

An aerial photograph of a large, turquoise lake nestled in a mountain valley. A long freight train with red and blue containers is visible on a track that runs along the right side of the lake. A road also follows the shoreline. The surrounding mountains are covered in dense evergreen forests, and some peaks are visible in the distance under a clear blue sky.

2022

Emissions Reduction Plan

Our journey to net zero emissions by 2050



TRANSMOUNTAIN



Dawn Farrell
President and Chief Executive Officer

A message from Dawn Farrell

We recognize the global concern about climate change, and we believe that the energy industry must take an active role in reducing emissions to help meet Canada's climate goals. Our emissions reduction plan is part of our overall Environmental, Social and Governance (ESG) reporting. It outlines our targets, our approach and the key strategies we will take to be net zero by 2050.

We believe our targets are achievable. By taking a disciplined approach, we will continue to improve our ESG performance and lower emissions, while maintaining safe and reliable operations.

Trans Mountain has an established track record of responsibly addressing and minimizing impacts to the environment. Trans Mountain will be the first pipeline system in Canada required by the Canada Energy Regulator to offset all direct greenhouse gas (GHG) emissions generated from Project construction. Going forward, we will also work with our customers, stakeholders and Indigenous communities to look for solutions and complementary business opportunities that support a lower-carbon world.

Reaching our emissions goals will take time. It will also take innovative thinking, discipline and a commitment to sustainability. I am confident our dedicated people have the determination to deliver the oil the country needs, while making every effort to reduce our emissions.

Our journey to net zero emissions

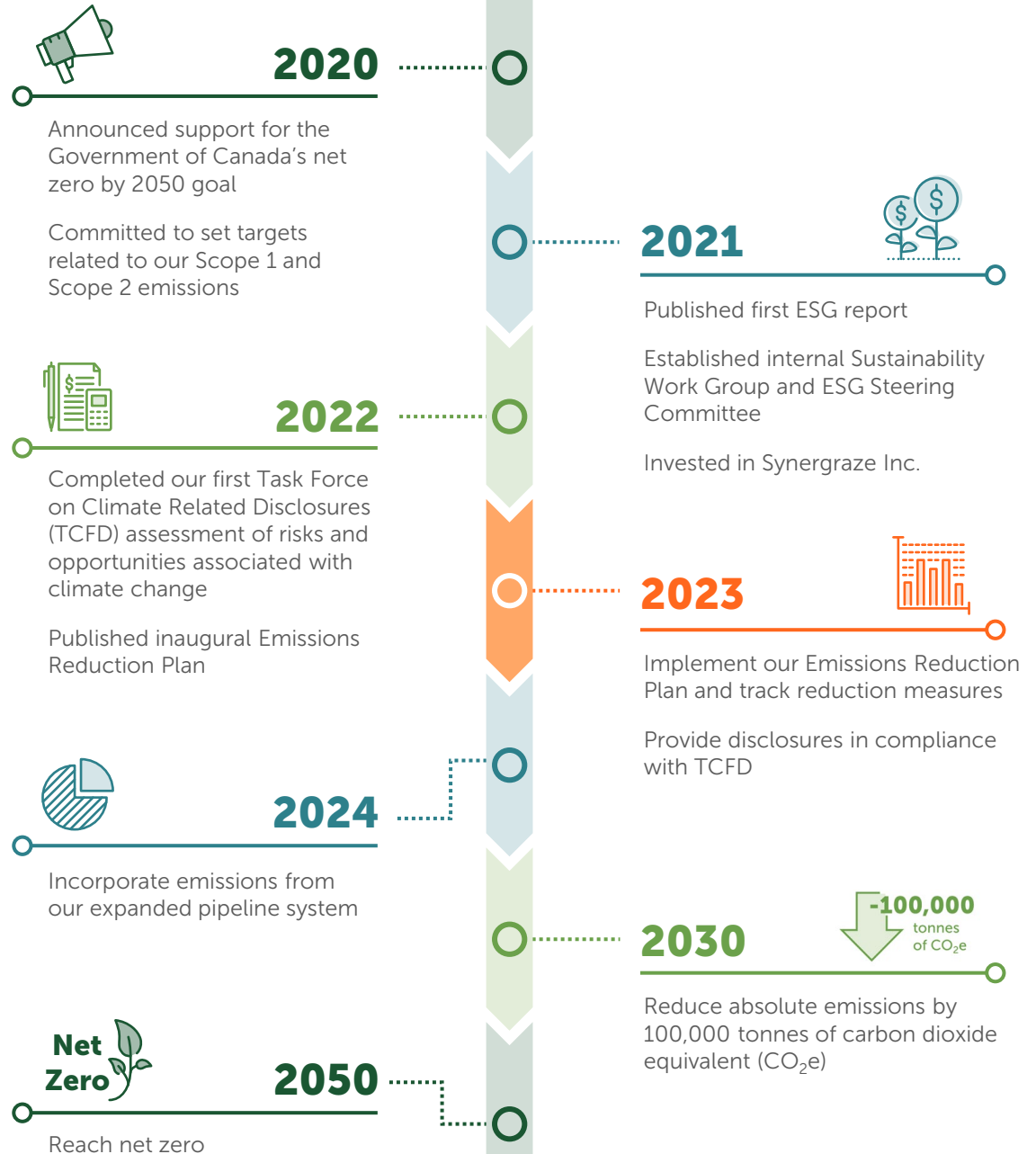
Our commitment to the environment has been core to our operations for many years. It is part of our past, present, and an integral part of our future.

Conducting our business in an environmentally responsible manner is not new for us. We already have many activities underway to reduce our emissions. Our emissions reduction plan formally communicates how we have and will continue to reduce our environmental footprint. This plan outlines our emissions management approach and the strategies we are implementing to meet the Government of Canada's goal of net zero* by 2050.

The construction of the Trans Mountain Expansion Project traverses some of the most environmentally challenging terrain in Canada and led us to develop what is perhaps the most comprehensive set of protection plans for infrastructure anywhere in Canada.

Our journey to net zero will be guided by the same core values that have led to these significant outcomes.

***Net zero** is defined as achieving a balance between emissions produced and emissions taken out of the atmosphere. For Trans Mountain, this means that we have removed or offset our Scope 1 and Scope 2 GHG emissions through abatement and/or the use of offsets.



Our GHG emissions profile

Greenhouse gas emissions from liquids pipelines are significantly less than that of other oil and gas industry sectors. As a result, our overall GHG emissions are correspondingly low, particularly when compared with peer operators and the broader energy industry.

Emission categories



Scope 1 emissions are the direct emissions arising from sources that are owned or controlled by Trans Mountain.



Scope 2 emissions are the indirect emissions resulting from the generation of electricity that we purchase and consume for operations of Trans Mountain.



Scope 3 emissions occur from sources owned or controlled by other entities within Trans Mountain's value chain.

While we do not yet track or report on our Scope 3 emissions, we plan to encourage our suppliers, vendors and partners to track, report and reduce their emissions relevant to Trans Mountain.

Emission sources by scope

The vast majority of our GHG emissions (95%) are indirect emissions from the generation of electricity that we purchase and consume.

Only 5% of our total GHG emissions are generated directly from our owned or controlled operations.

5%

Scope 1

(5,685 tCO₂e*)

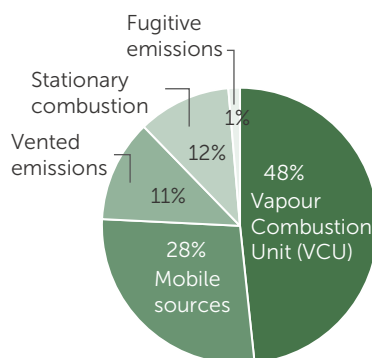


95%

Scope 2

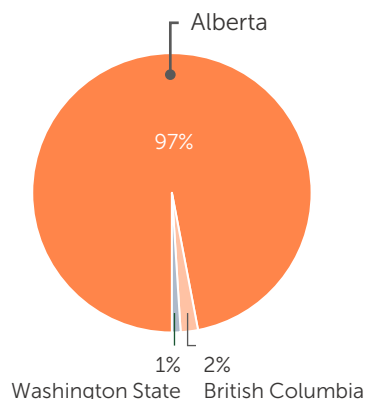
(99,360 tCO₂e)

Scope 1 emissions by source



*tCO₂e = tonnes of carbon dioxide equivalent

Scope 2 emissions by electricity generation location



This data represents our operations GHG emissions profile in 2021.



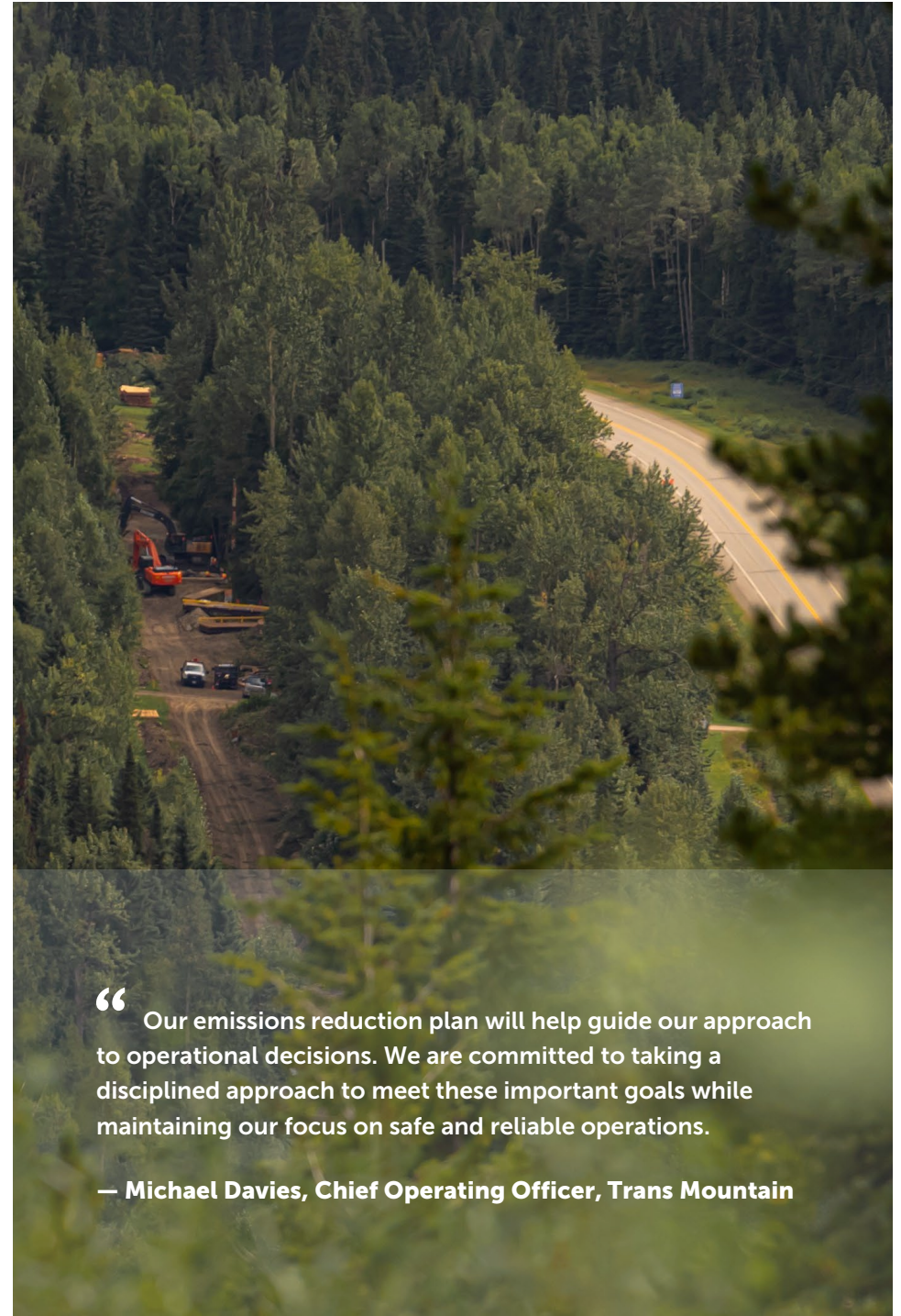
Vapour combustion unit (VCU) at our Westridge Marine Terminal.

Our approach

At Trans Mountain, our core values of safety, integrity, respect and excellence dictate how we work. It starts with a vision and a commitment to take the high road — doing things the right way every day, even when it isn't easy. Our approach to setting targets strongly reflects our values and is guided by the following principles:

- Our targets will **result in material, absolute and sustained reduction of our emissions.**
- Our targets must **consider the commercial and economic implications** and be aligned with our customers.
- Our targets should be sufficiently flexible such that we may **implement a variety of solutions to achieve our targets.**
- Pursuit of our targets should prioritize actions that **support Indigenous communities and advance Indigenous reconciliation.**
- Achieving our targets will **help Canadian energy compete in a global market** where energy security and lower emissions are both important.

We will adapt our ideas, learnings and capabilities in response to these factors while maintaining these guiding principles.



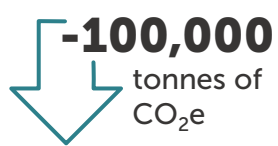
“ Our emissions reduction plan will help guide our approach to operational decisions. We are committed to taking a disciplined approach to meet these important goals while maintaining our focus on safe and reliable operations.

— Michael Davies, Chief Operating Officer, Trans Mountain

Our targets

At Trans Mountain, we are committed to helping Canada meet its objectives to transition to a lower-carbon economy while reducing our own emissions. Our low volume of directly sourced or Scope 1 emissions provides us with the versatility and flexibility to pursue various GHG reduction options. Our targets will address Scope 1 and Scope 2 emissions.

Where we're headed



Reduce absolute emissions by 100,000 tonnes of CO₂e by 2030



Reach zero emissions, on a net basis, by 2050

In addition, we will develop a **Construction Emission Offset Plan** to offset an estimated 1,000,000 tonnes of CO₂e to achieve no net GHG emissions from the expansion project construction.



Our target trajectory

In 2023, we will begin our journey to reduce emissions by 100,000 tonnes of CO₂e by 2030*. Once our expanded pipeline system is fully operational, we estimate our Scope 1 and Scope 2 emissions to be between 280,000 and 350,000 tonnes of CO₂e per year. This estimate is based on several factors that are unknown at this time, including power consumption and the carbon intensity of the electricity grids to which we are connected.



*Progress against this target will be measured relative to 2023 levels



What is the difference between absolute and intensity-based targets?

Absolute reduction targets refer to the total, overall quantity of GHG emissions being reduced. A GHG intensity-based target is relative to a productivity or economic output such as tonnes of CO₂ per million dollars of revenue. By contrast, absolute emissions targets specify reductions measured in metric tons (i.e., tonnes), relative only to a historical baseline. **Compared to intensity-based targets, our absolute emissions reduction targets are unique.**

What is a “tonne” of CO₂?

We often hear reference to “tonnes of CO₂” as a unit of measure in quantifying the impact of greenhouse gases, but for most people, this is likely an abstract concept. **Achieving a 100,000-tonne reduction in our absolute Scope 1 and Scope 2 emissions by 2030 is equivalent to removing more than 21,500 cars from the road.***

What is “CO₂e”?

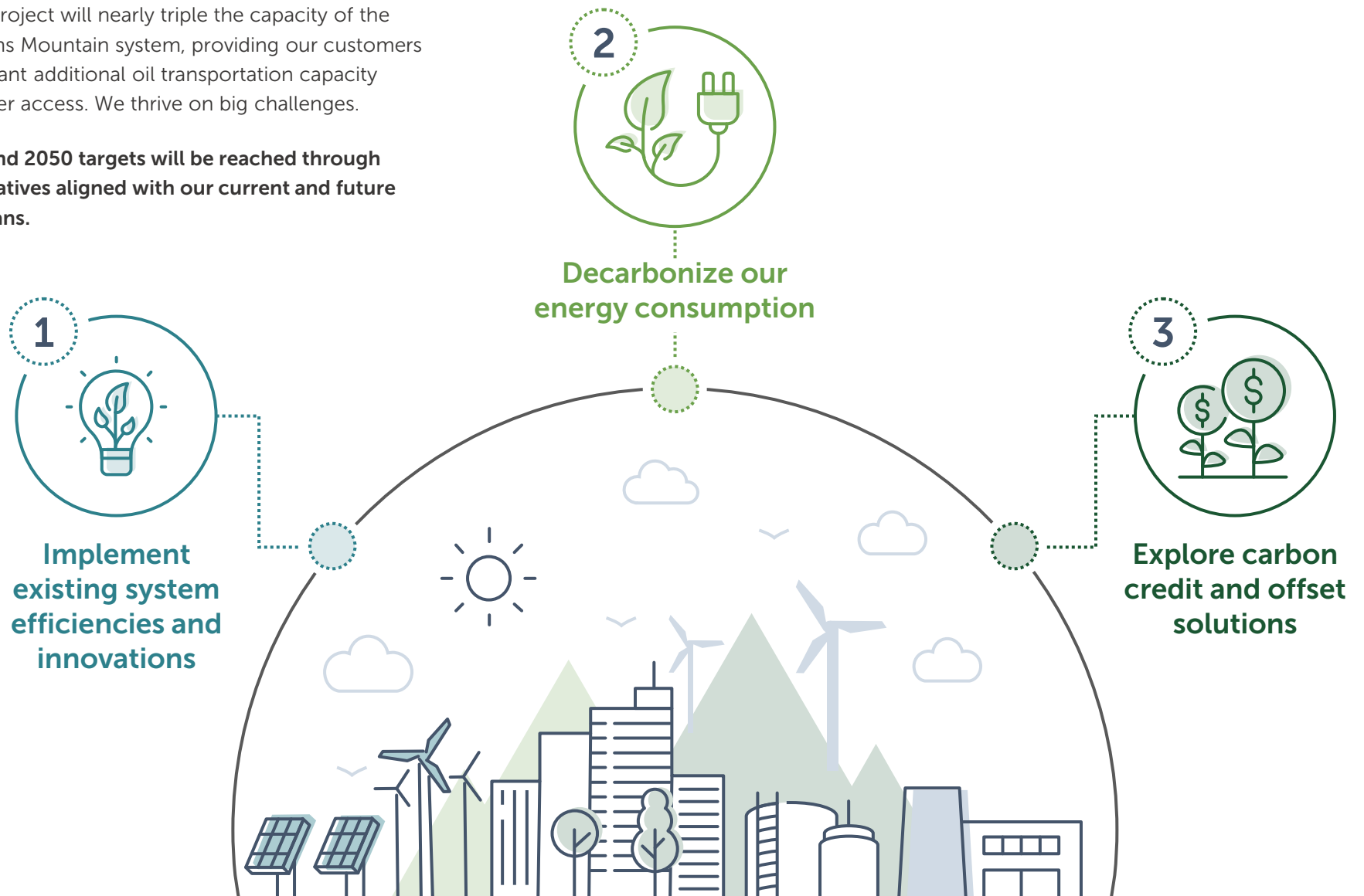
Carbon dioxide equivalent (CO₂e) is a measure used to indicate the global warming potential of each of the greenhouse gases by converting amounts of other gases to the equivalent amount of CO₂.

*Source: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

Our strategies

We operate Canada's only pipeline system transporting crude oil and refined products to the West Coast. Our Expansion Project will nearly triple the capacity of the existing Trans Mountain system, providing our customers with significant additional oil transportation capacity and tidewater access. We thrive on big challenges.

Our 2030 and 2050 targets will be reached through several initiatives aligned with our current and future business plans.





Implement existing system efficiencies & innovations

Driving operational efficiency and accelerating the adoption of technology will play an important role in meeting our targets.

What we've done

We have established dedicated energy efficiency and innovation funding to support emission reduction initiatives within our operations. While we continue to make ongoing upgrades and improvements through our integrity and maintenance programs, this fund allows for new technologies, studies and programs to be evaluated and prioritized to specifically address emission reduction opportunities.

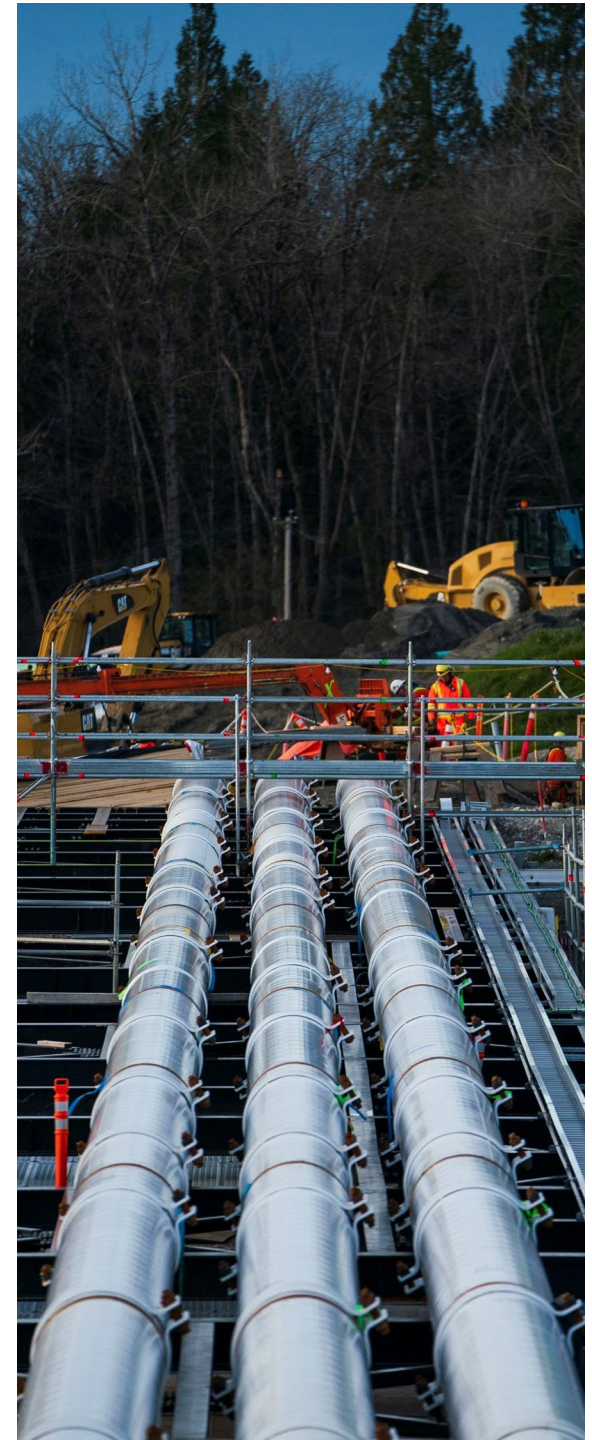
We are also engaging our employees and contractors on our journey to net zero. In 2022, we initiated an internal GHG emissions reduction challenge to surface innovative ideas and emissions reduction opportunities at all levels of the organization. These ideas will be collected, evaluated for their potential, and implemented as appropriate.

What's next

We will conduct a detailed review and analysis of our Scope 1 emissions, which will help us to better understand the cost and magnitude of different emissions reduction options, including process efficiencies and alternative fuel sources.

We will also implement an internal price on carbon measured in dollars per tonne of carbon dioxide equivalent. This internal price on carbon will help inform financial decisions and may also be used for regulatory reporting, project analysis and business development.

We will also engage with our customers to explore ways that we can make progress towards our emissions reduction targets while also aligning with their priorities and goals.





Decarbonize our energy consumption

Electrically powered pump stations keep the product flowing through our pipeline. Most of our emissions are Scope 2 emissions from the electricity we purchase and consume to power our pump stations in Alberta. In British Columbia, we already rely on hydroelectric power resulting in a lower carbon footprint for our operations in the province.

What's next

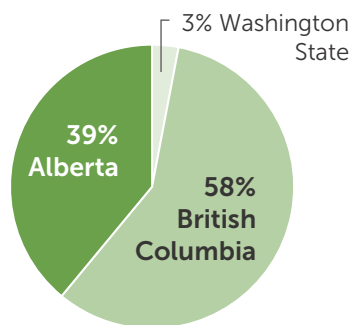
To reduce our Scope 2 emissions in Alberta, we will:

- **Procure renewable power from sources such as wind and solar facilities** using virtual power purchase agreements, and
- **Explore the feasibility of self-generation** at select facilities in Alberta.

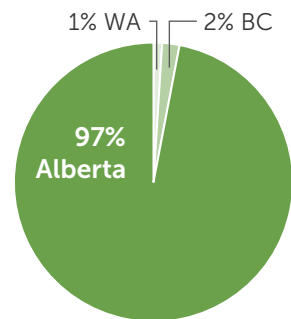
The carbon intensity of Alberta's electricity grid is expected to continue to decline in the coming decade as well, which will lead to lower Scope 2 emissions in Alberta.

There are also potential opportunities to address our Scope 1 emissions through the electrification of our vehicle fleet and by sourcing alternative fuels for use in combustion equipment.

PURCHASED ELECTRICITY



EMISSIONS from PURCHASED ELECTRICITY



**This data represents our operations GHG emissions profile in 2021.*





Explore carbon credit and offset solutions

Although our priority is to reduce our Scope 1 and 2 emissions through our direct actions and investments, we will consider the purchase of offsets to help meet our targets and balance any remaining emissions.

Offsets will be high quality and sourced from projects certified under reputable programs that ensure emission reductions are real and permanent.

What we've done

In 2021, we invested in Synergraze Inc., a start-up company working to develop a commercially viable natural feed additive that has the potential to reduce methane emissions in cattle.

What's next

Moving forward, we will look for additional opportunities to invest in projects and technology that will reduce GHG emissions or allow us to gain GHG offset credits. We will prioritize these opportunities that increase our ability to reduce our emissions and to work collaboratively with Indigenous communities and partners.

We expect to develop and publish a Construction Emission Offset Plan by the end of 2023 for the Trans Mountain Expansion Project. We estimate that GHG emissions from project construction are approximately 1,000,000 tonnes of CO₂e, with 800,000 tonnes of CO₂e occurring in British Columbia and 200,000 tonnes of CO₂e in Alberta.

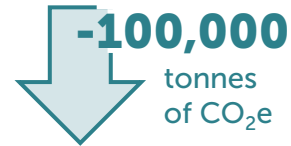
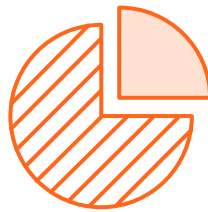
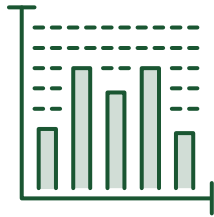
The plan will consider a variety of offset options, resulting in no net GHG emissions from project construction.



Sharing our progress

We plan to report our progress every two years in our ESG report against our 2030 and 2050 targets.

As we explore emissions reduction options, we will continue to monitor federal government initiatives to identify opportunities and adjust as required.



2023

Implement Emissions Reduction Plan and track our reduction measures

2024

Incorporate emissions from the expanded pipeline system

2030

Reduce absolute emissions by 100,000 tonnes of CO₂e

2050

Reach net zero

Forward looking statement

This report contains certain forward-looking information and statements (“forward-looking statements”). Forward-looking statements relate to future results or events, are based upon internal plans, intentions, expectations, and beliefs, and are subject to risks and uncertainties that may cause actual results or events to differ materially from those indicated or suggested therein. All statements other than statements of current or historical fact constitute forward looking statements. Forward-looking statements are typically, but not always, identified by words such as “plan”, “target”, “goal”, “believe”, “will”, “continue”, “expect”, “committed”, “estimate”, “reach”, “should” and similar or other expressions indicating or suggesting future results or events. The forward-looking statements reflect Trans Mountain’s beliefs and assumptions with respect to such things as the outlook for general economic and market trends and conditions, industry and emissions reduction trends, the integrity and reliability of Trans Mountain’s assets, and the governmental, regulatory and legal environment.

Forward-looking statements are not promises of future outcomes. There is no assurance that the results or events indicated or suggested by the forward-looking statements, or the plans, intentions, expectations or beliefs contained therein or upon which they are based, are correct or will in fact occur or be realized (or if they do, what benefits Trans Mountain may derive therefrom).

In particular, this report contains forward-looking statements pertaining to, without limitation: plans, targets, commitments and strategies with respect to emissions reduction and reaching net zero; our targets resulting in material, absolute and sustained reductions in our emissions; our contribution to the Government of Canada’s goal of net zero by 2050 and to the competitiveness of Canadian energy in the global market; the timing and nature of emissions reporting including the publication of a Construction Emission Offset Plan by the end of 2023 for the Trans Mountain Expansion Project; current and expected generation of emissions and anticipated reductions in emissions levels; the quality and sources of offsets purchased by Trans Mountain; the implementation of an internal price on carbon; the procurement of renewable power and the possibility of self-generation; the electrification of our vehicle fleet; the availability and use of our efficiency and innovation fund; engagement with our customers, suppliers, vendors and partners regarding emissions reduction; the expected increase in pipeline capacity as a result of the Expansion Project; and our ability to improve our ESG performance.

Undue reliance should not be placed on these forward-looking statements and information as they are based on assumptions made by Trans Mountain as of the date hereof regarding, among other things: oil and gas industry exploration and development activity levels; commodity prices; the availability and efficacy of various technologies; the success of our operations; that future results of our operations and related activities will be consistent with past performance and/or anticipated performance and management expectations related thereto; availability of individuals with skills required to execute on our business objectives and strategy; general compliance with Trans Mountain’s plans, strategies, programs and goals across its reporting and monitoring systems among our employees, stakeholders and service providers; our ability to successfully engage Indigenous and other stakeholders; the success of growth projects; existing regulatory, tax, environmental and other laws and regulations; and the availability of additional opportunities to invest in projects and technologies that reduce GHG emissions.

While Trans Mountain believes the expectations and assumptions reflected in these forward-looking statements are reasonable as of the date hereof, there can be no assurance that they will prove to be correct. Forward-looking statements are subject to known and unknown risks and uncertainties which may cause actual performance and financial results to differ materially from the results expressed or implied, including but not limited to: our ability to implement our strategic priorities and business plan and achieve the expected benefits; the strength and operations of the oil and natural gas industry and related commodity prices and market conditions; our relationships with external stakeholders, including Indigenous stakeholders; reliance on key personnel and third parties; shortages or disruptions in the availability of labour, human capital and/or materials; actions by governmental and regulatory authorities, including changes in regulatory processes or increased environmental regulation; fluctuations in operating results; adverse general economic and market conditions in Canada, North America and elsewhere; risks related to the current and potential impacts of the COVID-19 pandemic and depressed commodity prices; constraints on, or the unavailability of, adequate infrastructure and technology; changes in the political environment in Canada; the ability to access sources of financing and insurance; the effectiveness of our risk management and other programs; ability to expand, update and adapt our infrastructure on a timely and effective basis; technology and security risks including cyber-security risks; reputational risks; potential litigation and disputes; natural catastrophes; and geopolitical conflicts.

Readers are cautioned that this list of risk factors should not be construed as exhaustive.

The forward-looking statements contained in this document speak only as of the date of this document. Unless required by law, Trans Mountain assumes no obligation to update forward looking statements and information should circumstances or management’s expectations, estimates, projections or assumptions change. The forward-looking statements contained in this document are expressly qualified by this cautionary statement.

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