2023
Climate Transition Plan Update

Emera

Table of Contents

About this Update

Our 2023 Emera Climate Transition Plan Update complements Emera's 2023 Sustainability Report. It's informed by the Task Force on Climate-related Financial Disclosures (TCFD) and provides additional details about the progress we're making on the transition to cleaner energy and how we plan to continue building on this progress. This publication is part of our suite of annual disclosure documents. For more information about Emera, please see our other reports:

2023 Annual Report

2024 Management Information Circular

2023 Sustainability Report

Unless otherwise stated, all currency is in Canadian dollars.

Forward-Looking Information

This climate transition plan update contains forward-looking information and forward-looking statements within the meaning of applicable securities laws (collectively, "forward-looking information"). Words such as *anticipates, believes, budget, continue, could, estimates, expects, forecast, goals, intends, may, objectives, plans, projects, schedule, should, strategy, targets, will, would* and similar words and expressions are often intended to identify forward-looking information, although not all forward-looking information contains these identifying words. References to "Emera" in this section include references to the subsidiaries of Emera.

The forward-looking information includes, but is not limited to, statements which reflect the current view of Emera's management with respect to Emera's goals, objectives, plans, strategies, financial and operating performance, our Climate Commitment goals, our carbon dioxide reduction goals, net-zero by 2050 vision, climate adaptation framework, climate adaptation planning, measures and investment, scenario analysis and climate change impact mitigation, environmental impact reduction plans, new technologies and capital investment plans and utility asset management frameworks, plans for additional more renewable and non-emitting energy generation and sales, increased demand for electrification, transmission and storage, forecasted rate base growth, delivery of cleaner, reliable energy, fuel conversion projects, phasing out coal generation, plans to ensure a fair and just clean energy transition, electricity grid modernization, storm hardening, reliability and system integrity, infrastructure modernization and expansion, and other business prospects and opportunities. All such forward-looking information is provided pursuant to safe harbour provisions contained in applicable securities laws.

The forecasts and projections that make up the forward-looking information are based on reasonable assumptions which include, but are not limited to: the receipt of applicable regulatory approvals and requested rate decisions; collaborative effort by utilities, governments, regulators, customer stakeholders and Indigenous communities; expectations regarding the nature, timing and costs of capital investments of Emera and its subsidiaries; continued investment in solar, onshore and offshore wind generation and hydro generation; sufficient liquidity and capital resources; changes in customer energy usage and behaviour patterns due to electrification; availability of new technologies and solutions to address the clean energy transition, including grid-scale battery storage, carbon capture and storage, green hydrogen and microgrids; availability of cleaner energy imports from other jurisdictions; availability of additional renewable energy through power purchase agreements; continued investment in grid modernization, storage, resiliency, reliability and system maintenance to support increased intermittent renewables and withstand increasingly severe weather events; continued support for clean energy research and development and partnerships with academic institutions to advance innovation; the absence of significant changes in government energy plans and environmental laws and regulations that may materially affect Emera's operations and cash flows; opportunities to access government clean energy transition programs, including incentives, grants and tax credits to accelerate the development of technologies and help reduce customer costs; and sufficient human resources to deliver service and execute Emera's capital investment plan.

The forward-looking information is subject to risks, uncertainties and other factors that could cause actual results to differ materially from historical results or results anticipated by the forward-looking information. Factors that could cause results or events to differ from current expectations include, but are not limited to: regulatory, policy and political risk; operating and maintenance risks; changes in economic conditions; commodity price and availability risk; liquidity and capital market risk; changes in credit ratings; timing and costs associated with certain capital investments; expected impacts on Emera of challenges in the global economy; estimated energy consumption rates; availability and maintenance of adequate insurance coverage; changes in customer energy usage patterns; developments in technology that enable the replacement of existing energy supply sources with renewable or lower carbon sources; developments in technology that could reduce demand for electricity; global climate change and related physical risks; weather risk, including increased frequency and severity of weather events; increased frequency and severity risk of wildfires; unanticipated maintenance and other expenditures; system operating and maintenance risk; interest rate risk; inflation risk; counterparty risk; disruption of fuel supply; country risks; supply chain risk; environmental risks; foreign exchange; regulatory and government decisions, including changes to environmental legislation, financial reporting and tax legislation; loss of service area; risk of failure of information technology infrastructure and cybersecurity risks; uncertainties associated with infectious diseases, pandemics and similar public health threats; market energy sales prices; reputational risk; labour relations; and availability of labour and management resources.

Readers are cautioned not to place undue reliance on forward-looking information as actual results could differ materially from the plans, expectations, estimates or intentions and statements expressed in the forward-looking information. For additional information with respect to certain of these risks, uncertainties and/or other factors, refer to the continuous disclosure materials filed from time to time by Emera with Canadian securities regulatory authorities and the United States Securities and Exchange Commission. All such forward-looking information is qualified in its entirety by the above cautionary statements and, except as required by law, Emera undertakes no obligation and disclaims any intention to revise or update any forward-looking information as a result of new information, future events or otherwise. Forward-looking information in this climate transition plan update is presented for the purpose of assisting our stakeholders in understanding certain of our climate transition plan progress, goals and objectives in the context of our anticipated operating environment. Such information may not be appropriate for other purposes.

Other

Rate base is a financial measure specific to rate-regulated utilities that is not intended to represent any financial measure as defined by GAAP. The measure is required by the regulatory authorities in the jurisdictions where Emera's rate-regulated subsidiaries or equity investments operate, as discussed throughout Emera's Q4 2023 MD&A, which can be found under Emera's profile on SEDAR+ at www.sedarplus.ca. The calculation of this measure as presented may not be comparable to similarly titled measures used by other companies.

Introduction

Climate change presents some of the most significant global challenges of our time, particularly in the energy industry where we're not only working to reduce our carbon dioxide (CO_2) emissions, but also managing increased demand from electrification, a critical enabler of decarbonization for other sectors.

Trees are trimmed back from Nova Scotia Power lines. Proactive vegetation management is critical as storms become increasingly severe and more frequent.

For us, climate change brings two distinct but related risks and streams of action – the transition to cleaner energy and the need to adapt to the physical impacts of climate change. We know our utility customers want cleaner and reliable energy and they are concerned about affordability. And governments have mandated clean energy targets in some of our operating jurisdictions. At the same time, we must invest more in asset management and storm hardening to ensure our generation facilities, energy delivery equipment and other assets are better prepared to withstand the impacts of increasingly severe weather events.

Our investments in key projects like the modernization of Big Bend Power Station converting from coal to gas generation, solar generation in Florida, and the Maritime Link and battery storage in Atlantic Canada are helping to drive our growth and our progress toward a cleaner energy future. These projects have helped us make significant progress on our emissions reduction efforts and will continue to support our progress going forward. Since 2005, we've reduced our CO_2 emissions by 47 per cent and we continue building on this progress with additional planned investments in renewable energy and fuel conversion projects across the business.

By working with a range of stakeholders, we have made solid progress on the energy transition with a focus on ensuring reliability and affordability for our utility customers. However, there is much more to be done to meet our 2050 net-zero vision and government mandates.

In Canada, there are government requirements to phase out coal generation by 2030 and in Nova Scotia to achieve 80 per cent renewable electricity sales by 2030. The federal government is also currently engaging with stakeholders on additional Clean Electricity Regulations which could be in place for 2035. In the United States, there is an opportunity to access incentives that allow for carbon-reducing technologies which also benefit customers and the reliability of the system.

Expectations to meet government mandates and access considerable incentives to advance carbon-reducing technologies leave utilities across North America to face the formidable task of transitioning to more renewable and non-emitting generation as quickly as possible, while at the same time working to address the enormous costs associated with a transition of this magnitude – costs that need to be responsibly addressed to minimize the impact on affordability for utility customers.

The path to a clean energy future is not a simple one. It will take collaboration by governments, regulators, customers stakeholders and Indigenous communities. At Emera, our capital investment plan includes significant investments in renewable and cleaner generation, reliability and system integrity, infrastructure modernization and expansion to meet the needs of new and existing customers, and technologies to better support the business and service for customers in our operating companies. In keeping with our strategy, our teams will plan and approach this work at a pace that's balanced with the cost impacts for utility customers, however government collaboration and support from all stakeholders will be critical.

This *Climate Transition Plan Update* provides an overview of our progress to date, our plans to continue building on our progress and the challenges ahead as we work to deliver a clean energy future.

On page 19, we've included an updated infographic on the progress we're making toward our Climate Commitment goals. We've also outlined additional details about our path toward net-zero by 2050 in our Net-Zero Roadmap graphic on page 20.

To support reliability, Tampa Electric crews work to bury power lines underground.

Task Force on Climate-related Financial Disclosures (TCFD)

Our Climate Transition Plan Update is designed to provide the most recent information about how we're addressing the physical and transition risks of climate change.

The need to address the transition and physical risks of climate change is fully integrated into our risk management processes and subject to strong oversight and governance.

Our sustainability approach aligns with TCFD's four core elements – **Governance, Strategy, Risk Management** and **Metrics and Targets.**

Core Elements of Recommended Climate-related Financial Disclosures

1

GOVERNANCE

The organization's governance around climate-related risks and opportunities

2

STRATEGY

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning

3

RISK MANAGEMENT

The processes used by the organization to identify, assess and manage climate-related risks

4

METRICS AND TARGETS

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

Governance

Strong governance and oversight are core to our approach for reducing our impacts on the environment while we also address the impacts of climate change on our businesses.

Board Oversight

Emera's Board of Directors oversees our strategy and the management of climate risks and opportunities. The Risk and Sustainability Committee (RSC) of the Board oversees our approach to the energy transition and sustainability risk management.

Learn More

- 2024 Management Information Circular – Skills and Experience
- Board of Directors and Committee Charters
- Sustainability Management Committee Charter
- Risk and Sustainability Committee Charter
- Sustainability Governance Structure

The Health, Safety and Environment (HSE) Committee of the Board oversees health, safety and environmental programs and performance for Emera and our operating companies. Related to the climate transition, the HSE is focused on performance related to emissions reductions, environmental impacts and climate adaptation work, among its other mandated areas.

Based on Emera's strategic objectives and the nature of its operations, the Board has established a list of core skills and qualifications of Board members that are essential to providing effective oversight and guidance to the management team. The Board strives to nominate Directors with an appropriate mix of these skills and qualifications. All of Emera's 2024 Director nominees have varying degrees of experience in sustainability and environment, social and governance (ESG), having led or overseen ESG programs, sustainable practices, corporate social responsibility programs and/or diversity, equity and inclusion initiatives.

In addition, Emera's operating companies each have local Boards of Directors that oversee planning and performance related to the company's health, safety and environmental accountabilities, including climate risk. Most of the activities that support the achievement of our Climate Commitment and put sustainability into action occur within our operating companies.

Management Focus

Emera's Sustainability Management Committee (SMC) is comprised of senior leaders from across the business and is chaired by our CEO. Through the Chief Risk and Sustainability Officer, the SMC works closely with the RSC and plays a critical role in establishing our sustainability priorities and advancing our planning, disclosures and performance including those related to climate change and the energy transition. The SMC receives guidance and input from the RSC and addresses concerns and action items in its quarterly meetings.

Climate change risks and opportunities are evaluated by the management team and Board of Directors when advancing major project planning, risk management policies, forecasts, performance objectives, capital expenditures, acquisitions, and divestitures. The SMC and RSC Charters outline the governance and objectives of each Committee and their responsibilities for sustainability oversight.

As we work toward our 2025 CO_2 emissions reduction goal, our 2024 Short-Term Incentive Plan, based on our Corporate Scorecard, connects a portion of executive compensation to the achievement of the following Environment Measure: Year-end emission forecasts and updated climate transition plan to demonstrate that Emera is on track to fully achieve its 2025 Climate Commitment goal.

The management teams within our operating companies are responsible for planning and implementing relevant initiatives within their businesses that put environmental, social and governance priorities into action within their respective businesses.

Environmental Management System (EMS)

Our established EMS provides Emera-wide guidance for appropriately addressing environmental risks, opportunities, and compliance obligations across the business. It has several key components that drive the management and continual improvement of all aspects of environmental performance, including those related to climate change, such as reducing CO_2 and other air emissions, as well as climate risk and adaptation.

Aligned with the process outlined in our EMS, climate risks and opportunities across Emera are integrated into the business practices, strategies, and objectives of our respective operating companies.

See the *Risk Management* section of this update for more information.

RSC RESPONSIBILITIES

The RSC meets a minimum of three times per year to:

- discuss climate-related topics,
- monitor emerging climate risks and trends,
- review core components of Emera's Climate Transition Plan, including internal tracking process,
- review climate-related disclosure and feedback from investors and other stakeholders,
- work with leadership team [and Emera Audit Committee] to ensure Emera is well-prepared for anticipated mandatory climate-related disclosures.

Strategy

Decarbonization has been a strategic focus at Emera for nearly 20 years. We continue investing to reduce the CO_2 emissions profile of the energy we deliver and to modernize the grid to support the changing ways energy is being used. We're also investing in innovative technologies and in reliability, storm hardening and system expansion to meet customer needs.

Our Climate Commitment articulates our clean energy objectives and our vision to achieve net-zero by 2050. We call this our vision because the path to net-zero is not an easy one and there are significant challenges ahead. As we work to build on the progress we've made, achieving our objectives in 2040 and beyond will rely heavily on a variety of factors, including market conditions and emerging technologies.

Our Climate Commitment

The team across Emera is working together to meet our Climate Commitment goals[1] and our vision to achieve net-zero CO_2 emissions[2] by 2050.

2023 PROGRESS	2025 GOAL	2040 GOAL	2050 VISION
47% reduction in CO_2 emissions and **77% reduction** in coal use[3]	**55% reduction** in CO_2 emissions	**80% reduction** in CO_2 emissions and **last coal unit retired** no later than 2040	**Net-Zero** CO_2 emissions

1 Our Climate Commitment goals are compared to 2005 levels. Achieving our climate goals on these timelines is subject to external factors beyond our control and dependent upon decisions of, and/or support from, others including government, regulators, independent system operators, independent power producers, interconnected utilities, partners, investors, customers and Indigenous communities. We will only proceed with forward-looking investments where we can demonstrate to the satisfaction of regulators that such investments are prudent and the most cost-effective solution for customers within the applicable legislative and regulatory regimes.

2 98 per cent of Emera's total Scope 1 and 2 GHG emissions inventory is CO_2 emissions. Approximately 94 per cent of this total are emissions from Nova Scotia Power and Tampa Electric.

3 Reduction in GWh generated from coal since 2005.

Investing to Address Climate Change

Across Emera, our teams are innovating and delivering on ambitious projects and planning. We take a holistic view of climate risks and opportunities to act on climate impacts and adapt as the climate changes. We're making strategic investments in cleaner energy and climate adaptation and we're investing time with stakeholders to collaborate on a cleaner energy future.

More than 60 per cent of our $8.9 billion capital plan over the 2024–2026 period is committed to cleaner energy and reliability initiatives across the business. This includes significant investment in renewable and cleaner generation, reliability and system integrity, infrastructure modernization and expansion, and advancing technologies.

Our approach to decarbonization has been focused on three main areas – fuel conversion of existing units, commissioning of new natural gas units, and increasing renewable energy including building transmission to support cleaner energy imports from other jurisdictions. This has been particularly important at our largest electrical utilities, Tampa Electric and Nova Scotia Power, which combined account for 94 per cent of our CO_2 emissions in 2023, and where our biggest reductions have been achieved. Our gas utilities by comparison only cover less than 1 per cent of our total Scope 1 and 2 CO_2 emissions.

CLEANER & MORE RELIABLE CAPITAL PROJECTS (2024–2026)

$M CAD

Tampa Electric – Storm hardening	**$795**
Tampa Electric – Solar investments	**$690**
Tampa Electric – Grid modernization, AMI and LED	**$550**
Nova Scotia Power – Reliability projects	**$550**
New Mexico Gas – Reliability projects	**$550**
PGS – Reliability and RNG projects	**$340**
Labrador Island Link – Transmission investment	**$240**
Tampa Electric – Battery storage	**$165**
Other projects (energy delivery upgrades, DG, storage, etc.)	**$1,640**
Total	**$5,520**
% of baseline capital program	**62%**

Coal Retirement and Fuel Switching and Conversion

Our focus on fuel conversion has allowed us to incorporate more natural gas while reducing our reliance on coal.

At Tampa Electric, we completed the Big Bend modernization project, which converted one unit from coal to high-efficiency, combined-cycle natural gas and retired two other coal units. This work has resulted in fuel cost savings for customers and significantly reduced our use of coal at the facility and associated CO_2 emissions. We're also planning to add 75 MW of capacity at Tampa Electric by using Reciprocating Internal Combustion Engines (RICE), peaking resources which are critical to support increasing levels of intermittent solar generation. By placing generation closer to where the energy will be used, we can also reduce energy loss on our lines, leading to fuel savings and also avoid a transmission investment which would otherwise have been needed.

Two natural gas units that were installed as part of the modernization project at Tampa Electric's Big Bend Power Station.

Fuel conversion has been part of the approach at Nova Scotia Power for many years. For example, at the Tufts Cove Generation Station, units 1, 2 and 3 were converted to run on both natural gas and oil, with these running primarily on gas today. The Tuft's Cove site also has three other natural gas units equipped with a waste heat capturing system to generate energy without additional fuel or associated CO_2 emissions.

This historic experience with fuel conversion projects will be valuable as Provincial regulations in Nova Scotia are increasing the pace of the clean energy transition. In late 2023, the Province of Nova Scotia released its *2030 Clean Power Plan* outlining the actions required to achieve 80 per cent electricity sales from renewable sources and phase out coal by 2030 in Nova Scotia.

In line with this, Nova Scotia Power submitted its *Path to 2030* to its regulator, the Nova Scotia Utility and Review Board (UARB), outlining the proposed plan to achieve these targets. The plan includes the addition of more wind and solar generation, the installation of grid-scale battery storage, and building fast-acting natural gas generation, with the flexibility to use clean fuels such as green hydrogen and biofuels, to integrate more renewable generation into the mix and to support their intermittent nature. Nova Scotia Power has also proposed operating three coal units solely on heavy fuel oil to be used in a peaking role that supports supply reliability (such as in times of high demand), converting another unit to natural gas, and retiring four other coal units by 2030.

1 One small hydro unit was decommissioned in 2023.
2 Based on owned and purchased renewable GWh generated.

Increasing Renewable Energy

INSTALLED RENEWABLE GENERATION CAPACITY (MW)

by operating company (excludes purchased energy)

	2022	2023
Tampa Electric	1,023	**1,252**
Nova Scotia Power	591	**590**[1]
Emera Energy	30	**30**
Barbados Light and Power	10	**10**
Total	**1,654**	**1,882**

Emera has invested considerable capital in a variety of renewable energy opportunities including solar, wind, hydro and biomass. We expect to advance the scale and pace of renewable energy across our operations in the years ahead. In 2023, our total installed renewable capacity was 1,882 MW, an increase from 1,654 MW in 2022.

In addition to what we generate, we purchase renewable energy from a number of sources. We expect to purchase even more renewable energy in the future as we pursue additional solar and onshore and offshore wind power purchase agreements. Overall, 19 per cent of Emera's energy mix was renewable in 2023, up from 16 per cent in 2022.[2]

SOLAR

Phases One and Two of solar development at Tampa Electric are now complete. In 2023, four new solar projects went into service, for a total solar capacity of over 1250 MW. In addition to reducing CO_2 emissions, solar generation also reduces the amount of fuel required in generation. Since 2017, solar generation has saved Tampa Electric customers approximately $200 million USD in fuel costs. Solar Phases Three and Four are expected to add approximately 840 MW by the end of 2028.

Solar generation is also expanding in Nova Scotia, with community solar and commercial net-metering programs to account for a portion of the 300 MW of solar anticipated to be integrated into Nova Scotia Power's energy mix by 2030. We also continue to pursue solar development at our Caribbean utilities. In addition to its 10 MW solar farm, at the end of 2023 there are now just over 3,400 rooftop and third-party ground-mounted solar photovoltaic (PV) installations at Barbados Light and Power (BLPC), for a total installed capacity of more than 92 MW. The team is planning additional grid modernization and storage projects to enable and support more third-party solar installations that are expected to exceed 400 MW by 2030.

Grand Bahama Power Company (GBPC) has signed three Power Purchase Agreements with Independent Power Producers for 14.5 MW of solar generation to be added into its generation mix and which are all planned to come online in 2024. In addition, the company continues to develop its own 5 MW solar generation project which is anticipated to come online in 2025. Once all of these projects are online, solar energy will make up approximately 19.5 MW of GBPC's generating capacity, which will represent approximately 14.5 per cent of the island's energy needs.

Barbados Light and Power's St. Lucy Solar site.

WIND AND OTHER RENEWABLES

Historically, onshore wind, hydro and biomass have been our sources of renewable energy at Nova Scotia Power, enabling the utility to increase renewables from 9 per cent of generation in 2005, to 37 per cent in 2023.[1] Currently, Nova Scotia Power has approximately 600 MW of installed wind capacity, including about 150 MW from rate base investments and 450 MW supplied by independent power producers (IPPs). We recognize an expansion in purchased renewable energy will be critical to Nova Scotia Power achieving 80 per cent renewable energy by 2030. We're supportive of Provincial plans for over 1,000 MW of additional onshore wind administered through provincial wind procurement programs, and other independent power purchase agreements.

Our investment in the Maritime Link transmission project, built to deliver clean hydro energy from Muskrat Falls in Labrador to Nova Scotia, is also an important contributor to our energy transition plan. The Maritime Link performed well in 2023, delivering 160 per cent of the contracted Nova Scotia Block of energy, meeting nearly 20 per cent of Nova Scotia Power's energy requirements. The Maritime Link achieved availability of 99.9 per cent for 2023. This puts the Maritime Link in the top 10 per cent of high-voltage direct current links globally in terms of availability – we are proud that it's among the best in the world and pleased that it's doing the job of delivering cleaner energy to Nova Scotians. With Newfoundland & Labrador Hydro's commissioning of the Labrador Island Link early in 2023, all aspects of the Muskrat Falls Project are now fully operational, supporting significant use of Emera's Maritime Link and providing substantial benefits to customers in both Nova Scotia and Newfoundland & Labrador.

EMERGING TECHNOLOGY CONSIDERATIONS

New and emerging technologies are critical to achieving net-zero by 2050. We're exploring a variety of innovative solutions across Emera including carbon capture and storage, green hydrogen, grid-scale battery storage, microgrids, independent power produced offshore wind, and many others that could be sources for renewable and non-emitting energy generation and storage and distribution into the future. The challenge is that many of these technologies are not yet advanced enough to be commercially viable or are not yet available at a cost that makes sense for our utility customers. For this reason, we continue to support clean energy research and development, and partner with academic institutions to continue to advance innovation. We're also evaluating continuing opportunities to leverage government incentives, both in the United States and Canada. In the US, the Infrastructure Investment and Jobs Act (IIJA), the Inflation Reduction Act (IRA) and the Department of Energy's (DOE) CarbonSafe Initiative are supporting the clean energy transition through incentives, grants and tax credits. These supports are helping reduce customer costs associated with clean energy projects. For example, the U.S. DOE has earmarked nearly $100 million USD for Tampa Electric to explore the feasibility of carbon capture and storage (CCS) at its Polk Power Station. In Canada, we're exploring grants, tax credits and financial tools to accelerate the development of technologies to help achieve national climate targets.

ENABLING PROJECTS

Emerging technologies are also part of the wide range of investments we're making to ensure reliability is not sacrificed as we pursue a clean energy future.

We're investing to address the intermittency of renewables and the rapidly increasing demand for energy overall to ensure we not only maintain, but also enhance, reliability for utility customers. This includes investments in grid modernization projects, resiliency initiatives, and projects to increase system capacity. Some examples of this work include advanced metering infrastructure (AMI), grid-scale battery storage, customer distributed energy resources, demand side management, grid stability and renewable integration resources, and reliability interties with neighbouring jurisdictions.

These enabling projects are key to ensuring that our grids are stable and reliable as more clean energy is brought online and demand from electrification continues to increase.

Reducing Coal and Increasing Natural Gas and Renewables

% COAL[2] IN GENERATION

Tampa Electric	Nova Scotia Power
2005: 47%	2005: 73%
2023: 3%	**2023: 33%**

% OF NATURAL GAS[3] IN GENERATION

Tampa Electric	Nova Scotia Power
2005: 37%	2005: 14%
2023: 81%	**2023: 19%**

% OF RENEWABLES IN GENERATION

Tampa Electric	Nova Scotia Power
2005: ~0%	2005: 9%
2023: 8%	**2023: 37%**

% IMPORTS

Tampa Electric	Nova Scotia Power
2005: 16%	2005: 2%
2023: 8%	**2023: 11%**

1 Based on GWh of total available generation. Note that this represents 42.5 per cent renewable generation when reported using criteria, including energy sales, under the Renewable Electricity Regulations and associated renewable electricity standard in the Province of Nova Scotia.
2 Includes petcoke.
3 Includes oil, which represented approximately 1 per cent of the total in 2023.

A Just Transition

The energy transition is fundamentally changing how we generate and deliver energy.

At Nova Scotia Power, we continue to work with employees, union leaders, government, environmental groups, low-income advocates and Mi'kmaw communities and organizations to gather input and enable participation in building a framework that ensures a fair and just clean energy transition.

Following established guiding principles, we're committed to working with our employees whose roles are connected to our coal facilities. In 2023, we continued conversations with our team members to identify meaningful transition options, such as retraining for other roles within the company and externally, or retirement. Our efforts will continue to ramp up in the coming years as our coal unit retirement target draws closer.

Scenario Analysis

To ensure our energy systems are prepared for a range of potential futures, we develop plans using short-, medium- and long-term modelling that outlines the resources needed to achieve shared objectives within our businesses.

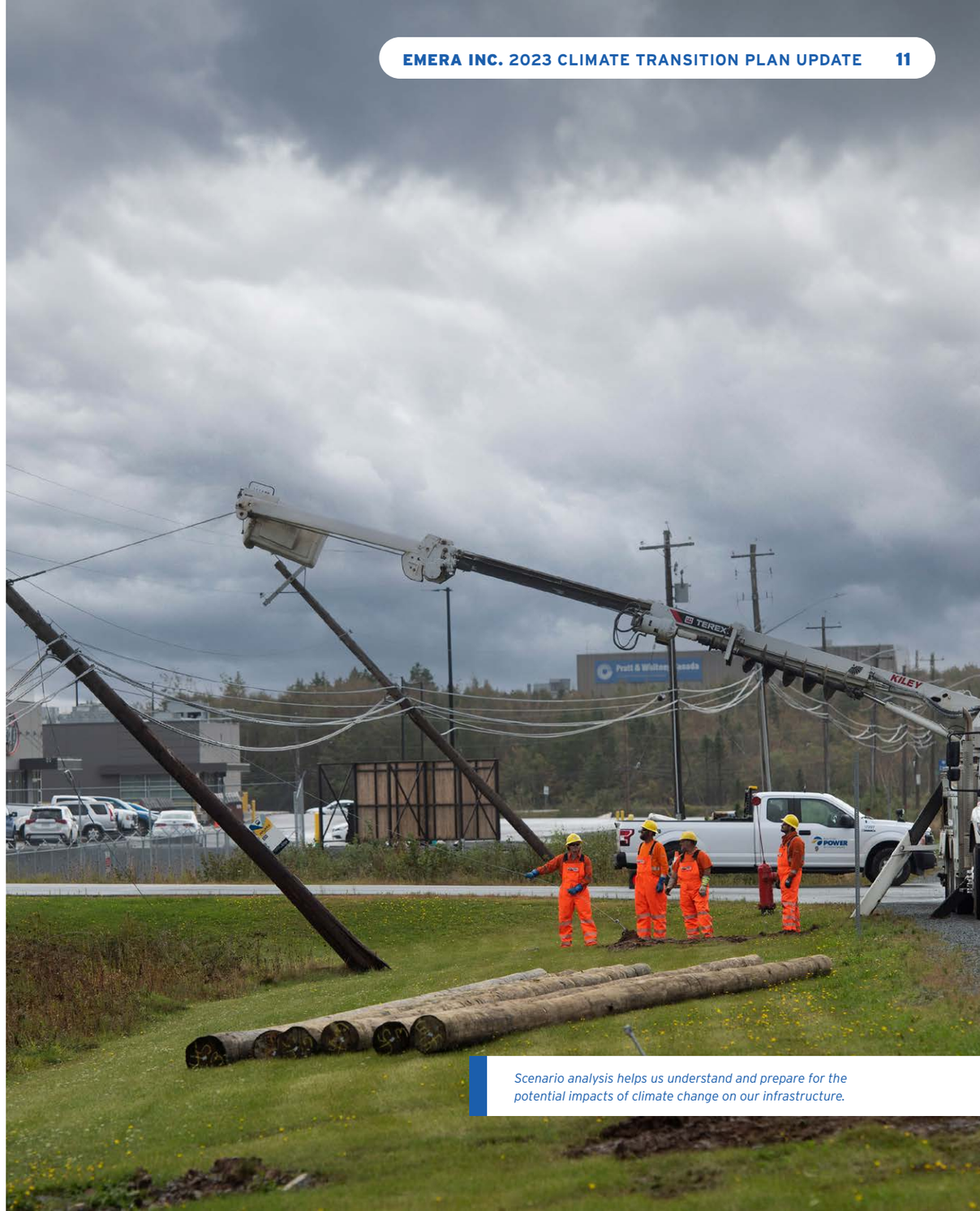
Our resource planning incorporates many aspects of scenario analysis that are recommended by TCFD. Scenario work in our utilities includes our *Evergreen Integrated Resource Plan* (IRP) at Nova Scotia Power and our ten-year site plans at Tampa Electric, as well as resource planning in our Caribbean utilities and gas businesses. At Nova Scotia Power in particular, development of our IRP is driven, in part, by government regulations and related targets that inform the climate scenarios we consider.

Modelling at our operating companies focuses on key variables, such as coal unit and plant retirement dates, the level of demand-side management, the level of renewable generation and the potential for power purchase agreements with other utilities and renewable and non-emitting energy providers. The plans also consider current and future renewable energy availability at each operating company, technology changes and the needs and expectations of our utility customers.

These processes are regularly reviewed as risks and opportunities change. The results of resource plan modelling directly align with Emera's long-term capital investment plan, which includes significant investment in renewable and cleaner generation, reliability and system integrity, infrastructure modernization and expansion, and technologies. These initiatives contribute to mitigating the potential impacts of climate change.

Learn More

- Emera Strategy
- Environmental Policy
- Environmental Management System



Scenario analysis helps us understand and prepare for the potential impacts of climate change on our infrastructure.

Risk Management

Corporate Risk Management

Our climate-related risks are fully integrated into our Emera-wide Enterprise Risk Management (ERM) Program. The Chief Risk and Sustainability Officer, along with Emera's Enterprise Risk Management Committee (ERMC), is responsible for this program. The Board and the RSC provide oversight.

Our approach includes risk identification, prevention and mitigation strategies, residual risk reduction and management action plans. We also have a high-impact risk review process to assess evolving risks and to provide a deeper analysis, as required. The ERMC develops the high-impact enterprise risk registry, identifying, analyzing, and ranking inherent and residual risks, including those related to sustainability and climate change.

Risks are ranked on severity, velocity of onset, probability of occurrence, control environment, and mitigation strategies and action plans. Each risk is assigned an executive owner.

Our risk registry is reviewed and updated as required by the ERMC on a quarterly basis. It's reviewed by the RSC at each committee meeting, summarized for the Board each quarter and carefully reviewed by the Board annually. The ERMC conducts a more in-depth review and analysis annually informed by input from the Board's annual review.

We also examine key climate transition risks, including policy and legal, reputational, supply chain, insurance, technology, and market, as well as risks related to the physical impacts of climate change – both acute and chronic. We also consider potential financial impacts as they relate to generation sources, products and services, and the market.

RISK MANAGEMENT AT OUR OPERATING COMPANIES

The assessment of climate risks and opportunities in our operating companies is integrated into their respective risk management and strategy discussions. Each operating company addresses risk management in line with the enterprise level processes, each with its own risk registry, dashboard and heat maps. We conduct a calibration review and comparison of operating companies' dashboards and risk ratings against and the overall enterprise risk dashboard to identify those requiring further discussion and action on appropriate risk identification and ratings.

Our operating companies' approach to managing material environmental risks and opportunities, including those related to climate change, are guided by Emera's Environmental Management System (EMS).

Through the EMS, we identify the elements of our operations that interact with, or have the potential to interact with, the environment, as well as the potential ways the environment can impact our business. Objectives and targets are identified for each of these to ensure they're being managed effectively. For impacts that are common across the organization, Emera's Corporate Environment team sets company-wide objectives. Objectives and targets at both Emera and our operating companies include CO_2 emissions reduction and climate adaptation initiatives.

See Table 1:
Emera's Climate-related Risks and Opportunities for additional details about our management of climate-related risks.

Table 1: Emera's Climate-related Risks and Opportunities

Type	Description	Potential Financial Impact	
RISKS			
Policy and Legal	• Regulatory requirements limiting emissions and/or impacting generation mix (e.g., increasing renewable generation mandates, coal plant phase-outs, emission caps and trade, emission source limits) • Increasing price on carbon • Utility regulator asset cost recovery mechanisms • Exposure to litigation from stakeholders and fines from regulators • Restrictions on new natural gas hook-ups	• Increased operating costs to address emission constraints • Early retirement of existing assets prior to the end of their useful life and recovery of costs of same • Large capital investment to address renewables and other generation mix requirements	• Increased costs associated with potential fines and judgements • Reduced growth in natural gas utilities
Technology	• Replacement of existing energy supply sources with renewable/lower carbon sources	• Early retirement of existing assets prior to the end of their useful life and recovery of costs of same	• Large capital investment to address renewables and other generation mix requirements
Market	• Customer desire for lower emitting energy sources • Changes in supply chain as a result of regulation and/or market demand • Uncertainty in asset insurance options	• Customer demands for cleaner energy sources reduce demand for existing supply • Delays, shortages or requirements to seek alternative products/services required to support operations	• Challenges procuring economic asset insurance from commercial insurers for existing assets
Reputation	• Increased stakeholder concern associated with carbon intensive business • Increased stakeholder concern associated with increased frequency and severity of weather events impacting reliability	• Reduced revenue, constraints on operation and limited future growth	• Reduced access to capital at increased cost • Social licence to operate at risk
Acute Physical Risk	• Increased frequency and severity of weather events such as hurricanes, windstorms, extreme rainfalls, floods and storm surges, ice storms and wildfires	• Reduced revenue due to energy delivery disruption to customers • Increased capital to storm harden equipment • Increased expenditures to respond to storm events and undertake system repairs	• Increased liability and clean up costs associated with uncontrolled releases resulting from damaged equipment • Increased costs due to fuel supply disruption • Liability for utility-caused wildfires
Chronic Physical Risk	• Changes in precipitation patterns • Changes in temperature and related seasonal patterns • Rising sea levels • Increased frequency and severity of wildfires	• Precipitation changes potentially impact hydro generation availability • Change in customer demand patterns impacting related revenue	• Increased capital to harden infrastructure against rising seas and storm surge and increased precipitation events • Costs to mitigate wildfire risk
OPPORTUNITIES			
Energy Source (Supply)	• Development and/or expansion of low emission energy sources and services • Use of supportive policy incentives • Use of new technologies • Resource diversification	• Increased revenue from increased demand for lower emitting sources and services • Reduced exposure to GHG emission regulation impacts and pricing	• Increased investment opportunities
Energy Source (Delivery)	• Investment opportunities in grid modernization and integration of distributed energy resources • Development of grid-related climate adaptation (Storm Protection Plans)	• Increased valuation and stakeholder reputation through resilience planning and increased reliability	• Increased investment opportunities to enable future growth and increased demand
Products and Services	• Development of products and services to support distributed energy resources • Development of energy efficient and demand response programs • Increased electrification demand	• Increased revenue through demand for new products and services • Better competitive position to reflect shifting customer preferences, resulting in increased revenues	• Increased capital investment requirements for grid modernization to support electrification
Market	• Access to new markets • Energy market share increase (electrification)	• Increased revenues through access to new and emerging markets (partnerships)	• Increased revenue and growth through new products and services addressing increased demand for electricity

PHYSICAL RISK: RESILIENCE AND ADAPTATION

We're focused on ensuring our physical assets, such as generation facilities, energy delivery systems and other infrastructure, are able to withstand the impacts of the increasingly severe weather brought on by climate change.

In addition to traditional considerations, such as the impacts of high winds, rain and ice in Nova Scotia and Newfoundland and Labrador, and hurricanes in Florida, Nova Scotia, and the Caribbean, we must also consider other risks of climate change, such as increased frequency and severity of wildfires, weather events, rising temperatures and sea level rise. These require us to re-examine and strengthen the processes we have in place to mitigate potential impacts to our business.

Our Climate Adaptation Framework (See Table 2) provides a consistent, proactive approach for assessing risks and potential impacts, as well as implementing management and adaptation strategies. Mitigations can include wildfire prevention and response protocols, additional storm hardening, refurbishment and upgrades of equipment and infrastructure and improved vegetation and erosion management. Additionally, as new assets are refurbished or replaced, we've evolved engineering designs and standards to address these changing climate risks.

Using our framework as a model, our operating companies are conducting detailed assessments and quantification of risk as they develop adaptation measures and formal Climate Adaptation Plans.

Our operating companies are supporting this work using scenario analysis (i.e., future warming scenarios, such as Representative Concentration Pathways (RCPs)) to better quantify the physical risk to key assets. At applicable operating companies, we're using two scenarios, RCP4.5 and RCP8.5, to inform planning and to guide the climate modelling data we receive from third-party experts. RCP4.5, the base case, is an intermediate reduction scenario, which is less stringent than the aspirational goals of the Paris Agreement, ensuring more realistic climate impacts are considered in our planning. RCP8.5 considers the worst-case scenario. Outcomes from this exercise are being incorporated into our Climate Adaptation Plans, as well as our loss control and asset management programs where climate risk is now a discrete parameter to be assessed and included in capital and operating budgets. The asset management process already considers cost of service, asset life cycle and renewal, and reliability.

Our climate adaptation planning is also being captured in our EMS to provide policy direction and integration across our business. Through this planning, we're maturing and advancing our approach to assessing the risk of climate change to our operations. These are captured as continual improvement initiatives within our EMS and are tracked using objectives and planning actions. The assessment of climate risk is being formally integrated into utility asset management frameworks, which are already used to manage assets over a longer life cycle, so we have been updating existing processes to reflect climate change risks. This integration is guided by our EMS and operational management systems. Additional spending to address risks and opportunities is incorporated into our budget planning process.

Across our utilities, we're investing in storm hardening to ensure our infrastructure can better withstand the impacts of increasingly severe weather brought on by climate change. In this photo, a Nova Scotia Power crew member works to restore power after an ice storm hit the province.

See Table 2:
Emera's Climate Adaptation Framework

See Table 3:
Examples of Climate Adaptation Planning in Action Across Our Operating Companies

Table 2: Emera's Climate Adaptation Framework

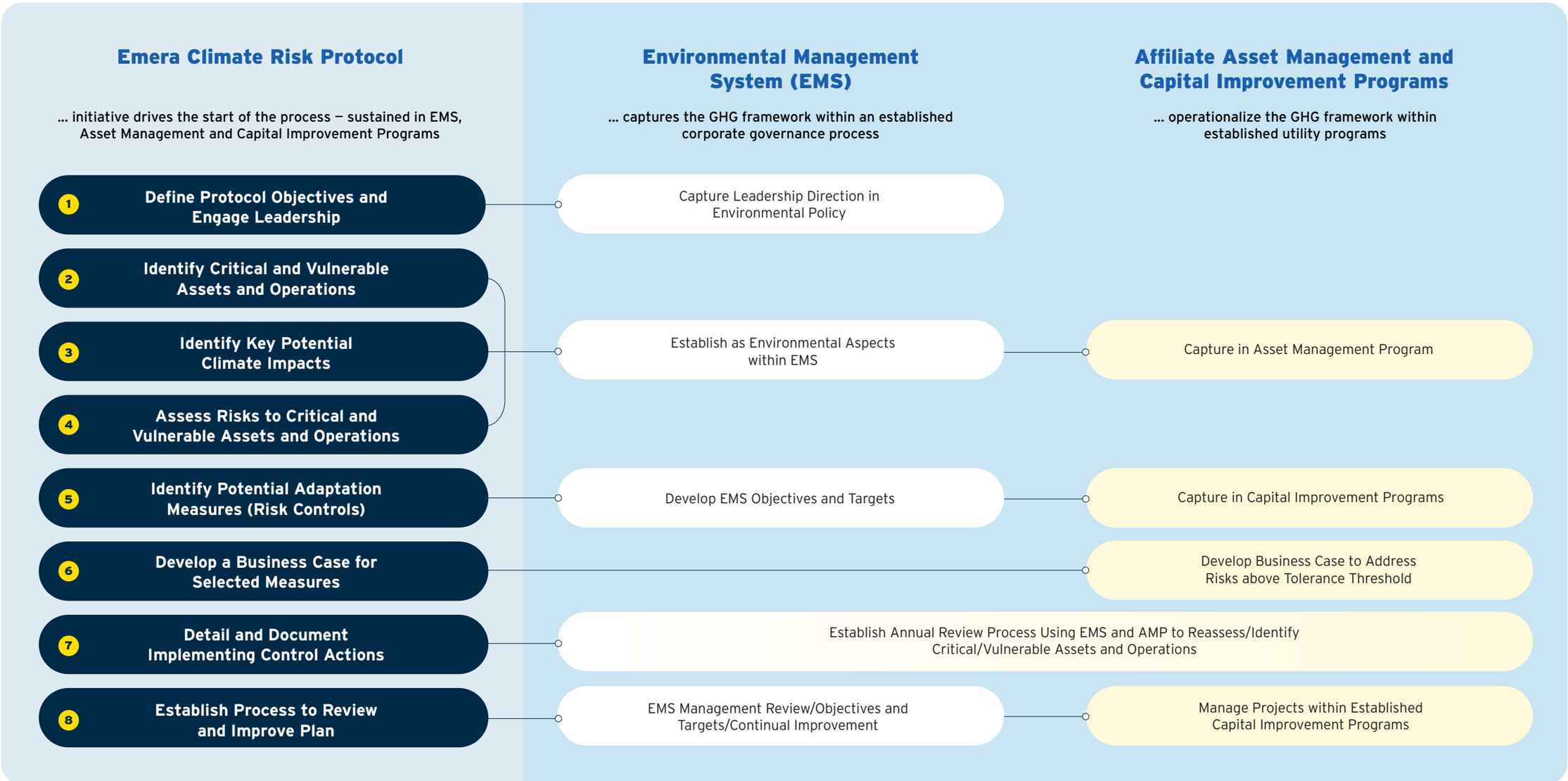


Table 3: Examples of Climate Adaptation Planning in Action Across Our Operating Companies

Storm Hardening and Vegetation Management	**Tampa Electric** Through its ten-year Storm Protection Plan (SPP) (approved by the Florida Public Services Commission in 2020) Tampa Electric invested approximately $200 million USD in 2023 to strengthen power poles, modernize infrastructure, bury power lines and trim trees. Tampa Electric targets investment in seven SPP programs: Distribution Lateral Undergrounding, Vegetation Management, Transmission Asset Upgrades, Substation Extreme Weather Hardening, Distribution Overhead Feeder Hardening, Infrastructure Inspections and Legacy Storm Hardening Initiatives. About 51 per cent of Tampa Electric's power lines are already underground, buried during construction of new developments. In 2023, Tampa Electric converted another 70 miles (113 km) of exposed overhead lines to underground, and hardened 25 distributed circuits. Tampa Electric also performed vegetation management activities on 2,898 miles (4,664 km) of distribution lines and 601 miles (967 km) of transmission lines. As a result of this work, tree-related outages were reduced by more than 40 per cent compared to 2022. Power restoration times and storm-related restoration expenses were also reduced. **Nova Scotia Power** In 2023, Nova Scotia Power spent approximately $250 million on power system reliability, vegetation management and storm hardening including the installation of larger, stronger poles and more robust insulators designed for equipment exposed in coastal areas. Tree contacts with power lines continue to be the leading cause of customer interruptions for Nova Scotia Power which is why $32 million of this was directed to vegetation management in 2023, with a focus on widening transmission rights-of-way to improve line resiliency during wind events including hurricanes. In total, Nova Scotia Power performed vegetation management activities on 672 km of distribution lines and 736 km of transmission lines in 2023. As the frequency of high winds increases, climate modelling also indicates an increase in warmer temperatures leads to longer projected vegetation growing seasons. To help address this, Nova Scotia Power's vegetation management budget for 2024 has been increased by approximately 40 per cent to $45 million.
Wildfire Management	Wildfire is a risk to all of our operating companies, principally our electric utilities in Tampa and Nova Scotia. At these utilities, wildfire risk mitigation efforts are part of our existing operational and asset management programs and are considered within our storm hardening and vegetation management investments. For example, mitigation measures in place at Nova Scotia Power include performing drone and helicopter inspections during wildfire conditions, clearing vegetation from a wide perimeter around substations, using satellite monitoring of vegetation conditions, installing nest deterrents and animal guards on transmission equipment and at substations, and targeted replacement of uninsulated conductors. At our gas utility operations in Florida, New Mexico and New Brunswick the potential impact of wildfire risk is lower as the majority of our infrastructure is underground and constructed to withstand extreme heat. Additionally, these utilities have strong asset integrity programs and regulatory oversight in place for managing specific risks around gas release and ignition. Proactive wildfire measures continue to be considered despite the lower risk. For example, Emera New Brunswick is working proactively to clear downed trees and other vegetation, particularly after high wind events when there is a larger volume of fallen trees and debris in these areas to reduce risk of wildfire spreading into the right-of-way.
Flood Management	In 2023, Nova Scotia Power completed a coastal flood study at its Tufts Cove Generating Station. The goal of the study was to understand the risk and vulnerabilities of the site to coastal flooding, based on future projections of sea level rise and storm surge. Results from the study will be used to help identify coastal protection projects for the site. Nova Scotia Power also continues to make other investments to protect its assets from more frequent and more severe precipitation events that can lead to overland flooding. This includes investing in its hydroelectric dam infrastructure and other water control equipment (e.g., gates and hoists) to ensure dam assets are better able to handle these extreme weather events without impacting downstream residents. Nova Scotia Power is also investing in thermal fleet projects, such as ash capping, to divert large portions of surface water away from containment ponds, lessening the burden on this infrastructure during major precipitation events. For underground infrastructure, Nova Scotia Power is increasing its investment in pumping from access points to reduce the flood impacts on underground equipment.

Storm Surge and Sea Level Rise	Tampa Electric has been investigating the growing risk of storm surge related to extreme weather events, such as hurricanes and tropical storms, as well as the impacts of sea-level rise on its substation infrastructure, particularly in low-elevation areas. As part of the Storm Protection Plan, Tampa Electric commissioned a Substation Hardening Study that recommends several projects and protection measures to improve grid stability and reliability. These actions have been prioritized and ranked based on urgency and severity of climate risk factors such as flooding and proximity to Tampa Bay. One of the protection measures being deployed at Tampa Electric is to build concrete walls around power transformers to prevent water intrusion into transformer control cabinets.
Ice and Wind Management	In recent years, Nova Scotia Power has updated several design standards associated with parameters such as ice loading and extreme wind gusts for overhead lines and poles. As older transmission and distribution lines are upgraded and refurbished as part of annual investments, these lines are becoming more resilient to the impacts of extreme weather events, such as hurricanes.
Water Management	Tampa Electric recognizes that water management is critical in the state of Florida and is always looking for opportunities to conserve and protect water quality across its operations. For example, most of the properties purchased by Tampa Electric for solar generation are former agricultural lands with existing water use permits. When land is sold to new owners, Southwest Florida Water Management District (SWFWMD) rules require that these water permits are transferred as well. Since solar generation requires no water, Tampa Electric conserves this groundwater, which otherwise would have pumped and used for agricultural needs. To date, TEC's acquisition of land for the development of solar power has saved more than 6.1 billion gallons of water, which significantly helps an area of the state that has critical concerns over water use. Water management is also important at our generation facilities. For example, as a result of the reduced use of coal at Big Bend Power Station, the Tampa Electric team is changing the way water is managed at the facility. Approximately 160 million gallons of recycled water can be held in storage ponds at Big Bend. The recycled water consists of captured stormwater and processed wastewater. This recycled water was previously required in large volumes for coal-related processes, such as ash management and flue gas desulphurization. A reduction in coal use at Big Bend reduces the need for these ancillary processes, meaning there can be a surplus of water at the site, particularly during the rainy season.

Water Management	To manage excess water, Big Bend recently completed the installation of its primary solution to long term water balance management. With the installation of two deep injection wells onsite, Big Bend is able to safely direct excess stormwater and process wastewater over 3,000 feet deep into injection zones well below the drinking water sources. Drinking water sources are protected by a telescoping casing well design and by several separate layers of confining caprock over hundreds of feet thick. By removing the surface water discharge from Big Bend Station, up to 85 tons of nutrients are removed annually from Tampa Bay. At its Big Bend Modernization site, the Tampa Electric team also built an above grade ten-foot flood wall (18 feet in total elevation) during construction. The wall design and height were determined based on building code criteria for essential facilities built in flood hazard areas.
Investing in Technology	Nova Scotia Power recognizes that technological advancements will be essential to responding to the impact of climate change. For example, to track climate risks and mitigations, Nova Scotia Power has developed a climate adaptation management system (CAMS) that includes a dashboard to illustrate the levels of climate risk and provides a valuable means to document the numerous and wide-ranging activities underway to address climate risk. Nova Scotia Power has also invested in AMI, and other communication equipment (e.g. remote terminal units) enabling a quicker and more precise understanding of the state of plants in the immediate aftermath of extreme weather events, which allows for more effective restoration planning. Nova Scotia Power has also invested in satellite communication equipment for field crews to ensure continued, reliable communication in times of widespread power outages impacting cellular or radio communications. This allows the two-way communication needed to ensure crews can safely execute the right restoration priorities.

Metrics and Targets

Clear metrics and targets are critical to measuring our progress and maintaining accountability throughout the energy transition. The ability to track performance against our goals helps transparently show our progress and the path forward to our teams, utility customers, investors and communities.

At the end of 2023, we achieved a 47 per cent reduction in Scope 1 and 2 CO_2 emissions and a 77 per cent reduction in coal as a percentage of total GWh generated compared to 2005 levels. Over the past five years alone, we've decreased our CO_2 emissions by approximately 17 per cent. We're on track to achieve a 55 per cent reduction in CO_2 emissions by 2025, compared to 2005 levels. Additional details about the path to achieving our 2025 objectives, as well our progress toward net-zero, are described on pages 19–20.

In 2022, we developed a Climate Commitment Tracking Tool, that allows us to monitor our progress on CO_2 emission reductions, as we work towards our goals. Our tracking tool includes two key components: 1) a dashboard that illustrates our progress, and 2) details and status updates on key projects, including risks and opportunities. The tool is designed to be regularly updated and reviewed by our SMC and RSC as project scheduling and planning evolves, as future projects are planned, and milestones are achieved.

Our tracking is informed by reporting from our Climate Commitment Tracking Committee that provides updates on actual and future emissions forecasts and progress against key capital project updates. Progress is reviewed at the operating company level through the EMS and regularly reviewed by the Boards of Directors in our operating companies. The Climate Commitment Tracking Committee aligns its meeting times with the anticipated timing of updates to planning forecasts such as Nova Scotia Power's integrated resource plans and Tampa Electric's ten-year site plans. The SMC and RSC review the status of key clean energy projects and our Climate Commitment progress and provide oversight and guidance to the Committee.

We strive to ensure all members of our team are aware of and understand our Climate Commitment goals and progress. All new hires receive training on the Commitment as part of onboarding and we distribute updates on our progress annually, at a minimum.

SCOPE 1 AND 2 CO_2 EMISSIONS
($ktCO_2$)

2023	2022
13,336	14,676

SCOPE 3[1] CO_{2e} EMISSIONS
($ktCO_{2e}$)

2023	2022
8,301	8,811

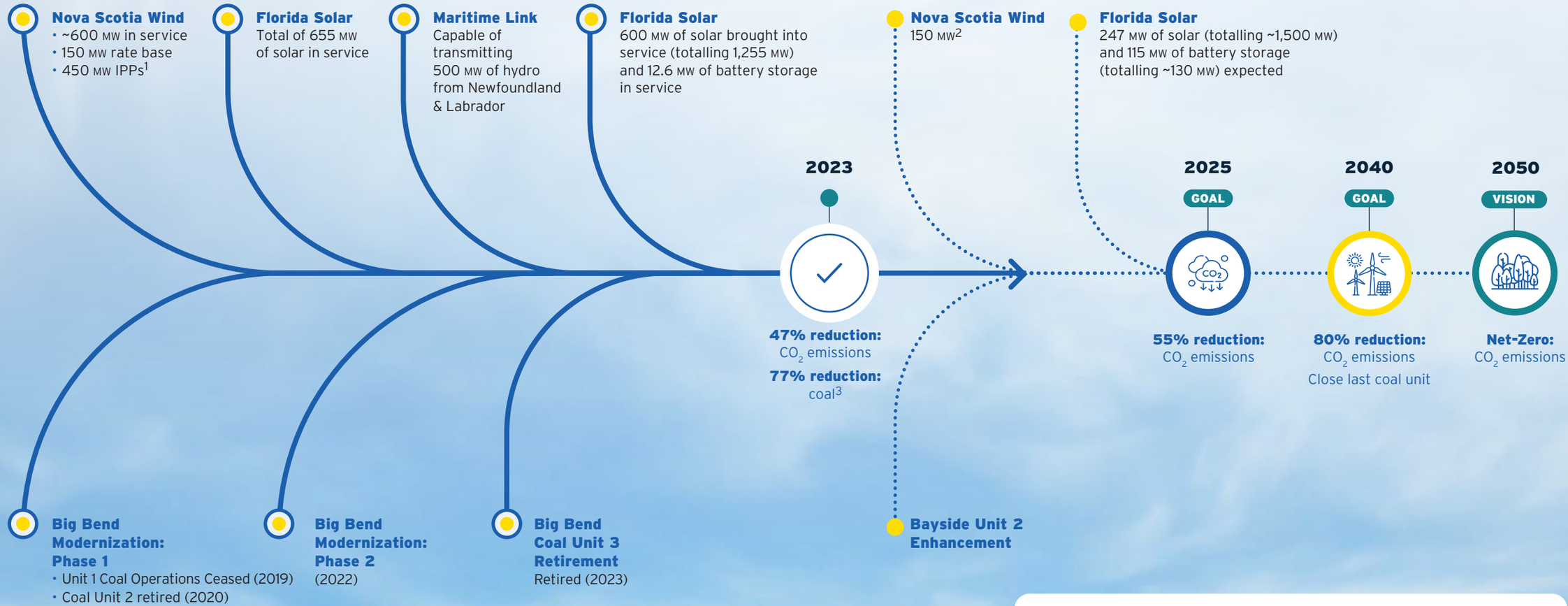
0.41 total CO_2 intensity – 15% decrease over last five years

Over 60% of capital plan through 2026 is committed to clean energy and reliability projects

1 Emera currently discloses two Scope 3 categories under the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. Our Scope 3 emissions include emissions from purchased electricity (Category 3d) for Nova Scotia Power and Tampa Electric and the end use of natural gas (Category 11) (including gas owned by Peoples Gas and New Mexico Gas and gas distributed but not owned by Peoples Gas and New Mexico Gas).

Climate Commitment Progress

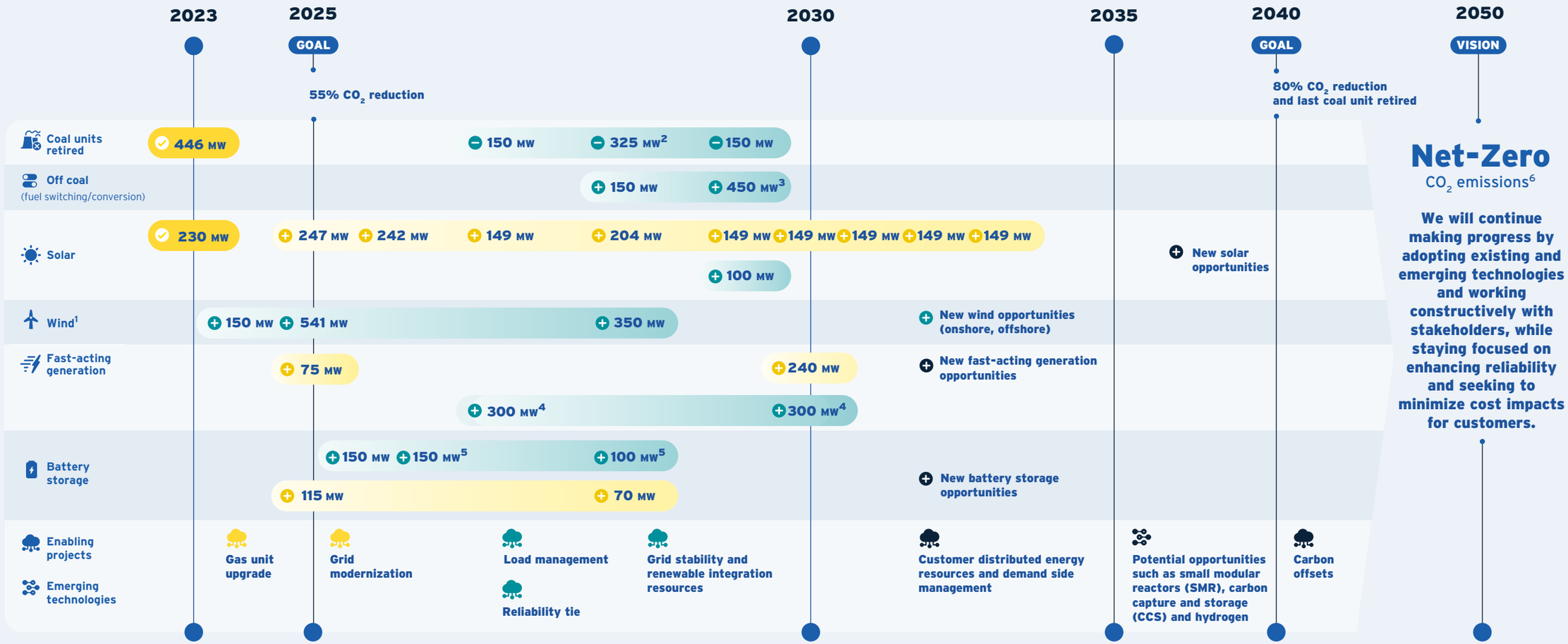
The team across Emera is working together to meet our Climate Commitment goals and our vision to achieve net-zero CO_2 emissions by 2050.



1 Independent Power Producers.
2 Encompasses provincial procurement programs and other independent power purchase agreements.
3 Reduction in GWh generated from coal since 2005.

Net-Zero Roadmap

Emera's net-zero planning roadmap is a summary highlighting recently completed and in-progress projects and planned investments outlined in Nova Scotia Power's *Path to 2030 Report* and integrated resource plans, and Tampa Electric's ten-year site plans.



- Nova Scotia Power projects/opportunities
- Tampa Electric projects/opportunities
- Nova Scotia Power/Tampa Electric common projects/opportunities

This roadmap is subject to change and matters beyond our control and is dependent upon decisions of, and/or support from, others including governments, regulators, independent system operators, independent power producers, interconnected utilities, partners, investors, customers and Indigenous communities. We will only proceed with forward-looking investments where we can demonstrate to the satisfaction of regulators that such investments are prudent and the most cost-effective solution for utility customers within the applicable legislative and regulatory regimes.

1 Encompasses provincial procurement programs and other independent power purchase agreements.
2 A total of two units (160 MW and 165 MW).
3 A total of three 150 MW units.
4 Utility or independent power producer owned.
5 Expected independent power purchase agreements.
6 Emera's Climate Commitment is focused on Nova Scotia Power and Tampa Electric and captures 94 per cent of our Scope 1 and 2 CO_2 emissions.


Emera