

Climate Report 2021

An energy company for the future



Table of contents

■ Our approach	3	■ Our performance	27
Our purpose and strategy	3	GHG scope 1 and 2	28
Message from our President and CEO, Mark Little & CFO, Alister Cowan	4	GHG scope 3	31
		GHG target	32
■ Climate strategy	5	■ Appendix	33
Optimize our base business	6	About this report	33
Expand low emissions business	10	TCFD concordance table	34
Renewable fuels	10	Performance data footnotes	35
Electricity	11	Advisories	39
Hydrogen	12		
Grow our customer connection	13		
Well-positioned for low emissions energy expansion	14		
■ Governance and decision making	15		
Governance	16		
Board oversight of climate-related risks and opportunities	16		
Role of senior leadership	16		
Climate-related risk management	17		
Transitional risk resilience	18		
Regulatory risk resilience	22		
Physical risk resilience	24		
Collaboration, partnerships & engagement	25		
Engagement with our supply chain	26		
Collaborating and partnering to advance innovation	26		

Our approach

- > Our purpose and strategy
- > Message from our President and CEO, Mark Little & CFO, Alister Cowan

OUR PURPOSE

To provide trusted energy that enhances people's lives, while caring for each other and the Earth.

OUR STRATEGY

To be Canada's leading energy company

by growing our business in low greenhouse gas (GHG) fuels, electricity, and hydrogen while sustaining and optimizing our existing hydrocarbon business and transforming our GHG footprint; all enabled by our expertise, long-life resources, integrated business model, strong connection to customers, and world-class environment, social and governance (ESG) performance.

OUR SIX STRATEGIC OBJECTIVES

Grow
returns on
capital

Be
net-zero
by 2050

Optimize
our base
business

Expand
low-emissions
businesses

Grow our
customer
connection

Achieve
world-class ESG
performance

Suncor's strategy is designed to create value for our shareholders, customers and wider society. Six strategic objectives support our purpose and guide our strategy:

- Grow long-term returns on invested capital and increasing shareholder returns.
- Be a net-zero GHG emissions company by 2050 and substantially contribute to society's net-zero goals.
- Sustain and optimize our base business while improving cost and carbon competitiveness.
- Grow low-GHG emissions businesses that will materially contribute to earnings and cash flow.
- Grow our customer connection through new low-carbon products and services.
- Achieve world-class ESG performance and disclosure while being recognized as a leader in sustainability and the energy transition.

Message from our President and CEO, Mark Little & CFO, Alister Cowan

Suncor took a significant step forward this year in response to the climate challenge, evolving our strategy and including the objective of contributing to a net-zero world by 2050, purposefully and profitably. Aligned with the Paris Agreement, this strategic objective supports our purpose — to provide trusted energy that enhances people's lives while caring for each other and the Earth — and is designed to create value for our shareholders, customers and society. As we seek competitive ways to reduce emissions, we will also support our customers as they look for low-carbon energy choices that allow them to also be part of this transition.

Getting to net-zero for us starts by reducing the emissions footprint of our base business. Energy efficiency projects, new technologies and switching to lower GHG-emitting fuels — like our cogeneration project to replace our coke-fired boilers at our Base Plant and our progress on solvents for next generation in situ extraction — will get us part way there. Equally important will be expanding our businesses in low-emissions energy like hydrogen, electricity and renewable fuels. For example, we have partnered with ATCO Energy to explore the potential of a world-scale clean hydrogen project in Alberta, pursued a renewable fuels project with Enkern in Quebec, and have built Canada's first coast-to-coast Electric Highway™ for customers seeking low-carbon options for their energy needs.

Carbon capture, utilization and storage (CCUS) is also an important part of our plans to reduce our base business emissions. As a partner in the [Oil Sands Pathways to Net Zero](#) alliance with other oil sands producers, and working collectively with the federal and Alberta governments, we have a significant focus on CCUS. Creating a major CCUS trunkline connected to a carbon sequestration hub will play a significant role in emission reductions in the Canadian oil sands.

Our strategic objective to reach net-zero builds on our focus of managing carbon as a principal risk to our business. Our Board of Directors was deeply involved and will continue to closely review our progress to ensure we meet our objectives. We have also introduced a new target that builds on our previous goal of reducing GHG emissions intensity by 30% by 2030. We are now targeting annual emission reductions of 10 megatonnes (Mt) across our value chain by 2030.

We believe we are well positioned to reach our objective of becoming a net-zero company by 2050. We have unparalleled energy expertise; long-life, low-decline resources; an integrated business model; a long history of embracing technology changes and innovation; and a decades-long sustainability journey. The profitability of our business, capital discipline, commitment to operational excellence and growing long-term returns on invested capital are inseparable from achieving our climate objectives.

We invite you to read our fifth annual Climate Report to learn more about our plans and how we are moving to become a net-zero company by 2050. Our strategy and disclosure were guided by insights from our scenario planning, including a 2°C scenario, policy trends, and recommendations from the Task Force on Climate-related Financial Disclosures (TCFD). Achieving leading ESG performance is no small feat and requires deep collaboration and investment in innovation and technology. Our engagement with stakeholders — including our customers, Indigenous Peoples, communities, investors and financial partners — along with the input and support of Suncor's Board of Directors, remains invaluable to our future success. This support, combined with Suncor's decades-long history of sustainability leadership and ambition, make us resolute and ready for the challenge ahead.



A stylized, dark ink signature of Mark Little.

Mark Little

President and Chief Executive Officer



A stylized, dark ink signature of Alister Cowan.

Alister Cowan

Chief Financial Officer

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Climate strategy

- > Optimize our base business
- > Expand low emissions business
- > Grow our customer connection
- > Well-positioned for low emissions energy expansion

Climate change is a complex challenge and we are committed to doing our part to limit global temperature rise to less than 2°C. We know that to stay within these global limits, the world needs to reach net-zero emissions by 2050 or sooner.

As an energy company for the future, our strategy charts a path to contribute to a net-zero world by transforming the emissions footprint of our core business while also expanding our low-emissions businesses and working with our customers, governments and partners to realize our shared climate objectives. We are building on a strong foundation. Through our investments in low-carbon power, renewable fuels and electric charging stations, we have already helped our customers reduce their emissions by 3.5 Mt in 2020 and our new target commits us to going even further.

Be a net-zero greenhouse gas emissions company by 2050 and substantially contribute to society's net zero goals

By 2030, reduce annual emissions by 10 megatonnes across our value chain.



Reduce greenhouse gas emissions through base business improvements

Grow low-emissions energy businesses in renewable fuels, electricity and hydrogen

Work with others to reduce emissions

Optimize our base business

Sustain and optimize our base business while improving cost and carbon competitiveness

Operational excellence

- 🛡️ Safety
- 🕒 Reliability
- 📈 Cost competitiveness

Reduce emissions

- ⌚ Energy efficiency improvements
- 🔧 Fuel switching
- 🗑️ Carbon capture storage
- 🔧 Implementation of new technologies



As the world strives to reach net-zero emissions, Suncor will continue to deliver reliable and increasingly low-carbon energy. We are focused on sustaining output at our existing facilities while working to reduce GHG emissions throughout our value chain. Our plans include improving the energy efficiency of our operations, fuel switching, carbon capture, utilization and storage (CCUS) and new technologies.

Suncor's base business consists of oil sands mining operations, in situ operations, upgrading, offshore production, and refining and marketing facilities. From digitalization initiatives to new mining technology to CCUS, Suncor is applying innovative technology to reduce our emissions across the business. For more information about Suncor's base business please visit suncor.com.

Carbon capture, utilization and storage

As we move towards our net-zero by 2050 strategic objective, CCUS will be a critical component of our emissions reduction efforts. Earlier this year, Suncor invested in [Svante Inc.](https://svanteinc.com), which is developing a second-generation CO₂ capture technology for the decarbonization of both combustion emissions and clean hydrogen production. This investment will support Svante in its efforts to accelerate the commercial scale deployment of a technology that

has the potential to dramatically reduce the cost associated with carbon capture.

With supportive fiscal and regulatory policies and on-going collaboration, we expect CCUS will be a key component of reducing emissions in our base business. It will also enable the production of clean hydrogen from natural gas as an energy product.



Oil Sands Pathways to Net Zero

Suncor, Canadian Natural Resources, Cenovus Energy, Imperial and MEG Energy, representing approximately 90% of Canada's oil sands production, have established the [Oil Sands Pathways to Net Zero](https://oilandspathways.com) alliance to work collectively with the federal and Alberta governments to achieve net-zero greenhouse gas (GHG) emissions from oil sands operations by 2050. The initiative incorporates a number of parallel pathways to address GHG emissions including a carbon sequestration hub through a CO₂ trunkline in northern Alberta and deploying existing and emerging GHG reduction technologies.

Optimize our base business

Subsurface steam enhancements and solvents

As part of our efforts to improve the steam assisted gravity drainage (SAGD) process for our in situ assets, we are pursuing a number of surface and subsurface technologies to lower the cost and GHG intensity at our existing facilities. The technologies we are pursuing include:

- **Expanding Solvent SAGD (ES-SAGD)** – By partially replacing steam with a solvent, we aim to accelerate bitumen production, and reduce the steam-to-oil ratio (SOR) to lower GHG intensity. In 2020, we completed the solvent injection phase of the pad-scale demonstration at Firebag and we're now in the monitoring phase post-injection, including solvent recovery. As we deploy ES-SAGD commercially, we plan to undertake additional commercial demonstration activities to further understand production performance and solvent recovery.
- **Extra Low Intensity Thermal Extraction (ELITE)** – This subsurface steam enhancement technology focuses on driving down the SOR by operating at a significantly reduced temperature

and pressure, reducing steam requirements and ultimately reducing the GHG intensity. We initiated this pilot at Firebag early in 2021 and expect it to last for approximately two years.

- **Heavy Oil Late Life Energy Recovery (HOLLER)** – Reusing heat from mature SAGD operations to generate low-carbon power and drive down GHG emissions. Details of the process are outlined below.

We believe a combination of these three technologies has the potential to reduce emissions intensity in existing in situ operations by up to 30%.

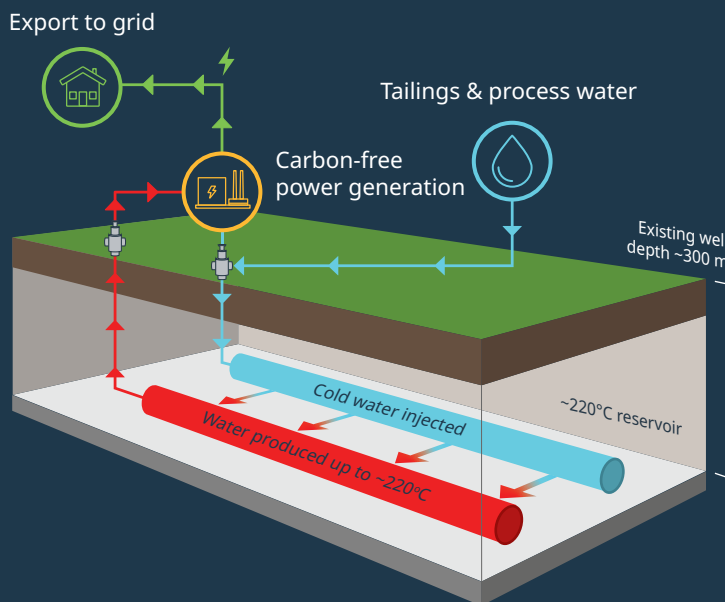
Additionally, we continue to test a range of hydrocarbon solvents and heating mechanisms to significantly lower the GHG intensity of our in situ operations by up to 70%. These technologies could include solvents paired with wellbore heating, super heating, or electromagnetic heating and the addition of steam. We are building on more than 20 years of experience and knowledge from participating in pilots and testing solvent recovery processes.

Heavy Oil Late Life Energy Recovery (HOLLER)

HOLLER is the application of geothermal technology in SAGD wells that are nearing their end of life. Over the past two decades, SAGD has added energy into the ground for bitumen production, transforming Canada's in situ oil sands into the world's largest man-made battery. While conventional geothermal technology is encumbered by the high cost of drilling deep wells to reach the temperatures required for economic power generation, Suncor has a vast inventory of mature, shallow SAGD wells with access to high temperatures.

Through the HOLLER project, we will harness this thermal energy by using our well inventory to create a closed geothermal system using recycled water from our base operations and tailings ponds as the heat recovery medium. This could allow us to generate zero carbon emission base load electricity, while responsibly sequestering process or tailings water. We are advancing this technology along with the relevant patents and expect to submit a pilot application to the regulator in 2021.

For perspective, the thermal energy from just one SAGD well can produce enough electricity to supply 3,600 homes for a year — and we have hundreds of these wells.



~12x shallower ~70% hotter
than current Canadian geothermal wells

Optimize our base business

Cogeneration

Cogeneration is an established technology that improves the efficiency of our base business. By producing both industrial steam and electricity through a natural gas-fueled process, cogeneration is the lowest GHG-intensive form of hydrocarbon-based power generation. All our oil sands facilities use cogeneration, and we continue to recognize the value it brings to our operations. We are replacing the coke-fired boilers at our Oil Sands Base Plant with cogeneration units and anticipate the cogeneration facility to be commissioned late 2024. In addition to providing the facility with steam needed for operations and reducing direct GHG emissions at site, the cogeneration units will export an additional 800 megawatts (MW) of electricity to the provincial grid, equivalent to roughly 7% of Alberta's current electricity demand. The GHG intensity of the power produced from our cogeneration units is approximately 75% lower than coal-fired power generation. For example, our coke-fired boiler replacement (CBR) project will reduce GHG emissions by approximately 5.1 megatonnes (Mt)¹ per year in Alberta. This is equivalent to displacing over 1,000,000 cars from the road.

Fuel switching

Fuel switching, whether from solid fuel, natural gas, electrification, or blending hydrogen with gas for combustion, is one way we can lower the intensity of our operations. For example, in addition to

providing low-GHG power, our CBR project will also replace the coke combustion for steam generation with lower-carbon-intensity natural gas, reducing GHG emissions.

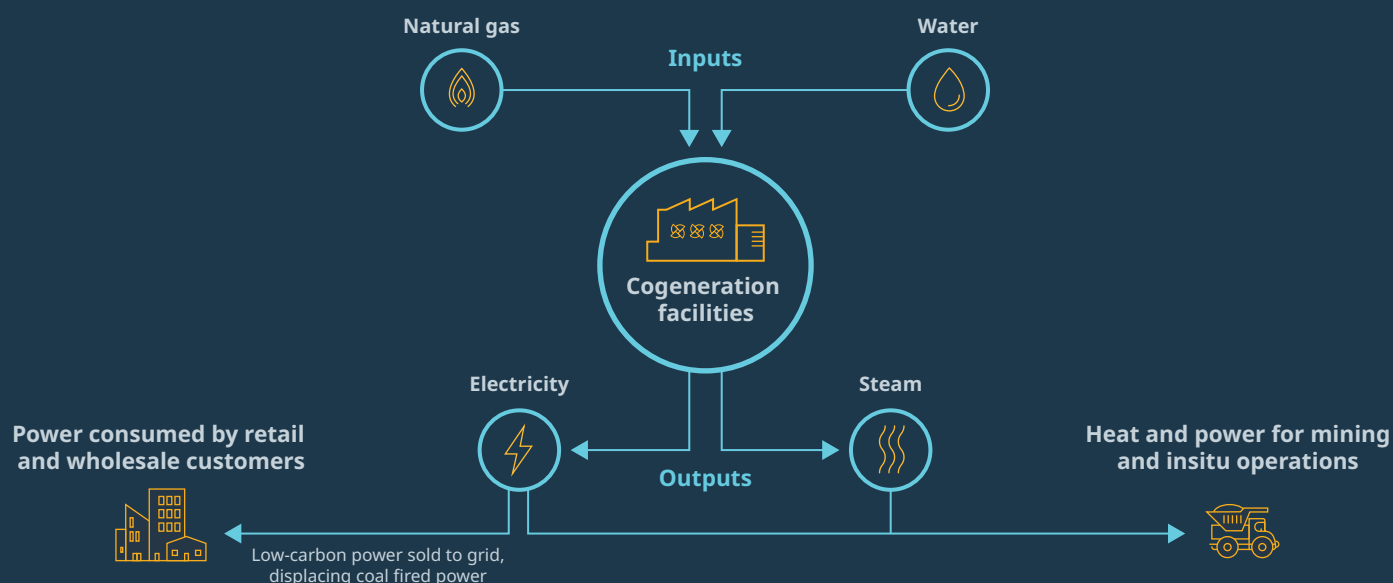
Non-aqueous extraction

Through partnerships with equipment suppliers and research organizations, we are pursuing new technologies that reduce the need for water in bitumen extraction from mining operations. Currently, warm water is used to separate bitumen from sand. By replacing that water with a solvent, we could significantly reduce tailings, costs, and our GHG emissions. We have increased the size and scope of our non-aqueous extraction pilots with a number of partners that are helping advance the technology. We are working with COANDA Research and Development, InnoTech Alberta, CanmetENERGY, and Exergy Solutions, as well as several academic institutions.

Thermal bitumen conversion

We are advancing thermal bitumen conversion technology to partially upgrade bitumen, which would increase value by decreasing the cost to upgrade and reducing the amount of diluent required to transport this product, and lower GHG intensity from extraction to the end user. We are also advancing conversion technologies to achieve high-yield, low-GHG intensity upgrading of bitumen to valuable end-products. The technologies when realized could also integrate with existing Suncor infrastructure.

Cogeneration process



¹ Benefits from the cogeneration project are made up from fuel switch emission reductions (coke to natural gas, approximately 1 Mt CO₂e) and power credits (calculated using the difference between the cogeneration power intensity and the intensity of coal power production, approximately 4 Mt CO₂e).

Optimize our base business

GHG: Technology development and deployment programs and select energy expansion projects²

	Discover	Design	Develop	Deploy
Optimize our base business	<ul style="list-style-type: none"> Technology Collaborations <ul style="list-style-type: none"> • COSIA • CRIN • EVOK Innovations • Academic and Research Institutions • Pathways 	<ul style="list-style-type: none"> Carbon Capture, Utilization and Storage Novel Bitumen Conversion Heavy Oil Late Life Energy Recovery Novel Low GHG Power 	<ul style="list-style-type: none"> Thermal Bitumen Conversion Non-aqueous Extraction Subsurface Solvents 	<ul style="list-style-type: none"> Subsurface Steam Enhancements Fuel switching Aquatic Tailings Reclamation
Expand low emissions business	<ul style="list-style-type: none"> Bitumen Beyond Combustion and New Products 	<ul style="list-style-type: none"> Hydrogen Generation 	<ul style="list-style-type: none"> CO₂ to Fuels Renewable power – solar 	<ul style="list-style-type: none"> Renewable fuels Renewable power – wind
Time to implementation	<ul style="list-style-type: none"> Operational 	<ul style="list-style-type: none"> 0-3 years 	<ul style="list-style-type: none"> 4-6 years 	<ul style="list-style-type: none"> 7-10 years

Examples provided for illustration of programs from the Suncor technology portfolio. The programs may include a subset of processes or projects (ex. The thermal bitumen conversion program includes processes such as partial upgrading). Additional information is available at sustainability.suncor.com/innovation

Our technology collaboration span across various stages of technology development and deployment. Information about our collaboration and partnership efforts to advance innovation are available throughout this report.

Technology development & deployment

Addressing climate change and providing low-emission sources of energy will require investment, innovation, regulatory support, collaboration and global co-operation. Our GHG technology development and deployment portfolio includes several programs focused on reducing emissions from our operations as well as helping our customers lower their emissions through expanded low-emissions energy offerings.

In 2020, we invested \$535 million in technology development and deployment including digital transformation³.




² Select energy expansion projects include cogeneration, renewable power – solar, and renewable power – wind.

³ This figure does not include investments into energy expansion projects.

Expand low emissions business

Grow low-GHG emissions businesses that will materially contribute to earnings and cash flow

Expanding the businesses we're in today

 Renewable fuels Grow our renewable fuels production to meet our customer needs for low-carbon fuels	 Electricity Deliver low-GHG electricity capacity to the market	 Hydrogen Develop a low-GHG hydrogen business
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As outlined in the strategy section of the report, we are expanding our business in renewable fuels, low-GHG electricity and clean hydrogen. This is a natural evolution of our company as it builds on our current areas of expertise and our integrated business model. Our plans include:

- allocating approximately 10% (or \$500 million) of our annual capital budget in the mid-term on investments that advance our low-GHG energy offerings
- increasing our renewable fuels production capacity
- increasing our low-GHG electricity capacity to market, including expanding Canada's Electric Highway™
- becoming a producer of clean hydrogen by 2030.

Renewable fuels

In Canada, demand is increasing for renewable fuels driven by consumer preferences and the implementation of policy, e.g., the Clean Fuel Regulation (CFR). Since 2006, Suncor has been making a significant impact in Canada's emerging biofuels industry and we continue to expand our presence in this space. Our ethanol plant, the largest in Canada, provides ethanol for blended gasoline. We continue to research lower-carbon-intensity ethanol and are advancing a portfolio of projects with universities and companies aimed at producing advanced renewable fuels from waste, forestry and agricultural excess biomass, and refinery gases. Early investment in novel renewable fuel technologies helps Suncor develop a portfolio of commercial development opportunities. These renewable fuel projects have the potential to significantly reduce GHG emissions, increase revenues and provide expected rates of return in the mid-teens to shareholders.

Examples include:

- participating in the Alberta-Based Biorefinery (AB-Bio) project with Alberta Innovates to de-risk sustainable Alberta-based feedstocks to produce low-GHG fuels
- increasing renewable fuel blending for our diesel and gasoline pools
- investing in companies advancing next generation clean and renewable fuel technologies.

Low-GHG intensity ethanol

Working with Alberta-based forestry organizations, Emissions Reductions Alberta, Alberta Innovates, the Government of Canada and LanzaTech, we are advancing pilot production of ethanol. The pilot project converts woody biomass into renewable ethanol through the gasification of the biomass into syngas and the fermentation of the syngas into ethanol. By leading this initiative in a regional context, we could create a new value chain that would support the commercial development of advanced biofuels across Canada.

Enerkem

In 2019 we invested in [Enerkem](#), which manufactures biofuels and renewable chemical products from mainly municipal solid waste that would otherwise be landfilled.

In December 2020, Suncor announced a continuation of this strategic partnership with an investment in Enerkem's renewable fuels facility in Varennes, Que. This facility will also have the largest North American electrolyzer to produce clean hydrogen and oxygen. When combined with the Enerkem conversion process, it will convert nearly 200,000 tonnes of non-recyclable residual materials as well as wood waste into 125 million litres of low-carbon-intensity renewable fuels and chemicals annually. This is equivalent to taking approximately 45,000 vehicles off the road every year.

Expand low emissions business

LanzaTech

[LanzaTech's](#) carbon recycling platform uses novel gas fermentation technology to capture CO-rich gases and convert the carbon to fuels and chemicals. For over 10 years, Suncor has partnered with LanzaTech to support the development of their patented technology portfolio for potential deployment within our existing operations as well as next generation biofuel plants.

LanzaJet

[LanzaJet Inc.](#) will produce sustainable aviation fuel (SAF) from ethanol derived from a variety of sustainable sources, including wastes and residues. Suncor is a founding investor alongside Mitsui & Co., Ltd. and LanzaTech, along with Shell and British Airways (International Airlines Group) who formalized their investments in 2021. Investments will help build LanzaJet's SAF-producing plant in Georgia, U.S. The biorefinery, when constructed, will produce 10 million gallons (37.9 million litres) per year of sustainable fuels with the majority of the fuel produced as SAF and the remaining as renewable diesel. We've contracted to take a significant portion of the SAF and renewable diesel produced at the facility to provide to jet fuel and distillate customers. Modular construction of this facility is underway, with production slated for end of 2022. This biorefinery is the first of many planned by LanzaJet which will help accelerate global access to a new and economical sustainable fuels pathway for the aviation sector as it seeks to decarbonize and reach net-zero by 2050.

Electricity

Wind power

Wind power is one of the fastest-growing sources of electricity generation in the world. Suncor has been in the wind power business for more than 20 years and we are planning to build on that experience to deliver value for our shareholders. As a merchant power producer, we are selective in the jurisdictions

Wind project	Generation capacity (MW)	Size
Chin Chute	30	20 turbines
Magrath	30	20 turbines
SunBridge	11	17 turbines
Adelaide	40	18 turbines
Forty Mile*	200	45 turbines

*Under construction

Cogeneration and renewable power capacity

Our combined investments in cogeneration and wind power generation make us the fifth largest and one of the most carbon-competitive independent power producers in Alberta by generation capacity. Across our operations, we have working interest in approximately 1,400 MW of renewable and cogeneration capacity and provide approximately 500 MW to regional grids, increasing our revenue and providing low-carbon energy to consumers. Sanctioned projects are expected to add another 1,000 MW of capacity by 2025, which would make us the third largest power producer. In addition to providing low-carbon energy, these projects also contribute invested rates of return of approximately 20% for the CBR project and approximately 15% for Forty Mile.

where we invest. For example, we invest in Alberta where we generate carbon credits to offset costs against our base business, strengthening project economics.

We are a partner in four operational wind power facilities with aggregate generating capacity of 111 megawatts (MW). This is enough to power about 53,000 homes. We continue to evaluate both wind and solar investments that fit with our existing portfolio of projects.

Solar power

In recent years, with technological advancements, solar has become a more commercially viable option. Solar technologies can complement our business through stand-alone projects, integration with existing facilities, and co-location with wind power. We continue to evaluate new opportunities across Canada to build our renewable energy portfolio.

Forty Mile Power Project

The Forty Mile Power Project is a renewable energy project planned to be developed in two phases; phase one, a 200 MW wind power project and phase two, a 220 MW solar power project. Phase one is expected to be completed and operational in late 2022 and upon completion of this phase, we will increase our wind generation capacity by almost three times. Phase two, the Forty Mile Solar Power Project, has commenced consultation activities and could be operational by late 2024.

Expand low emissions business

Hydrogen

Suncor is the largest producer and consumer of hydrogen in Canada. We view hydrogen as being a significant part of the future energy mix and recognize the opportunity for Alberta to be a global leader in the production of clean hydrogen. As such, we have partnered with ATCO to evaluate the potential for a world-scale clean hydrogen project near Fort Saskatchewan, Alta. If sanctioned, this project would produce more than 300,000 tonnes per year of clean hydrogen and reduce Alberta's CO₂ emissions by more than 2 Mt per year. This is an equivalent to removing approximately 450,000 cars from the road annually. Further, by using advanced technology to capture over 90% of the emissions generated in the production of hydrogen, and then using the hydrogen in our refining processes and cogeneration, we would also reduce the carbon intensity of our refined products. To further reduce Alberta's emissions, approximately 20% of the

clean hydrogen from the facility would be used in blending with Alberta's natural gas supply. This project is also expected to generate substantial economic activity and jobs across the province, and make a sizable contribution to Canada's net-zero ambition. If government support, policy and regulatory certainty is obtained to support a sanction decision, the facility could be operational as early as 2028.

Additionally, we are pursuing other opportunities to advance the hydrogen economy in Canada. In June 2021, we announced a first-of-its-kind project, Alberta Zero Emissions Truck Electrification Collaboration (AZETEC), to design, manufacture and test long-range hydrogen fuel cell trucks for operation year-round between Calgary and Edmonton. This 18-month pilot with our partners will serve as an initial step on a path to developing economically viable commercial hydrogen transport fuelling stations.

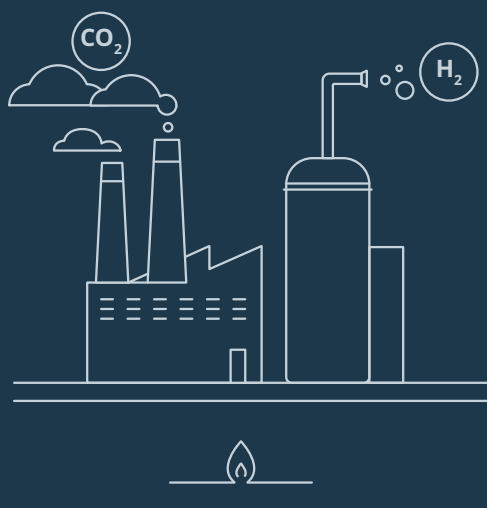
Over 50 years of expertise in hydrogen

Current production

Largest Canadian producer & consumer

Grey hydrogen

from natural gas

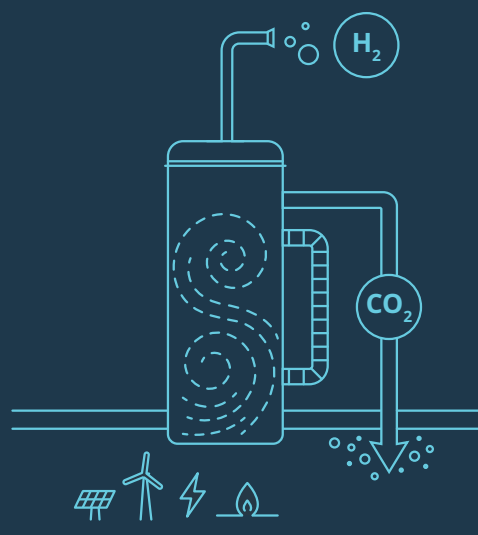


GHG intensity = ~12 kg CO₂e/kg H₂

Future production opportunity

Clean hydrogen

from natural gas with CCUS or low carbon power



GHG intensity = ~0.5 kg CO₂e/kg H₂

Grow our customer connection

As an integrated energy company, Suncor can influence emissions throughout the energy value chain and help our customers to do the same.

We are committed to developing solutions that help our customers lower their GHG emissions. Customers have increasingly more choices around transportation — traditional internal combustion engine vehicles, hybrid vehicles, battery electric vehicles (EV), and in some cases even the emergence of hydrogen fuel cell vehicles. We intend to provide low-GHG energy options to support these choices. Currently, liquid fuels blended with biofuels comprise the bulk of this energy mix but EV charging and hydrogen for transportation are forecast to grow. We will continue to expand our offerings as the transportation energy mix evolves through our Petro-Canada™ brand and established and trusted customer relationships with millions of Canadians. We plan to do this by:




- working with governments to ensure regulatory clarity and effective fiscal frameworks are in place to support climate and economic goals (e.g., supporting fuel standards that result in affordable, lower-emissions fuel for customers)

In addition to growing our customer connection, we will work with our supply chain to encourage emission reductions. For further information on how we're working with our suppliers, visit 'Engaging with our Suppliers' on [page 26](#).

- providing renewable liquid fuels and blending to help to reduce the carbon intensity of the fuels we sell
- expanding our low-emissions power business to displace higher-emission sources and reduce the overall intensity of electricity, offering EV fast charge locations through Canada's Electric Highway™
- expanding our significant hydrogen capacity to offer transportation solutions to sectors such as the heavy-duty vehicle fleet as demand increases.

Grow our customer connection through new low-carbon products and services

Help valued customers contribute to a net-zero world

-  **Provide cleaner energy choices for customers**
-  **Develop solutions for customers to buy energy in simple ways**
-  **Listen to and help customers understand consumption and lower their GHG emissions**



Well-positioned for low-emissions energy expansion

Over the past two decades, Suncor has made significant investments in projects and technologies designed to position the company for energy system expansion opportunities. We have been increasing low-carbon power generation through cogeneration and investments in wind power; we've completed Canada's first Electric Highway™; and we are enabling low-emissions renewable fuels through investments in Enkern, LanzaTech and LanzaJet. We have also operated Canada's largest ethanol plant since 2006. In addition to positioning Suncor for energy expansion opportunities, these investments have resulted in 3.5 Mt⁴ of annual emissions reductions for our customers. Our new 2030 GHG reduction target is incremental to the 3.5 Mt emission reductions from past investments shown in the chart below.

By pursuing opportunities both inside and outside our operations, we have a tremendous opportunity to contribute to Canada's overall emission reduction efforts.

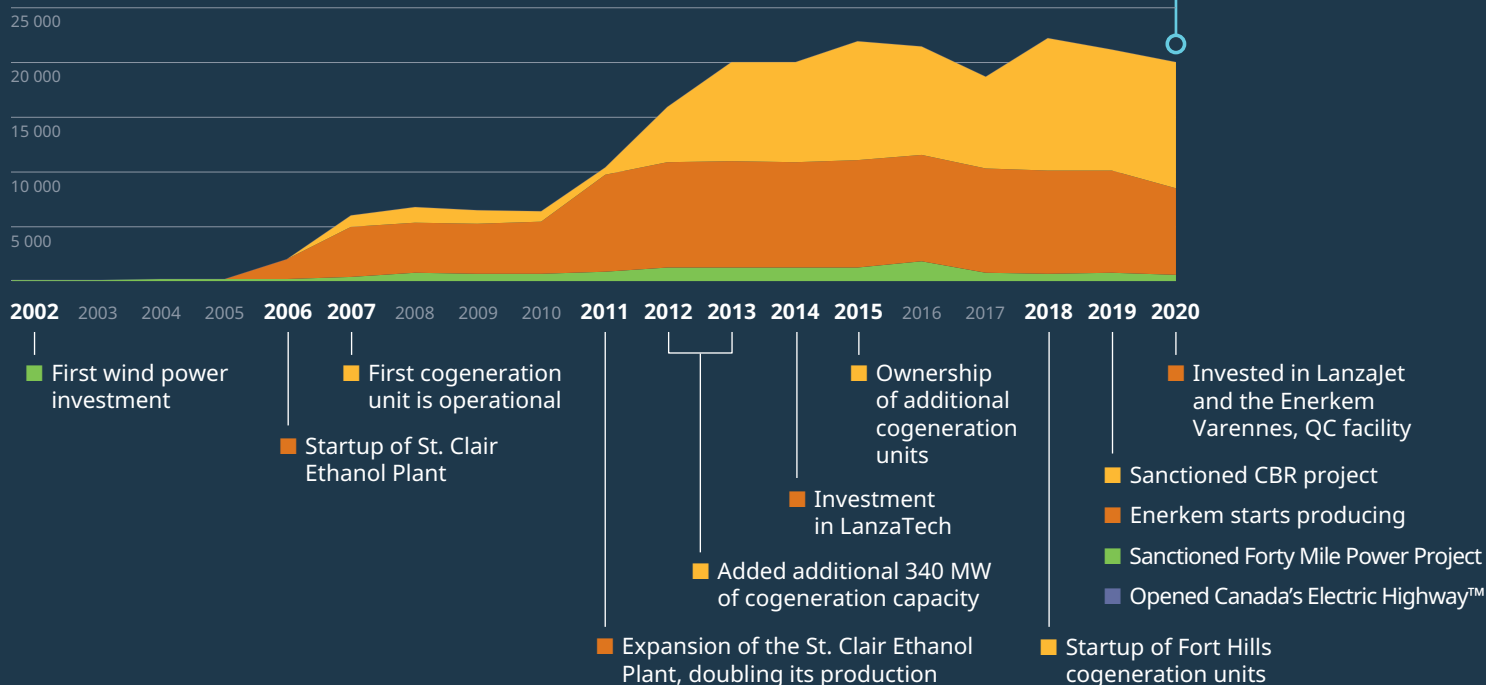
As one of the largest industrial users of electricity, fuels and hydrogen, Suncor is a primary consumer for these energy expansion opportunities. This allows us to build our capabilities and reduce market risk associated with expanding these lines of business. As we've done for decades, we will continue expanding low-carbon energy products, thus building on our core competencies and making additional investments that are synergistic across the company.

Two decades of low-carbon energy production

These investments helped our customers reduce their emissions by 3.5 Mt in 2020

Energy production Tj/year

■ Wind ■ Renewable fuels ■ Cogeneration ■ EV charging



* Timeline is not exhaustive of Suncor's efforts or investments in low-carbon energy.

** Reduction in cogeneration production in 2017 was due to major turnarounds; reduction in wind power was due to divestiture of wind facilities through 2015-2017.

*** Data displayed is on a working interest basis with the exception of Syncrude, as data was not available at the time of reporting.

4 The 3.5 Mt of annual emission reductions in 2020 is a result of past investments. Our new 2030 GHG target does not include these previous reductions. We anticipate achieving approximately half of the target by reducing emissions from our facilities and the other half from reducing emissions outside of our operations.

Governance and decision making

- > Governance
- > Climate-related risk management
- > Collaboration, partnerships & engagement

We understand that achieving our goals is only possible through sound decision-making processes. Over the last year, we've built on our track record of success to develop our new strategic objectives. Our strategy firmly embeds climate action into our business.



Governance

Our board and senior leadership integrate climate into our decisions by identifying carbon as a principal risk and incorporating thorough risk management practices. Environment, social and governance (ESG) performance is a component of Suncor's executive compensation with further integration to come in 2022.

Board oversight of climate-related risks and opportunities

Suncor's Board of Directors and the executive leadership team (ELT) are both responsible for approving and implementing strategies. The board oversees our Enterprise Risk Management (ERM) program, and annually reviews principal risks. Principal risks have the potential to impact or impair Suncor's ability to meet its strategic objectives. Carbon risk is one of these principal risks, requiring the full board to review external trends, scenarios, carbon risk pathways and Suncor's mitigation plans at least once a year.

The Environment, Health, Safety and Sustainable Development Committee (EHS&SD) of the board reviews carbon risk quarterly. Its oversight responsibilities include monitoring the effectiveness and integrity of Suncor's internal controls related to operational risks of physical assets and other sustainability matters. The committee also reviews policies and practices respecting operational risks as they relate to climate change.

In addition to overseeing principal risks, the board annually reviews business plans (including capital budget), and in doing so endorses the strategies reflected in long-range plans. The board's Governance Committee also annually assesses Suncor's planning and budgeting process.

Suncor's board practices on performance evaluation and compensation consider various environmental, social and governance factors by:

- evaluating senior executive performance annually against well-defined goals that support and reinforce our business objectives
- considering our performance against enterprise-wide sustainability goals related to safety, environmental (including GHGs) and social performance in determining the amount of annual incentive payments to the Chief Executive Officer (CEO) and the rest of the ELT.

Role of senior leadership

As a member of the board, our CEO leads an ELT that builds and implements a strategy to identify and realize high-quality opportunities while mitigating risks. Collectively, our ELT establishes strategic financial direction and operational objectives, and integrates climate change and other sustainability considerations into business planning and processes. The ELT also ensures we effectively deliver value chain integration, pursue technology development, support public policy and government interaction, and establish and maintain valuable external relationships.

To help inform the execution of our strategy, our leadership team also receives guidance through several internal collaborative groups which help guide decisions by providing advice and input on innovation and technology investments.

Our Chief Sustainability Officer (CSO) helps to elevate sustainability considerations and ensure they are properly represented in decision-making. The CSO reports directly to our CEO and collaborates with other ELT colleagues on strategy, operations and other departments with focused climate-related accountabilities, including:

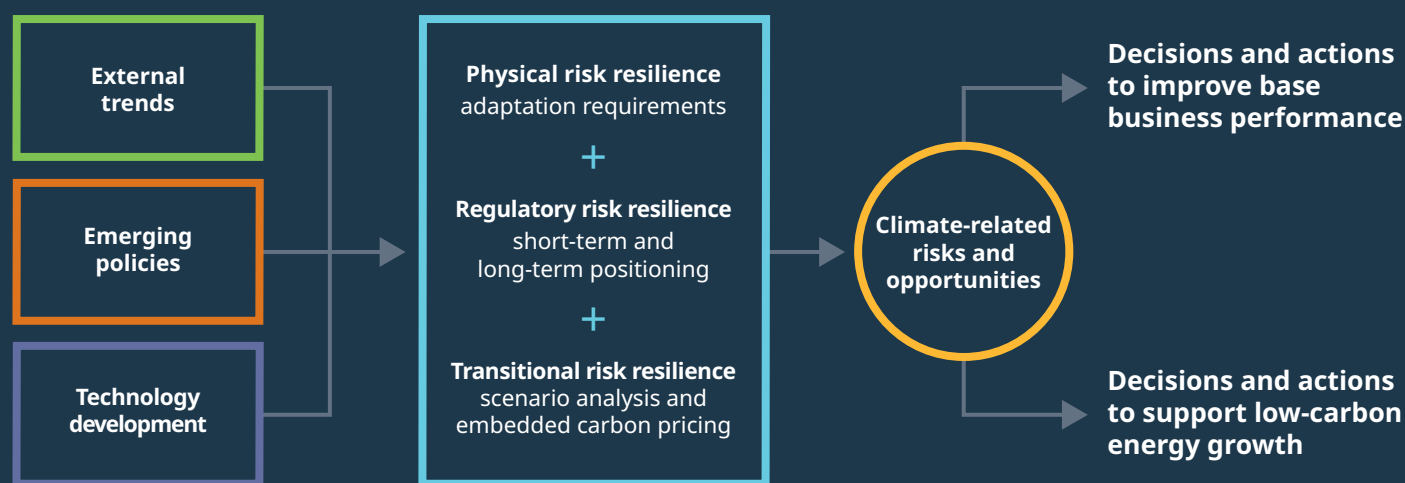
- communicating Suncor's carbon risk and mitigation measures to the board
- translating the strategic sustainability direction from the board into corporate action
- serving as a direct link to the Environment, Health, Safety & Sustainable Development (EHS&SD) Committee of the board, which assesses the risks and impacts of climate change issues on business and growth plans, reviews impacts of emerging climate legislation and regulations, and reviews public disclosures on carbon risk
- playing a critical role in supporting Suncor's public policy and government interaction and deepening Indigenous and stakeholder relationships and collaboration
- supporting Suncor's sustainability initiatives.

Climate-related risk management

Our commitment to a proactive Enterprise Risk Management (ERM) program contributes to effective decision-making through consistent identification and assessment of risks inherent to our assets, activities and operations. Evaluation of potential climate-related risks and opportunities is integrated consistently along with other economic, environmental and social factors into these decision-making processes and our overall ERM program.

Climate-related risks can affect every aspect of our business. Our integrated approach to identifying and assessing climate-related risks addresses the influence and impacts of these risks across organizational boundaries and allows co-ordinated efforts to manage and mitigate the risk for the entire company. Board-level oversight of these risks and mitigation efforts and dedicated executive management ensures an integrated, co-ordinated approach across our business.

Understanding and integrating climate-related risks and opportunities



An enterprise risk matrix supports the assessment and prioritization of all risks and opportunities using a common measure of likelihood and consequence to identify different types of risk such as physical, transitional and regulatory⁵ which could result in reputational, financial, safety and environmental impacts.

Additional processes and risk management evaluation techniques include:

- an established strategic issues management process inclusive of climate change risks and opportunities, governed by a policy and regulatory forum comprised of senior leaders
- an annual carbon price outlook developed to incorporate existing regulations and expected cost and credit trajectories into the economic evaluation of projects and assets in each corporate scenario

- internal project and asset development model, which includes a review of climate change implications early in the process and before the commitment of significant resources
- strategy formulation to enhance energy efficiency and to advance carbon reduction technologies through collaboration of cross functional teams including environmental engineering, corporate technology development, corporate strategy, and capital portfolio management
- an annual business unit and functional level assessment of key business risks and opportunities, including the potential physical risks to our assets posed by the effects of climate change, the outcomes of which feed into our overarching enterprise risk program and processes
- facility-focused GHG emissions forecasts which inform the potential impact of identified risks and optimize business planning.

⁵ [SASB climate risk technical bulletin](#)

Climate related risk-management

Transitional risk resilience

We consider transitional risks, such as the change in consumer preferences and market forces in our business decisions, using four future scenarios and the integration of carbon pricing into strategic plans and capital allocation decisions.

Scenarios & integration

We use three energy future scenarios to 2050 and a 2°C scenario to 2100 to test and assess the resilience of our business strategy against inherent uncertainty. All scenarios are developed using distinct, challenging, relevant and plausible world trajectories. The three energy future scenarios to 2050 use variables adjusted in a consistent manner. Some of the aspects we consider in our scenario development include demographics, economics, environment, geopolitics, legal, social and cultural, and technology. Our scenarios are used annually by the CEO, the executive leadership team and the Board of Directors to assess business and growth strategy and identify alternative strategic directions. The scenarios are also used by internal teams to evaluate projects and opportunities. This process continues to be a useful tool for stress-testing our business on several key dimensions, including climate risk.

Energy future scenarios to 2050⁶

Under each of these scenarios, we believe oil will be required for decades to come as the world transitions to meet its climate

ambitions. This view is also supported by organizations such as the International Energy Agency (IEA) and the U.S. Energy Information Administration.

These scenarios confirm the need to continually lower costs and carbon throughout our business. Each scenario has an implied crude oil price range and climate change regulatory impact. Two of the three reflect the current global aspiration toward reducing carbon emissions; what differentiates the scenarios is the context, pace and scale at which that comes about. The scenarios considered are:

- **Autonomy:** Revolutionary change in social and political attitudes toward energy, climate and the environment. Of the three energy future scenarios, “Autonomy” represents the technology and policy context that would progress closest to achieving the aspiration of limiting global warming to 2°C or less vs. pre-industrial levels.
- **Rivalry:** Population growth, urbanization and growing middle class drive energy demand — diverse supply is required to satisfy demand, with intense competition for market share between energy sources.
- **Discord:** A world with economic and political fragmentation and market uncertainty and weakness. In 2020, we adopted IHS Markit’s “Discord” scenario naming convention, replacing “Vertigo.” Discord focuses less on extreme volatility and more on enduring disunity, uncertainty, long-term market weakness and nationalism.

Autonomy

Revolutionary change in social and political attitudes toward energy, climate and the environment.

- COVID-19 has a fundamental impact on the world that alters institutional and lifestyle choices, accelerating the energy transition.
- Strong behavioral and attitudinal changes drive fundamental shifts in energy policy, use and investment.
- The combination of policy and commercial initiatives and advances in clean technologies leads to revolutionary changes in energy and emissions levels.
- Carbon-intensive industries face high regulatory costs and requirements.

Energy markets impact

- Oil is still required and continues to provide a significant share of the world’s energy needs for decades to come, but economic growth is less oil-intensive than ever before.
- Natural gas demand remains steady, overtaking oil as the largest source of global primary energy by the end of the scenario period.
- Global electrification grows strongly as access to electricity expands and penetrates further.
- Highly used renewable power generation becomes the new default thanks to technology advances in low-cost, reliable batteries.
- Production of low-GHG hydrogen grows as technologies for its use also improve.

Expected impact on Suncor

- Some producing upstream assets may be retired before the end of their producing life.
- Sustain and optimize base business, providing stable cash flow to support shareholder returns and fund growth for expanded low-carbon energy businesses (renewable fuels, electricity, hydrogen).
- Only the top tier refineries remain profitable — Suncor’s downstream maintains a focus on reliable, efficient, low-GHG and low-cost operations.

⁶ These scenarios are substantially based on the IHS Markit Autonomy, Rivalry and Discord 2020 scenarios. The scenario descriptions have been modified by Suncor for applicability to its business.

Rivalry

In Rivalry, population growth, urbanization and growing middle class drive energy demand — diverse supply is required to satisfy demand, with intense competition for market share between energy sources.

- Post-COVID-19, most governments revert to a more stable and sustainable level of interdependent political, economic, and trade relationships.
- Expansion of emerging-market economies, especially in Asia, drives growing geopolitical competition between rising and established powers.
- Shared self-interest in economic growth and global stability are moderating forces in global affairs, which helps underpin weaker but ongoing international development.
- Carbon-intensive industries face higher regulatory costs and stricter standards, affordable due to a higher price environment and stronger economic growth that can be passed on to consumers.

Energy markets impact

- Energy mix evolves gradually and steadily — fossil fuels still dominate by 2050, but oil and coal lose ground to cleaner-burning natural gas and renewables.
- Oil demand sees modest growth through the scenario period, met with enduring upstream capital discipline.
- Natural gas demand never fully recovers to pre-pandemic levels largely due to penetration of renewables in the power sector.
- Renewables expand globally, enabled by coal-constraining policies in favour of cleaner power generation options.
- Hydrogen develops as a niche solution.

Expected impact on Suncor

- Existing upstream assets are retired at their normal end of producing life.
- Higher prices and stricter emissions policy incentivize new technologies to lower our cost and carbon footprint.
- Competitive downstream provides robust returns and more aggressive investment in low-GHG fuels and electricity.

Discord

Discord is a world with economic and political fragmentation and market uncertainty and weakness.

- Environmental progress and climate change mitigation take a back seat to economic concerns.
- Chronic economic crises make governments short-term focused, insular, and confrontational in international affairs.
- The global supply chain breaks down, raising the cost of living for the emerging middle class.
- Governments are unstable due to the volatile political environment, resulting in uncertainty for climate change action policy.
- Income inequality grows in many jurisdictions.
- Lack of consistent, stable government policy and support to meet society's climate ambitions.

Energy markets impact

- Fossil fuels remain the primary source of affordable energy and dominate the global energy mix.
- Slower economic growth limits growth in energy, oil and refined product demand.
- Natural gas demand growth slows significantly largely due to ongoing competition from lower-cost coal and falling-cost renewables.
- Despite continued competitiveness, renewables see less growth vs. Autonomy and Rivalry.

Expected impact on Suncor

- No existing upstream assets are stranded.
- High-return energy investments continue to be funded.
- Suncor downstream well positioned to compete, with a focus on reliable, efficient, and low-cost operations. Less competition vs. Rivalry expected in both our traditional refined product businesses and low-GHG fuels and electricity businesses.

Climate related risk-management

2°C scenario

Suncor's 2°C scenario, developed in 2019 with IHS Markit⁷ is informing our long-term business planning and corporate strategy and allows us to understand what a pathway could entail to keep global temperatures from rising 2°C or less, by 2100 compared with pre-industrial levels.

Developing this scenario pushed us to think critically about the characteristics of a plausible, relevant and consistent view of the future. The process was valuable and provided us with several key takeaways including the need for co-ordinated global action on climate change, the power of carbon pricing to incentivize low-GHG technology, and the changing energy mix required to power the world's economies amidst a growing population.

2°C

A plausible pathway to keep global temperatures from rising 2°C or less, by 2100 compared with pre-industrial levels.

- Peak emissions are reached following a combination of cost and generational pressures, technological innovation, and political unity that bring enough of the world together to take dramatic and unified action to change the trajectory of GHG emissions.
- Aggressive emission reductions in all sectors, and solutions to remove GHGs from the atmosphere are required to reduce the total concentration of CO₂ by 2100.
- An international alliance with a shared 2°C ambition, along with transparent collaboration in technology, trade and environmental approaches is established.
- A broad-based price on carbon throughout the economy is required to reduce consumption and incent the adoption and improvement of low-GHG technology.
- In conjunction with carbon pricing, governments implement market-based solutions within the alliance, including open carbon markets to buy, sell and trade offsets across a vast economy.

Energy markets impact

- Oil plays a continued, albeit diminished, role to 2100, while renewables and nuclear power become more prominent post-2050.
- In the power sector, the demand for coal faces sustained pressure globally because of its relatively high emissions intensity. Renewables continue to gain market share on improved cost profiles, dedicated policy support and the firm capacity offered by improved storage in the form of hydro, batteries, and hydrogen. Nuclear power increases market penetration with lower costs, and new, safer technologies and policies.
- In the transportation sector, the world shifts away from oil. Oil demand in the second half of the century transitions to demand for petrochemical feedstock. The decline is most pronounced in the light duty vehicle segment where electrification, biofuel and hydrogen supply opportunities are assumed. The decline is slower in the heavy goods vehicle segment, and hydrogen as a transportation fuel grows as costs come down.

Expected impact on Suncor

- Grow our business in low-GHG fuels, electricity and hydrogen.
- Sustain and optimize our existing hydrocarbon business and transform our GHG footprint.
- Play an enhanced role, along with other large organizations, in climate change solution scaling and commercialization.

⁷ IHS Markit acted as external market consultant for this data and analysis in 2019. The use of this content was authorized in advance by IHS Markit. Any further use or redistribution of this content is strictly prohibited without written permission by IHS Markit. All rights reserved.

Climate related risk-management

Scenario signposts

Along with scenarios, we also develop and annually update our signposts, which are milestones to identify critical shifts in the external context. The world is in a constant state of change, sometimes moving faster than we expect; 2020 is a prime example with the COVID-19 pandemic paired with oil market turmoil.

Tracking the pace and direction of the change is an integral part of our scenario work and helps us develop and evaluate strategic alternatives for our business by incorporating both global and Canadian current events, trends and actions.

Signposts include changes in global energy demand and supply mix, political and economic indicators, climate data, policy and consumer trends, and technology advances. Current signposts tell us:

- Nations have deployed large stimulus packages to incentivize clean energy, intensifying competition between energy sources.
- Rise in trade tensions and deglobalization of supply chains creates an increasingly volatile geopolitical environment.
- Economic weakness and fragmentation cause instability that undermines business confidence and impedes investment.
- Technology continues to evolve at a rapid pace, driving down costs and improving energy efficiencies for producers and consumers alike.
- Several G20 member countries have announced more aggressive climate ambitions and targets; however, they require further action to achieve them⁸.

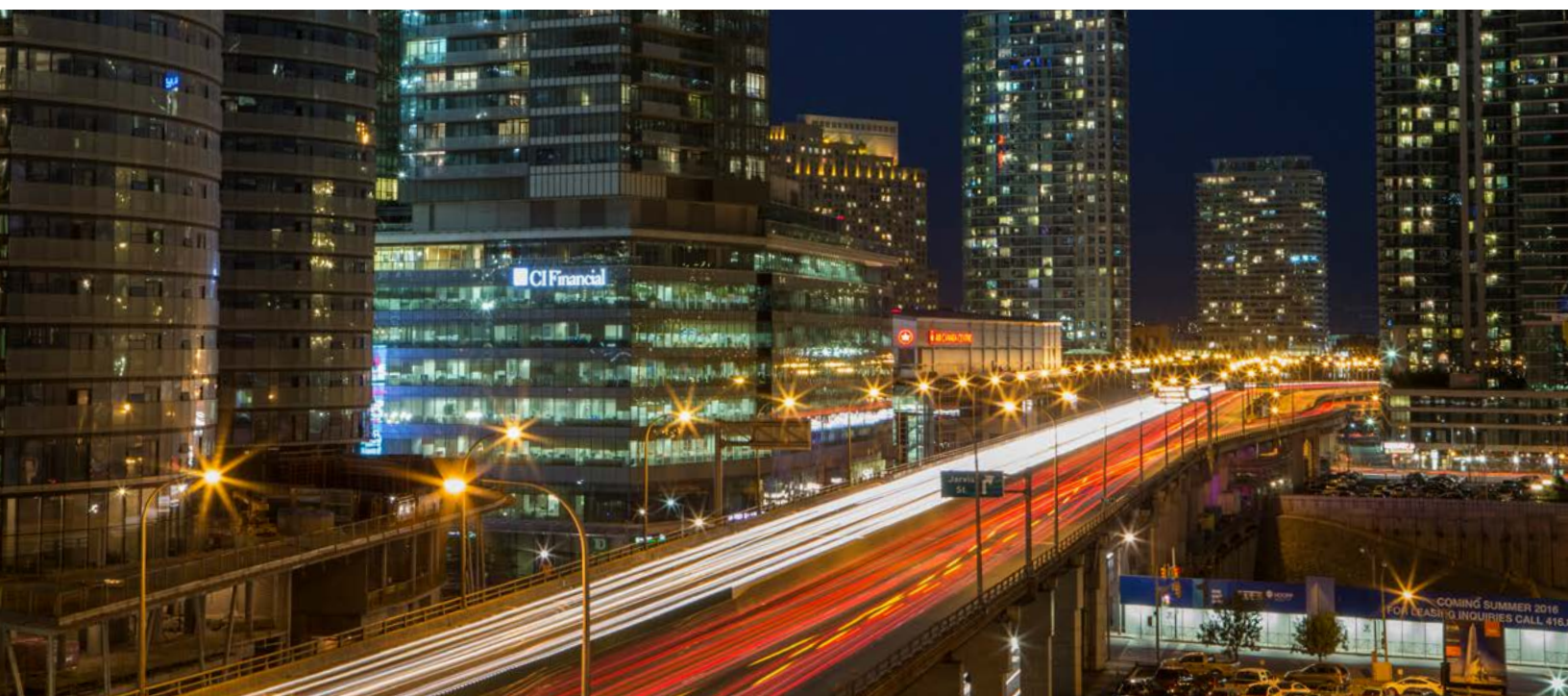
Integration of transitional risks & carbon pricing

The energy system is changing and our business continues to adapt. We consider several inputs to our planning process. Each year, as part of our normal integrated business planning process, we develop multiple price assumptions for a variety of economic variables, including carbon price.

For all long-term planning, we use carbon price assumptions as per existing regulations and their expected trajectory as they apply to our assets. Although the pathway to 2030 may vary, the Canadian federal government policy is clear with the intent to increase carbon pricing to \$170 per tonne by 2030. Suncor has increased the resilience of its investments by incorporating announced policy changes and existing government regulation under all corporate scenarios. These assumptions help evaluate all business, acquisition, divestiture, capital and strategic planning activities.

In addition to carbon price, we incorporate other climate-related considerations including:

- testing our portfolio against internal performance goals in the context of longer-term GHG impacts of our decisions
- understanding the impact to our business and long-term resilience by evaluating multiple scenarios including our 2°C scenario consistent with the Paris Agreement
- assessing emerging trends, research and reports.



⁸ United Nations Environment Programme (2019). Emissions Gap Report 2019. UNEP, Nairobi.

Climate related risk-management

Regulatory risk resilience

Suncor continuously evaluates the regulatory environment for risks related to our business. This includes targets, mandates and legislation such as internal combustion vehicle bans or carbon pricing. We closely monitor regions where we operate, as well as areas that have potential to influence our operations or climate objectives.

Leadership in climate policy

Since the Paris Agreement in 2015, governments globally have focused on the technology pathways and policy frameworks required to achieve a stable and responsible transition to limit global warming to well below 2°C compared to pre-industrial levels, while continuing to meet rising global demand for energy. We continue to see an acceleration in both policy and technology advancements to address this need.

Suncor operates in many jurisdictions that regulate, or have proposed to regulate, industrial GHG emissions and GHG emissions from transportation. Our operational presence across Canada and internationally requires thoughtful, constructive engagement with governments and political parties, Indigenous Peoples, think tanks, universities, and environmental advocacy groups. These efforts help identify opportunities to develop smart policies that promote low-cost alternatives and carbon competitiveness.

We believe that good policy instills confidence in the financial markets, industry and society. This confidence enables the continued economic prosperity required to fund the low-carbon economy transition and incites investment in technology and innovation that is critical to reducing emissions globally. We continue to advocate for accountable, transparent and pragmatic environmental policies and regulations that help society address climate change, including supporting a broad-based price on carbon. Currently, 100% of our scope 1 and 2 GHG emissions from our operated assets and facilities are in regions with various carbon pricing mechanisms and/or GHG reduction targets. A broad-based carbon price for producers and consumers can be one of many effective market and regulatory mechanisms to lower GHG emissions while promoting economic diversity and low-carbon innovation.

We are either monitoring or collaboratively engaging with government in developing federal and provincial climate policies and regulations including:

- Canada's Net-Zero Goal
- federal Pan-Canadian Framework on Clean Growth and Climate Change (PCF)
- federal Clean Fuel Regulation
- federal Output Based Pricing System (OBPS)
- Alberta's Technology Innovation and Emissions Reduction Implementation Act (TIER)
- British Columbia's Low Carbon Fuel Standard Program
- Ontario's Emissions Performance Standard (EPS)
- Quebec's Plan for a Green Economy and renewed cap and trade program
- The United States' increased ambitions and evolving climate policies
- Colorado's Climate Action Plan

Our approach to policy engagement is to support just, effective, practical and cost-efficient policy designs. As changes in approach to GHG emissions evolve, Suncor remains committed to constructive dialogue and ready to adapt with the implementation of changes. Until regulations and policies are fully implemented, the impact of these changes on Suncor is not fully apparent.

Additional information about environmental regulations and initiatives related to climate change and Suncor's compliance costs can be found in the [2020 Annual Information Form \(AIF\)](#) published on Feb. 24, 2021.

Climate policy impacts on Suncor

The aggregate of all the climate change and energy transition risks, market scenarios and regulatory uncertainties and existing policies listed above have contributed to our new strategy statement, strategic objectives and energy transition focus as explained in the 'Climate strategy' section in this report. While the government policies have the possibility to constrain fossil fuel production and consumption, they create new opportunities for Suncor in the energy market.

Climate related risk-management

Policy & Regulatory Issues Management (PRIM)

Over the last number of years, increased political and policy changes, activism, public pressure and uncertainty about regulatory processes have added significant financial, social and climate risk to Suncor. To address these risks, Suncor has created an integrated policy and regulatory issues management (PRIM) process to drive a disciplined approach to managing these issues. PRIM enables enterprise alignment on strategies to seize opportunities and mitigate risks from policy and regulatory issues that may impact Suncor.

What is a Policy & Regulatory issue?

- An issue is anything that has the potential to elicit a policy response or regulatory change by government and that has the potential to impact Suncor's business either now or in the future.
- "Issues" may include amendments to existing policies, regulations, or laws, or an issue could be a new proposed policy or regulation, an election platform, a theme, social media trend, concept, etc.
- An issue may be either a threat or an opportunity.

What are the objectives of issues management?

- Provide an easy and structured way to ensure policy and regulatory issues are approached consistently
- Drive value through the pursuit of achievable policy and regulatory outcomes
- Ensure resources are allocated to highest-impact policy and regulatory issues where Suncor's ability to influence is high
- Enable proactive identification of policy and regulatory issues that are integrated with Suncor's strategic business plans.

Cost impact of carbon pricing

Suncor's 2021 carbon price outlook applies federal and provincial carbon pricing regimes from across Canada. In December 2020, the federal government announced its intention to increase carbon pricing to \$170/tonne by 2030. As most of our facilities are regulated under various carbon-pricing regimes, the impact of government pricing is incorporated into our business planning activities and assumptions. We've evaluated the cost impacts for emerging and evolving emissions regulations and how they apply to GHG emissions (scope 1 and 2), from the working interest in both our upstream and downstream assets. These estimates are split out independently to more accurately reflect the integrated nature of our business — upstream production of crude oil and downstream refining of finished products. The estimated average after-tax cost per barrel of carbon pricing regulation on our upstream net production over the next 10 years is \$0.46 per barrel. The estimated average after-tax cost per barrel of carbon pricing regulation on our downstream saleable yield over this same period is \$0.38 per barrel.

* Emission performance credits (EPCs) from cogeneration power exports are included in the upstream after-tax cost per barrel figures. Benefits from our renewable power projects are not included in our upstream and downstream estimated average after-tax cost per barrel figures. In future reporting we will look to describe the cost benefits of our low-carbon lines of business.



Climate related risk-management

Physical risk resilience

We assess specific risks to our physical assets, including the risk of acute or chronic extreme weather events, which are possible in the areas where we operate. We manage these risks through facility design and operational procedures, and maintain insurance for damage to, or loss of, assets.

Temperature extremes

Many of our facilities routinely operate in an annual temperature range of -40 to +40°C and are built to mitigate extreme weather events. Prolonged periods of extreme cold could force these facilities into extended shutdowns to ensure worker safety and prevent undue stress on equipment. Prolonged periods of extreme heat may lead to production cuts if an adequate supply of cooling water is not available. Suncor's refineries in Montreal and Sarnia have access to large bodies of cooling water, greatly reducing exposure to this risk.

Hurricanes and icebergs

Suncor's Terra Nova floating production, storage and offloading (FPSO) installation, off the coast of Newfoundland and Labrador, operates in an area of the Atlantic Ocean which is subject to extreme weather conditions. Production at Terra Nova has been shut in since the fourth quarter of 2019, unrelated to physical risks. In 2021, co-owners have reached an agreement in principle to restructure the project ownership and provide short-term funding toward continuing the development of the Asset Life Extension Project, with the intent to move to a sanction decision in fall 2021.

Although the FPSO is currently offline, we continue to have measures in place to support the integrity and safety of the subsea infrastructure and offshore support vessel that remain active in the Terra Nova field. We use a continuous weather tracking service to monitor storm systems in the North Atlantic, mitigating risks during hurricane season. There is also a risk in the region of icebergs causing damage to our installation and subsea infrastructure. The risk is mitigated through facility design and a continuous monitoring system tracking iceberg locations. We complete regular flyovers to monitor movement of the icebergs, chart their paths and work to alter their direction if required. Where the course of an iceberg cannot be altered, an emergency response system allows the FPSO to disengage and move to safer water. While this results in production disruption, it protects our people and the asset, and mitigates environmental risks.

Droughts, floods and wildfires

Most of our operated facilities are not in stressed watersheds where the availability of water, or severe restrictions on water withdrawals could compromise our ability to operate. We manage limits to oil sands water withdrawal during winter low-flow periods through on-site water storage where facility design permits. The Commerce City Refinery, owned and operated by our U.S. subsidiary Suncor Energy (U.S.A) Inc., is located in a region that is classified as moderate risk (medium-high stress)⁹ where curtailment of water supply would require bringing in water by pipeline or truck. Water management is a priority at Suncor, driving industry-leading innovation at our facilities to reduce, recycle, reuse and return water.

There is also a risk of seasonal flooding in certain areas where we operate, which we manage through contingency plans to protect facilities including backup generators and pumps to drain critical operating units and equipment. Suncor's oil sands facilities are located within Canada's boreal forest and wildfires pose a risk to our operations and the communities nearby. To mitigate this risk, we manage our production facilities in line with FireSmart¹⁰ guidance. We have detailed emergency preparedness and response plans in place to ensure emergency situations resulting from wildfire risks are managed effectively. We also partner with other operators and the Regional Municipality of Wood Buffalo in mutual aid agreements to collectively manage emergencies.



⁹ According to both the World Wildlife Fund's Water Risk Filter Tool and the World Resources Institute's Aqueduct Water Risk Atlas. These tools evaluate overall physical, regulatory and reputational risks at the watershed level and indicate that the Commerce City Refinery in Colorado exists within a "medium-high" water stress region of the Mississippi River Basin.

¹⁰ FireSmart Canada leads the development of resources and programs designed to empower the public and increase community resilience to wildfire across Canada. More information is available at firesmartcanada.ca

Collaboration, partnerships & engagement



Transitioning an energy system requires social, cultural, technological and economic shifts and a shared vision for the future. Through both Suncor and the Suncor Energy Foundation, we support organizations that engage Canadians in meaningful discussions on the energy system and its connections between the environment and the economy. We work with our foundation partners to promote an understanding of the changing energy realities of the 21st century and raise awareness among Canadians of the role their choices and lifestyles play in reducing emissions.

Collective dialogue and collaboration are essential to developing relationships and understanding diverse perspectives, experiences and viewpoints about the role we all play in creating our energy future. While our views on the pathways to achieving this future may not always align, we can all agree on the need to sustainably produce energy that enhances people's lives while caring for each other and the Earth.

Over the past year, we engaged with stakeholders through meetings, workshops and conferences. Although these engagements looked a bit different this year with COVID-19, our virtual engagements were effective and productive. This past year, we also advanced supplier engagement efforts and worked together to create more environmental and social impact opportunities within Suncor and the broader marketplace. We are committed to engaging in different ways, and we look forward to

opportunities to build mutual understanding and work toward solutions. Examples of these collaborations and highlights over the past year include:

- Partnering with the Energy Futures Lab, a multi-stakeholder, collaborative platform committed to ensuring Alberta and Canada's strong energy economy is ready to thrive in a low-emissions future.
- Working collaboratively to support reconciliation with Indigenous Peoples through leadership development and building community capacity, including a focus on environmental priorities.
- Although we couldn't host our annual Ceres¹¹-facilitated stakeholder panel in 2020 due to COVID-19, we continued to engage with both Ceres and Climate Action 100+ on climate-related issues and the role Suncor can play in the energy transition. Both groups provided helpful feedback as we worked on our climate objectives and encouraged us, among other things, to have clear metrics that could be tied to executive compensation. We look forward to continued engagement throughout 2021.
- Involvement on several committees to advance sustainable energy development, including participation on the Canadian Standards Association sustainable finance taxonomy and the Alberta ESG steering committee.

¹¹ Ceres is a non-profit organization that works with investors and companies to build sustainability leadership and drive solutions for a healthy global economy.

Collaboration, partnerships & engagement

To help inform Suncor on policy trends and policy design, we also support several climate initiatives and participate in critical global energy discussions, including:

- the Canadian Institute for Climate Choices, which assists government decision-making through rigorous research and analysis, broad engagement with experts, industry, and other key stakeholders
- the World Bank Carbon Pricing Leadership Coalition (CPLC), a voluntary initiative that aspires to catalyze action toward the successful implementation of global carbon pricing
- the World Economic Forum and the United Nations Climate Change Conference of Parties (COP).

Engagement with our supply chain

In 2020, we continued work to identify baseline risks and opportunities within our supply chain. Through the supplier prequalification process, we now gather data and screen potential suppliers based on sustainability-related criteria. Annually we review our critical suppliers' sustainability reports, codes of conduct and [CDP Climate Change](#) responses. We have mapped our suppliers on a global basis and are working to better understand the sustainability risks and opportunities available. In addition, we have added a supply chain sustainability risk to our risk register.

In early 2020, our senior leaders met with our key supplier community and industry partners to signal Suncor's intentions to transform relationships to accelerate innovation and sustainability performance. The event, called FORGE, created an opportunity to collaborate across the breadth of Suncor's supply chain. One of the outcomes from FORGE was the development of a supplier relationship management structure. This innovative approach allows Suncor and our key suppliers to share best practices to achieve continuous improvement in sustainability performance throughout the value chain. These discussions contributed to the formalization of a supplier performance assessment survey that incorporates multiple sustainability factors, including questions to our suppliers related to emissions, and allows Suncor to receive two-way feedback from our suppliers.

Collaborating and partnering to advance innovation

Innovation is best served by inviting the brightest minds and diverse perspectives to collaborate both within and outside our industry. We invest and participate in several initiatives, all sharing the goal of addressing the most pressing environmental and economic challenges of the energy industry and amplifying climate actions, including:

- Co-founding [Evok Innovations](#) with Cenovus Energy and the BC Cleantech CEO Alliance Inc. This \$100 million technology fund (to which Suncor and Cenovus have each committed up to \$50 million over 10 years) focuses investments on enabling entrepreneurs to advance ideas to commercialize clean technologies and market them globally.
- Technology collaboration efforts through [Canada's Oil Sands Innovation Alliance](#) (COSIA). Canada's largest oil sands producers pool expertise and intellectual property to advance technologies and improve environmental performance in four focus areas: GHG, water, tailings, and land. COSIA also focuses on developing advanced monitoring technologies to increase the accuracy of area fugitive emissions quantification from our tailings ponds and mine face.
- Advancing the work of the [Clean Resource Innovation Network](#) (CRIN), an industry-led group created to leverage the oil and gas industry's strengths and contribute to a future in which Canada is a global leader in producing clean hydrocarbon energy from source to end use. The network brings together diverse expertise and facilitates connections to advance technologies for use in Canada, and potentially for export to global markets.
- Investing in clean technology funds such as [ArcTern Ventures](#), a Toronto-based venture capital firm investing globally in breakthrough clean technology companies addressing climate change and sustainability.

Carbon XPRIZE

Suncor and other COSIA member companies supported the NRG COSIA Carbon XPRIZE, a global competition where international teams, including Canada, proved their technologies can capture and transform CO₂ into valuable, useful products. In April 2021, Carbon Cure and Carbon Built were announced as winners. [Learn more.](#)

Our performance

- > GHG scope 1 and 2
- > GHG scope 3
- > GHG target



To become a net-zero GHG emissions company by 2050, we are working to reduce our emissions by continuing to pursue operational efficiency improvements while accelerating the adoption of new technology. To drive progress, we have set a new goal to achieve 10 megatonnes (Mt) of annual GHG emission reductions by 2030.

We continue to significantly invest in technology development and deployment, to optimize current assets and develop next-generation facilities. We believe technology and innovation have the potential to move emissions reduction from incremental to step-change improvements, particularly beyond 2030 when many of these technologies are expected to be commercially available. We expect they will contribute significantly to our strategic objective of net-zero by 2050.

Suncor has reported on scope 1 and 2 emissions for over a decade. Scope 1 emissions are the direct emissions resulting from our operations while scope 2 emissions are the indirect emissions resulting from the use of purchased energy such as heat and electricity. Our net-zero by 2050 objective includes both scope 1 and 2 emissions and helping reduce others' emissions

(scope 3) by working with our suppliers, customers, governments and other stakeholders.

Suncor also supports the disclosure of scope 3 emissions to better understand our entire value chain emissions. Scope 3 emissions are the emissions that result from the products and activities outside our operations, both up and down in the value chain, such as the combustion of fuel that we provide to consumers. For the first time, we are reporting on our scope 3 emissions, "use of sold products" and our equity-based GHG emissions.

Suncor reports to CDP, an independent not-for-profit organization that records corporate climate change information. We have reported to CDP Climate since 2004 to provide visibility and accountability to stakeholders on climate-related information, also aligned with the TCFD recommendations. Suncor has been named a top reporter by the CDP. For more information please visit [cdp.net](https://www.cdp.net).

¹² The Greenhouse Gas Protocol defines 15 different categories of scope 3 emissions, describing emissions that occur outside of a company's direct control, both upstream and downstream in the value chain of the company (i.e. emissions from the goods and services that contribute to the company's operations and the emissions associated with the products or services it provides). Category 11 specifically refers to the use of sold product. For Suncor, this is largely the emissions associated with the combustion of our sold fuel products.

GHG scope 1 and 2

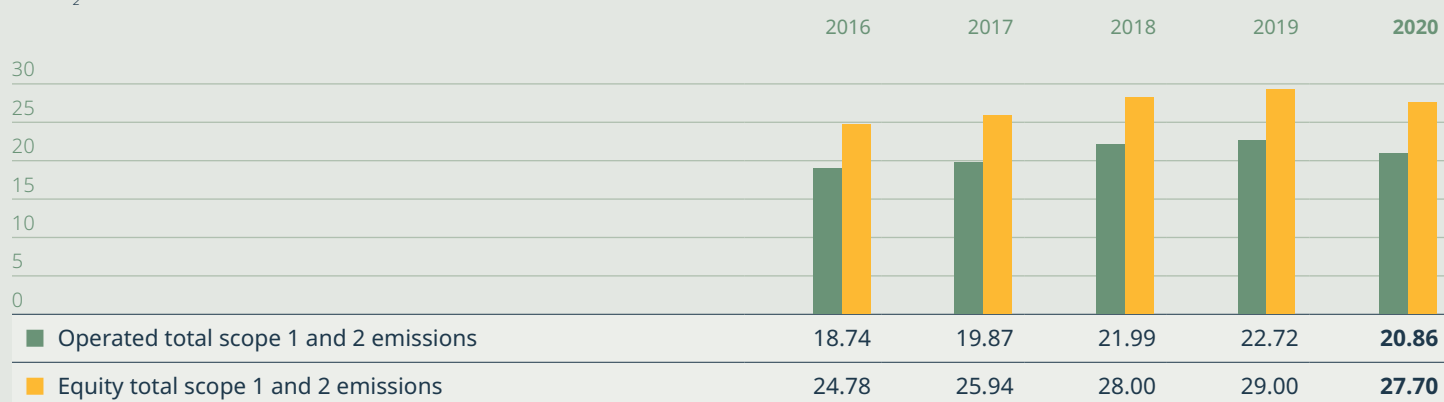
In 2020, our total absolute scope 1 and 2 GHG emissions were approximately 8% lower compared to 2019, primarily due to decreased production resulting from the pandemic, unplanned incidents, maintenance activities, and curtailment¹³. In 2020, our absolute emissions were 20.86 Mt of CO₂e, versus 22.72 Mt of CO₂e a year prior on an operational basis. For the projects Suncor has a working interest in, the total absolute emissions in 2020 were 27.70 Mt of CO₂e, based on our equity share of the projects.

While both the total emissions and production decreased, scope 1 and 2 emissions intensity increased to 66 kilograms of CO₂e per

barrel of oil equivalent (kg CO₂e/BOE) production (10.9 grams of CO₂e per megajoule (g CO₂e/MJ)) on an operational basis due to facilities not operating at optimal rates. For the facilities Suncor has a working interest in, the total GHG emissions intensity in 2020 was 71 kg CO₂e/BOE production (11.7 g CO₂e/MJ), based on our equity share of the projects. GHG emissions are closely linked to energy use, with approximately 90% of direct GHG emissions and nearly all indirect emissions accounted for by energy consumption for operations. Similar to the GHG intensity trends, energy intensity increased by 8% in 2020.

Absolute scope 1 and 2 GHG emissions

Mt CO₂e



			Equity (%)	2016	2017	2018	2019	2020
Oil Sands Base Plant – Mining, Extraction	operated	100	3.03	3.82	3.30	3.95	3.80	
Oil Sands Base Plant – Upgrading	operated	100	4.11	4.64	4.57	4.69	4.27	
Oil Sands Fort Hills – Mining, Extraction	operated	54.1	NA*	NA*	2.15	2.26	1.95	
Oil Sands In Situ	operated	100	5.44	5.42	6.28	5.98	5.73	
Syncrude – Mining, Extraction, Upgrading	non-operated	58.7	6.03	6.10	6.91	7.18	7.26	
Exploration and Production Canada	operated	37.7	0.58	0.65	0.62	0.52	0.00	
Exploration and Production	non-operated	23	0.38	0.39	0.47	0.45	0.49**	
Refining and Logistics	operated	100	5.41	5.19	4.92	5.15	4.97	
Renewable Fuels	operated	100	0.17	0.16	0.16	0.17	0.14	
Renewable Power	operated	75	0.00	0.00	0.00	0.00	0.00	

* Fort Hills began operation in 2018.

** E&P non-operated asset 2020 GHG data has not undergone third-party verification at time of our 2021 Climate Report publication and is subject to change.

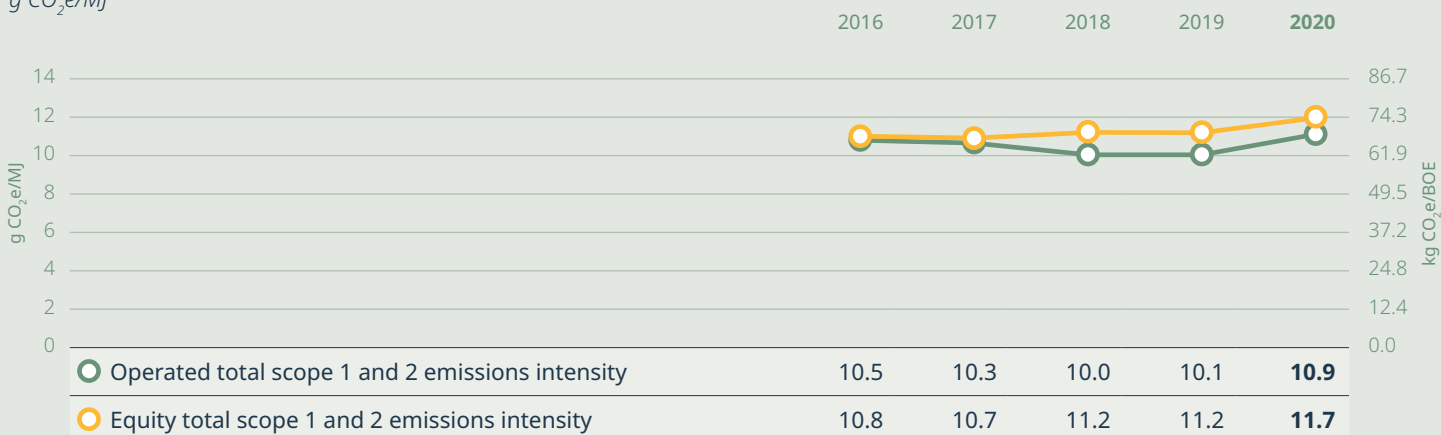
*** Due to the integrated nature of cogeneration at the facilities, cogen emissions and benefits are included in the values for each facility.

13 Government of Alberta mandatory production curtailment

GHG scope 1 and 2

Scope 1 and 2 GHG emissions intensity

g CO₂e/MJ



Suncor uses a conversion of 1 g CO₂e/MJ = 6.193 kg CO₂e/BOE

		Equity (%)	2016	2017	2018	2019	2020
Oil Sands Base Plant – Mining, Extraction	operated	100	6.0	6.0	6.1	6.5	6.8
Oil Sands Base Plant – Upgrading	operated	100	5.9	5.4	5.9	5.4	5.0
Oil Sands Fort Hills – Mining, Extraction	operated	54.1	NA*	NA*	6.1	5.3	6.4
Oil Sands In Situ	operated	100	9.0	9.2	9.4	9.9	10.3
Syncrude – Mining, Extraction, Upgrading	non-operated	58.7	18.5	20.3	21.1	18.6	19.9
Exploration and Production Canada	operated	37.7	7.2	8.9	8.8	7.5	0.0
Exploration and Production	non-operated	23	1.7	1.7	2.4	2.2	2.2**
Refining and Logistics	operated	100	5.5	5.1	5.0	5.0	5.4
Renewable Fuels	operated	100	27.9	28.1	27.9	29.5	29.5
Renewable Power	operated	75	0.0	0.0	0.0	0.0	0.0

* Fort Hills began operation in 2018.

** E&P non-operated asset 2020 GHG data has not undergone third-party verification at time of our 2021 Climate Report publication and is subject to change.

*** Due to the integrated nature of cogeneration at the facilities, cogen emissions and benefits are included in the values for each facility.

Oil Sands Base Plant

In 2020, absolute scope 1 and 2 emissions from Oil Sands Base Plant decreased by 7%, from 8.6 Mt of CO₂e in 2019 to 8.1 Mt of CO₂e in 2020. Emissions reductions in mining and extraction resulted from lower demand due to the COVID-19 pandemic and an operation incident that resulted in an unplanned outage at our secondary extraction facilities. In our upgraders, although the volume of fuel gas consumed was comparable to 2019, there was a significant decrease in the amount of rich fuel gas used, which has a higher carbon content than the ultra-lean fuel gas and natural gas it was replaced with. As a result, Base Plant's overall emissions intensity decreased slightly, to 69 kg CO₂e/BOE (10.3 g CO₂e/MJ).

Cogeneration produces low-carbon-intensity power along with industrial steam, and we operate cogeneration units at our Oil Sands Base Plant, Firebag, and Fort Hills facilities. Our owned and operated cogeneration power production at these sites was approximately 6.6 million MWh in 2020, with the excess of our internal needs exported to the provincial grid. Suncor's cogeneration units produce power at a GHG intensity that is less than half of the current Alberta grid.

GHG scope 1 and 2

Fort Hills

As a result of the COVID-19 pandemic, our Fort Hills operations temporarily transitioned to one primary extraction train, resulting in 31% lower production compared to 2019¹⁴. Due to decreased operational rates, absolute scope 1 and 2 emissions decreased by 16%, with the facility accounting for 2.0 Mt of CO₂e compared to 2.3 Mt of CO₂e in 2019. Emissions intensity and energy intensity increased in 2020 because the facility was not operating as efficiently as 2019. In 2020, Fort Hills emissions intensity was 43 kg CO₂e/BOE (6.4 g CO₂e/MJ).

Syncrude

In the fall of 2021, Suncor will take over as operator of the Syncrude Mildred Lake and Aurora facilities. Suncor's financial interest will not change — we will maintain our 58.74% working interest. In 2020, the net portion of Syncrude's scope 1 and 2 GHG emissions were 7.26 Mt of CO₂e, which accounts for our working interest in the asset. For our reporting on GHG emissions by an operational-basis, Syncrude's emissions are not included in our 2020 data. They will be included in next year's operational-basis reporting.

In Situ

The absolute scope 1 and 2 emissions at our steam assisted gravity drainage (SAGD) operations decreased 4% year over year to approximately 5.7 Mt of CO₂e. Suncor's In Situ facility intensity was 6% higher compared to the previous year, at 70 kg CO₂e/BOE (10.3 g CO₂e/MJ) in 2020. Last year's performance resulted from lower demand due to the COVID-19 pandemic, maintenance activities at Firebag and an extended outage at MacKay River that occurred in late 2019. MacKay River re-started in May 2020 and was fully ramped up to nameplate capacity in the fourth quarter of 2020. Firebag expanded its capacity by 12,000 bbl/day in late 2020. By year-end, Firebag was producing at its new nameplate capacity of 215,000 bbl/day.

Exploration and Production

Production at Terra Nova has been shut in since the fourth quarter of 2019. In 2021, co-owners have reached an agreement in principle to restructure the project ownership and provide short-term funding toward continuing the development of the Asset Life Extension Project, with the intent to move to a sanction decision in fall 2021. Because of this, the 2020 scope 1 and 2 emissions are reported as 0 tonnes of CO₂e. Terra Nova is the only E&P asset that we operate and we hold non-operated interests in other Canadian and International E&P assets. Our non-operated E&P assets represent less than 2% of our absolute scope 1 and 2 emissions.

Refining and Logistics

Total scope 1 and 2 GHG emissions at our downstream facilities decreased 4% to 5.0 Mt of CO₂e. Performance in 2020 was comparable to 2019, as there were various turnarounds and shutdowns at refineries combined with pandemic impacts. Scope 1 and 2 emissions intensity increased in 2020, at 31 kg CO₂e/BOE (5.4 g CO₂e/MJ), which is approximately 8% higher than 2019 but comparable to the 2016-2017 average intensity.

Renewable fuels

We've been blending ethanol in our retail fuels since 1992 and our St. Clair Ethanol Plant is the single-largest ethanol production facility in Canada. In 2020, the plant produced 336 million litres of ethanol, a 16% decrease compared to 2019, due to lower gasoline demand associated with the pandemic. Absolute scope 1 and 2 emissions were 0.142 Mt CO₂e and emissions intensity was 110 kg CO₂e/BOE (29.5 g CO₂e/MJ). Converting corn into fuel is more energy intensive than turning hydrocarbons into fuel, and we are evaluating optimization work at our St. Clair facility to develop lower-carbon-intensity ethanol.

Life cycle of products

As Suncor works to decarbonize its energy portfolio, we are also looking at the end-use emissions from combustion fuels. For example, renewable fuel often has a relatively high scope 1 and 2 carbon intensity due to the energy required to convert biomass into liquid fuels compatible with vehicle engines. The GHG benefit of renewable fuels is that they are considered to have zero end-use emissions as the carbon emitted during end-use combustion was recently captured from the atmosphere via biological processes such as photosynthesis. Its combustion is considered net neutral with regard to carbon emissions.

Renewable power

Our renewable power facilities contribute to our low GHG electricity business. In 2020, the Adelaide wind power facility in Ontario that we operate, in partnership with Aamjiwnaang First Nation, generated approximately 97,000 MWh of electricity. Performance data reflects operated wind farms only and is not adjusted to reflect ownership share.

¹⁴ Fort Hills production was curtailed in 2019 and 2020

GHG scope 3

Scope 3 includes fifteen categories as defined by the GHG Protocol¹⁶. GHG emissions from the use of sold products (category 11) is by far the most material scope 3 category for Suncor, which is consistent with other integrated energy producers. Approximately 70% to 80%¹⁷ of GHG emissions from the lifecycle of fossil fuel products come from their combustion.

Due to the integrated nature of Suncor's business, scope 3 (category 11) emissions can be calculated at various stages of production. The International Petroleum Industry Environmental Conservation Association, or IPIECA, provides guidance on methodologies, considerations and reporting elements that Suncor has considered in the calculation of our scope 3 emissions. We recognize that stakeholders are interested in understanding our emissions and to remain transparent, we have provided our scope 3 emissions using multiple methodologies (these are not additive). By definition, scope 3 emissions are someone else's scope 1 and 2 emissions and given the export nature of our products, these emissions can occur anywhere in the world. Estimates of Suncor's scope 3 emissions are based on three different calculation methodologies as shown in the scope 3 emission estimates graphic.

Considering the total output of energy products from Suncor, including upstream production and production of renewable fuels, power and hydrogen, the average scope 3 end-use carbon intensity of our energy products is 74 g CO₂e/MJ. An illustrative view of our portfolio GHG intensities are provided in the graph below. The end-use carbon intensity of renewable fuels, power and hydrogen is 0 g CO₂e/MJ; therefore, increasing production of these products will reduce the overall aggregated end-use carbon intensity.

While the use of sold products is the dominant category of scope 3 emissions, we are also making efforts to work with our suppliers, service providers, and other business partners to reduce emissions

Suncor 2020 scope 3 emission estimates: three discrete reporting methodologies¹⁵

Mt CO₂e



123 Mt

Upstream production

- volume of oil extracted from the ground on a working interest basis
- assumes that the crude produced is fully combusted



58 Mt

Refining throughput

- volume of product moved through our refineries; Suncor refines only a portion of its total production of crude oil
- assumes that the products produced are fully combusted



23 Mt

Branded sales

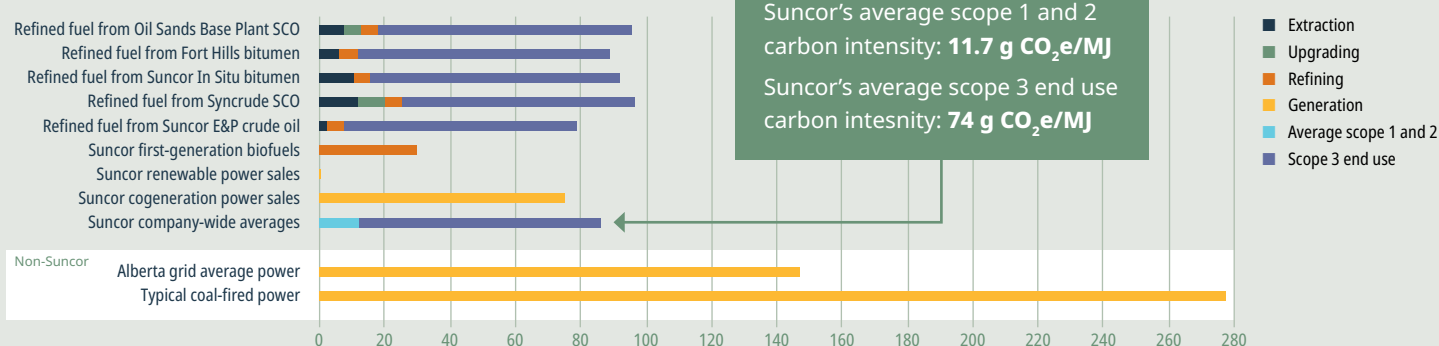
- volume of refined product sales to retail customers
- recognizes renewable fuel sales, which do not have any scope 3 emissions associated

* Of note, our estimated scope 3 emissions in 2020 were lower compared with historical averages due to decreased production and product sales resulting from the global pandemic, unplanned incidents, maintenance activities, and curtailment.

throughout our supply chain. We also recognize the importance of understanding the total life-cycle emissions of our products. Life-cycle analysis (LCA), incorporating the other categories within scope 3, is a critical tool to evaluate our current projects and future opportunities and we are working with peers, academics, governments and other institutions to develop a consistent and transparent methodology for estimating the LCA values for the products we produce.

Suncor energy products – carbon intensities

g CO₂e/MJ (equity-basis)



¹⁵ Scope 3 estimates for the use of Suncor's energy production are provided in alignment with category 11 of IPIECA's methodology, which contemplates accounting for products at the point of extraction, processing or sales. These scope 3 estimates are not additive, each category represents a unique accounting method using different boundary conditions.

¹⁶ Greenhouse Gas Protocol – [Technical Guidance for Calculating Scope 3 Emissions](#)

¹⁷ Natural Resources Canada – [Oilsands GHG Emissions Fact Sheet](#)

GHG target

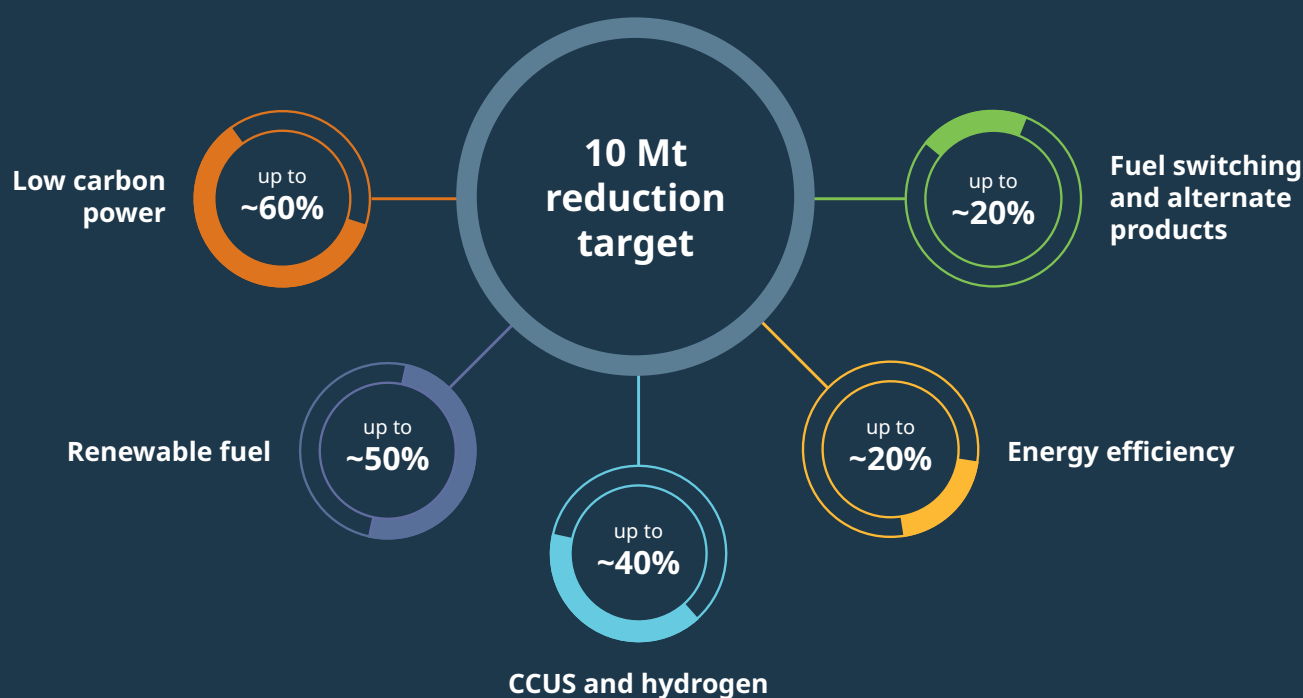
We are targeting annual emission reductions of 10 Mt across our value chain by 2030¹⁸. While we are confident in our ability to achieve our previous GHG goal of a 30% reduction in emissions intensity by 2030 (based on a 2014 baseline), Suncor's new target is designed to drive actions that result in even more significant emission reductions. Through our investments in low-carbon power, low-emissions renewable fuels and electric charging stations we have already helped our customers reduce their emissions by 3.5 Mt in 2020 and our new target, which does not include this previous reduction, commits us to going even further. We have established principles that guide the implementation of the target. The 10 Mt target should:

- encourage new, lower-intensity production as part of our evaluation of new projects.
- drive real emission reductions in the energy system both within and external to Suncor's operations.

We anticipate achieving approximately half of our 10 Mt target by reducing emissions from our own operations. The other half would come from reducing emissions outside of our operations where we have directly intervened, caused change or invested to make these reductions happen. Our new target will drive decisions that result in real emission reductions that benefit the environment, independent of where they occur, helping us to play our part in the energy transition.

We won't reduce emissions by selling assets and we understand emissions are global and the world will only get to net-zero by focusing on real emission reductions. Embedding the GHG target and carbon price assumptions within our asset development execution model enables a rigorous process to promote the selection of efficient assets and technology for any oil sands, offshore, downstream and renewable projects.

GHG reduction pathways



Opportunities are in excess of 10 Mt due to uncertainties associated with various pathways.

¹⁸ We will count incremental reductions beginning in 2020.

Appendix

- > About this report
- > TCFD concordance table
- > Performance data footnotes
- > Advisories



About this report

Suncor has an extensive history of reporting on our environment, social and governance performance in our annual Report on Sustainability, Climate Report, Annual Report, Management Proxy Circular, Annual Information Form/Form 40-F, and through submissions to several third-party indices and climate change reporting organizations.

We appreciate that all stakeholders may benefit from further information on how Suncor is addressing climate change and our perspective on the energy future. Sharing how we manage climate change risks and evaluate opportunities also promotes collaborative learning with our stakeholders on carbon reduction initiatives and performance.

Now in our fifth annual update, this climate report complements sustainability performance information in our annual [Report on Sustainability](#) and enables continuous improvement in our

approach to climate-related financial disclosures. We support and align with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Our Climate Report is a supplemental file to the Report on Sustainability and reflects the details of our strategy and highlight changes to our reporting boundaries.

We are continuously evaluating appropriate disclosure opportunities to ensure we provide a transparent and wide-ranging discussion on our climate strategy over the long term, while recognizing the challenges of providing forward-looking information within regulatory financial disclosure requirements.

suncor.com

sustainability.suncor.com

As of July 13, 2021

TCFD concordance table

The information in the disclosure table below provides linkages to TCFD-aligned information and recommendations, fully or in part, within this report.disclosures.

TCFD Recommendation		Report Section
Governance		
Disclose the organization's governance around climate-related risks and opportunities.	Describe the board's oversight of climate-related risks and opportunities.	<ul style="list-style-type: none">• Governance• Climate-related risk management• Transitional risk resilience
	Describe management's role in assessing and managing climate-related risks and opportunities.	
Strategy		
Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's business, strategy, and financial planning where such information is material.	Describe the climate-related risks and opportunities the organization has identified over the short-, medium-, and long-term.	<ul style="list-style-type: none">• Climate strategy• Climate-related risk management<ul style="list-style-type: none">– Physical risk resilience– Transitional risk resilience– Regulatory risk resilience• Annual Information Form
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	
Risk management		
Disclose how the organization identifies, assesses, and manages climate-related risks.	Describe the organization's processes for identifying and assessing climate-related risks.	<ul style="list-style-type: none">• Governance• Climate-related risk management<ul style="list-style-type: none">– Physical risk resilience– Transitional risk resilience– Regulatory risk resilience
	Describe the organization's processes for managing climate-related risks.	
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	
Metrics and targets		
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	<ul style="list-style-type: none">• Climate strategy• Expand low emissions business• GHG scope 1 and 2• GHG scope 3• GHG target
	Disclose scope 1, scope 2, and, if appropriate, scope 3 GHG emissions, and the related risks.	
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	

Performance data footnotes

1. Overview

Performance data provided throughout our Climate Report in tables and graphs includes indicators from the 2020 reporting year with trends, where feasible. These notes provide additional details on boundary conditions, and changes in methodologies, definitions, business segment structure changes or changes to historical data. We also implement our own internal guidelines and definitions for data gathering and reporting.

2. Reporting boundaries

Performance data is collected and reported for all facilities operated by Suncor and our joint venture interests operated by other organizations. Facilities are subject to annual planned and unplanned maintenance activities, which may impact consistent year-over-year trends. Facilities that are purchased and subsequently operated by Suncor in the middle of a reporting year are pro-rated based on the date of operatorship.

3. Summary of business segments and operations included in performance data:

- a. Suncor totals reflect consolidation of data where relevant and applicable.
- b. Upstream (Oil Sands Base) includes Millennium and North Steepbank mining, extraction and integrated upgrading facilities, integrated Poplar Creek cogeneration facility (owned and operated by Suncor as of 2015), and associated infrastructure for these assets, but does not include Syncrude.
- c. Upstream (Fort Hills).
- d. Upstream (Oil Sands In Situ operations) data includes oil sands bitumen production from Firebag and MacKay River operations and supporting infrastructure.
- e. Upstream Exploration and Production (E&P) includes:
 - E&P Terra Nova FPSO vessel situated off the east coast of Canada. Production at Terra Nova has been shut in since the fourth quarter of 2019. In 2021, co-owners have reached an agreement in principle to restructure the project ownership and provide short-term funding toward continuing the development of the Asset Life Extension Project, with the intent to move to a sanction decision in fall 2021.
 - E&P North America Onshore natural gas assets operated by Suncor. Assets were significantly divested from 2013 to 2015 and in 2018, Suncor sold its mineral land holdings in northeastern British Columbia to Canbriam Energy Inc.
 - Suncor holds non-operated interests in other Canadian and International E&P assets. Please visit www.suncor.com.
- f. Downstream (Refining and Logistics) includes refining operations in Montreal, Que., Sarnia, Ont., Edmonton, Alta., and Commerce City, Colo. Suncor previously operated a lubricants business in Mississauga, Ont., which was sold Feb. 1, 2017. 2017 performance data reflects this sale. Other assets include a petrochemical plant and sulphur recovery facility in Montreal, and product pipelines and terminals in Canada and the United States (new in 2019). Additional information about our downstream business is available at www.suncor.com.
- g. Renewable Fuels and Power includes wind power facilities operated by Suncor, and in graphs are reported with the St. Clair Ethanol Plant, located in Ontario.
- h. In fall of 2021, Suncor will take over operatorship of Syncrude. Suncor's financial interest will not change — we will maintain our 58.74% working interest. All data for Syncrude will be included on an operational basis in next year's report.

4. Notes on operational performance and production

- a. See "Advisories," as barrels of oil equivalent and cubic metres of oil equivalent may be misleading indicators of value.
- b. Oil Sands Base production is gross sweet and sour synthetic crude oil associated with mining, extraction and upgrading, and includes unprocessed volumes. This may be different than production reported in our 2020 Annual Report.
- c. Fort Hills production is partially upgraded bitumen associated with the paraffinic froth treatment process.
- d. In Situ production is net bitumen sales associated with total plant saleable product.

Performance data footnotes

- e. East Coast (Terra Nova) production is total amount of product sold, not flaring or internally produced fuel. Production at Terra Nova has been shut in since the fourth quarter of 2019. In 2021, co-owners reached an agreement in principle to restructure the project ownership and provide short-term funding towards continuing the development of the Asset Life Extension Project, with the intent to move to a sanction decision in fall 2021.
- f. Refining and Logistics net production is reported on a business unit level, where transfers between our facilities have been removed from facility production totals.
- g. St. Clair Ethanol Plant production is ethanol produced and converted to cubic metres of oil equivalent, on an energy basis.
- h. Wind energy production is in megawatt hours, from Suncor-operated wind facilities, (100% — not adjusted for ownership).
- i. Our refineries that blend ethanol into gasoline are Sarnia, Montreal, Commerce City and Edmonton.
- j. Production data is inconsistent with our 2020 Annual Report due different reporting boundaries.

5. Notes on greenhouse gas emissions (GHG)

5.1 GHG emissions factors

Emissions factors allow us to estimate GHG emissions from a unit of available activity data (e.g., quantity of fuel consumed or product produced). The metric we use in our Report on Sustainability for reporting GHG emissions is metric tonnes of carbon dioxide equivalent (CO₂e). This common unit for reporting GHGs represents volumes of gases that have been studied to have an impact on the global atmosphere. CO₂e means that individual GHGs have been multiplied by their assessed global warming potential (GWP) compared to carbon dioxide (CO₂). This report (and our 2015-2020 Reports on Sustainability) uses the 100-year GWPs issued by the Intergovernmental Panel on Climate Change's (IPCC) fourth assessment report (2007), which aligns to several jurisdictions of GHG reporting, including Environment Canada and the U.S. Environmental Protection Agency. The major impacts of using the GWPs issued by the IPCC's fourth assessment report are that emissions from methane increase slightly due to an increase in the GWP factor from 21 to 25. Emissions from nitrous oxides (N₂O) decrease slightly with that factor decreasing from 310 to 298. Other GHGs have also had their GWPs adjusted but have little to no material impact on our total GHG emissions.

5.2 Measuring potential GHG emission sources

As an integrated energy company spanning multiple jurisdictions, sectors and operations, we use several different externally developed and publicly accepted emission factor protocols to develop facility-specific emission calculation methodologies. We select the appropriate protocol for the site-specific fuel type and composition, emission source, facility or jurisdiction being considered. As required by regulators and verified by external auditors, we use internationally accepted GHG protocols and methodologies in determining our overall emissions profile.

In addition to using fuel-specific emission factors, some GHG emissions are calculated using process- or equipment-specific consumption rates in units such as run-hours, and not fuel volumes. Many of our sites have complicated processes that require specific emission factors and methodologies to accurately calculate their emissions.

Primarily, our sites use protocols and methodologies that are required by their operating jurisdiction. However, if no prescribed methodology is required, it may be necessary to use a combination of standardized methodologies at a single facility due to site and sector-specific details that may not be completely covered by a single standard or regulation. On occasion, more accurate emission factors — measured, calculated from compositional data, or manufacturer-supplied — may be available for specific equipment. These are used whenever and wherever appropriate to ensure we gather the best quality data and use the most accurate measures.

Specific emission factors are calculated from actual measured data rather than applying generic estimated default factors as frequently as possible. In other cases, such as when calculating indirect emissions from externally purchased electric power, we use factors primarily from site-specific factors if available, secondarily where prescribed by regulation and finally, from published emission factors for remaining emission sources.

Due to the unique nature of each site, we have more than 1,400 standard emission factors in our Environmental Information Management System that are applied at different sites. This number does not include thousands of additional factors that are calculated daily for different fuels and sites based on fuel composition analysis. These factors give us real-time gas composition and resulting carbon content.

Performance data footnotes

5.3 The role of regulation in GHG reporting

Many jurisdictions have, or are in the process of developing, prescriptive regulations that specify which factors can be used. For example, the EPA and regulators in Western Climate Initiative jurisdictions such as Quebec and British Columbia all required operators to use specified factors for the 2020 reporting year. Alberta requires large emitting facilities to use the standard methodology and emission factors in the Technology Innovation and Emission Reduction Regulation (TIER). Each of our sites that report through the TIER successfully generated positive (approved) verifications for the 2020 reporting year at a reasonable level of assurance.

5.4 GHG standard practices and methodologies

External agencies have developed industry-accepted standard methodologies that operators can choose to use in the absence of prescribed methods. The standard practices and methodologies we follow are widely accepted, well researched and documented so the numbers produced are verifiable by governments and third parties and are consistently applied from year to year.

A partial list of these standard methodologies and guidance documents includes:

- American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
- US EPA Mandatory Greenhouse Gas Reporting Rule
- IPCC Fourth Assessment Report 2007
- World Business Council for Sustainable Development/World Resources Institute Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard 2004
- Environment Canada Greenhouse Gas Inventory 1990 – 2007 Report 2009
- Intergovernmental Panel on Climate Change 2006 Guidelines for National Greenhouse Gas Inventories
- Western Climate Initiative (WCI) Design for the WCI Regional Program, July 2010
- National Renewable Energy Laboratory Life Cycle Assessment of Hydrogen Production via Natural Gas Steam Reforming
- Final Essential Requirements for Mandatory Reporting – Amended for Canadian Harmonization, 2011
- Alberta Greenhouse Gas Quantification Methodologies (Technology Innovation and Emission Reduction Regulation) (Version 2.1)
- Western Climate Initiative (WCI) Final Essential Requirements of Mandatory Reporting: Amended for Canadian Harmonization, 2013
- Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere 2020
- Canadian's Greenhouse Gas Quantification Requirements (Greenhouse Gas Reporting Program), 2020
- Environment Canada National Inventory Report, 1990-2018
- Canadian Association of Petroleum Producers: Guide Calculating Greenhouse Gas Emissions, April 2003

5.5 Additional GHG notes

- a. GHG emissions are calculated using facility-specific and referenced methodologies accepted by the relevant jurisdictions in which each facility is required to report GHG emissions. Methodology has been followed where a jurisdiction has a prescribed one and if none exist then the most applicable and accurate methods available are used to quantify each emission source.
- b. Absolute CO₂e emissions represents the total scope 1 and 2 emissions with no credit taken for low-carbon power production. The power credit is calculated using the Suncor-operated cogeneration power exported to the Alberta grid and the intensity in which this power was generated. It is included in determining the GHG emissions intensities for our operated assets.
- c. Absolute (total) GHG emissions are the sum of direct and indirect emissions.
 - Operated absolute emissions represent 100% of operated assets
 - Equity absolute emissions are based on Suncor's working interest for both operated and non-operated assets
- d. The Suncor total intensity calculation incorporates net facility production, minus internal transfers, resulting in a production value reflective of our product sales to market. Suncor total intensity will therefore not equal the weighted average of business unit intensities.
- e. In situ (MacKay River) indirect emissions methodology reported since 2014 includes electricity purchased from the grid, purchased electricity and steam from the third-party TransCanada cogen. Firebag cogeneration units are owned and operated by Suncor and

Performance data footnotes

therefore all cogen emissions contribute to total direct emissions including emissions associated with generating electricity that is sold to the Alberta grid.

- f. Direct (scope 1) GHG emissions are from sources that are owned or controlled by the reporting company. Refining and Logistics direct emissions do not deduct CO₂ transfers to third parties, such as the food and beverage industries.
- g. Indirect (scope 2) GHG emissions are energy-related emissions that are a consequence of our operations, but occur at sources owned or controlled by another company (e.g. purchases of electricity, steam, heat, and cooling). The indirect energy calculation methodology credits operations for electricity exported to external users and/or other Suncor facilities. Emissions are calculated based on actual supplier data where possible and published literature where supplier data is unavailable.
- h. Indirect (scope 3) GHG emissions are our category 11, use of sold products.
- i. Suncor's emissions from category 11 has been reported under the following categories based on the following parts of our integrated business:
 - Upstream production: Majority of the hydrocarbon volumes produced from Suncor operated and non-operated assets on a working interest (WI) basis must be processed into refined products, which are finally combusted. Bitumen production volumes from Firebag and Oil Sands mining have adjusted to account for coke combusted and stored onsite. Bitumen production volumes from all assets have been reduced by 6% to account for downstream asphalt production. GHG Emission Factors were sourced from API Compendium of GHG Emissions Methodologies for Oil and Natural Gas Industries, 2009 and GREET Model.
 - Refinery throughput: Scope 3 GHG emissions for Edmonton, Commerce City, Sarnia, and Montreal refineries have been quantified based on the products each refinery produces on an annual basis, i.e., gasoline, distillates and combustibles (propane, butane, coke and heavy fuel oil (HFO)). GHG Emission Factors were sourced from API Compendium of GHG Emissions Methodologies for Oil and Natural Gas Industries, 2009.
 - Branded sales: Sales of refined products to retail customers within Canada and the U.S.; wholesales are excluded. Renewable fuel volumes which are blended with the refined products have been subtracted from total volumes as renewable fuels do not have any scope 3 (category 11) GHG emissions.
- j. Suncor's GHG target is designed to encourage business choices that reduce Suncor's emissions and the emissions in the global energy system. To support tracking our progress, Suncor developed a methodology that includes both direct emissions reductions from our operated assets and indirect reductions from the use of our products. The data in the GHG performance section reflects our owned and operated assets emissions. New this year, we are reporting GHG data on an equity basis as well. Emissions data from our partners have not been verified, and they are subject to change. Direct and indirect CO₂e emissions are included for this report. No credit is taken for GHG reductions due to internally generated performance credits, purchased offsets, ethanol lifecycle GHG reductions or wind-generated offsets.
- k. Minor adjustments were made to 2019 GHG Fort Hills emissions due to a correction of the fuel gas quantification methodology to better align with the requirements of the new regulation (TIER). There were also other updates (adjustments to diesel and gasoline usage, venting survey, emission factor updates, etc.) to the data as well; however, they only marginally changed the emissions. Although these are minor adjustments, they also resulted in an immaterial change to our reported total Suncor-wide GHG emissions.

6. Notes on energy consumption

- a. Total energy is equal to the sum of direct and indirect energy. Electricity that is produced and sold to the provincial grids by oil sands and in situ cogeneration units and operated wind farms is converted to an equivalent amount in GJs and deducted from total energy use.
- b. Direct energy is primary energy consumed on-site by Suncor-operated facilities.
- c. Indirect energy includes imported electricity, steam, heating and cooling from third parties. The indirect energy calculation method credits operations for electricity exported to external users and/or other Suncor facilities.
- d. The energy intensity of renewables business is based on energy input for ethanol production, with wind energy production deducted from that total energy input.

Advisories

Forward-looking statements

Suncor's 2021 Climate Report contains certain forward-looking statements and forward-looking information (collectively, "forward-looking statements") within the meaning of applicable Canadian and U.S. securities laws. Forward-looking statements in Suncor's 2021 Climate Report include references to: The expectation that Suncor will be a net-zero greenhouse gas (GHG) emissions company by 2050 and substantially contribute to society's net-zero goals; the expectation that we will reach annual emission reductions of 10 Mt across our value chain by 2030; the belief that a net-zero world and Suncor's contribution to it will create value for our shareholders, customers and wider society; the belief that the company will sustain and optimize our base business while improving cost and carbon competitiveness; the belief that Suncor will grow low-GHG emissions businesses that will materially contribute to earnings and cash flow; the expectation that we will grow our customer connection through new low-carbon products and services; the belief that Suncor will achieve world-class ESG performance and disclosure while being recognized as a leader in sustainability and the energy transition; the expectation that getting to net-zero is started by reducing the emissions footprint of our base business, including use of energy efficiency projects, new technologies and switching to lower-GHG-emitting fuels like our cogeneration project to replace our coke-fired boilers at our Base Plant and our progress on solvents for next generation in situ extraction as well as expanding our businesses in low-emissions energy like hydrogen, electricity and renewable fuels; the belief that carbon capture, utilization and storage (CCUS) is an important part of our plans to reduce our base business emissions and to enable the production of clean hydrogen as an energy product; the expectation that, as a partner in the Oil Sands Pathways to Net Zero alliance with other oil sands producers and governments, we have a significant focus on CCUS by creating a major CCUS trunkline connected to a carbon sequestration hub that will play a significant role in emission reductions; the belief that addressing climate change and providing low-emission sources of energy will require investment, innovation, regulatory support, collaboration and global co-operation; the expectation that, as the world strives to reach net-zero emissions, Suncor will continue to deliver reliable and increasingly low-carbon energy; the expectation that Suncor's investment in Svante's second-generation CO₂ capture technology for the decarbonization of both combustion emissions and hydrogen production will support Svante in its efforts to accelerate the commercial scale deployment of a technology that has the potential to dramatically reduce the cost associated with carbon capture; the expectation that the Oil Sands Pathways to Net Zero alliance will work collectively with the federal and Alberta governments to achieve net-zero GHG emissions from oil sands operations by 2050; the expectation that the Extra Low Intensity Thermal Extraction subsurface steam enhancement technology at Firebag will last for approximately two years; the belief that ES-SAGD, ELITE and HOLLER technologies have the potential to reduce emissions intensity in existing in situ operations by up to 30%; the expectation that solvent technologies could include solvents paired with wellbore heating, super heating, or electromagnetic heating and the addition of steam; the expectation that the HOLLER project will enable us to generate zero-carbon-emission base load electricity, while responsibly sequestering process or tailings water; the expectation that Suncor will submit a pilot application to the regulator in 2021 with regard to the HOLLER project; the expectation that the coke-fired boilers at our Oil Sands Base Plant cogeneration facility will be commissioned by late 2024; the expectation that the cogeneration units will export an additional 800 megawatts (MW) of electricity to the provincial grid, equivalent to roughly 7% of Alberta's current electricity demand; the expectation that Suncor's coke-fired boiler replacement (CBR) project will reduce GHG emissions by approximately 5.1 Mt per year in Alberta; the expectation that our CBR project will also replace the coke combustion for steam generation with lower carbon intensity natural gas, reducing GHG emissions; the belief that, by replacing that water with a solvent, we could significantly reduce tailings, costs, and our GHG emissions; the expectation that, by advancing technology development to partially upgrade bitumen would reduce the temperature and pressure of our processes, decreasing the cost of treating bitumen and lowering GHG intensity; the expectation that Suncor will be allocating approximately 10% (or \$500 million) of our annual capital budget in the mid-term on investments that advance our low-GHG energy offerings; the belief that Suncor will be increasing our renewable fuels production capacity; the expectation that Suncor will be increasing our low-GHG electricity capacity to market and expanding Canada's Electric Highway™; the belief that Suncor will become a producer of clean hydrogen by 2030; the belief that, by leading a pilot-scale production of ethanol at a low-GHG intensity in a regional context, we could create a new value chain that would support the commercial development of advanced biofuels in Alberta; the expectation that the Enkema facility in Varennes, Que., will have the largest North American electrolyzer to produce hydrogen and oxygen and that when combined with the Enkema conversion process, it will convert nearly 200,000 tonnes of non-recyclable residual materials as well as wood waste into 12 million litres of renewable fuels and chemicals annually; the expectation that LanzaJet will produce sustainable aviation fuel (SAF) from ethanol derived from a variety of sustainable sources, including wastes and residues; the expectation that the biorefinery at the Freedom Pines site in Soperton, Ga., when constructed, will produce 10 million gallons (37.9 million litres) per year of sustainable fuels with 90% of its fuels as SAF and the remaining 10% as renewable diesel and that this facility is set to begin construction this year, with production to begin in 2023, and that this biorefinery will accelerate global commercial access to new sustainable fuels for the aviation sector as it seeks to decarbonize and reach net-zero by 2050; the expectation that sanctioned wind projects are expected to add another

Advisories

1,000 MW of Alberta generation capacity; the expectation that phase one of the Forty Mile Power Project will be completed and operational in 2022 and upon completion of this phase, we will increase our wind generation capacity by almost three times; the expectation is that phase two, the Forty Mile Solar Power Project could be operational by late 2024; the expectation that hydrogen will be a significant portion of the future energy mix and recognizing the opportunity for Alberta to be a global leader in the production of clean hydrogen; the expectations that, by using advanced technology to capture over 90% of the emissions generated in the hydrogen production, and then in turn using the hydrogen in our refining processes and cogeneration, Suncor would reduce emissions while improving the energy efficiency of our base business; the expectation that, to further reduce Alberta's emissions, approximately 20% of the clean hydrogen could be used in blending with Alberta's natural gas supply; the expectation that the project with ATCO will generate substantial economic activity and jobs across the province, and make a sizable contribution to Canada's net-zero ambition; the expectation that, if government support, policy and regulatory certainty is obtained to support a sanction decision, this world-scale facility could be operational as early as 2028; the expectation that the 18-month Alberta Zero Emissions Truck Electrification Collaboration (AZETEC) will serve as an initial step on a path to developing economically viable commercial hydrogen transport fuelling stations; the expectation that Suncor will continue to expand our offerings as the transportation energy mix evolves through our Petro-Canada™ brand and established and trusted customer relationships with millions of Canadians; the expectation that, by pursuing opportunities both inside and outside our operations, we have a tremendous opportunity to contribute to Canada's overall emission reduction efforts; the belief that we anticipate achieving approximately half of the 3.5 Mt of annual emission reductions target by reducing emissions from our facilities and the other half from reducing emissions outside of our operations; the expectation that Suncor will grow our customer connection through new low-carbon products and services and help valued customers contribute to a net-zero world; the expectation that ESG performance is a component of Suncor's executive compensation with further integration to come in 2022; the belief that "Autonomy" best represents the technology and policy context that would progress closest to achieving the aspiration of limiting global warming to 2°C or less vs. pre-industrial levels; the belief that three energy future scenarios to 2050 and a 2°C scenario to 2100 — Autonomy, Rivalry, and Discord — can test and assess the resiliency of our business strategy against inherent uncertainty; the expectation that a 2°C scenario provides a plausible pathway to keep global temperatures from rising 2°C, or less, by 2100 compared with pre-industrial levels; the belief that federal government policy is clear with the intent to increase carbon pricing to \$170 per tonne by 2030; the belief that technology and innovation have the potential to move emissions reduction from incremental to step-change improvements, particularly beyond 2030 when many of these technologies are expected to be commercially available; the expectation that technology and innovation will contribute significantly to our strategic objective of net-zero by 2050; the belief that the 10 Mt target should drive real emission reductions in the energy system both within and external to Suncor's operations and encourage new, lower-intensity production as part of our evaluation of new projects; the belief that Suncor will achieve approximately half of our 10 Mt target by reducing emissions from our own operations, while the other half would come from reducing emissions outside of our operations where we have directly intervened, caused change or invested to make these reductions happen;

Some of the forward-looking statements and information may be identified by words like "expected", "anticipated", "will", "estimates", "plan", "scheduled", "intended", "believes", "projected", "indicates", "could", "focus", "vision", "mission", "strategy", "goal", "outlook", "proposed", "target", "objective", "continue", "should", "may", "aim", "strives", "would", "potential", "committed", "opportunity" and similar expressions.

Forward-looking statements are based on Suncor's current expectations, estimates, projections and assumptions that were made by the company in light of information available at the time the statement was made and consider Suncor's experience and its perception of historical trends, including expectations and assumptions concerning: the accuracy of reserves and resources estimates; the current and potential adverse impacts of the novel coronavirus pandemic; commodity prices and interest and foreign exchange rates; the performance of assets and equipment; capital efficiencies and cost savings; applicable laws and government policies, future production rates; the sufficiency of budgeted capital expenditures in carrying out planned activities; the availability and cost of labour, services and infrastructure; the satisfaction by third parties of their obligations to Suncor; the development and execution of projects; the receipt, in a timely manner, of regulatory and third-party approvals; assumptions relating to demand for oil, natural gas, distillates, gasoline, diesel and other energy sources; the development and performance of technology; population growth and dynamics; assumptions relating to long-term energy future scenarios; and Suncor's carbon price outlook. Forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties, some that are similar to other oil and gas companies and some that are unique to Suncor. Suncor's actual results may differ materially from those expressed or implied by its forward-looking statements, so readers are cautioned not to place undue reliance on them.

Risks, uncertainties and other factors that could influence the financial and operating performance of all of Suncor's operating segments and activities include, but are not limited to, changes in general economic, market and business conditions, such as commodity prices,

Advisories

interest rates and currency exchange rates (including as a result of demand and supply effects resulting from the COVID-19 pandemic and the actions of OPEC and non-OPEC countries); fluctuations in supply and demand for Suncor's products; the successful and timely implementation of capital projects, including growth projects and regulatory projects; risks associated with the development and execution of Suncor's major projects and the commissioning and integration of new facilities; the possibility that completed maintenance activities may not improve operational performance or the output of related facilities; the risk that projects and initiatives intended to achieve cash flow growth and/or reductions in operating costs may not achieve the expected results in the time anticipated or at all; competitive actions of other companies, including increased competition from other oil and gas companies or from companies that provide alternative sources of energy; labour and material shortages; actions by government authorities, including the imposition or reassessment of, or changes to, taxes, fees, royalties, duties, and other government-imposed compliance costs; changes to laws and government policies that could impact the company's business, including environmental (including climate change), royalty and tax laws and policies; the ability and willingness of parties with whom Suncor has material relationships to perform their obligations to the company; the unavailability of, or outages to, third-party infrastructure that could cause disruptions to production or prevent the company from being able to transport its products; the occurrence of a protracted operational outage, a major safety or environmental incident, or unexpected events such as fires (including forest fires), equipment failures and other similar events affecting Suncor or other parties whose operations or assets directly or indirectly affect Suncor; the potential for security breaches of Suncor's information technology and infrastructure by malicious persons or entities, and the unavailability or failure of such systems to perform as anticipated as a result of such breaches; security threats and terrorist or activist activities; the risk that competing business objectives may exceed Suncor's capacity to adopt and implement change; risks and uncertainties associated with obtaining regulatory, third-party and stakeholder approvals outside of Suncor's control for the company's operations, projects, initiatives and exploration and development activities and the satisfaction of any conditions to approvals; the potential for disruptions to operations and construction projects as a result of Suncor's relationships with labour unions that represent employees at the company's facilities; our ability to find new oil and gas reserves that can be developed economically; the accuracy of Suncor's reserves, resources and future production estimates; market instability affecting Suncor's ability to borrow in the capital debt markets at acceptable rates or to issue other securities at acceptable prices; maintaining an optimal debt-to-cash-flow ratio; the success of the company's marketing and logistics activities using derivatives and other financial instruments; the cost of compliance with current and future environmental laws, including climate change laws; risks relating to increased activism and public opposition to fossil fuels and oil sands; risks and uncertainties associated with closing a transaction for the purchase or sale of a business, asset or oil and gas property, including estimates of the final consideration to be paid or received, the ability of counterparties to comply with their obligations in a timely manner; risks associated with joint arrangements in which the company has an interest; risks associated with land claims and Aboriginal consultation requirements; the risk the company may be subject to litigation; the impact of technology and risks associated with developing and implementing new technologies; and the accuracy of cost estimates, some of which are provided at the conceptual or other preliminary stage of projects and prior to commencement or conception of the detailed engineering that is needed to reduce the margin of error and increase the level of accuracy. The foregoing important factors are not exhaustive.

Suncor's Management's Discussion and Analysis for the first quarter of 2021 dated May 3, 2021 and its Annual Information Form, Form 40-F and Annual Report to Shareholders, each dated February 24, 2021, and other documents it files from time to time with securities regulatory authorities describe the risks, uncertainties, material assumptions and other factors that could influence actual results, and such factors are incorporated herein by reference. Copies of these documents are available without charge from Suncor at 150 6th Avenue S.W., Calgary, Alberta T2P 3E3, by calling 1-800-558-9071, or by email request to info@suncor.com or by referring to the company's profile on SEDAR at sedar.com or EDGAR at sec.gov. Except as required by applicable securities laws, Suncor disclaims any intention or obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Reclamation and revegetation plans

Reclamation Land is considered permanently reclaimed when landform construction and contouring, clean material placement (as required), reclamation material placement and revegetation has taken place. Land cannot be listed under permanent reclamation until revegetation has occurred which is reflective of the approved reclamation and revegetation plans.

BOEs and conversions

Certain natural gas volumes have been converted to barrels of oil equivalent (boe) on the basis of one barrel to six thousand cubic feet. Any figure presented in boe may be misleading, particularly if used in isolation. A conversion ratio of one barrel of crude oil or natural gas liquids to six thousand cubic feet of natural gas is based on an energy equivalency conversion method primarily applicable at the burner tip

Advisories

and does not necessarily represent a value equivalency at the wellhead. Given that the value ratio based on the current price of crude oil as compared to natural gas is significantly different from the energy equivalency of 6:1, utilizing a conversion on a 6:1 basis may be misleading as an indication of value. Cubic metres of oil equivalent are calculated on the basis of one boe to 0.159 standard cubic metres. As cubic metres of oil equivalent are based on a conversion involving boe, all values are subject to the same limitations as boe, noted above.

Suncor

Suncor Energy Inc. has numerous direct and indirect subsidiaries, partnerships and joint arrangements ("affiliates"), which own and operate assets and conduct activities in different jurisdictions. The terms "we", "our", "Suncor", or "the company" are used herein for simplicity of communication and only mean that there is an affiliation with Suncor Energy Inc., without necessarily identifying the specific nature of the affiliation. The use of such terms in any statement herein does not mean that they apply to Suncor Energy Inc. or any particular affiliate and does not waive the corporate separateness of any affiliate.

Partnerships

The use of "partnership" throughout Suncor's 2021 Climate Report does not necessarily mean a partnership in the legal context.

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