fires, pandemic-related staffing loss prior to a maintenance outage and simulating a fire at our battery installation at Crossfield Energy Centre.

Advancing our business continuity planning

Through numerous workshops with leaders from nearly every business unit at ENMAX in 2022, we identified our most critical business processes and the impacts if each were disrupted. Using a standard risk framework, we assessed the impacts of disruption and developed a list of the most critical processes. We are now examining the technology that supports these processes to understand our disaster recovery capability, including what could cause a system to go down, how long it would take to restore, and the impact of disruption or data loss on the process. Our next step is to identify and implement improvements to our disaster recovery capability and to build out business continuity plans for critical processes. We intend to use [ISO 22301:2019](#)—an international standard for business continuity management—to inform our future path.



Public safety

WHY IT MATTERS TO ENMAX

Public safety around electricity is extremely important. We are active in promoting the safe use of electricity in the community.

Our approach

We are committed to keeping the public safe while conducting our business. In our operations, one of the most significant risks to public safety is electrical contact with underground or overhead distribution lines or transformers. We strive to do our part to protect, educate and inform the public about electrical safety risks through the following:

Timely communication about outages

As power outages can impact public safety (for example, if traffic lights go out), we maintain the [ENMAX Power Trouble Response Hotline](#) for reporting outages and offer our [Calgary Outage Portal Map](#) to publicly communicate outage location, cause and estimated time of restoration. Versant Power also maintains a [live outage map](#) with outage information and estimated restoration times.

Protecting the public and our assets

Many types of digging or excavations can pose hazards to the public, workers and the environment. In Alberta, before excavating we encourage individuals to use [Alberta One-Call](#), a free service that notifies ENMAX Power. Additionally, our [ground disturbance guidelines](#) provide requirements that companies and individuals must comply with when exposing buried ENMAX Power cables or equipment. In Maine, Versant Power is a member of the Dig Safe® system, a communication network similar to Alberta One-Call, that notifies Versant Power prior to any intended ground disturbance by the public.

Providing power safety education

We continue to broadly share our [Hazardous Electrical Awareness Tutorial \(HEAT\)](#), a free safety presentation available to the public and first responders. The presentation demonstrates how to work safely near electrical infrastructure in Calgary and what to do if there is a failure in the system. To further promote power safety awareness, ENMAX's safety team has long provided the same important messages in a 90-minute presentation to contractors and first responders, such as firefighters and police officers. ENMAX returned to providing this session in person in 2022, offering it more than 38 times (with an attendance of 814 workers). Versant Power has a public safety team composed of employees who volunteer to provide safety training for fire and police departments (including the Maine State Police Academy), emergency medical technicians and other civic organizations. In 2022, Versant Power shared a [video about electrical safety](#) near powerlines to raise public awareness on this topic and is developing a new school-aged program in which a safety specialist will visit fourth-grade classrooms to provide a presentation on electrical safety.



Promoting electricity safety through the ENMAX Rodeo & Safety Expo

We host annual public events to bring awareness to electricity safety. Our ENMAX Rodeo & Safety Expo is a family-friendly event that showcases the technically complex roles of powerline technicians and rewards the safe and proficient execution of necessary skills through a series of fun, competitive events. More than 40 powerline technicians from across the province participated.

The event highlights the critical importance of safety as a core value and celebrates the essential role powerline technicians have in our everyday lives. This event includes our rodeo competition, safety expo, trade show and family fun zone. More than 1,500 people attended in 2022.

[See photos from the 2022 event.](#)



Diversity, inclusion and belonging

WHY IT MATTERS TO ENMAX

We believe that diverse views improve decision-making and contribute to improved financial and operational performance. A diverse and inclusive workforce fosters unique perspectives that enhance our culture, spark creativity, foster innovation and create value.

2022 HIGHLIGHTS

↳ **All people leaders across ENMAX completed inclusive leadership competency training.**

Our approach

Across our organization, we work to foster a culture of inclusion that embraces diversity and allows everyone to feel respected, valued and like they belong. We do not tolerate any form of harassment at ENMAX. Our *Safe and Respectful Workplace Standard* guides our efforts around fostering a healthy and respectful workplace. Team members complete training to understand this standard when they join the organization and undertake annual refresher training. We maintain a Diversity, Inclusion and Belonging Executive Steering Committee to progress initiatives, identify opportunities for improvement and provide governance and direction on diversity and inclusion matters.

Diversity and inclusion roadmap

Our three-year Diversity, Inclusion and Belonging roadmap outlines our aspirations to achieve cultural transformation and plans our approach to improve diversity and inclusion. Year one of the roadmap, in which we focused on building foundational structures and enhancing internal practices, is now complete.

Supporting equal access to opportunities

We are committed to the principles and practices of equal employment opportunity. In Maine, our commitments are formalized in Versant Power's *Diversity and Inclusion Policy*. As a federal contractor in Alberta and Maine, we are required to employ and promote the advancement of qualified persons with disabilities, minorities, women, Indigenous individuals and veterans. To meet the requirements, Versant Power maintains an objective external third-party audit and completes an annual filing of its Equal Employment Opportunity and Veterans' Employment and Training Service reports.



Versant Power also developed an Affirmative Action Plan that sets specific targets to increase its underrepresented populations through outreach efforts and training programs.

Ongoing supports for mental wellness

We believe strong mental health is foundational for developing a culture of inclusion and the skills we gain from having difficult conversations related to mental health make our culture more welcoming. We continue to invest in our team's mental and physical wellbeing. To create a space where we promote psychological safety and wellbeing, we offer access to [headversity](#) for our employees and their families.

The *headversity* app provides video and audio lessons, articles and practice tools to help employees build key resiliency skills and mental health awareness. We also offer our Mental Fitness program, which provides a variety of ongoing sessions and webinars to help our employees keep their brains and emotional health in shape. Read about our new 2022 activities related to mental wellness on [page 44](#). In Maine, Versant Power added mental health awareness sessions delivered by a licensed clinical practitioner to its annual all-employee Safety Training Days curriculum.

Progress in 2022

Over the past year, we have worked towards more inclusive leadership and have encouraged dialogue and awareness around inclusion. The following efforts support our vision of building a workforce that is reflective of our communities and where everyone has a sense of belonging.

Improving our policies and systems

Our policies establish appropriate and expected behaviour and form the foundation to building a more inclusive culture.

Vendor and customer practices

We completed assessments of our customer and vendor practices using the [Centre for Global Inclusion's](#) Global Diversity, Equity & Inclusion Benchmarks (GDEIB) as per our ESG target in 2022. We held a focus group with representatives at different levels of the organization. Using the GDEIB assessment as a framework, we benchmarked our current customer and marketing practices. Building upon this foundation, a committee will identify goals to progress our practices.

Fostering inclusive and empathetic leadership

We want to foster a culture where employees feel a sense of belonging and believe that this starts with inclusive leadership. Inclusive leaders respect the uniqueness of each individual and create an environment where all individuals can unlock their potential, thrive and grow.

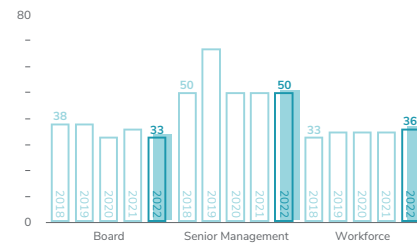
Inclusive leadership training

In 2020, we set a target for all senior leaders (directors and above) to complete inclusive leadership competency training. In 2021, this training was completed by all our senior leaders and by all other people leaders in Alberta in 2022. The training supports leaders in understanding their own unconscious bias, the business case for diversity, inclusion and belonging, as well as how to leverage a team's unique identities and ways of working. It also equips leaders with tips to start healthy conversations about diversity and inclusion with their teams. Now that all people leaders have taken the training, we are moving to a sustainment model in which all newly hired leaders take the training as they take on new leadership roles.

Sessions for leaders on empathy and more

As part of our annual Leadership Summit for all people leaders, we offered four training sessions. One was a 50-minute empathy and inclusion session, completed by 72 leaders, which featured practical tips for becoming a more empathetic leader in one's day-to-day work. The other sessions included psychological safety, team cohesion and crucial accountability.

WOMEN AT VARIOUS LEVELS
per cent

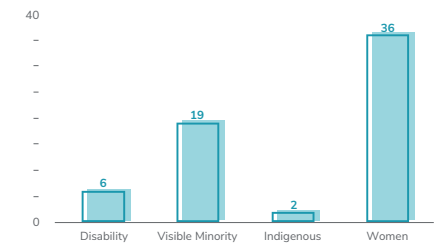


We have gender balance in senior management roles (senior vice-president and above), but will continue working on promoting diversity, inclusion and belonging across the entire organization.



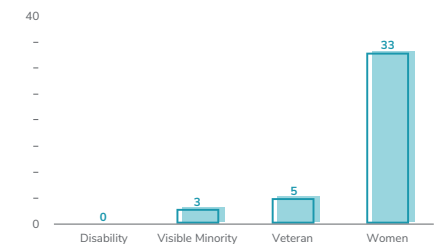
We believe that a culture where employees feel a sense of belonging starts with inclusive leadership.

2022 REPRESENTATION IN OUR WORKFORCE – ALBERTA
per cent



As a federal contractor, ENMAX reports in alignment with the Federal Contractors Program for Employee Equity. Categories are not inclusive of all diversity groups. Workforce demographics outside of gender are based on self-disclosed data from 69% of our workforce.

2022 REPRESENTATION IN OUR WORKFORCE – MAINE
per cent



As a federal contractor in Maine, we are required to employ and promote the advancement of qualified persons with disabilities, minorities, women, and veterans.

Developing a culture of inclusion

Through organizational and employee-led initiatives, ENMAX is creating momentum that is advancing inclusion and belonging organizationally. Employees and leaders are increasingly demonstrating their readiness and willingness to support, participate in and co-create an inclusive culture. Our focus in 2022 included broadening our employee resource group, ENPower, and creating more opportunities for employees to initiate and participate in inclusion activities.

Standing against bullying and harassment

ENMAX team members were encouraged to wear pink on Pink Shirt Day (February 23) and were provided with information on how to stand against bullying and harassment, including where to turn for help. Pink Shirt Day began in 2007 when a student in Nova Scotia was bullied for wearing a pink shirt to school. It has since been recognized annually worldwide as a day to stand against bullying.

Introducing diversity training

As part of its corporate mandatory training in 2023, Versant Power plans to launch a new training course for leaders with an emphasis on diversity and inclusion.



ENMAX team members in Alberta participated in Orange Shirt Day to honour the lost children and survivors of residential schools in Canada and recognize the lasting impacts of residential schools.

Growing our Indigenous awareness

We are actively working to grow our understanding of Indigenous histories and culture through learning opportunities, observances and events.

Learning about Indigenous histories

As part of National Indigenous History Month in June 2022, ENPower provided employees in Alberta the opportunity to advance their Indigenous awareness and celebrate the culture of First Nations, Inuit and Métis Peoples. Employees had the opportunity to participate in land acknowledgment information sessions led by two Elders from Siksika Nation and attend culture celebration events promoting Indigenous artisans and performers. Our Leadership Summit featured Indigenous cultural content including a traditional dancer and drum performance.

Orange Shirt Day

In Alberta, in recognition of the National Day for Truth and Reconciliation on September 30, we participated in Orange Shirt Day across ENMAX. This is a day to recognize the history of residential schools in Canada and to honour the survivors and their communities. We again invited employees in 2022 to post on our intranet site about what Orange Shirt Day means to them (in terms of their recognition of the experiences of residential school survivors) and to share how they planned to advance their own learning. We saw a 30 per cent increase in employee posts made and more meaningful actions compared to 2021. We also promoted orange shirts internally through our community partner, Trellis, which received funds from every orange shirt sold to employees.



Supporting holistic wellness

We strive to help our employees maintain balance across different health dimensions including financial, physical and mental wellbeing.

Building a healthy workplace

In Alberta, ENMAX observed Healthy Workplace Month in October to empower our employees to do their best, take care of themselves and help others. We provided sessions and webinars on a variety of health-related topics from physical wellness (Man Van and optometry services) to financial wellness (budgeting and pension planning) culminating in our first in-person Wellness Fair since 2019.

Understanding barriers to wellness

In support of both Healthy Workplace Month and ongoing diversity, inclusion and belonging work, ENMAX united with community partners to host a panel discussion on Barriers to Wellness for Marginalized Communities. The conversation was an opportunity to shed light on the experiences of those living with marginalized identities and the barriers to accessing care for mental health and wellness.

Buddy Up program

We piloted the Buddy Up program with our ENMAX Power field services crew in June. Buddy Up is a national campaign aimed at decreasing men's suicide rates and is delivered by the [Centre for Suicide Prevention](#). This suicide prevention program by men for men encourages real conversations with friends and provides ways to support those who are struggling with thoughts of suicide. The Buddy Up program included a virtual discussion session and an employee challenge, and started some good conversations about a topic not usually talked about.

Supporting mental wellness

ENMAX continued its focus on supporting mental health in 2022 with several sessions for both leaders and employees including:

- A psychological safety session for leaders as part of our Leadership Summit.
- Engaging external expertise to provide a mental fitness program for all employees.
- A burnout session for leaders led by external experts.
- The headversity app (available to all employees).
- The [Working Mind](#) from the Mental Health Commission of Canada (call centre employees).
- Mental Health Navigator from [Teladoc](#) (all employees, dependents, parents and parents-in-law).
- Comprehensive benefit coverage for psychological services (all employees and dependents).
- Implementation of new Employee and Family Assistance Program with option for virtual, telephone and in-person appointments. Employees and family members can select the therapist of their choice based on gender, language spoken, cultural and spiritual backgrounds, and continue to see the same therapist through our extended health care benefits once free sessions have been used.

Wellness

Versant Power continued its wellness initiative that includes mental wellbeing and financial and physical health. They offered monthly wellness newsletters and hosted wellness events during the month of May to recognize Mental Health Awareness Month. The wellness committee participated in Safety Days in September to recruit new committee members and to offer employees a survey to learn more about their wellness interests. In November, the wellness committee launched an employee recipe book.

Versant Power also engaged external experts to provide training on understanding mental health, understanding and addressing burnout, and building resilience. Targeted sessions were delivered specifically for leaders and for all employees.



We are working to support our employees in maintaining balance through open conversations, acceptance and holistic wellness.



Supporting the 2SLGBTQ+ community

In September, tens of thousands of people gathered to watch more than 160 parade entries march down 9th Avenue in Calgary for the Calgary Pride Parade. ENMAX is proud to have sponsored the Calgary Pride Parade and Festival for the last six years. ENMAX team members, their families and pets marched with our bubble-blowing ENMAX bucket truck and handed out 9,000 Pride flags to attendees along the route. Our support of Calgary Pride provides purposeful opportunities for us to show up for our 2SLGBTQ+ customers and team members.

Employee engagement and development

WHY IT MATTERS TO ENMAX

Fostering the potential of our people is critical to our success as an organization. Engaged employees have fewer safety incidents, are healthier and more customer-focused, and feel valued, respected and invested in their own success. Strong employee engagement and development improves organizational effectiveness and contributes to a more satisfied workforce, increased retention and a better bottom line for our Shareholder.

2022 HIGHLIGHTS

- ↳ **Completed fourth annual employee engagement survey, with results showing a meaningful improvement in engagement.**
- ↳ **Expanded our Coaching 101 program for leaders with a Coaching 201 program to provide opportunities for practical application of skills.**

Our approach

At ENMAX, we care about how committed, invested and engaged our team members are. We understand that learning and development are critical factors in employee engagement, and therefore target our programs to support employee growth by providing opportunities for career development. We complete annual employee engagement surveys and are working to ingrain employee engagement into daily practices.

In Maine, Versant Power offers professional development, and human resources programs and practices such as employee engagement surveys, succession planning for key positions and a tuition reimbursement policy. Versant Power's talent acquisition practice is to source talent from the local service territory.

Progress in 2022

Over the past year, we have continued to measure and improve our employee engagement and have worked to support the learning, development and advancement of our team members in the following ways:

Measuring engagement

At ENMAX, we have conducted an annual employee engagement survey through [Gallup](#) since 2019. After each of these surveys, results are shared with all employees. All employees are involved in action planning within their teams. We maintained our very high employee participation rate in 2022, and continue to exceed the average participation rate of 87 per cent among electricity service provider peers according to Gallup. In comparison to our first survey, we now have an additional 250 engaged employees.



In the survey, there are a set of questions that measure a "culture of inclusion" index. Gallup's inclusion index measures three fundamental qualities of inclusive culture: respect, strengths and trust. ENMAX's inclusion mean scores have increased year over year since 2019. We were encouraged to see increases in all three dimensions of the 'culture of inclusion' index, which suggests that employees feel our workplace operates with respect and integrity and that ENMAX is committed to building the strengths of each employee. Overall, our results in 2022 show improvements (that are statistically significant, according to Gallup) across Gallup's core engagement questions.

Versant Power launched its second engagement survey through Gallup in September 2022. The survey results showed improvements across each of Gallup's core engagement questions and that Versant Power continues to score high on engagement. To follow up on the survey results, leaders will be developing and implementing action plans in early 2023. Versant Power's HR team is delivering monthly newsletters to leaders to provide additional education, resources and guidance on creating engagement within their teams. The newsletter covers a monthly theme and includes a related podcast, article or webinar.



New options for flexible work

Mindful that employees' needs are shifting, ENMAX introduced a more flexible work arrangement in 2022. Our new hybrid work model enables employees to work from the office on Tuesdays, Wednesdays and Thursdays, with the option to work from home (for employees whose positions allow) on Mondays and Fridays. Through these flexible work options, employees are better able to meet their obligations outside of work and enjoy improved work-life balance.



ENMAX was selected as one of [Alberta's Top 75 Employers \(2022\)](#).

Learning and development

Our goal in 2022 was to build on the learning opportunities offered to leaders in 2021 with a focus on skills and capabilities useful in regularly changing environments. In addition to skill development, our learning opportunities created a sense of belonging and connection for participants. We advanced our learning and development offerings this year through:

Talent mobility

We continued to mature our talent programs and develop leaders in our organization through ongoing focus on development needs, internal mobility, project work and succession planning. Development plans include providing targeted leadership development opportunities, from offering education to target specific needs to providing opportunities for leaders to gain skills development experience. ENMAX's succession practices enhance cross-functional awareness of our talent pool, identify development areas and mitigate the risk of unexpected leadership vacancies. In 2022, we moved to a development-oriented talent assessment process using four categories that promote more meaningful discussion about an individual's potential, performance and follow-up development activity.

Industry acumen

This program provides industry-related information and technical knowledge for those new to ENMAX or the electricity industry. In 2022, 105 employees participated in a revamped program that provided new self-paced e-learning content, offered sessions hosted by ENMAX's own senior leaders and shared industry knowledge from [Western Energy Institute](#) speakers.

Mentorship

We continued our internal mentorship program, which matched 150 pairs of mentors and mentees in 2022 and established formal mentoring relationships over six months. Many of these relationships continue informally following completion of the formal program.

Communication for leaders

We launched two programs to provide communication tools to ENMAX leaders in Alberta. First, more than 31 directors and vice presidents received *Communication for Senior Leaders*, a four-week training program with one-on-one coaching that helps senior-level leaders craft a compelling vision, clear messaging and cultivate a leadership presence through their communications. Stemming from positive feedback about the first program, we launched *Speaking as a Leader*. In 2022, 50 mid-level leaders participated in this popular four-week program and learned how to communicate a powerful message in a concise and clear manner.

Senior leadership coaching

We continued our partnership with a Calgary-based executive coaching firm to provide a group of 18 senior leaders with individualized coaching to support leadership and personal development growth. An additional 17 alumni participants continue to be supported through this program by accessing supplementary coaching support on an as-needed basis.

Coaching 201

In 2022, ENMAX built on Coaching 101 (a three-hour introduction to coaching program for 78 leaders focusing on building fundamental coaching skills) with a new Coaching 201 program. The new program saw over 30 per cent of the leaders who completed Coaching 101 continue to engage in deeper conversations and receive support in the practical application of their emerging coaching skills.



Unions

WHY IT MATTERS TO ENMAX

We welcome the contributions of organized labour and respect the right of our employees to associate. More than 60 per cent of our workforce is represented by union members of the International Brotherhood of Electrical Workers (IBEW) Local 254 and the Canadian Union of Public Employees (CUPE) Local 38. Forty nine per cent of Versant Power's workforce is represented by the IBEW.

Our approach

We endeavour to be proactive in our communications and transparent as decisions are made. We consult with union representatives in advance of policies or business initiatives that directly impact union members. Collective bargaining agreements for both unions have a well-defined and documented process for raising grievances.

Collective agreements

ENMAX engaged in negotiations with the IBEW in 2022, reaching a tentative agreement which was ratified by the IBEW membership and began collective bargaining with CUPE in Alberta. In Maine, Versant Power successfully negotiated an extension to its collective agreement with the IBEW.

Valuing our collaborative relationships

We value the positive relationships we have with our bargaining unit representatives. Some of the most common matters we work with our unions on are compensation, job stability and outsourcing. We strive for open two-way dialogue to enable effective issue resolution. To promote collaborative union relationships in Alberta, some of the structures we have in place include:

Employee Relations Council

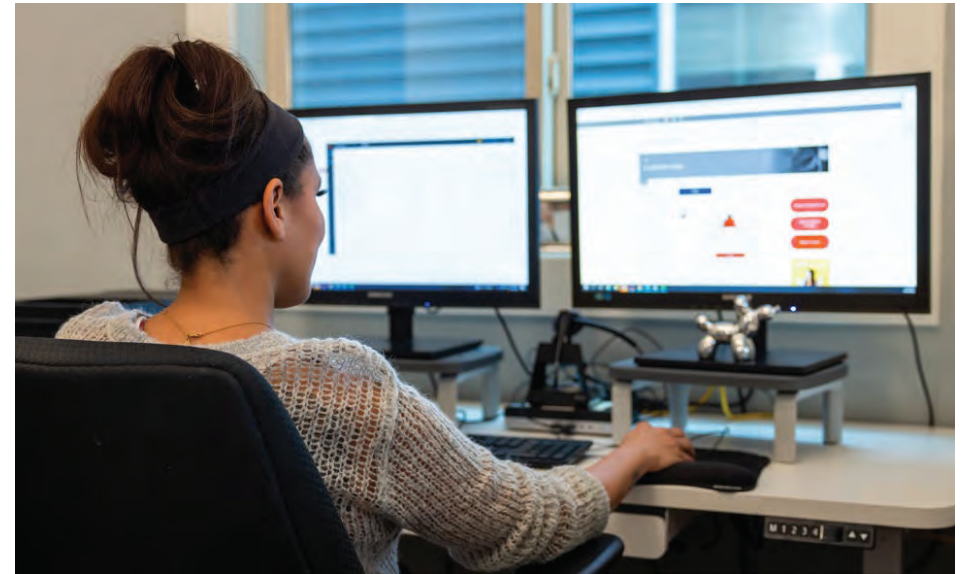
This council (which is a bargaining item within the IBEW) is a way to work through issues or concerns that need to be resolved outside of active bargaining.

Bid Committee

This committee includes representation from the IBEW and ENMAX management and meets as required to discuss any changes to job descriptions or qualifications.

Job Evaluation Committee

Any significant changes to job descriptions go to this committee for discussion and agreement. The committee includes representation from the CUPE and the ENMAX labour relations and total rewards teams.



Collaborating to improve work flexibility

ENMAX's flexible work arrangement (see previous page sidebar) was originally introduced as a pilot program. After receiving overwhelmingly positive feedback, we worked with our union partners to implement the new hybrid work model as a permanent program.

We are aligned in making the program work with operational efficiencies and are committed to working through these changes.

Energy affordability

WHY IT MATTERS TO ENMAX

Electricity is an essential need, and energy affordability is critical to our customers' quality of life. We aim to help eliminate barriers for vulnerable customers that may impact or inhibit access to safe, reliable and affordable electricity.

2022 HIGHLIGHTS

- ↳ Exceeded our target to spend at least 30 per cent of our community investment budget on energy affordability.
- ↳ Increased our funding to three of our long-standing community partners to support basic needs.

Our approach

We manage our energy affordability efforts across Alberta and Maine through a cross-functional Energy Affordability Working Group overseen by an Energy Affordability Steering Committee. The steering committee is responsible for providing strategic direction that promotes continued attention and action on the topic of energy affordability. The working group is responsible for knowledge sharing and progress tracking. We centre our efforts on supporting customers at each stage of the affordability lifecycle:

- Crisis management – relief to customers in energy-need crisis through agency partnerships.
- Prevention – programming to reduce barriers to affordable-energy access.
- Conservation – sustainable and efficient energy solutions, tools, education and awareness.

We have a range of community partnerships and customer programs in place to improve access to energy:

Supporting vulnerable customers

In both Alberta and Maine, we have a dedicated payment arrangements team that offers payment arrangements or installment plans to assist customers struggling to pay their electricity and/or natural gas bill and also connects customers with community resources. To further support vulnerable customers with essential services, ENMAX has long-standing relationships with Trellis Society, Distress Centre Calgary, United Way of Calgary and Area, Aboriginal Friendship Centre of Calgary, Bissell Centre (Edmonton), and United Way of Central Alberta.

In Maine, Versant Power works closely with state and county programs that qualify customers to receive assistance for heating. When customers qualify for heating assistance or for a means-tested program through Maine's Department of Health and Human Services, they also qualify to receive assistance through Versant Power's [Low Income Assistance Program](#), which provides an annual credit on electric bills for income-qualified applicants each year they apply. Low-income residential customers who fall behind on electricity bills may also be eligible for the company's [Arrearage Management Program](#), which applies a forgiveness credit to overdue balances for on-time payments of current bills. In 2022, this program allowed 89 per cent of the customers in arrears to become current.

Helping customers understand and optimize energy use

We have tools to enable customers to take greater control over how they use energy through monthly reports on their energy use, bill comparisons, energy-saving tips and more. In Alberta, for customers who have chosen a competitive retail plan with ENMAX Energy, we offer My Energy IQ™ and in Maine, we offer home energy reports through [OPower](#).

Demand-side management

ENMAX continues to advocate for the development of a demand-side management (DSM) program. DSM programs encourage customers to reduce their electricity use by shifting their usage to avoid periods of high demand on the distribution system and/or through investment in energy-efficiency measures. DSM programs are common across many North American jurisdictions. Customers enjoy many benefits of utility-led DSM programs such as reduced electricity costs and decreased environmental impacts. ENMAX requires approval from the Alberta Utilities Commission to proceed with any DSM program.



Understanding your bill

We use our websites as one tool to help customers better understand their bill. Our Understanding your Bill pages, in [Alberta](#) and [Maine](#), show an example of what an average customer's bill could resemble.



ENMAX employee volunteering at Silvera For Seniors to improve home efficiency.

Progress in 2022

Our Energy Affordability Working Group brought together key team members from across the organization to connect our combined efforts in 2022 as we continue to advance energy affordability initiatives for our customers.

Targeted community investment

We set a target in 2020 to spend at least 30 per cent of our community investment budget each year on activities and organizations that support customers at the various stages of the energy affordability lifecycle. In 2022, 35 per cent of our community investment budget was directed towards energy affordability. In addition, a one-time emergency fund outside of the community investment budget was donated to the United Way of Calgary and Area for crisis support, which brought the total to 42 per cent.

Energy affordability pilots

Over the course of the year, we implemented several pilot programs to help improve access to energy. Pilots also enable learnings that help to build future energy affordability programs. ENMAX Energy spent a total of \$1.7M on programs and pilots in 2022 to support energy affordability.

Energy saving kits

We achieved our target to deliver 1,000 energy saving kits by the end of 2022. The kits are designed to support customers who have higher-than-average energy use through energy conservation and efficiency practices. The kits include clear information on how to save energy as well as products that create energy savings like LED light bulbs and insulating weatherstripping.

Energy efficiency workshops pilot

Recognizing that education is a key part of energy affordability, we partnered with Green Calgary to deliver tailored [energy efficiency workshops](#) during 2022. The workshops provide energy efficiency strategies, tips on understanding your bill and other energy-saving content customized to the unique interests of each group (e.g., newcomers to Calgary or those who live in apartments). Through our partnership, we completed 35 workshops and reached 402 people. We received feedback indicating that the workshop content was useful and that most participants were applying one or more of the energy-savings tips learned in the workshop. We are continuing the workshops into 2023 and are working with Green Calgary to develop digital content that can be shared more broadly.

Load limiter pilot

We strive to understand different ways we can effectively support customers who are experiencing financial difficulties. In summer 2022, ENMAX ran a pilot project to use load limiters—rather than completing full disconnections—for our regulated rate customers struggling to pay their bill. A load limiter is a device installed on a customer's meter that allows the furnace and a few lights to run, but will turn the power off if too much electricity is used at one time. The purpose of the pilot was to understand the benefits of installing load limiters as an alternative action. Between July and October, more than 3,100 load limiters were installed, 500 of which were measured for the pilot.

Providing billing relief

Equalized Payment Plan

ENMAX Energy enhanced and relaunched its Equalized Payment Plan in 2022 to give customers the ability to take their energy charges over the year and redistribute them into equal amounts each month. Some organizations refer to this as budget billing. The enhancements included improvements to the customer experience of the program, including providing customers the ability to self-serve on the ENMAX website. Budget billing directly helps customers avoid price spikes associated with higher seasonal demand and variable pricing. Versant Power also provides a budget billing option (read more on [page 63](#)).

Bill credits

In addition to the implementation of programs and pilots, ENMAX and Versant Power support government-led affordability initiatives.

In Maine, Versant Power worked with state government officials to distribute two separate bill credits to provide bill relief to customers and offset the increase in supply cost seen in 2022. The first was a one-time US\$90 bill credit to about 8,000 customers funded through the Maine Department of Economic and Community Development for low-income customers. The second credit was a one-time utility account credit of more than US\$2,000 distributed to over 2,900 Maine medium-class businesses. This credit was funded through the Governor's Maine Jobs & Recovery Plan.

In Alberta, ENMAX Energy and ENMAX Power worked with the provincial government to distribute an electricity rebate to customers to partially offset the rising cost of energy. The rebate was a monthly \$50 credit applied to all residential and small business customer bills for a six-month period.



Long-term partnership with Trellis Society

For more than 20 years, ENMAX has partnered with Trellis to support people in crisis and prevent further trauma, such as homelessness, from occurring.

Trellis Society works with people of all ages and backgrounds to help them grow, overcome barriers, and reach their full potential. “We often meet people at an intersection in their life when they are the most vulnerable. Times when basic needs such as a home, groceries, heat and electricity are in jeopardy,” notes Jeff Dyer, Trellis Society CEO.

In 2022, we celebrated reaching the milestone of \$1 million of cumulative giving for Trellis programs and the people they serve.

Over the years, ENMAX has provided a variety of supports including direct utility subsidy and support, empowering people through energy savings workshops and volunteering.

“ENMAX continues to be our partner in creating solutions that provide immediate and long-term impact for Calgarians who need support.”

JEFF DYER, CEO, TRELLIS SOCIETY

Collaborating with industry to advance energy affordability

ENMAX initiated an industry working group in 2022, called CARE (Customer Affordability Resources for Energy Education) to work together towards energy affordability. The group includes Alberta energy retailers, with representation from the Alberta Utilities Commission and the Utilities Consumer Advocate (UCA). Through CARE, participants exchange ideas, find consensus and discuss energy affordability programs already in place. A key near-term goal for the group was to leverage existing information from the UCA to create an industry fact sheet with a retailer focus that summarizes current programs and resources to assist vulnerable or struggling customers. The fact sheet was completed and posted on the UCA’s website and is available for circulation amongst different retailers or providers, their call centres, social service, provincial and municipal government agencies.

Supporting basic needs in our communities

As part of our commitment to support energy affordability efforts, we continued to focus on basic needs funding through support of our long-standing community partners, Trellis Society, Distress Centre Calgary, United Way of Calgary and Area, Aboriginal Friendship Centre of Calgary, Bissel Centre (Edmonton), and United Way of Central Alberta. These partnerships support the crisis intervention stage of the energy affordability lifecycle and allow us to direct people to organizations to get the help they need. Increasing our support of these agencies means that more families and individuals will have access to funding for essential needs and services.

In Maine, Versant Power also focused on basic needs funding with significant giving directed towards:

Low-income heating assistance

To provide individuals in Versant Power’s service territory with emergency assistance during the cold months, funding was provided to Aroostook County Action Program, Penquis Action Program and Downeast Community Partners.

Housing security

The pandemic affected some families’ ability to keep up with bills and afford safe shelter. Many area shelters receive state and federal funding but face restrictions on who qualifies for help. Versant Power provided funding to Bangor Area Homeless Shelter, Emmaus Homeless Shelter, Community Care, The Northern Lighthouse, and Maine Veterans’ Homes to support their efforts in providing reliable short- and long-term housing.

SPOTLIGHT

How we support access to energy

ENMAX is committed to supporting customers at each stage of the energy affordability lifecycle. Some of the ways we work with community partners to improve access to energy include:



Energy efficiency

We are providing \$150,000 over two years and 200 energy efficiency kits to the [Alberta Ecotrust Foundation](#) to support its Energy Poverty Reduction and Home Upgrades Program for Calgarians. The program provides residents living in energy inefficient homes with education and fully subsidized energy efficiency upgrades to reduce their energy burden.


200
energy efficiency kits



111
organizations have benefited

Grants to communities

Since 2015, ENMAX has contributed \$690,000 to the [Energizing Spaces Fund](#). The Fund provides grants to community groups across Calgary to pay for energy efficient appliances or outdoor and rink lighting to help community associations reduce their environmental footprint and create safe and enjoyable spaces. Now in its eighth year, the Fund is administered by the [Federation of Calgary Communities](#) and has supported 111 organizations to replace 148 appliances, 28 rinks with new lights and six safety light projects. Energy cost savings, as a result of improved energy efficiency, can be reinvested in programs for community association residents.



Solar generation in Maine

Versant Power brought 260 solar projects on-line in 2022, including community and residential roof-top solar installations. These projects generate solar credits that are used to offset customers' monthly electricity bills.

260
solar projects on-line

12 affordable housing units with solar panels

Renewable and more affordable power

ENMAX oversaw solar installations on 12 affordable housing units (totalling 440 kW DC) as part of a partnership with Attainable Homes Calgary to bring renewable power to its new Martindale development. Attainable Homes Calgary is a non-profit organization, created and owned by The City of Calgary, which helps moderate-income Calgarians achieve quality home ownership. Each unit is designed to be highly energy efficient and includes a rooftop solar panel installation.



ABOVE

The latest solar installation supported by ENMAX. REACH at Martindale is a 12-building multi-family development with an arrangement of regular and stacked townhomes and includes 116 residential homes.

13 community associations with solar panels

Solar power for community associations

We supported the installation of solar panels on 13 community association buildings across Calgary in 2022, with 17 more scheduled to be completed in the first half of 2023. This initiative is part of the ENMAX Community Solar Fund, a partnership between ENMAX and The City of Calgary to support renewable energy. ENMAX Energy provides both the solar equipment and oversight of the installation of the solar panels at no cost to the community association.



ABOVE

The new solar panels at the Glenbrook Community Association in Southwest Calgary.

Community investment and economic impact

WHY IT MATTERS TO ENMAX

Our investments and employee volunteer contributions make a positive impact in the communities where we operate. We continually strive to do our part to build stronger and more resilient communities.

2022 HIGHLIGHTS

- ↳ **\$3.7 million contributed in cash, in kind and through matching of employee donations to Alberta and Maine community organizations in 2022.**
- ↳ **Continued to focus on maximizing social impact and supporting basic needs.**

Our approach

We are committed to supporting our communities in Alberta and Maine through sponsorships, donations, partnerships and employee volunteerism. Both ENMAX and Versant Power have been working to enhance our partnerships and focus our funding to directly target community needs and make an even bigger difference.

We aim to annually invest at least one per cent of our pre-tax profits in our communities and we achieved this goal in 2022. ENMAX engages the London Benchmarking Group Canada (LBG) to review our community investment performance. LBG's assessment includes ENMAX's cash donations, donations in kind and employee volunteer time, resulting in a more holistic view of our overall community contribution.

Progress in 2022

Last year, we donated \$3.7 million across Alberta and Maine. ENMAX contributed \$3.08 million in cash, in kind and through matching of employee donations to local agencies, and Versant Power contributed more than US\$486,000 (approximately C\$632,000).

Over the past year at ENMAX we:

- Have allocated 42 per cent of our community investment budget to activities and organizations that support customers at various stages of the energy affordability lifecycle.
- Have announced a contribution of \$150,000 over two years and 200 energy efficiency kits to the [Alberta Ecotrust Foundation](#) (see [previous page](#)).
- Are actioning our strategy for future community investment spending to increase the proportion of basic needs funding to 40 per cent by 2025.



In Maine, Versant Power:

- Has allocated 34 per cent of its community investment budget on activities and organizations that help advance energy affordability.
- Has launched a charitable matching program, called Power Match, to match donations from customers to those who struggle to pay their electricity bill but are unable to qualify for income-based assistance.
- Continued its campaign with the United Way in support of serving basic needs.

ENMAX's priority funding areas

↳ Essential needs

Families experiencing poverty often struggle to overcome the challenges of everyday life and meet their basic needs. We understand the importance of a warm meal, clean clothing and a safe place to sleep. This is why we are passionate about supporting non-profit organizations that help meet these critical basic needs for vulnerable families.

↳ Energy safety, education and efficiency

Whether it is in the classroom or the community, we strive to educate community members about electricity and how it relates to customers, young and old.

↳ Enriching communities

We care about the wellbeing of our communities. We are committed to supporting initiatives that build vibrant communities and organizations that help our customers thrive.

↳ Scholarships

We believe strongly in supporting the workforce of tomorrow. As part of this, ENMAX offers various student scholarships in the areas of environmental leadership, trades, electrical engineering and business.



Employee volunteerism and giving

ENMAX returned to in-person volunteering activities in 2022. We created a successful new process to connect employee teams seeking volunteerism-based team-building opportunities with our community partners. ENMAX team members contributed 4,630 volunteer hours to support community organizations last year, including packing food hampers at the Calgary Food Bank, a yard clean up at Children's Cottage, installing energy efficiency items at Silvera for Seniors, and our popular holiday light set ups at Alberta Children's Hospital, The Alex, Brenda's House, Heritage Park and Confederation Park.

Our Season of Giving campaign is our annual employee giving program that provides our employees the chance to give back and engage with their community in ways that matter to them. ENMAX supports this by matching employee donations, offering grants for personal volunteering and recognizing teams who came together to make a difference during the campaign.

Through its Good Neighbor Employee Volunteer Program and United Way campaign, Versant Power matches employee giving in Maine. Employees returned to volunteerism in 2022, contributing more than 700 hours of time and using Good Neighbor funds for programming important to them. Versant honored employees' wishes to provide gifts to children for the holidays and to spread holiday cheer by donating the funds to three organizations.



Our team members volunteer to remove logos from ENMAX work wear for donation to the Calgary Drop-In Centre.

Versant Power team members participated in the Big Brothers and Big Sisters Plane Pull fundraising event.

ENMAX employees set up Christmas lights at Silvera For Seniors.

Creating a positive economic impact

Providing access to safe and reliable energy is one of the ways we enable economic development. Reliable energy access is correlated to improved economic trade and growth, increased safety, comfort and security, better employment opportunities and is critical to supporting overall quality of life. In addition to our mission of providing safe, reliable and affordable energy, our extended financial strategy includes returning a stable and growing dividend to The City of Calgary. The dividend we pay to The City of Calgary, in addition to municipal taxes and other sources of income, helps fund public transit, water supply and treatment services as well as parks and recreation amenities. As part of our business, we develop infrastructure projects that create enduring improvements for the Province of Alberta and future generations. We also generate value through the jobs we create, the materials we purchase and our community investments. We are transparent about our financial position and results and share our annual and quarterly financial reports and our Annual Report on Governance and Compensation on our website.



ENMAX team members contributed 4,630 volunteer hours to support community organizations last year.



Community relations

WHY IT MATTERS TO ENMAX

Our relationships with people and communities across our operations are an important part of our success. We are committed to understanding their needs and interests and work to maintain positive relationships through open communication and respect.

Our approach

We supply safe and reliable power to all our customer groups, which include residential, commercial, industrial, and institutional customers as well as developers, builders and Indigenous communities. Through the course of our daily operations, we also work with many municipal and provincial elected officials, government agencies, advocacy groups and industry consultants.

ENMAX Power's electrical distribution [service area](#) spans more than 1,000 square kilometres (km²) in and around Calgary. We work to engage with any individuals or organizations that have distribution lines coming to their home or building, whether or not ENMAX Energy is their chosen electricity and natural gas provider.

From a broader perspective, ENMAX also works with anyone who could be impacted by our operations or who has an interest in our company, including regulators, municipalities, rural landowners, developers, new businesses, elected officials, the media and the general public.

Ongoing engagement with individuals or communities impacted by our projects

We promote two-way communication in the following ways:

- We offer a variety of contact avenues on our [contact page](#) in the areas of residential customer care, business customer care, and power and meter services.
- We elicit feedback from customers through our Voice of the Customer surveys.
- We also learn what individuals and communities want through monthly engagement activities with various advocacy groups (e.g., representatives of developers, builders or electrical contractors).
- When we submit a proposal to the regulator to explain a proposed rate increase, we make those submissions available to our customers and the public on our website.
- We disclose direct contact information on our website, including access to our Board of Directors.
- We provide advance notification of any planned Calgary distribution system outages, offer an outage map and heavily engage on social media to alert customers about outages.
- Our customer relations team handles inquiries and complaints promptly. In response to common concerns about outage locations, causes and estimated restoration timeframes, we installed a robust customer-facing interactive voice response system in 2019 to improve outage communications (see [page 25](#) to read about our Outage Management System).
- We are open to receiving questions and concerns and encourage individuals to call us or get in touch with us through our Live Chat.



We have a dedicated team of 250 employees who work in our customer care centre in Alberta.



Engaging during project development in Alberta

Development or alteration to transmission lines, substations or generation facilities can impact a variety of groups. We ensure compliance with the Alberta Utilities Commission (AUC) Rule 007 stakeholder consultation guidelines for all our projects. Rules may require notification or consultation with potentially affected landowners, customers, Indigenous communities or other stakeholders. This may involve sending a project information package, door knocking to directly engage or hosting an open house. People with comments or questions are encouraged to contact us through our dedicated community relations phone line and email. Our community relations team work closely with our regulatory and project teams to ensure compliance with AUC requirements and an understanding of concerns for consideration in our project development and permitting.



Engaging with people and communities in Maine

Versant Power's service territory extends across 26,900 km² in northern and eastern Maine. Versant Power aims to maintain positive relationships with people or communities impacted by its projects, including property owners, municipalities, lawmakers, elected officials, regulators, advocacy groups interested in energy policy and affordability, and business and development organizations. Nearly all of Versant Power's transmission right-of-way areas are easements (i.e., Versant Power does not own the land, but the easements provide Versant Power with access to the property). Versant Power believes in being good stewards of the land and being respectful, open and collaborative with all landowners. Any time field workers require special access through woodlands, temporary licenses or leases are obtained prior to any work being done. It is Versant Power's practice to record before and after video inventory and to complete any mitigations or inspections with the property owner.



A right-of-way is pictured behind Versant Power's Orono substation in Maine.

Working with Indigenous communities

WHY IT MATTERS TO ENMAX

The relationships we forge with Indigenous communities are meaningful to us. Our fundamental guiding principles—communication and trust—are instrumental in developing open and honest relationships. While our generation assets are located within the traditional territory of Treaty Seven Nations, we predominantly engage with the Tsuut’ina Nation. As our neighbours, we value our relationship with the Tsuut’ina Nation and respect its values and culture.

Moving forward with mutual trust and respect

In November 2022, ENMAX came together with representatives of Tsuut’ina Nation to celebrate two significant milestones: the renewal and re-negotiation of the Electrical Distribution Agreement with Tsuut’ina and the signing of a first-of-its-kind Relationship Agreement.

Electrical Distribution Agreement

ENMAX Power entered into a new 20-year agreement which has been modernized to reflect changes since the previous agreement, which was entered into in 1991. The renewed agreement governs how ENMAX Power provides electrical distribution services to Tsuut’ina Nation and how we construct, operate and maintain the electric distribution system on the eastern side of Tsuut’ina Nation.



ENMAX President and CEO Mark Poweska and Tsuut’ina Nation Chief Roy Whitney at the Relationship Agreement Signing Ceremony.

Relationship Agreement

ENMAX entered into a Relationship Agreement with the Tsuut’ina Nation setting out principles by which Tsuut’ina and ENMAX will work and collaborate together on community investment, training, employment and contracting and new business opportunities. The agreement establishes a platform for meaningful, effective and transparent communication and information sharing.

Collaborating on future opportunities

Employment opportunities

In partnership with Wright Tree Service, we hosted a job fair to share information on tree trimming, including grounds worker and apprenticeship positions within their organization.

On behalf of ENMAX Power, Wright Tree Service conducts regular maintenance work on Tsuut’ina lands including tree trimming and vegetation management for public safety and to ensure trees and bushes do not interfere with the operation of the distribution system.

Connecting new homes

Since 2021, we have been working with Tsuut’ina Nation on an initiative to connect several new-build homes on the Nation. Working closely with the Nation and three Nation-owned builders, we are adding new electrical infrastructure including distribution lines, poles and transformers, with more than 16 homes connected to date and 19 applications for new connections received in 2022. Connecting these new homes is allowing us to continue providing Tsuut’ina Nation families with safe and reliable power.

Investing in Indigenous communities

We look to support the economic and social development of Indigenous communities. As one of our areas of focus, we support education programs that assist Indigenous Peoples in advancing their knowledge and skills and support the celebration of Indigenous culture. In 2022, we continued our partnership with the Aboriginal Friendship Centre of Calgary, supporting the essential needs of the urban Indigenous community in Calgary.

Over the past two years, we have increased our focus on basic needs funding across Alberta, which includes an Indigenous focus. Funding was directed to the Tsuut’ina Food Bank, the United Way of Central Alberta’s Lights On Fund (which benefits the Red Deer Native Friendship Society), and to Edmonton Bissell Centre Community Bridge Program (which supports Bent Arrow working with the Indigenous community).



Governance

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Corporate governance

WHY IT MATTERS TO ENMAX

We believe sound corporate governance contributes to shareholder and public value, as well as trust and confidence in our organization.

Our approach

Although ENMAX is not required to publicly file an annual information form or a proxy circular for our annual general meeting, we have released an annual disclosure document regarding our governance and executive compensation practices for more than 10 years. Our [Annual Report on Governance and Compensation](#) is informed by the requirements applicable to Canadian public companies.

Shareholder relationship

ENMAX is a private corporation, incorporated under the *Alberta Business Corporations Act*, and our sole shareholder is The City of Calgary. Calgary's City Council acts in the capacity of the Shareholder on behalf of Calgarians. Ongoing communication and engagement with The City of Calgary is an integral part of our framework of good governance.

Our Board of Directors and executive team meet with Calgary's City Council quarterly, including a meeting with City Council and Administration to present ENMAX's budget each fall. We meet annually with The City of Calgary's Audit Committee to review our financial, risk management and governance practices in detail. We also hold an annual general meeting that is open to all members of the public.

Board independence

We recognize that having a majority of independent, highly qualified Directors from diverse backgrounds is essential to effective decision making. For the year ended December 31, 2022, 11 out of 12 of our directors were considered "independent" for the purposes of applicable Canadian securities law policies.

Board diversity

We believe that having a diverse Board enhances ENMAX's decision-making abilities. Our [Board Diversity Policy](#) states that when selecting director candidates, consideration will be given to the following diversity criteria: gender, age, residency, race, culture, ethnicity, people with disabilities (including invisible and episodic disabilities), members of the 2SLGBTQ+ community, and other factors that may enhance ENMAX's ability to deliver value to our Shareholder. The Board Diversity Policy also includes diversity targets to maintain or exceed a Board composition in which: 1) at least 30 per cent of our directors are women and 2) at least one member of the Board is from an underrepresented group, relative to the communities served by ENMAX. As of December 31, 2022, 33 per cent of the members of the Board of Directors are women and 17 per cent of the members of the Board of Directors self-identify as a member of an underrepresented group.



Board evaluation and assessment

The Board undertakes an annual evaluation process to assess its performance and ensure the Board is providing effective oversight. The Corporate Governance Committee uses the results to identify actions for improvement, confirm the Board of Directors possess the desired expertise and skillsets, review succession planning and determine educational opportunities.

GOVERNANCE SNAPSHOT

ETHICS

Code of Conduct for directors, officers and employees	Yes
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BOARD COMPOSITION AND INDEPENDENCE

Size of Board	12
Number of independent directors	11
Separate Chair and CEO	Yes
Independent Chair	Yes
Comprehensive Board assessment process	Yes
Directors that are financially literate	92%
Board meetings held in 2022*	19
Average meeting attendance	99%

BOARD RENEWAL AND DIVERSITY

Annual election of directors	Yes
Average age of directors	61
Mandatory retirement age	No
Average director tenure	3.4 years
Women Board members	33%
Board members that identified as members of underrepresented groups	17%
Board Diversity Policy	Yes

All chart information as of December 31, 2022.

* Total number of regularly scheduled Board and Committee meetings during 2022.



Ethics

WHY IT MATTERS TO ENMAX

We are guided by strong principles of accountability, transparency and ethics in our decision making and behaviour. It is expected that all directors, officers and employees of ENMAX act with honesty, integrity and impartiality. This allows us to earn and maintain the trust of our Shareholder, employees, customers and the communities in which we operate.

Our approach

Policies

Principles of Business Ethics Policy

This policy establishes the appropriate and expected behaviour for maintaining ENMAX's reputation for honesty and integrity. Our Board reviews and approves the policy at least once every three years and works closely with our executive team to promote a strong governance culture that influences ENMAX at every level. All employees acknowledge their responsibility to perform their duties at ENMAX in accordance with the [Principles of Business Ethics Policy](#).

Code of Conduct Regulation

This regulation must be followed by all owners of electricity distribution systems, their affiliated retailers and their regulated rate providers in Alberta. ENMAX Power is a distribution system owner, while ENMAX Energy is both an affiliated retailer and the regulated rate provider for ENMAX Power and others. Our compliance plan outlines how we will abide by the [Code of Conduct Regulation](#).

Training

All employees, including our contractors as assigned, are required to complete annual training on the Principles of Business Ethics Policy, Safe and Respectful Workplace and Code of Conduct. In 2022, 1,877 individuals completed this training.

Reporting concerns and conflicts of interest

ENMAX has a confidential ethics hotline where individuals can anonymously express concerns about inappropriate business conduct through a confidential third-party service. Submissions to the ethics hotline are reported to ENMAX's Corporate Governance Committee. All reports are investigated with oversight of legal counsel. In accordance with our Principles of Business Ethics Policy, the directors and officers of ENMAX are also required to disclose conflicts of interest and declare outside business interests on an annual basis. This helps ensure directors exercise independent judgment when considering transactions and agreements. The Board ensures our directors do not participate in discussions or vote on matters when they are conflicted.



We are guided by strong principles of accountability, transparency and ethics in our decision making and behaviour.



Governance for ESG matters

WHY IT MATTERS TO ENMAX

We are dedicated to conducting our business responsibly and overseeing and managing our risks in a diligent manner.

Our approach

ENMAX's Board of Directors and the executive team are committed to setting the "tone from the top" to create a culture of high ethical standards and good corporate governance through our organization and business operations, which includes our ESG practices. Additionally, we have strong management systems that formalize the management of environmental and safety topics.

Board oversight of ESG matters

The Board of Directors has the highest level of oversight for ESG matters. The Board's role is to oversee ENMAX's strategy, the development of its ESG targets and to ensure alignment between ESG initiatives and business strategy. The Board is also responsible for the company's risk profile.

As an enhancement to our ESG framework, ESG oversight moved to a newly formed Safety, Environment and Sustainability Committee as of January 1, 2023.

The Committee was developed to support the Board in fulfilling its role by (a) reviewing our progress and performance against our ESG targets (b) reviewing periodic reports related to developments, trends, best practices, risks, and issues related to our ESG targets and reporting, and (c) recommending for approval the publication of our annual ESG Report. In addition to their mandates, each of the four Board committees oversees and provides guidance on different ESG-related topics:

BOARD/BOARD COMMITTEE*	ESG TOPICS	
Board of Directors	<ul style="list-style-type: none"> – Corporate strategy – ESG targets – Enterprise risk management – COVID-19 pandemic 	<ul style="list-style-type: none"> – Shareholder relations – Compliance – Disclosure
Corporate Governance Committee	<ul style="list-style-type: none"> – Business ethics and integrity – Board diversity – Enterprise Risk 	<ul style="list-style-type: none"> – IT/cybersecurity – Board education – Board governance
Human Resources Committee	<ul style="list-style-type: none"> – Talent and culture – Diversity and inclusion 	<ul style="list-style-type: none"> – ESG compensation link
Safety, Environment and Sustainability Committee	<ul style="list-style-type: none"> – Safety and health – Environment – ESG progress and performance 	<ul style="list-style-type: none"> – Sustainability – Social governance
Audit Committee	<ul style="list-style-type: none"> – Financial reporting – Internal controls and procedures 	<ul style="list-style-type: none"> – Tax strategy

This table reflects our governance structure as of January 1, 2023.





Management's role

To support the implementation of our plans and the achievement of our targets, our executive team and subject matter experts are involved in the management of ESG issues in the following ways:

Executive team's role

ENMAX's executive team is responsible for the management of our ESG commitments. The executive team regularly reports to both the Safety, Environment and Sustainability Committee and Board on ESG and climate-related matters. Read more in the Task Force on Climate-related Financial Disclosures (TCFD) section of this report.

In 2022, we embedded several performance measures related to our ESG targets into our Long-Term Incentive Plan (LTIP), a three-year plan for ENMAX's senior leaders. We have integrated key ESG factors including climate action into our executive compensation strategies as success in these areas is critical to ENMAX's long-term success and sustainability.

ESG Working Group

We formed an ESG Working Group with people from across the organization in 2020. The role of the group is to advance and communicate progress towards our ESG targets. It is chaired by ENMAX's Director of ESG Performance and Reporting and discusses and drives organizational progress on our ESG targets.

Safety and environmental management systems

To support the execution of our policies and practices, we have mature management systems, clear data collection and reporting, and strong internal structures to effectively manage our safety and environmental risks, including that:

- We work in accordance with the [Alberta Safety Codes Act](#), which governs public safety. We also report any instances of employee, contractor or public electrical contacts.
- All work carried out in Alberta is in accordance with Alberta's [Occupational Health and Safety Act](#), Regulation and Code, and our fleet safety program is in compliance with [Alberta Transportation](#) rules and regulations.
- We continue to align our safety management system to [ISO 45001](#). We also maintain an Alberta Certificate of Recognition (CoR) to help us satisfy provincial safety standards. To maintain our CoR, we must subject our safety management system to a third-party recertification audit that includes employee interviews at all levels, a review of documentation and observations of workplace conditions and practices every three years. We completed our latest recertification audit in November 2022 and were recertified.
- Our environmental management system is modeled after the requirements of Electricity Canada's Sustainable Electricity™ program and is aligned with [ISO 14001:2015](#), an international standard for environmental management systems.

- Versant Power has its own robust safety management system aligned with ISO 45001. Each year Versant Power develops and receives executive approval for its Safety Management System Action Plan, which contains more than 35 separate actions and metrics within the 10 management system elements. The action plan includes all aspects of Versant Power's safety program and has strong accountabilities built into it. Versant Power is committed to completing a minimum of 90 per cent of those actions and the results are verified by an ENMAX auditor.



In 2022, we embedded ESG targets into our Long-Term Incentive Plan for leaders (directors and above).



Customer satisfaction

WHY IT MATTERS TO ENMAX

As a provider of energy products and services, ENMAX Energy serves approximately 725,000 residential, commercial and industrial customers in Alberta. Versant Power serves approximately 164,000 customers in Maine.

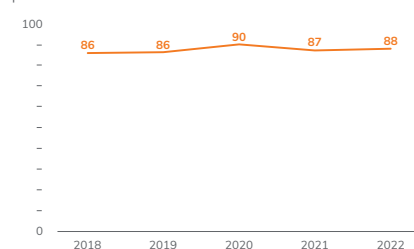
Our approach

We take customer experience seriously and approach customer satisfaction with the philosophy that "every moment matters." We aim to treat every customer with respect, kindness and empathy.

Customer satisfaction in Alberta

To continue improving customer satisfaction, we have a dedicated, locally based team of 250 employees who work in our customer care centre in Alberta. Our customer care agents receive more than 680,000 contacts (including chat, email and phone contacts) per year. Additionally, we receive approximately 45,000 responses to our Voice of the Customer survey (a 12 per cent response rate) each year. We analyze the data trends and look for opportunities to improve our processes and coach or reward our agents. Our High Five Program recognizes agents who receive five out of five in customer ratings.

CUSTOMER SATISFACTION IN ALBERTA per cent



Customer satisfaction increased slightly in 2022 compared to 2021. We continue to invest time and resources in understanding our customers' needs.

Note: Chart data excludes Versant Power.

Customer satisfaction in Maine

Versant Power has a customer contact centre staffed with local customer service representatives in two locations in Maine: Presque Isle and Bangor. To foster high-quality customer service, Versant Power provides a 10-week training program to onboard new representatives and offers continuing coaching and training for tenured representatives. Versant Power also has an online user portal to view and pay bills, report and see status on outages and to view daily and hourly usage information. Customers who use online services also receive weekly usage reports by email and can sign up for high usage alerts by email or text.

CUSTOMER SATISFACTION IN MAINE (VERSANT POWER)

METRIC	TARGET*	2022 PERFORMANCE
Responsiveness to customer calls (calls answered in 30 seconds)	80%	68.40%
Call abandonment rate	<7%	6.60%
Bill error rate	<0.40%	0.24%

We met our target for bill error rate and call abandonment rate but fell short of our target to answer 80 per cent of calls in 30 seconds. In 2022, we hired and trained additional Customer Service Representatives to continue to work to improve our responsiveness to customer calls.

* These targets are established by the Maine Public Utilities Commission.

Survey shows strong customer approval

A survey conducted by a leading public opinion survey firm in February 2022 confirmed Versant Power's strong customer satisfaction across several key performance indicators. The survey reached 401 Versant Power customers and indicated that:

- 67 per cent of Versant Power customers say they are satisfied with the company.
- A large majority of customers give high approval to the job Versant is doing, including:
 - 88 per cent approval on reliability of electricity service.
 - 86 per cent approval on timeliness of restoring service after storms.
 - 77 per cent approval on timeliness and accuracy of bills.
 - 71 per cent approval on responsiveness to customer requests for information or service.



We serve more than 889,000 residential, commercial and industrial customers in Alberta and Maine*.

* Excludes ENMAX Power sites.

SPOTLIGHT

How we listen to our customers

In Alberta and Maine we are committed to understanding and responding to the changing needs of our customers.





Cybersecurity and data privacy

WHY IT MATTERS TO ENMAX

Resilience to cyber threats is exceptionally important for organizations like ours that own and operate critical electricity infrastructure. We place high attention on maintaining the cybersecurity of our operational technology systems as they directly impact physical systems and the delivery of power to our customers. Further, the trust placed in ENMAX by customers and other external parties requires that we uphold the personal information standards set out in Alberta's *Personal Information Protection Act* with respect to the proper collection, use, disclosure and storage of personal information.

2022 HIGHLIGHTS

- ↳ **Developed an automated process to consistently measure our compliance with Center for Internet Security controls.**
- ↳ **Updated our information classification standard to improve our data retention and organization practices.**

Our approach

We continuously monitor the global geopolitical situation and act proactively to maintain and strengthen our cybersecurity posture. We also exercise diligence in monitoring and assessing third-party risks. Our cybersecurity practices are constantly advancing through alignment with the following frameworks:

NIST Cybersecurity Framework

The [National Institute of Standards and Technology \(NIST\)](#) framework is considered a best practice in cybersecurity for utilities. ENMAX is standardizing our alignment to NIST across the business.

Critical Infrastructure Protection rules

We comply with the Alberta Reliability Standards, which requires following Critical Infrastructure Protection on the Bulk Electric System.

Center for Internet Security controls

We implement security controls in line with the [Center for Internet Security \(CIS\)](#) security controls standard and maintain an advanced suite of software for threat detection, log processing and monitoring. We conduct regular testing and retain external cybersecurity experts to provide audits.

Privacy compliance

ENMAX regularly reviews and updates policies and procedures governing the proper collection, use and disclosure of personal information of our customers, employees and other individuals whose information is in our custody or control. Our employees receive annual training as well as regular privacy updates and communications to keep this important risk area top of mind.





Cybersecurity awareness

Training our employees on cybersecurity empowers them to recognize potential threats and helps to prevent cyber-related incidents. As employees join the company, and annually thereafter, our mandatory corporate training includes a module on cybersecurity and data protection. We offer regular cybersecurity awareness courses and hold an in-depth Cybersecurity Awareness Month in October during which we circulate relevant articles, share tips of the day and host virtual events with guest speakers such as the Calgary Police Service's Cyber Crime Unit and the RCMP. We also have a comprehensive phishing performance management process, monthly phishing tests and supplemental training for employees.

Progress in 2022

Over the past year, we have evolved our approach to encompass a more holistic view of security. We also improved our collaboration across the organization through a common strategy, alignment on practices, more integrated processes, improved information sharing and enhanced threat intelligence.

Refining our incident response

We have continued to refine and mature our response to cybersecurity-related events through improved incident response planning and tabletop exercises. As an organization, we use the Incident Command System (ICS) to manage incidents. More than 30 of our employees (including IT, risk and business continuity) completed ICS training in 2022 to enable a more inclusive and coordinated response to incidents.

We participated in an Alberta-focused cyber incident response exercise in November organized by the Alberta Electric System operator (AESO). This exercise focused on communications during a response and how the AESO would interface with energy market participants and external entities during such an incident. We also participated in Electricity Canada's CEO-level cyber tabletop exercise in November. The goal of this exercise was to explore senior-level collaborative response to a cybersecurity threat at the national level and to examine the resilience of those communications during a crisis.

Alignment to the Centre for Internet Security (CIS) controls

We built an automated process for measuring our compliance with the CIS controls. A dashboard provides current metrics, giving us an immediate snapshot of our maturity and progress towards implementing these standard controls.

We also completed several cybersecurity assessments including security evaluations of our most critical business services and conducted exercises where we simulated attacks and monitored how our controls responded to them to assess and strengthen our cybersecurity posture. We started tracking cyber metrics in 2022 and adopted cybersecurity as a component of incentive pay, effective for 2023.



Data privacy

As an essential services organization, our business requires the collection and management of customer data. We collect only the data we require to provide service to our customers, such as billing details. Additionally, we restrict data accessibility and all instances of access to customer data are logged and auditable. Every customer service agent in our customer care team receives data privacy and protection training when hired.

Each year, we diligently educate employees on the importance of data protection and promote awareness of potentially fraudulent activity by third parties as and when we become aware of such attempts by individuals or organizations misrepresenting themselves as ENMAX.

We updated our information classification standard in 2022 to improve our data retention and organization practices. The updated standard included reductions to our email retention timeframes and a decrease in our allowable file-sharing size.



Responsible procurement

WHY IT MATTERS TO ENMAX

We are committed to fair competition in all dealings with suppliers and to making our purchases honestly and objectively. We also want to make sure that our suppliers and contractors respect and uphold our ethics, safety and environmental practices.

2022 HIGHLIGHTS

↳ **Completed a baseline assessment of our procurement practices to support the development of a Sustainable Procurement Strategy by the end of 2023.**

Our approach

Our contractor screening process is designed to verify that any contracted companies we work with have similar safety practices and systems to ENMAX. We are currently using [ISNetworld](#), an online data-driven contractor and supplier management platform. Through the platform, we can verify contracted companies have insurance and appropriate safety performance and practices. Read more about contractor safety on [page 37](#).

Progress in 2022

- ENMAX has set a new target to develop a Sustainable Procurement Strategy by the end of 2023. To better understand the current state of our procurement practices and identify gaps, we completed a baseline assessment in 2022 based on guidance from [ISO 20400:2017](#), an international standard for sustainable procurement. The assessment involved a review of our procurement processes, our peer companies and feedback from employees involved in procurement activities across our business units.
- Versant Power began implementing ISNetworld with support from ENMAX in 2021 and has now completed onboarding of more than 95 vendors. Versant Power assisted its small contractors with the safety questionnaire in 2022. Versant Power plans to revise the questionnaire in 2023 to make it easier for contractors to complete it on their own and plans to develop prerequisite training for contractors that can be verified through ISNetworld.



Supply chain resiliency

The COVID-19 pandemic, coupled with geopolitical factors, continued to affect global supply chains in 2022 with delays to materials and products, increases in lead time and costs, and skilled labour shortages. We have worked proactively to navigate the ongoing situation by strengthening our supplier relationship management, placing orders well in advance of need, securing alternate sources of supply, monitoring changes in the market and working with our business units to advance demand planning.

Public policy

WHY IT MATTERS TO ENMAX

We aim to act honestly and with integrity in all business relationships, including in our interactions with government officials. Our public policy engagement includes direct interactions with government officials and administrators.

Our approach

We comply with all provincial, state and federal lobbying legislation in Canada and the United States, as applicable. We have an internal lobbying policy and provide training for any executives and directors that interact with government officials. We track and report lobbying activities to the Office of the Ethics Commissioner of Alberta and to the Federal Office of the Commissioner of Lobbying to comply with the lobbying requirements that are directly focused on policies, programs and regulations. Versant Power reports lobbying activities to the Maine Commission on Governmental Ethics and Election Practices and also reports qualifying political activities to the Maine Public Utilities Commission. To support industry positions and to stay informed of policy development, we are also members of industry associations such as Electricity Canada, Independent Power Producers Society of Alberta (IPPSA), the Edison Electric Institute and the Western Energy Institute.



TCFD

Task force on climate-related financial disclosures

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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.

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 2023, oversight for ESG matters, including climate, moved to a newly formed Safety, Environment and Sustainability Committee to provide increased focus on these topics.

The **Safety, Environment and Sustainability Committee** supports the Board in fulfilling its role by:

- 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.
- Reviewing periodic reports related to developments, trends, best practices, risks and issues related to our ESG targets and reporting.



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

- Reviewing quarterly reports on ENMAX's enterprise risk. 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.

Board skills

To support informed decision making, we added climate-related competencies as one of the desired skills for our Board of Directors in 2022. Knowledge in this area will help us better navigate the energy transition and evaluate climate-related risks and opportunities.

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 Corporate Governance Committee and 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 **Energy Market Policy Committee (EMPC)** is an executive-level committee whose role is to identify and assess how changes to Alberta market and carbon policy impact our competitive energy business. The committee studies generation, transmission, pricing carbon policy and related topics.



Risk management

Effective risk management empowers us to actively identify, assess and mitigate 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 nine 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. We incorporate climate-related risks into the most impacted risk categories within our existing ERM program.



The most relevant physical risks are summarized on [page 71](#) and the most relevant transition-related risks are discussed on [pages 73-75](#).



Our largest power generation facility, Shepard Energy Centre, is the most efficient natural gas-fuelled combined-cycle facility operating in Canada today, as measured by tonnes of CO₂ per megawatt hour (MWh).

Risk assessment

For each of our identified risk categories, we evaluate the level of residual risk (after current 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 assessments. Quarterly, a group of subject matter experts and senior leaders across the business reviews our top risk categories and their assessment to make sure they remain accurate. Our risk group updates the Board of Directors on changes to risk assessments and/or new risks each quarter.

Risk mitigation plans

Once risks have been identified and assessed, then the development of mitigation and management plans is the responsibility of the impacted business unit. Mitigation plans are summarized and shared with our risk group to inform our risk assessment.

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 39](#)).
- Commodity risk forecasting and management.
- Severe weather planning at Versant Power to ensure resources are available for potential infrastructure impacts.



Physical risk scenarios

To prepare for and adapt to climate change, ENMAX has undertaken scenario work to understand the risks and opportunities that a changing climate may present for our business over the long term. We conducted physical risk workshops in 2022, with more than 20 subject matter experts across our operating areas in Alberta and Maine to discuss the potential impacts of climate change on our assets.

Physical risk scenarios commonly use the Intergovernmental Panel on Climate Change (IPCC) scenarios; however as such scenarios are global in nature they do not provide the information we require to assess local impacts. We therefore chose to use [Climate Projections for Calgary](#) (developed by The City of Calgary), which leverages the IPCC model with the highest carbon concentration (IPCC model RCP 8.5)—and therefore the most severe outcomes—and applies it to the Calgary region.

We began by evaluating each of our ENMAX Corporation, ENMAX Power and ENMAX Energy assets against nine relevant climate hazards: extreme heat, higher average temperatures, wildfire, drought, short duration high intensity storms, severe storms (tornadoes, hail, high winds), high winds (convective storms and strong wind gusts), river flooding and heavy snowfall. We also examined Versant Power assets after adding hurricanes and sea-level rise to the list of hazards. To streamline the discussions, hazards with similar outcomes were grouped (for example, extreme heat and higher average temperatures were examined together). Securing appropriate expertise—such as facility operators and our own Geographic Information System team members, who supplied several useful maps and models—proved invaluable to the analysis.

We completed follow-up sessions to develop recommended actions. The analysis confirmed that we had already identified our most important climate hazards. Our next steps will be to work with our enterprise risk management and business continuity teams to identify potential items for our risk registry and business continuity exercises.

Climate scenario analysis is a multi-year process. We will continue to discuss and develop more detailed climate models to better understand the climate hazards and potential changes to future power demand.



We conducted physical risk workshops with more than 20 subject matter experts across our Alberta and Maine operations to discuss the potential impacts of climate change.

Elevating our organizational knowledge of climate

We created the Climate Action Working Group in 2022 which brings together representatives from across the ENMAX group of companies to increase organizational knowledge and engagement on climate-related risks, opportunities and actions.

The employee-led group will provide regular reports to its Executive Sponsor on the progress of climate-related initiatives.

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. The following is a summary of the results of our physical scenario workshops and of our key mitigation activities.



CLIMATE HAZARD	Floods	Drought	Storms	Wildfires	Heat	Hurricanes/Storms	Sea level rise
POTENTIAL IMPACT	<p>Severe flooding can:</p> <ul style="list-style-type: none"> Limit access to water for power generation. Restrict or prevent access to substations and other critical infrastructure. Damage infrastructure. 	<p>Prolonged drought can:</p> <ul style="list-style-type: none"> Increase load for our transmission and distribution wires. Limit access to water for power generation. Impact our ability to effectively operate our facilities. 	<p>Impact will likely be local, specifically, storms can:</p> <ul style="list-style-type: none"> Knock down poles or wires. Result in localized flooding due to blockage of storm drains. Bring large hail, causing property damage. Increase the risk of vehicle accidents and therefore damage to poles. 	<p>More frequent and severe fires can:</p> <ul style="list-style-type: none"> Increase risk of damage to facilities or wires. Impact air quality for air intake at power generation plants. 	<p>Higher average temperatures can:</p> <ul style="list-style-type: none"> Increase generation and load. Increase wear and tear on equipment and wires. Impact health and wellbeing of crews. 	<p>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. Heavy winds, rain, ice and heavy snowfalls can make the risks of tree falls even greater.</p>	<p>Sea level rise and storm surge can submerge assets and cause outages.</p>
WHAT ARE WE DOING TO MITIGATE?	<ul style="list-style-type: none"> Revised our internal mapping to include flood inundation zones and evacuation zones (provided annually by The City of Calgary) after the 2013 Calgary flood. Continue to engage closely with Calgary Emergency Management Agency (CEMA) partners to maintain alignment and coordinate responses with these valuable partners. In 2022, we held a flood-related tabletop exercise involving representatives from field services, senior leadership, communications and system operations. Review our flood action plan annually. 	<ul style="list-style-type: none"> Our areas of operation are characterized as low-to-medium baseline water stress¹. Continue working to reduce our freshwater use and optimize water use at our operated facilities. Minimize 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 17. 	<ul style="list-style-type: none"> 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 hold seven to eight emergency response exercises each year with several focused on weather-related events. We also join CEMA to participate in exercises they host. 	<ul style="list-style-type: none"> Our operations include the use of fibre glass cross arms that greatly minimize the risk of pole fires due to extreme weather changes. We use extensive air inlet filtration systems to limit the impact of smoke particulate on our facilities and protect the efficiency of our gas turbines. We continuously monitor the filtration systems to plan replacements. 	<ul style="list-style-type: none"> Many of our critical equipment in substations have monitoring systems that allow us to monitor, track and measure equipment condition due to higher ambient temperature. We have heating, ventilation and air conditioning (HVAC) maintenance programs and a root cause analysis program which mitigate the risk of recurring heat-related failures. 	<ul style="list-style-type: none"> 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. 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 24. 	<ul style="list-style-type: none"> In 2023, we will overlay our assets on sea level rise maps to identify areas of future risk.

¹ Using the World Resources Institute's Aqueeduct™ Water Risk Atlas, <https://www.wri.org/aqueeduct>.



Transition 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 Canada Energy Regulator).

Our discussions used these scenarios as book ends. STEPS provides a more conservative, business-as-usual view with its own challenges. The NZE shows a faster, more aggressive energy transition. We compared assumptions in our business plans with market and policy assumptions in both scenarios to evaluate a range of outcomes.

The NZE requires substantial growth in clean energy technology including renewables, electric vehicles (EVs), battery storage, hydrogen-based fuels and energy efficiency. As these technologies advance, development costs are projected to decrease. The NZE forecasts that fossil fuel use will decrease and remaining natural gas assets used for power generation will be combined with emissions reduction initiatives such as CCUS. Energy demand will increase with further 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, and 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 are encouraged by our learnings from these scenarios. 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.



As part of our efforts to reduce our GHG emissions we are transitioning our mobile fleet by incorporating zero emission vehicles.





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. 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 could 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 monitoring. At ENMAX, we support a measured approach to the energy transition that maintains continued system reliability and 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?

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.	For the last few years, there has been regulatory uncertainty in Alberta regarding whether the provincial or federal carbon tax would apply. In January 2023, the Alberta regulation received equivalency until 2030, which has reduced this uncertainty. The carbon tax in the Province will match the Federal tax and 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 seeking 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 per cent reduction by 2030 from 2015 levels. Working towards those targets, we are currently evaluating: <ul style="list-style-type: none"> – Carbon capture – Utility-scale renewables – Batteries – Offsets
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 combustion 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 may partially 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 sufficiently available to have CCUS installed at our natural gas power generation facilities. This could, in turn, increase rates. There is still uncertainty about the role that offsets can play in this proposed regulation and whether natural gas peaker plants will be allowed to operate after 2035.	As part of this commitment, Canada announced a plan to deploy \$5 billion to advance clean power generation, transmission and storage across Canada. If support is sufficient, it would support the acceleration of progress towards our target. The Canadian Federal Budget 2023 announced that the government will consult on the development of a broad-based approach to "carbon contracts for difference" that aims to make carbon pricing even more predictable, while supporting the investments needed to build a competitive clean economy and help meet Canada's climate goals.	In November 2022, our project for a potential carbon capture unit at the Shepard Energy Centre advanced to Phase 2 in the Federal Net-Zero Accelerator (NZA) process. Additionally, Shepard Energy Centre received a commitment for just over \$3 million in funding from the Government of Alberta. Details on page 17 .
U.S. Inflation Reduction Act The U.S. Inflation Reduction Act increased financial support for technologies and projects to support the energy transition, like carbon capture and green hydrogen.	This regulation initially created asymmetrical benefits between the U.S. and Canada, which could impact economic feasibility and/or timelines of carbon capture projects.	The Canadian Federal government announced additional Investment Tax Credits in the Federal Budget 2023 to support clean electricity in Canada.	



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?
<p>Clean Fuel Regulations The Clean Fuel Regulations 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.</p>	<p>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.</p>	<p>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. It may also create opportunity for ENMAX to receive investment funding toward EVs for our fleet.</p>	<p>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.</p>
<p>Regulatory support for hydrogen In 2022, Alberta published a Hydrogen Roadmap supporting natural gas and hydrogen blending for heating. Canada has a Hydrogen Strategy to position us as a world-leading producer, user and exporter of clean hydrogen and to set the country on a path to meet its climate goals.</p>	<p>If either the federal or provincial 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.</p>	<p>The Alberta Roadmap shows support for leveraging current natural gas heating infrastructure and a more gradual transition. The federal strategy can 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.</p>	<p>At this point in time, hydrogen is not economically feasible for ENMAX. We continue to monitor advancements in hydrogen technology.</p>
MARKET			
<p>Natural gas pricing Market changes will likely result in highly volatile natural gas prices.</p>	<p>Increases in natural gas prices result in an increase to our electricity generation costs. This can impact our electricity and natural gas customers.</p>	<p>Volatile prices can mean that retail offerings are more appealing to customers. By having more electricity volumes under contract, ENMAX can more effectively manage our generation portfolio, load and GHG compliance obligations.</p>	<p>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 CEO. Read more about how we are helping vulnerable customers on pages 48-51.</p>
<p>Increases in renewables coming on stream Renewable power generation (such as wind and solar) is increasing in the Province.</p>	<p>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.</p>	<p>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.</p>	<p>ENMAX Power, ENMAX Energy and Versant Power each to conduct a pilot project to advance the energy transition by the end of 2023.</p>
<p>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.</p>	<p>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 and of non-traditional disruptive participants.</p>	<p>This presents a significant opportunity for our power generation and electricity service provider sides of the business.</p>	<p>ENMAX is well positioned to support an increase in electricity demand.</p>
<p>Electric vehicle adoption The federal government has announced that all new light-duty vehicles sold in Canada will be zero emission by 2035, with an interim sales target of at least 50 per cent by 2030. There are additional proposed changes that would support accelerated adoption.</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>
<p>Geopolitical events The current war in Ukraine is disrupting global supply chains and increasing concerns about energy security. Other unforeseen external events could cause market and/or supply chain disruptions.</p>	<p>Sourcing materials from countries that are impacted by geopolitical events carries the risk of longer delivery times, increased prices and lack of availability from preferred suppliers which could result in sourcing less sustainable materials and supplies.</p>	<p>Conversation about enhancing North American energy security could positively impact policy or regulatory development in Canada and the U.S. Developing alternate supply plans that may more closely align with sustainable procurement practices.</p>	<p>As a power producer and electricity service provider, we continue to participate and support developments that can strengthen energy security. ENMAX is developing a Sustainable Procurement Strategy. This strategy will be considered when sourcing alternate supply caused by geopolitical risks.</p>



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?
TECHNOLOGY			
<p>Advancement in battery technology Energy storage will play a larger role in the future as costs for battery storage technologies decline.</p>	<p>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.</p>	<p>Energy storage can create an opportunity to supplement our portfolio.</p>	<p>We are operating a battery storage system at Crossfield Energy Centre, which is a hybrid electric gas turbine. Read more</p>
<p>Advancement in other technologies As they progress, technologies such as hydrogen, carbon capture technology and advanced metering will play an important role in the future.</p>	<p>Technology-related risks are related to the timing of investment. Early investment can lead to increased cost. Delayed investment can lead to missed opportunities.</p>	<p>Advancements in technology present great opportunities for us to meet our net-zero target.</p>	<p>To support innovation and technology development in a way that can lower risk for our company, we are investing in Energy Impact Partners.</p> <p>We are evaluating the feasibility of carbon capture at our Shepard Energy Centre.</p> <p>We support several technology developments, such as:</p> <ul style="list-style-type: none"> - Two-way power flow - Electric mobile fleet - Advanced metering <p>Provincial and federal funding can accelerate technology advancements. These advancements reduce technology costs over time and help to maintain energy affordability for customers.</p>
REPUTATION			
<p>Perception around fossil fuel electricity generation Increased awareness and societal or investor activism around fossil fuels.</p>	<p>Customer perceptions of fossil fuels are increasing pressure on companies to reduce emissions.</p>	<p>ENMAX has a strong history of continual improvement in emissions reduction and will continue to seek cost-effective ways to reach environmental goals.</p>	<p>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.</p>



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

Achieve net-zero scope 1 and 2 emissions by 2050.	<ul style="list-style-type: none"> Reduces carbon regulation exposure. Aligns with The City of Calgary and Government of Canada commitments.
Achieve 70% reduction of scope 1 and scope 2 GHG emissions by 2030 from 2015 levels.	<ul style="list-style-type: none"> Reduces carbon regulation exposure.
Transition 35% of our mobile fleet to zero emission vehicles (ZEV) by 2030.	<ul style="list-style-type: none"> 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.
Offset 100% of our building GHG emissions (scope 1 and scope 2) annually.	<ul style="list-style-type: none"> Supports our larger net-zero target and aligns with our values. Supports renewable energy development.
ENMAX Power, ENMAX Energy and Versant Power each to conduct a pilot project to advance the energy transition by the end of 2023.	<ul style="list-style-type: none"> Underscores our commitment to supporting the energy transition and increasing the resiliency of the electric grid.

ENMAX has been publicly disclosing its scope 1 and 2 GHG emissions since 2009. See our performance for the last five years in the table to the right. Read more about our GHG reduction initiatives on [pages 12-19](#).

GHG EMISSIONS (KILOTONNES CO ₂ E)	2018	2019	2020	2021	2022
EQUITY SHARE					
Scope 1 emissions	2,880	2,899	2,975	3,127	3,242
Scope 2 emissions	15	14	25	24	24
OPERATIONAL CONTROL					
Scope 1 emissions	3,262	3,362	3,475	3,451	3,676
Scope 2 emissions	13	13	21	21	21

Note: Minor updates were made as a result of a third party review of our emissions data.



A Versant power system technician at work on the University of Maine campus.



Appendices

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About this report

This report communicates the ESG initiatives and key metrics that demonstrate ENMAX's progress to date and our commitment to continual advancement.

- The terms ENMAX, our, we, us, and the organization, refer to the ENMAX group of companies unless otherwise noted.
- The data included in tables and charts in this report reflects the performance of our companies in Alberta (ENMAX Corporation, ENMAX Power, ENMAX Energy) and, unless otherwise noted, excludes Versant Power. When data is available for Versant Power, it is provided separately and noted accordingly.
- Qualitative information about the operations and achievements of Versant Power is provided throughout the report and noted explicitly with "Versant Power" or "in Maine."
- Unless otherwise indicated, this report covers data and qualitative information for the year ended December 31, 2022. When available, historical data is provided for four years.
- For all of our targets, the date stated indicates by year end of the stated year. For example, completing an activity by 2023, means completion by the end of 2023.

- For our companies in Alberta, we report environmental and social performance for all assets over which we have operational control. This means we report 100 per cent of data related to environment, human resources, safety and business practices for assets we operate. The only exception to this principle is in accounting for greenhouse gas (GHG) emissions that we report based on financial ownership (see next point).
- We report GHG emissions using guidance from the Greenhouse Gas Protocol, developed by the World Resources Institute and the World Business Council for Sustainable Development, and account for our GHG emissions based on financial ownership (equity share approach). Reporting under the equity approach means that we include ENMAX's proportional output share of the emissions from our Shepard Energy Centre, 50 per cent from our Balzac facility, and GHG emissions associated with structured power agreements such as Energy Service Agreements where ENMAX is responsible for carbon compliance obligations. Following this principle, our 2015 baseline for our net-zero target includes GHG emissions related to our Power Purchase Arrangements (PPAs). GHG emissions for prior years have been restated under the equity share approach.

- Unless otherwise noted, data does not cover third-party service providers.
- Unless otherwise noted, financial data is in Canadian dollars and environmental data is in metric units.
- The accuracy of this report is of significant importance to our company. Senior management, our internal auditors and relevant staff have reviewed key information and believe it is an accurate representation of our performance. In some instances, estimates are made based on best-available information and records at the time of writing.
- See Forward-looking Information Advisory (on [page 86](#)) for information regarding estimates and other forward-looking statements contained in this report.

Aligning with ESG reporting standards

We cross-reference our disclosures in this report to the following recognized standards:

[SASB](#) ————— [page 84](#)

[TCFD](#) ————— [page 67](#)

Read our caution regarding forward-looking statements on [page 86](#).



Performance table

OPERATIONS	UNITS	2018	2019	2020	2021	2022
Electric utility						
Number of customers served (ENMAX Energy) ¹	number	667,700	674,800	690,861	711,233	725,370
Electricity sold to customers in Alberta	GWh	19,668	19,250	17,891	15,509	14,405
Electricity delivered in Calgary service area	GWh	9,520	9,332	9,050	9,271	9,483
Power generation						
Generation capacity, equity based	MW	1,506	1,506	1,509	1,512	1,522
Net Energy Output (electricity generated), equity based	MWh	7,869,096	7,889,814	8,372,681	8,505,430	8,940,035
Natural gas	MWh	7,256,454	7,309,027	7,636,598	7,857,367	8,296,491
Wind	MWh	604,230	570,769	713,197	640,238	643,544
District Energy ²	MWh	8,412	10,018	22,885	7,825	NR
Transmission and distribution						
Total km wire in Calgary	km	9,751	9,908	9,694	9,891	9,862
Number of distribution transformers	number	53,540	54,258	54,754	55,451 ³	56,198
Number of utility poles	number	61,413	61,408	65,054	64,934 ³	64,875
ENVIRONMENT						
GHG emissions (equity)⁴						
Scope 1 emissions	kilotonnes CO ₂ e	2,880	2,899	2,975	3,127 ⁵	3,242
Scope 2 emissions	kilotonnes CO ₂ e	15	14	25	24	24
Total GHG emissions	kilotonnes CO ₂ e	2,895	2,913	3,000	3,151	3,266
GHG emissions intensity (Scope 1 only)	tCO ₂ e/MWh	0.39	0.39	0.39	0.37	0.36

NR = not reported

Notes

- ENMAX Energy customers include electricity and/or natural gas customers, as well as sites that we bill for city services such as water.
- ENMAX completed the sale of its District Energy Centre facility in May 2021.
- 2021 count updated due to improved calculation methods.
- We report GHG emissions based on financial ownership (equity) which means we include ENMAX's proportional share of the emissions from our Shepard Energy Centre, 50 per cent from our Balzac facility, and GHG emissions associated with structured power agreements such as Energy Service Agreements in which ENMAX is responsible for carbon compliance obligations. Following this principle, our 2015 baseline includes GHG emissions related to our Power Purchase Agreements (PPAs). Our GHG emissions from 2017-2020 have been restated since the publication of our 2020 ESG report to account for changes in methodology. The changes represent less than 1 per cent of our total GHG emissions.
- Minor updates were made as a result of a third party review of our emissions data.



ENVIRONMENT CONT'D

	UNITS	2018	2019	2020	2021	2022
GHG emissions (operational control)⁶						
Scope 1 emissions	kilotonnes CO ₂ e	3,262	3,362	3,475	3,451	3,676
Scope 2 emissions	kilotonnes CO ₂ e	13	13	21	21	21
GHG emissions intensity (Scope 1 only)	tCO ₂ e/MWh	0.38	0.38	0.37	0.37	0.37
Scope 1 GHG emissions by source (ENMAX Energy only)						
Natural gas combustion	tonnes CO ₂ e	3,254,004	3,352,027	3,452,622	3,427,566	3,668,533
Fugitive	tonnes CO ₂ e	887	1,336	818	590	745
Fleet ⁷	tonnes CO ₂ e	50	153	25	NR	NR
SF ₆	tonnes CO ₂ e	0	0	0	0	0
Flaring	tonnes CO ₂ e	NR	NR	NR	NR	NR
Other	tonnes CO ₂ e	0	0	0	0	238
Energy transition						
Scope 1 GHG emissions covered under emissions-limiting regulations ⁸	per cent	NR	NR	100	100	100
Scope 1 GHG emissions covered under emissions-reporting regulations	per cent	NR	NR	100	100	100
Grid Resiliency						
Investment in Calgary's Transmission and Distribution (T&D) System and other assets	\$ million	228	305	259	253	273
Reliability and availability						
System Average Interruption Duration Index (SAIDI) ⁹	hours	0.54	0.42	0.47	0.53	0.50
System Average Interruption Frequency Index (SAIFI) ⁹	# interruptions per customer	0.80	0.72	0.54	0.62	0.65
Customer Average Interruption Duration Index (CAIDI) ⁹	hours	0.68	0.58	0.87	0.86	0.77
Average generation plant availability factor	per cent	93.4	93.3	98.7	91.9	93
Air quality¹⁰						
NO _x intensity ¹¹	kg/MWh	0.18	0.18	0.21	0.23	0.23
NO _x (excluding N ₂ O)	tonnes	1,657	1,612	1,926	2,102	2,250
Particulate matter (PM ₁₀)	tonnes	14	15	15	12	16
SO _x	tonnes	16	16	17	13	18
NO _x in or near areas of dense population	tonnes	1,253	1,231	1,312	1,637	1,837
PM ₁₀ in or near areas of dense population	tonnes	13	13	14	10	15
SO _x in or near areas of dense population	tonnes	15	15	15	10	16

Notes

- To allow comparability with historical information, we also provide GHG emissions under operational control which means 100 per cent of GHG emissions from facilities which we operate regardless of financial ownership.
- Beginning in 2021, fleet related emissions (that in previous years were included under ENMAX Energy) are included in corporate scope 1 emissions.
- Emissions-limiting regulations include carbon tax.
- Excludes Versant Power.
- Air quality data is limited to air emissions from power generation facilities, excluding Balzac Facility.
- The calculation methodology for NO_x intensity values were reviewed in 2022 resulting in correction as now noted.



ENVIRONMENT CONT'D

	UNITS	2018	2019	2020	2021	2022
Water management						
Water consumption intensity ¹²	m ³ /MWh	0.70	0.69	0.69	0.67	0.74
Water consumption	million m ³	6.06	6.18	6.57	6.14	7.03
Total water withdrawn	million m ³	7.51	7.61	8.11	7.66	8.64
Fresh	million m ³	1.97	2.09	2.10	2.28	2.28
Non-potable (Reclaimed)	million m ³	5.54	5.52	6.00	5.37	6.36
Total water discharged	million m ³	1.41	1.40	1.53	1.50	1.60
Spills¹³						
Significant spills, number	number	0	1	2	3	4
Significant spills, volume	litres	0	552	2,516	2,177	779

	UNITS	2018	2019	2020	2021	2022
SOCIAL						
Employee and contractor safety						
Total recordable incident rate (TRIR)	injuries per 200,000 hours worked	0.71	0.94	0.34	0.74	0.74
Lost time injury frequency rate	injuries per 200,000 hours worked	0.13	0.20	0.07	0.45	0.15
Fatalities	number	0	0	0	0	0
Near misses – serious	number	8	6	1	12	8
Public safety						
Number of public injuries	number	0	0	0	0	0
Number of public fatalities	number	0	0	0	0	0
Employees						
Total number of employees	number	1,744	1,797	1,692	1,651	1,690
Employee turnover rate	per cent	12	8	9	11	8
Training and development						
Average hours of training per year per participant (excludes mandatory)	hours	19	12	8	11	14

Notes

12. Our water consumption intensity is calculated using our net output MWh, operational basis.
13. All significant spills are spills of more than 500 litres in alignment with industry standards (including EC) for sustainability reporting. At ENMAX all releases to the environment are reported to our Environment personnel, who report to Alberta Environment and Parks (AEP) any release in excess of one gram of Polychlorinated Biphenyl (PCB) concentration from in-service equipment or two parts per million or greater of PCB from stored equipment, any release that has the potential to cause an adverse effect, or any release that has the potential to contravene an AEP facility operating approval.



SOCIAL CONT'D	UNITS	2018	2019	2020	2021	2022
Diversity and inclusion						
Employees who completed respect in the workplace training	number	1,750	1,859	1,793	1,684	1,619
Total number of incidents of discrimination reported ¹⁴	number	0	0	0	1	1
Women at various levels						
Board	per cent	38	38	33	36	33
Sr. Mgmt (Senior VP and above)	per cent	50	67	50	50	50
Total Workforce	per cent	33	35	35	35	36
Unions						
Employees covered by a collective bargaining agreement	per cent	62	61	62	63	63
Energy affordability						
Number of residential and small commercial customer electric disconnections for nonpayment ¹⁵	number	19,841	14,903	6,006	14,018	9,328
Customers reconnected ¹⁶	number	NR	NR	3,869	11,540	7,185
Community investment						
Community investment	million \$	3.8	3.5	2.8	3.3	3.7
GOVERNANCE						
Customer satisfaction						
Customer satisfaction	out of 100%	86%	86%	90%	87%	88%
Anti-corruption and anti-competition						
Number of legal cases regarding corrupt practices	number	0	0	0	0	0
Number of significant legal actions for anti-competitive, anti-trust behaviour	number	0	0	0	0	0
Physical and cybersecurity						
Number of phishing tests conducted	number	4	8	14	11	15
Employees who received cybersecurity training	number	1,747	1,856	1,792	1,832	1,882

Notes

14. The matter was investigated under the Safe & Respectful Workplace Policy with full resolution.
15. Disconnection data includes both disconnections and load limiter installations. 2020 disconnections are lower than previous years due to ENMAX halting disconnection activities for most of the year due to the deferral program related to the COVID-19 pandemic. The 2022 disconnections are lower due to the Load Limiter Pilot. The number of customer electric disconnects for nonpayment or vacancies includes residential and small business customers.
16. Total reconnections, not necessarily within 30 days. Reconnections may not happen due to extended vacancies or customer changes in provider.



Performance table – Versant Power

COMPANY CONTEXT	UNITS	2020	2021	2022
Electric utility				
Number of customers served	number	166,236	162,000	164,000
Electricity sold to customers	GWh	1,971	1,995	2,054
Electricity delivered	GWh	1,938	2,075	2,050
Transmission and distribution				
Total km wires	km	12,022	12,022	11,834
Number of distribution transformers	number	68,000	68,000	68,000

ENVIRONMENT	UNITS	2020	2021	2022
GHG Emissions				
Scope 1 emissions	tonnes CO ₂ e	NA	NA	6,890
Scope 2 emissions	tonnes CO ₂ e	NA	NA	1,370
Spills				
Significant spills, number	number	0	0	0
Significant spills, volume	litres	0	0	0
Reliability				
System Average Interruption Duration Index (SAIDI)	hours	5.03	3.63	5.43
System Average Interruption Frequency Index (SAIFI)	# interruptions per customer	2.27	1.97	2.46
Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	hours	2.21	1.84	2.21

SOCIAL	UNITS	2020	2021	2022
Energy affordability				
Number of residential customer electric disconnections for nonpayment	number	65	1,292	924
Number of residential customer electric disconnections reconnected	number	6	962	691
Employees				
Total number of employees	number	433	454	497
Number of employees covered by collective bargaining agreements	per cent	55	51	49
Employee and contractor safety				
Proactive Incident Report (PAIR) Rate	proactive measures per 200,000 hours worked	867	1,020	1,031
Total recordable incident rate (TRIR)	injuries per 200,000 hours worked	0.94	0.67	1.63
Lost time injury frequency rate	injuries per 200,000 hours worked	0.00	0.00	0.00
Fatalities	number	0	0	0
High potential near misses	number	0	3	3
Diversity and inclusion				
Women in the workforce	per cent	NR	NR	33
Communities				
Community investment	USD \$	NR	NR	486,096
Volunteered hours	hours	NR	298	700

NA = Not applicable
NR = Not reported



SASB index

Below are the metrics and references to qualitative descriptions in this report that align with the Sustainability Accounting Standards Board (SASB) standard for electric utilities and power generators. SASB is a non-profit organization with the goal of enabling businesses around the world to identify, manage and communicate financially-material sustainability information to their shareholders and providers of capital. This index excludes Versant Power.

* Reclaimed wastewater meets the criteria for freshwater under the Alberta Water Act.

SASB INDEX	SASB SUGGESTED DISCLOSURES	2022 DATA
GHG emissions & energy resource planning		
IF-EU-110a.1	Gross global scope 1 emissions (operational control) [tonnes CO ₂ e]	3,675,298
IF-EU-110a.1	Gross global scope 1 emissions (equity) [tonnes CO ₂ e]	3,241,660
IF-EU-110a.1	Percentage of scope 1 emissions covered under emissions-limiting regulations	100%
IF-EU-110a.1	Percentage of scope 1 emissions covered under emissions-reporting regulations	100%
IF-EU-110a.2	GHG emissions associated with power deliveries	not reported
IF-EU-110a.3	Discussion of long-term and short-term strategy or plan to manage scope 1 emissions, emissions reduction targets, and performance against targets	pages 4-5, 12-19, 73, 76
IF-EU-110a.4	(1) Number of customers served in markets subject to renewable portfolio standards (RPS) and (2) percentage fulfillment of RPS target by market	not applicable
Air quality		
IF-EU-120a.1	NOx (excluding N ₂ O) [tonnes]	2,250
IF-EU-120a.1	SOx [tonnes]	18
IF-EU-120a.1	Particulate matter (PM ₁₀) [tonnes]	16
IF-EU-120a.1	Lead (Pb)	not applicable
IF-EU-120a.1	Mercury (Hg)	not applicable
IF-EU-120a.1	Percentage of NOx in or near areas of dense population	82%
IF-EU-120a.1	Percentage of SOx in or near areas of dense population	89%
IF-EU-120a.1	Percentage of particulate matter (PM ₁₀) in or near areas of dense population	94%
Water management		
IF-EU-140a.1	Total water withdrawn (fresh and non-fresh) [million m ³]	8.64
IF-EU-140a.1	Percentage of water withdrawn that is fresh	100%*
IF-EU-140a.1	Total water consumed [million m ³]	7.03
IF-EU-140a.1	Percentage of water withdrawn and consumed in regions with High or Extremely High Baseline Water Stress	not reported
IF-EU-140a.2	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	not reported
IF-EU-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	page 29



SASB INDEX	SASB SUGGESTED DISCLOSURES	2022 DATA
Coal ash management		
IF-EU-150a.1	Amount of coal combustion residuals (CCR) generated, percentage recycled	not applicable
IF-EU-150a.2	Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment	not applicable
Energy affordability		
IF-EU-240a.1	Average retail electric rate for (1) residential, (2) commercial, and (3) industrial customers	not reported
IF-EU-240a.2	Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month [reporting currency]	not reported
IF-EU-240a.3	Number of residential customer electric disconnections for nonpayment	9,328 ¹⁵
IF-EU-240a.3	Percentage of customers reconnected (not necessarily within 30 days)	77%
IF-EU-240a.4	Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	pages 7, 48-53
Workforce health & safety		
IF-EU-320a.1	Total recordable incident rate (TRIR)	0.74
IF-EU-320a.1	Fatalities	0
IF-EU-320a.1	Near misses (serious)	8
End-use efficiency & demand		
IF-EU-420a.1	Percentage of electric utility revenues from rate structures that (1) are decoupled and (2) contain a lost revenue adjustment mechanism (LRAM)	not applicable
IF-EU-420a.2	Percentage of electric load served by smart grid technology	not reported
IF-EU-420a.3	Customer electricity savings from efficiency measures, by market	not reported
Nuclear safety & energy management		
IF-EU-540a.1	Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	not applicable
IF-EU-540a.2	Description of efforts to manage nuclear safety and emergency preparedness	not applicable
Grid resiliency		
IF-EU-550a.1	Number of incidents of non-compliance with physical standards or regulations	not reported
IF-EU-550a.1	Number of incidents of non-compliance with cybersecurity standards or regulations	not reported
IF-EU-550a.2	System Average Interruption Duration Index (SAIDI) [hours]	0.50
IF-EU-550a.2	System Average Interruption Frequency Index (SAIFI) [number of interruptions per customer]	0.65
IF-EU-550a.2	Customer Average Interruption Duration Index (CAIDI), inclusive of major event days [hours]	0.77



Forward-looking information advisory

This report contains certain forward-looking statements and forward-looking information (collectively referred to as “forward-looking information”) about our current intentions, expectations, estimates and projections about the future, as well as targets that we have set for future business conditions, in each case based on certain assumptions made by us in light of our experience and perception of historical trends. Forward-looking information in this report is identified by words such as “aim”, “ambition”, “anticipate”, “believe”, “can”, “committed”, “confident”, “continue”, “develop”, “enhance”, “ensure”, “estimate”, “expect”, “focus”, “goal”, “improve”, “increase”, “integrate”, “invest”, “maintain”, “plan”, “potential”, “priority”, “reduce”, “remain”, “strategy”, “strive”, “target”, “vision” and “will”, or similar words or expressions and includes suggestions of future outcomes. Although ENMAX believes that the expectations represented by such forward-looking information are reasonable, there is no assurance that events will occur in accordance with such expectations. Readers are cautioned not to place undue reliance on forward-looking information as actual results may differ materially from those expressed or implied.

Forward-looking information in this report includes, but is not limited to, statements about: our vision for achieving net-zero scope 1 and scope 2 GHG emissions by 2050 and our targets in implementing this vision; plans to purchase GHG offsets in 2023; our plans to reduce or offset GHG emissions by 2030 from a 2015 baseline and our strategies to achieve that, including the transition of a portion of our mobile fleet to zero emission vehicles by 2030 and offsetting 100 per cent of our building GHG emissions (scope 1 and 2) annually; our plans to develop GHG Action Plans for our GHG-emitting facilities; options we are considering to enhance ESG performance through new technologies; our plans for ENMAX Power, ENMAX Energy and Versant Power to each conduct a pilot project to advance the energy transition in 2023; our plans to continue progressing actions against the diversity, inclusion and belonging roadmap and to update and expand categories of workforce diversity measurement and our intent to survey all employees in 2023; our plans to provide inclusiveness training and training regarding the history of Indigenous Peoples in 2023; our plans regarding communication of opportunities for improvements in hydrovac slurry management; our expectations regarding our completion of oil spill cleanup by the end of 2023; our plans to invest in activities and organizations that support customers in the energy affordability lifecycle; our goal to conduct six pilot projects for energy access and affordability by 2025. Versant Power’s plans to complete two of the six pilot projects; plans to implement a medium-duty mobile fleet electrification pilot project, including the anticipated phases leading to completion; plans for the FEED study to evaluate the technical and financial feasibility of integrating a carbon capture unit at our Shepard Energy Centre and the opportunity to make this facility home to one of the first commercial-scale natural-gas combined-cycle carbon capture units in North America; plans to install rooftop solar panels on community association buildings in the first half of 2023; other plans for the installation of solar generating facilities and the use of two-way power flow on our secondary systems; the expected impacts of the energy transition arising from current energy trends; expectations regarding future federal, state and provincial government regulatory programs, including changes in carbon pricing and GHG regulations; our efforts to improve our safety culture; our plans to improve our risk management strategies; our plans to continue our hybrid work model; our plans regarding training for customer facing teams in 2023; plans to roll out a customer experience strategy to employees in 2023; Versant Power’s plans to develop and implement an action plan to address results of its engagement survey; Versant Power’s plan to create a diversity, inclusion and belonging roadmap by end of 2023 and to launch a new diversity and inclusion-related

training course for leaders in 2023; our plans to integrate Versant Power’s data with ENMAX’s; Versant Power’s plans to complete additional undersea cable replacement projects in 2023; Versant Power’s plans to improve customer interaction; our plans to incorporate our operations in Maine into more ESG target areas; our plans to maintain Board of Directors composition of at least 30% women and at least one other member from an underrepresented group; our plans to develop a sustainable procurement strategy by the end of 2023; our plans to implement AMI meters in Calgary; and expectations regarding information to be included in future ESG reports.

This forward-looking information is based on certain assumptions, including: that ENMAX will have the financial, human and other resources available to carry out its plans and meet its targets; that laws and regulations will not change in a material way in a manner that requires significant changes to our plans or to our targets; that general economic conditions will not change materially; that technological changes will not occur in a material way that affects our ability to carry out our plans and meet our targets; that our relationship with our Shareholder (The City of Calgary), our employees and applicable unions, our lenders, and our applicable communities, including Indigenous communities, do not vary significantly in the future in a manner that requires significant changes to our plans or targets or the ability to meet our GHG reduction and other ESG targets; that unexpected external events will not occur that affects the business generally and our plans and strategies; and other assumptions as to the businesses of ENMAX generally, and of Versant Power, not changing materially in the foreseeable future.

There are risk factors and uncertainties that could cause our actual results to differ materially from those set forth in the forward-looking information contained herein. These include risks to ENMAX meeting our 2030 and 2050 climate and GHG emissions reductions targets and further ambitions, including: ENMAX’s ability to develop, access or implement some or all of the technology necessary to efficiently and effectively operate assets and achieve expected future results; the commercial viability of emissions reduction strategies and related technology and products; uncertainty regarding the status of offsets, including due to renewable energy generation, recognition under future government policies and by ESG rating organizations and the measurability of offsets to count as emissions reductions. There are also general risks with respect to ENMAX meeting its ESG targets, commitments, ambitions and strategies in the manner expected, including: restrictions on access to resources needed to meet our plans and targets; increased operating, capital and compliance costs; increasing consideration of ESG factors by parties with whom we have relationships, including among credit rating agencies, lenders and investors, which may impact ENMAX’s ability to access capital required to finance growth and sustaining capital expenditures; our ability to receive necessary regulatory and operating approvals in a timely manner; maintenance of key relationships with government and other regulatory bodies; risks associated with technology and its application to ENMAX’s business; risks associated with reputation of companies that generate electricity from fossil fuels and litigation related thereto; changes in general economic, market and business conditions; the effectiveness of ENMAX’s risk management program; ENMAX’s ability to develop, access or implement some or all of the technology necessary to efficiently and effectively achieve expected future results; the occurrence of unexpected events such as fires, extreme flooding, other severe weather, equipment failures, transportation incidents and other accidents or similar events; unexpected cost increases or technical difficulties in building or maintaining our facilities; availability of, and our ability to attract and retain qualified human resources in a timely and cost-efficient manner;

risks associated with climate change and our assumptions relating thereto; changes in the regulatory framework in any of the locations in which we operate, including changes to regulatory approval processes and tax, environmental, greenhouse gas, carbon, climate change and other laws or regulations; potential changes to market expectations and practices related to human resources, diversity and governance practices; risks relating to threats from cybersecurity and other technological challenges; and the occurrence of unexpected events such as pandemics, terrorist threats, foreign conflicts and related geopolitical events and the instability resulting therefrom.

In addition, there are risks that the effect of actions taken by us in implementing targets, commitments and ambitions for ESG focus areas may have a negative impact on our existing business, plans and future results from operations.

It is not possible to predict precisely how the future will unfold and as such, each scenario is inherently uncertain. Our assumptions may prove to be incorrect or inadequate. Events or factors currently unknown to us could materialize and materially affect the outcome of a particular scenario or lead to a scenario not considered, which scenario may adversely affect our operations and financial condition.

All estimates and targets contained in this report are made as of the date of the report based on currently available information. ENMAX undertakes no obligation to update or revise any forward-looking information except as required by law.

