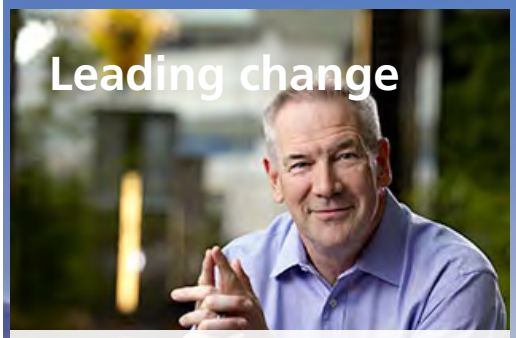
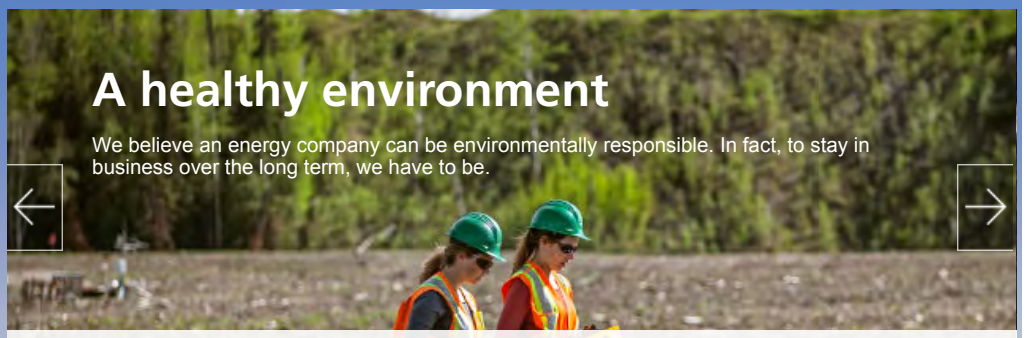


Leading change

Read CEO message



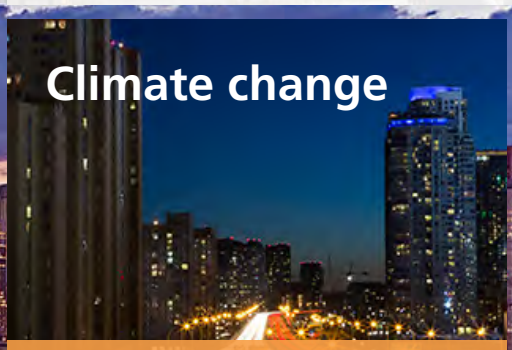
A healthy environment

We believe an energy company can be environmentally responsible. In fact, to stay in business over the long term, we have to be.

More on environmental performance

Challenges & opportunities

Check out the Q&A



Climate change

More on climate change

Aboriginal relations

More on how we engage with Canada's Aboriginal Peoples

Goals and progress

More on our environmental performance goals

Report highlights

Video gallery

View featured videos

Materiality review

See the key environmental, economic, social and governance issues

Charts library

View all of our data charts

Performance data

See our progress for the 2014 reporting year

On this page:

Energy is delivered to and experienced by people in every country across the globe. It is vital to the world we live in and the quality of life we enjoy.

As Canada's leading integrated energy company, we know that, together with our stakeholders, we need to look beyond the energy needs of today and understand what is required for the future. Sustainability is about seeing the big picture, and working together towards better, more sustainable solutions.

Our mission

We create energy for a better world.

This is our core purpose, and what we aspire to every day.

Our vision

Suncor's vision is to be trusted stewards of valuable natural resources. Guided by our values, we will lead the way to deliver economic prosperity, improved social well-being and a healthy environment for today and tomorrow.

This is where we see ourselves and our company in the future. In other words, it's our view of Suncor's place in the world.

Our values

Our values are our guiding principles – our constant set of beliefs. They define the way we do business each and every day.

Safety above all else

Do it safely or don't do it.

Respect

Being our best. Giving our best. Showing we care.

Do the right thing

The right way, with integrity.

Raise the bar

Pursue with passion. Always add value.

Commitments matter

We are all connected and part of something bigger.

Strategy and competitive differentiators

Our significant asset base, strong balance sheet and integrated model set us apart from our peers. We strive to be the low-cost competitor in our sector, without compromising environmental performance. Capitalizing and executing on these differentiators has contributed to our industry-leading position and provide the foundation for delivering long-term value for shareholders.

Reserves and resources base

We are committed to getting the most value from our resources, which include a significant position in the oil sands. Our operational excellence focus is to unlock the full value of these resources.

Industry expertise

We pioneered commercial oil sands development and continue to advance by developing and collaborating on innovative technologies that improve efficiency, lower costs and enhance environmental performance.

Our people are among the most experienced and knowledgeable in the industry. They bring their passion and expertise to work every day.

Sustainable development

We are focused on delivering triple-bottom-line sustainability. That means leadership in:

- environmental performance
- social responsibility
- creating a strong economy

A proven integrated model

From the ground to the gas station and offshore platform to wind turbine, we're focused on creating value for our shareholders. The integration of our business, both financially and physically, creates the conditions for our success.

Financial strength

We aim to achieve the highest returns possible from our operations. Our focus is on keeping costs down and increasing reliability. Our strong balance sheet and ongoing focus on capital discipline continue to highlight our commitment to delivering value for shareholders.

Commitment to sustainable development

A commitment to continuously improve performance is what makes us unique. Not only is continuous sustainability improvement a pillar of our business

strategy, it is also a company value driver, effectively weaving a sustainability focus into the very fabric of the organization.

Actions speak louder than words. Here are a few concrete initiatives where we have put the principles of sustainable development into practice:

Expand all | Collapse all

Climate change

- We adopted a seven-point climate change action plan aimed at increasing energy efficiency and reducing corporate-wide greenhouse gas emissions.
- This has contributed to a 45% reduction in carbon dioxide (CO_2) intensity per barrel at our oil sands operations since 1990.

Renewable energy

- We make industry-leading investments in renewable energy.
- Our interests include 7 operating wind power projects.
- We also operate Canada's largest ethanol plant with a capacity of 400 million litres per year.
- Our combined renewable energy portfolio displaces about 1 million tonnes of carbon dioxide per year – the equivalent of the annual tailpipe emissions of about 235,000 typical cars.

Partnering with Aboriginal businesses

Through our Petro-Canada brand, we've partnered with the Peter Ballantyne Cree Nation (PBCN) in northern Saskatchewan to manage Petro-Canada retail stations.

These stations employ many PBCN members and bring tremendous value to the Petro-Canada retail model.

The PBCN continues to be a top performer. In addition to generating positive economic returns for the First Nation, this partnership has created jobs and developed business capability in the community.

Learn more about our partnerships with Aboriginal businesses

Innovation in bitumen recovery

In collaboration with industry partners, we're developing an in situ extraction method called enhanced solvent extraction incorporating electromagnetic heating (ESEIEH – pronounced 'easy'). The ESEIEH process uses radio waves and solvents to heat, extract and transport bitumen for further processing. By reducing the energy required and eliminating the need for water or steam, the ESEIEH process has the potential to:

- improve energy efficiency
- reduce greenhouse gas emissions
- reduce extraction costs

Preliminary ESEIEH results have been encouraging. Additional work is underway to determine the commercial viability of the process.

Learn more about ESEIEH

Social Prosperity

We invest in change and social progress in the communities where we operate. Social Prosperity Wood Buffalo, a five-year partnership between stakeholders in the Wood Buffalo region of northeastern Alberta, the Suncor Energy Foundation, Ontario's Waterloo region and the University of Waterloo, aims to improve the quality of life in rapidly growing Wood Buffalo by strengthening its non-profit sector.

Read more about:

- Social Prosperity Wood Buffalo
- Our community investment strategy

Reclamation

- We're improving how quickly and how well we reclaim disturbed lands. In September 2010, we became the first oil sands company to complete surface reclamation* of a tailings pond. Through adoption of environmental goals in 2009, we're targeting an increase in reclamation of disturbed land area by 100% by 2015.**

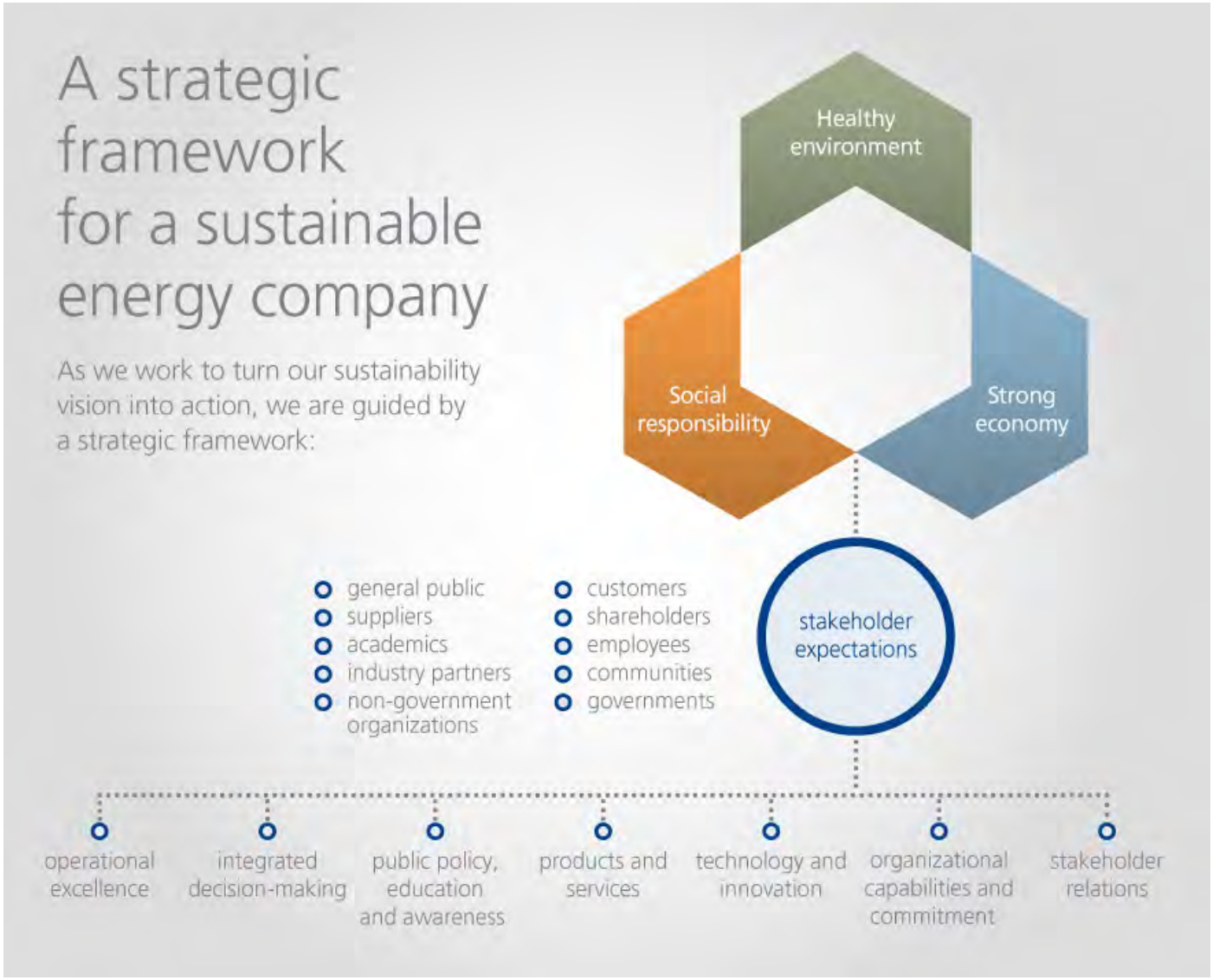
  See the Wapisiw Lookout reclamation site from our live web camera

Water use

- We work to continuously reduce our use of fresh water.
- At Oil Sands, our gross freshwater withdrawal from the Athabasca River has declined by 57% since 2007.
- Approximately 96% of the water used at our Firebag in situ site is recycled.

Operational excellence

Operational excellence, operating in a way that is safe, reliable, cost-efficient and environmentally responsible, helps us mitigate business risks and focus on achieving industry-leading performance.



Download

Reclaimed lands have not been certified by government regulators. For further details, see Advisories — Forward-Looking Statements.
* The base year for the planned improvements is 2007. The goals were established in 2009.

CEO Message

Each year, our Report on Sustainability provides us with an opportunity to reflect – on our performance over the past 12 months, as well as on the challenges and opportunities facing us going forward.

The recent decline in oil prices has created challenging times – for Suncor, the oil industry and the economies in which we all operate. Like others, we've had to make some tough choices. We've:

- reduced our 2015 capital budget
- cut operational spending
- deferred some projects until market conditions improve
- reduced the size of our workforce

These were painful, but necessary, decisions aimed at ensuring Suncor emerges strongly from swings in commodity prices.

But it's important to note that programs related to Suncor's safety, reliability and environmental performance were specifically excluded from budget cuts. For us, leadership in these areas is not just a responsibility; it's part of a proven business model that's allowed us to successfully operate and grow through good times and bad. Our discretionary spending reductions were made in a thoughtful way, with a focus on how to achieve the same results with less cost, by setting priorities or by eliminating non-essential work.

Stakeholder concerns

As we navigate through these uncertain times, we can't forget what we've heard from stakeholders:

- Can we sustain our commitment to developing the breakthrough technologies required to meet long-term environmental and production challenges?
- Will we continue to address the social challenges of the communities where we operate?
- Will we stay true to pursuing performance goals?

The answer to all those questions is yes. While it's obviously easier to lead when the economic and social climate is stable and prosperous, it's even more important in an era of change and uncertainty.

The world is changing in ways that go well beyond commodity price trends. For one, we are all connected in ways we couldn't have imagined even a decade ago.

I see this in younger generations, who grew up connected through Facebook, Instagram and Twitter. They understand the challenges we face – including climate change, poverty and sustainable energy development – are global in nature. So are potential solutions.

Energy system transition

It's also clear our energy system is in an era of change. As we try to meet growing global demand, energy experts still point out that hydrocarbons will continue to be a key source of reliable and affordable energy for the foreseeable future and alternative and renewable energy sources become a greater part of the energy mix. Since hydrocarbons are finite resources with an environmental impact, using them wisely will be a big part of making the transition to lower carbon sources of energy.

We know we disturb land, draw on water resources and produce greenhouse gas (GHG) emissions that contribute to global climate change. We have a responsibility to address these impacts, which is why Suncor strives to continuously raise the bar on environmental performance.

We also know that energy, in all its forms, is essential to human progress. It provides mobility, heats our homes and schools, and generates jobs and economic growth. Energy is the bedrock of the developed world. In the developing world, it can mean the difference between health and sickness.

Oil sands and oil development have an important role to play in meeting our energy needs. But as Canada's largest integrated energy company, we recognize our responsibility to think about our role in the energy system transition and how we work together with broader society on our energy future.

Focus areas

A company like ours faces many challenges and priorities. But in listening to our stakeholders, we have identified 3 key areas where they expect us to make a positive difference:

- water use and water quality
- GHG emissions
- partnering with Aboriginal Peoples

Suncor has been finding innovative ways to reuse and recycle tailings waste and wastewater – initiatives that helped us achieve a 20% year-over-year decrease in water use at Oil Sands in 2014 alone. But we also recognize that, as production increases, we will need to redouble our efforts to manage our freshwater use, including collaborating with industry peers on projects to advance new water recycling, reuse and treatment technologies.

Climate change is a real and growing global challenge and the need to transform to a lower carbon economy is one of the pressing issues of our times. As both a father and an energy company executive, I'm concerned about the legacy that will be left for our children and grandchildren.

By investing in technology and innovation, we will continue to lower the carbon footprint of oil sands. We will also continue to invest in renewable sources of energy, primarily wind power and biofuels, which we know are part of the future energy mix.

But to make a significant global impact on GHG emissions, there needs to be a much broader plan of action on how, as a society, we can best produce and use the energy we require. That's why we engage in partnerships like the recently formed Energy Futures Lab (EFL), which is bringing together diverse interests to discuss how Alberta can play a leadership role in transforming our energy system.

A carbon price is another method of triggering action on climate change. Suncor has long supported the principle of a broadly based carbon levy equitably applied to both energy producers and consumers. In collaboration with Canada's EcoFiscal Commission, we continue to work on progressive fiscal policies that will support economic growth and improved environmental performance.

Many of Suncor's operations are located on or near the traditional lands of Aboriginal Peoples. We have worked over many years to build mutually beneficial relationships and to partner with Aboriginal businesses. But we aspire to achieve much more, including greater participation by Aboriginal Peoples in Suncor's workforce and leadership and helping to improve the educational outcomes and opportunities for Aboriginal youth.

Guided by our values

Our aspirations in all these areas are rooted in Suncor's values, one of which stands above the rest: safety first. At the end of every day, we want to send our colleagues home safely to their loved ones. Sadly, we fell far short of that goal in 2014. Following 5 separate fatalities near our Oil Sands site, we established a Safety Step Change Task Force. Working with the local union leadership, this group developed 16 safety solutions, which we're now implementing. We will not take our focus off these efforts.

Another core value for Suncor is respect for human rights, which is reflected in the collaborative work Suncor and 7 other companies are doing as founding members of the United Nations Global Compact (UNGC) Local Network in Canada. This is part of our continuing support for the UNGC and its 10 Principles, which guide our approach to human rights, labour, environment and corruption – wherever in the world we operate.

Leading change is not something one company, industry, government or stakeholder group can do alone. We can achieve so much more when we collaborate on solutions.

An exciting example of this is Canada's Oil Sands Innovation Alliance (COSIA), a network of 13 companies working together towards step-change in environmental performance. The unique part of COSIA is that fiercely competitive companies are sharing technological discoveries to achieve common goals. They are also using market forces to pursue the public interest. It's a textbook example of taking collaboration to the next level.

Sustainability is about striking a balance between opportunity and risk. Businesses and economies are at risk if we fail to meet society's rising expectations for our performance. But we also have a huge opportunity to mitigate those risks by leading the change that makes a positive difference to our communities, country and world.

We at Suncor want to be a part of that collective effort. We hope you'll join us in helping to build a more sustainable future.

Steve Williams
president and chief executive officer

On this page :

Our reporting framework

Our 2015 Report on Sustainability outlines performance in 2014 and provides a 5-year performance trend wherever possible.

We have prepared our Report on Sustainability in accordance with the Global Reporting Initiative (GRI) G4 Core Guidelines and Oil and Gas Sector Disclosures (PDF, 69 pp., 2.06 MB)

Deloitte LLP, an independent third party, has reviewed selected performance indicators for the 2014 reporting year using the GRI G4 guidelines and the sector disclosures.

Review the results of the third-party assurance report (PDF, 3 pp., 56.9 KB)

Materiality review

For the purposes of this report, materiality in a sustainability context is defined as the relative significance of an issue's environmental, social, governance and economic impacts (both positive and negative) to our business and our stakeholders.

Our materiality review process ensures the content included in our annual Report on Sustainability reflects key environmental, economic, social and governance issues considered most critical to the company and our stakeholders.

In late 2014, we conducted an extensive materiality review in accordance with GRI's G4 guidelines. During this review, we evaluated a wide-range of issues for their business and stakeholder impacts as well as Suncor's degree of control.

Our materiality review follows a two-step process:

Expand all | Collapse all

Materiality assessment process

Step 1 – Review of materials and issues identification

In addition to using the framework provided by AccountAbility's Five-Part test, we also conducted a thorough review and analyses of the following:

- social media and website analytics
- corporate objectives, programs and risks
- traditional news releases and media coverage
- internal communication publications
- multi-sector sustainability and corporate social responsibility reports
- topics identified through our internal strategic issues management process
- input from across our business areas

We also reviewed information learned from our ongoing stakeholder dialogues, in addition to feedback from our annual multi-stakeholder forum. This forum is important for providing us a venue to highlight, discuss and address complex issues with a wide range of key stakeholders and document their feedback. During this forum, we talk about our challenges and how we can work to address them.

Our extensive review resulted in a number of material sustainability issues for both external and internal evaluation for inclusion in this year's report.

Step 2 – External and internal issue evaluation

External evaluation

We incorporated direct stakeholder feedback into our materiality review process to improve on past materiality assessments as well as provide a more comprehensive evaluation of what would become our most material sustainability issues.

To that end, we identified individuals within key stakeholder groups spanning across academia, aboriginal advocacy groups, the investment community, environmental non-government organizations and community representatives for in-depth interviews that focused not only on which issues they saw as most material to our business but also how they would prioritize those issues based on a ranking tool we developed.

Internal evaluation

Using feedback learned from our stakeholder interviews, we evaluated our sustainability issues with a cross functional employee team of senior leaders from across our business.

For each candidate material issue, team members determined the degree of impact on and importance to the company and our stakeholders.

The aggregated data collected from both our internal and external reviews resulted in a list of our most material sustainability issues, which are plotted on the materiality matrix below. This diagram displays a sampling of the pertinent issues identified during the materiality review. Issues increase in material importance to both the company and our stakeholders from the lower-left corner up to the right corner of the matrix. While these are all important issues, we've prioritized the content of this report around our most material issues.

In some instances we chose to report above and beyond the issues identified in our materiality review because although they don't meet the GRI G4 materiality threshold, they remain important to our stakeholders.

Materiality matrix

Select a letter in the chart below to identify and learn more about an issue. You can filter categories below by selecting communities, economic, environment or our employees. Click the category again to turn the filter off.

We not only identified our most material issues, we also mapped where the most material positive or negative impacts of those relevant issues occur within our value chain, both within and outside of our organizational boundary. Our upstream, refining and marketing and corporate offices exist within this boundary while our suppliers, some joint venture relationships, product transportation, customers and broader society exist outside of this boundary.

Download

Communities

Continuously earning and maintaining our social license to operate is crucial to our business. If not managed well, these issues could potentially result in increased project delays and costs, legal proceedings, stakeholder outrage and an erosion of community resilience. Managed well, these issues present a vital shared value opportunity to build relationships and provide economic and social benefit.		Impact across Suncor value chain	
		Inside of Suncor	Outside of Suncor
B	**Aboriginal engagement in energy development** • Aboriginal relations • Partnering with Aboriginal businesses • Supporting Aboriginal education	X	X
L	**Responsible community partnerships**		

	• Community investment • Our stakeholders • Social responsibility	X	X
P	**Human rights** • Human rights and operating internationally	X	X

Economy

The following issues are material to Suncor s performance and growth. Managed poorly, these issues could result in unplanned legal, financial, operational or reputational impacts. Managed well, these issues help to support business continuity and maximize shareholder value.		Impact across Suncor value chain	
		Inside of Suncor	Outside of Suncor
A	**Economic conditions and performance** • Capital spending and discipline • Growth and access to markets • Production costs and production mix • Royalties and taxes	X	X
M	**Operational reliability** • Facility and asset reliability • Operational excellence and business continuity	X	X
O	**Corporate governance** • Board composition and diversity • Enterprise risk management • Executive compensation	X	
S	**Business ethics** • Ethical business conduct • Prevention of improper payments	X	X

Environment

Our environmental performance represents a key strategic risk and opportunity. The management of these issues are subject to strict scrutiny from both government regulators and stakeholders. Poor management of these issues could result in regulatory fines, stakeholder outrage, capital divestment and project costs and delays. Managed well, these issues contribute to a case for innovation, new technology and collaboration with our stakeholders and industry peers to create more value and improved environmental performance.		Impact across Suncor value chain	
		Inside of Suncor	Outside of Suncor
C	**Carbon footprint** • Climate change • Greenhouse gas (GHG) emissions	X	X
D	**Energy system transition** • Energy diversification & renewables • Federal and provincial policy	X	
E	**Water management** • Water quality monitoring		

	• Water use • Withdrawal in low flow conditions	X	X
F	**Tailings management** • Tailings reduction and remediation	X	X
G	**Cumulative impacts** • Aligned regional growth plans	X	X
H	**Innovation and collaboration** • Collaboration with industry • New technology	X	X
I	**Environmental protection and compliance** • Spills and releases • Operational issues	X	X
J	**Air quality** • Air quality monitoring and emissions • Flaring	X	X
N	**Land management and biodiversity** • Biodiversity • Land management • Land reclamation	X	X
R	**Climate resiliency** • Climate change action plan	X	X
T	**Waste management** • Waste management	X	X

Our people

Our people are our most valuable asset and key to our success. If managed poorly, these issues could result in labour shortages, talent depletion, process and personal safety incidents or even worse, fatalities. Managed well these issues could result in improved productivity, lower costs, innovation and a strong and thriving work culture.		Impact across Suncor value chain	
		Inside of Suncor	Outside of Suncor
K	**Health and safety (employees and contractors)** • Fatality prevention • Occupational health and wellness • Personal safety • Process and operational safety	X	
Q	**Employee attraction, retention and development** • Building talent • Our employees	X	

On this page :

We are Canada's largest integrated energy company with operations in all stages of the oil and gas industry – upstream, midstream and downstream.

Our operations include:

- Oil Sands
- Exploration & Production
- Supply & Trading
- Refining & Marketing

Our operating areas

Expand all | Collapse all

Oil Sands

Our Oil Sands business is focused on the responsible development of one of the world's largest petroleum resource basins – the Athabasca oil sands – through both mining and in situ technologies.

Read about Oil Sands on Suncor.com

Exploration & Production

Our Exploration & Production business is focused on delivering value and growth through the development and operation of lower cost crude oil assets, which includes:

- offshore operations off the east coast of Canada and in the North Sea
- onshore assets in North America, Libya and Syria (Note: Operations in Syria have been suspended indefinitely due to political unrest and resulting sanctions. Production in Libya has been substantially shut-in due to political unrest, with the timing of a return to normal operations remaining uncertain.)

Read about Exploration & Production on Suncor.com

Supply & Trading

Our Supply & Trading business provides midstream services including crude oil marketing and logistics activities to optimize our value chain.

Read more about Supply & Trading on Suncor.com

Refining & Marketing

Our Refining & Marketing operations further unlock the value of the upstream barrel through our strong refining and marketing network, which includes more than 1,400 Petro-Canada retail stations. Our renewables business includes investments in 7 operating wind farms and Canada's largest ethanol production facility which feeds into our retail gasoline network.

Read more about our wind power business on Suncor.com

Operations Map

Below is a map of our operations around the globe. Click the image to view larger. (PDF, 1 pp., 1.7 MB)

On this page:

Suncor pioneered oil sands development. Our early investments in technology helped unlock the potential of the oil sands by improving reliability and performance, expanding productivity and driving down costs while reducing our environmental footprint.

Today, new technology and innovative thinking remains fundamental to how we do business. Our investments in incremental and game-changing technologies and our operational efficiencies target the following performance improvements:

- higher production
- enhanced profitability
- reduced environmental impacts

In some cases, we aggressively lead research and development of new technologies. In others, we collaborate through consortiums or third parties. Collaboration is critical to the oil sands industry's efforts to develop and deploy new technologies which is why Suncor is leading and is involved in a number of technology studies and projects under Canada's Oil Sands Innovation Alliance (COSIA), an alliance of 13 companies representing 90% of oil sands production. COSIA allows participating companies to share technologies and innovations focused on environmental improvements. To date:

- 777 environmental technologies that cost over $950 million to develop have been submitted
- 68 projects costing over $200 million initiated (in 2014 alone)

Pursuing technology opportunities

Suncor also monitors technologies being developed by external parties to determine if, and when, an investment makes sense to advance the technology or adapt them for our business. This involves funding outside companies whose technology ideas align with the strategic needs of our operations or businesses.

For Suncor, this type of technology investment takes 3 forms:

- **Research agreements** where Suncor (and sometimes other partners) funds the lab scale or field pilot work that is needed to advance a new idea forward and demonstrate commercial viability. We benefit from preferential rights to the new technology, or in some cases a shared technology ownership position, but the outside company remains independent.
- **Direct strategic investments** where we invest in an equity position in companies that need external funds to help develop a technology that is of interest to Suncor. This may be technologies that address an environmental, reliability, or cost challenge in our operations, or technologies that can allow us to create business value from a new market opportunity like wind power or biofuels. Examples of these investments are LanzaTech, a biofuels firm based in the United States that is advancing technologies to recycle waste gas and greenhouse gas emissions into low carbon fuels and chemicals, and Benefuel, a technology commercialization company focused on building biodiesel production capacity using cost advantaged feedstock.
- **Venture capital funds** where we pool our funds with other Limited Partners into professionally managed outside firms. These venture capital funds then invest on our behalf in a range of companies, most typically focused on clean technology or energy technology innovation areas we might not otherwise be exposed to. An example is Emerald Technology Ventures, a globally recognized venture capital firm focused on innovation in areas of strategic importance to Suncor, including energy, water and other resource markets with an emphasis on clean technology.

In all cases this type of technology development is carefully managed to ensure it provides both a strategic and economic benefit to Suncor. This external innovation approach is essential in a world of fast changing products and services, especially true in the area of environmental equipment and alternative energy.

In 2014, we spent over $150 million to support research and development of technology across the corporation, through both internal and external pathways.

Read more about industry innovation and technology in our Oil Sands Question and Response (OSQAR) blog

Read more about COSIA's environmental priority areas on its website

Some examples of our technology journey so far:

2009 2010 2012

CIVITAS™

CIVITAS is the first commercially available fungus control and plant health product for the golf course industry that has a unique mode of action called Induced Systemic Resistance (ISR). CIVITAS products impact the plant

2009

CIVITAS™

CIVITAS is the first commercially available fungus control and plant health product for the golf course industry that has a unique mode of action called Induced Systemic Resistance (ISR). CIVITAS products impact the plant working to treat diseases and prevent them from taking hold in the first place.

CIVITAS products are OMRI-listed for use in organic turfgrass management.

2010

TRO™

This new approach to managing mine tailings, developed in 2010, is focused on a de-watering process that will more rapidly turn fluid tailings ponds into solid landscapes suitable for reclamation.

TRO is a key tool in our efforts to progressively reclaim tailings ponds, allowing us to reclaim entire mine sites faster – resulting in the more rapid return of natural habitats.

2012

Oxyfuel technology

Through our partnership with CO2 Capture Project, we are involved in a collaborative research and development project that could improve the prospects for implementing carbon capture and storage at in situ facilities. This technology produces a concentrated carbon dioxide (CO2) steam that is 'capture ready' and is, therefore, expected to avoid or eliminate substantial CO2 emissions at a reduced cost.

2012

Hydrocarbon blanket gas and recovery system

Our hydrocarbon blanket gas and recovery system was installed on the Terra Nova offshore drilling platform in 2012.

Unlike conventional cargo systems which use inert gas to maintain a positive pressure in storage tanks and then vent that gas, along with volatile organic compounds (VOCs), into the atmosphere during production, our system 'blankets' cargo tanks with pure hydrocarbon gas recovered during production and effectively eliminates the release of VOCs.

2013

N-Solv

Through collaborative technology development, we are currently undertaking field tests on using a condensing solvent to extract bitumen, which could significantly reduce energy use and greenhouse gas emissions. The N-Solv pilot at Dover is currently operating with encouraging results.

2013

SAGD LITE

SAGD LITE involves the addition of slight amounts of soap-like additives – surfactants – in the steam for steam assisted gravity drainage (SAGD) production.

A pilot project testing this technology was successfully operated at our MacKay River in situ field in 2013. Results were positive and the program is being extended. In addition, three other enhanced surfactants will be tested in 2014.

2013

Autonomous haulage systems

In fall 2013, we began engineering tests for Autonomous Haulage Systems (AHS) at our mine site near Fort McMurray. Using GPS and perception technologies the trucks can operate in a continuous fashion and provide potential efficiencies in maintenance costs, reduced stoppages and fuel consumption, resulting in reduction in GHGs. The technology may also create opportunities for employees to upgrade their technical skills. Testing of AHS equipment is being performed in a tightly controlled mine environment. If we decided to proceed with using AHS on a commercial scale, progressive implementation would begin after 2017.

2014

ESEIEH

This pilot is testing a new method of in situ bitumen recovery using radio frequency heating and solvent to reduce energy, greenhouse gases and water use. Currently, a joint development partnership is doing a technology proof-of-concept project. Field pilot testing for ESEIEH is scheduled for 2014.

2014

DCSG technology

As part of Canada's Oil Sands Innovation Alliance (COSIA), we are leading a project investigating the potential benefits of using direct contact steam generation (DCSG) - a direct combustion process that generates a mixture of steam and CO2 that is then pumped underground. The process has the potential to reduce GHG emissions because a significant portion of the CO2 may be sequestered underground in the SAGD reservoir.

2015

Water Technology Development Centre

As part of Canada's Oil Sands Innovation Alliance (COSIA), we are working to develop the Water Technology Development Centre (WTDC), which will advance new water treatment and recycling technologies for in situ oil sands development.

Construction of the WTDC is expected to begin in 2015 with opening planned for 2017.

working to treat diseases and prevent them from taking hold in the first place.

CIVITAS products are OMRI-listed for use in organic turfgrass management.

Water

Steam Assisted Gravity Drainage (SAGD) Produced Water Treatment pilot project

In 2014, Suncor hosted a project with GE Canada, Alberta Innovates - Energy and Environment Solutions, ConocoPhillips Canada and Devon to test new technologies to reduce greenhouse gas (GHG) emissions and water usage in the oil sands. SAGD operators reuse as much of the water as possible to create more steam but, the water pumped to the surface in the extraction process must be separated from the bitumen prior to being run through a steam-generator. Under this collaborative COSIA project de-oiling technologies were tested for water treatment at our MacKay River facility. These technologies could enable treating and reusing the water more consistently which means being more operational efficient and requiring less energy. In spring 2015, Suncor signed an additional agreement with GE Canada and Devon for the next phase of work to further develop technologies to improve environmental performance in areas of GHG reductions and advances in water treatment technologies.

Advancing in situ technology: Electromagnetically Assisted Solvent Extraction

Instead of using steam to heat the bitumen, electromagnetically assisted solvent extraction involves using radiofrequency electromagnetic energy to heat the reservoir oil rather than the ore, similar to your microwave at home. The technology then uses a solvent to further lower bitumen viscosity, enabling production to a horizontal well. This potentially game-changing technology may remove the need for water to heat the bitumen plus the solvent leaves asphalt ends in the reservoir producing a lighter oil, with lower GHG footprint when refined into gasoline and other products. Among the suite of electromagnetically assisted solvent technologies we are pursuing, we are a partner in the Enhanced Solvent Extraction Incorporating Electromagnetic Heating field pilot.

Expand all | Collapse all

Enhanced Solvent Extraction Incorporating Electromagnetic Heating Pilot (ESEIEH)

We are part of a technology consortium that is moving forward with a field demonstration at our Dover Site – home of the original SAGD demonstration facility – to demonstrate the viability of an innovative in situ production technology.

The field pilot, known as ESEIEH (pronounced “easy”), is a project supported by a consortium of Suncor, Devon Canada, Nexen Energy ULC, Harris Corporation, and Alberta’s Climate Change and Emissions Management Corporation (CCEMC).

ESEIEH uses wells configured in horizontal pairs much like a SAGD operation. The radio frequency energy and solvent is introduced to the reservoir in the upper well. Bitumen and residual solvent are produced from the lower well.

If commercially successful, ESEIEH offers a number of potential benefits over conventional SAGD technology, including:

- reducing energy requirements by up to 75%, which reduces costs and GHG emissions
- eliminating process water needs, including water treatment and handling equipment
- significantly reducing the size and complexity of the surface facility, reducing both capital costs and land footprint

Current phase

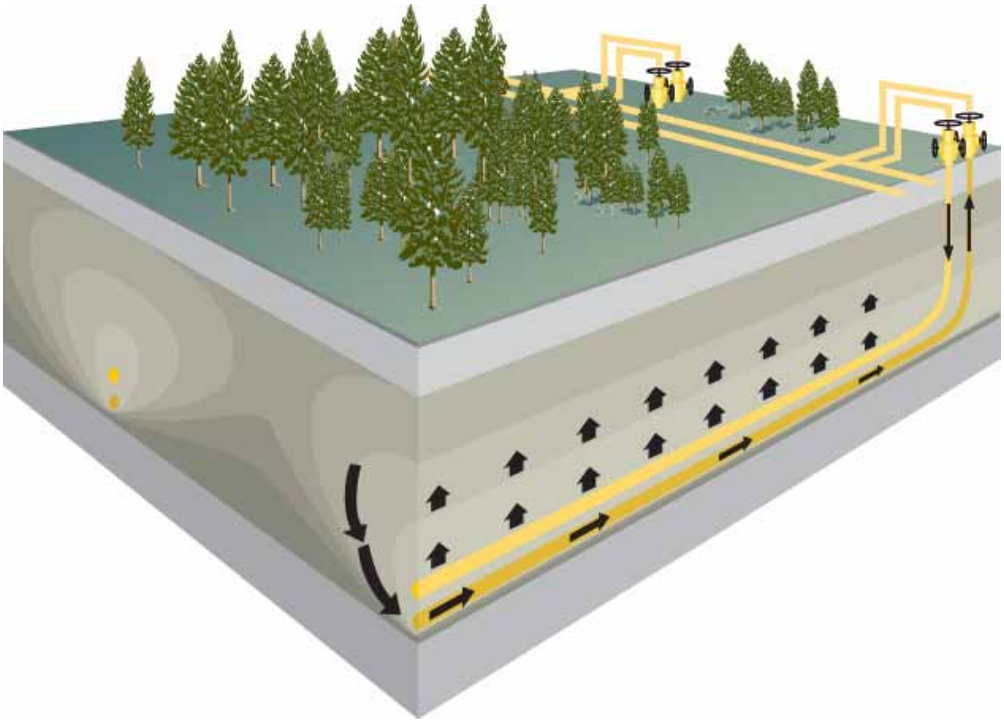
The project is currently in the second phase which is scheduled to begin operations in the first half of 2015, and run for up to 2 years.

First and second phase

- In 2012, the first phase was a test at our Steepbank mine facility north of Fort McMurray.
- This test successfully demonstrated radio frequency energy could safely and efficiently heat bitumen, and led to the second phase of the project.
- The second phase is the demonstration at our Dover site.

Nsolv: toward waterless extraction

Our current technology for in situ production, SAGD, employs parallel pairs of horizontal wells to recover the bitumen. The top well distributes steam to heat the reservoir and the bitumen, allowing it to flow to the lower well where it can be pumped to the surface. One of the challenges of SAGD is that the reservoir is typically heated to 200°C or more to get the bitumen to flow, consuming a significant amount of natural gas, and necessitating large amounts of water handling and treatment for steam production.



Starting in 2013, a pilot plant at our Dover lease began field-testing a new condensing solvent extraction technology, with the objective of proving the technology for commercial deployment. The Nsolv process uses the horizontal well technology developed for SAGD, but does not use any water. Instead, Nsolv uses vapourized propane or butane to provide heat the way steam does. But because this solvent also dilutes and mobilizes the bitumen, reservoir temperatures do not need to be raised above 60°C, requiring up to 80% less energy. This potential energy reduction could have a significant impact on greenhouse gas emissions.

The Nsolv technology offers potential economic and environmental benefits. Like ESEIEH, the process produces lighter, de-asphalted, and higher-value oil. Commercially, capital and operating costs could be reduced by removing the water treatment plant and steam boilers; instead, a relatively smaller solvent recovery and vapourization plant is required, which will also reduce the land footprint of the facility. Due to the low temperature and low pressure required for its operation, Nsolv can also access shallow in-situ resources which are currently inaccessible.

The Nsolv pilot is the result of collaboration between Nsolv Corporation and Suncor, with support from Sustainable Development Technology Canada and Alberta's Climate Change and Emissions Management Corporation. Suncor is currently evaluating this promising technology for the development of a larger-scale commercial prototype plant.

Visit these websites for more details:

- Nsolv Corporation
- Sustainable Development Technology Canada
- Climate Change and Emissions Management Corporation

'SAGD LITE' and surfactants program: small technology, big benefits

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The advantage of our surfactants and solvents program is that it holds the promise of immediate benefits – more efficient oil recovery while using less energy and water – with minimal associated costs or environmental footprint.

A good example of an incremental technology with the potential to make a big difference is the addition of slight amounts of soap-like additives – surfactants – in the steam for SAGD production. During the producing life of an oil reservoir, different techniques can be applied to optimize oil production and recovery. Potentially, a reduction of steam-to-oil ratio (SOR) in excess of 15% will enable more oil production with less steam production and fluid handling requirements.

A pilot project testing surfactant technology was successfully operated on 3 well pairs at our MacKay River in situ field in 2013. Results were positive and the program is being extended in 2015 to full pads of mature wells in the MacKay River field.

Non-condensable gas co-injection technology

Later in life, mature in situ reservoirs exhibit declining production and increasing SOR. Based on continuous improvement, Suncor is piloting solvent co-injection with steam for our wind-down process to divert steam from aging wells to new, more profitable wells with lower SOR. This technology, which reduces the SOR while maintaining production and pressure, reduces energy intensity and CO_2 emissions. The pilot projects at Firebag and MacKay River have shown encouraging results and are being expanded in 2015.

Greenhouse Gases (GHG)

Direct Contact Steam Generation (DCSG)

We are leading a project investigating the potential benefits of using DCSG as an alternative to the existing once-through steam generators (OTSGs) used in steam assisted gravity drainage (SAGD). This technology, if proven viable, will lower GHG emissions, water and land intensity while improving the economics of in situ projects.

In current SAGD operations a well is drilled, and steam produced from large OTSGs is injected down the well to heat the bitumen until it becomes warm enough to flow. The bitumen and steam now cooled and turned back into water, are brought to the surface through a second well, and then separated so the water can be used again. Carbon dioxide (CO_2) from combustion is conventionally released from the OTSGs' exhaust stacks.

Using the DCSG process, a direct combustion process mixes steam and CO_2 that is then pumped underground. The process has the potential to reduce GHG emissions because a significant portion of the CO_2 may be sequestered underground in the SAGD reservoir, and there is less heat loss in moving the steam to the well.

DCSG technology also has potential water and land management benefits. The system captures the water from combustion, augmenting conventional recycling of about 90% of the water, and reduces additional water required to replenish the system. If taken from existing tailings water, tailings pond water could be consumed with this technology. Further, DCSGs produce the same amount of steam as a large OTSG, but in a vessel that would fit in a typical office meeting room, opening up the potential for distributed steam generation and a far smaller footprint than our current large central OTSG facilities.

In early 2014, the Suncor-led project completed testing under pressurized conditions, and in the spring of 2014 the participating Canada's Oil Sands Innovation Alliance's (COSIA) companies received the results on steam generator performance. The results indicated no significant technical hurdles and identified the further development work that will be needed to scale-up the technology. Suncor is currently working with CanmetENERGY (Government of Canada) to design the pilot for the next development phase.

Suncor has received approval from the Alberta Energy Regulator to execute a field pilot at MacKay River whereby bulk CO_2 will be injected with steam into

one well pair to assess the potential impacts to reservoir performance as well as the potential for CO_2 sequestration.

Expand all | Collapse all

Autonomous haulage systems

Autonomous haulage systems (AHS) use GPS and perception technologies to navigate terrain. While operators are not required, these vehicles can be operated in a manual mode. This proven technology is being used in Australia and Chile for hard-rock mining operations.

As we progress, we will continue to evaluate the technology's performance in our operating conditions and during all seasons to determine the commercial and sustainability value. If we decide to proceed with the technology, progressive implementation may begin in 2017.

AHS technology offers several advantages over existing truck haul operations which could lead to efficiencies and lower operating costs. These advantages include:

- decreased equipment stoppages
- improved maintenance requirements
- reduced environmental impact
- enhanced safety performance

From an environmental perspective, the continuous manner in which autonomous trucks operate can reduce fuel consumption. This means lower greenhouse gas emissions.

In 2014 preliminary trials were successfully completed, and we are planning the next phase of AHS field work. This will take place over the next 12 to 18 months in a tightly controlled mine environment north of Fort McMurray, Alta.

We recognize that any new technology means changes to the required skill sets for workers. At the same time, finding skilled labour continues to be a challenge in the Regional Municipality of Wood Buffalo. If adopted, AHS technology could create different kinds of employment opportunities. It is something we will work through with our employees if and when we decide to implement this technology.

CO_2 capture from hydrogen plants

Capturing, transporting and storing CO_2 underground is already being used as a key long-term tool for reducing large-scale industrial emissions. But current technology remains too expensive for the oil sands industry to implement on a broad scale. COSIA Greenhouse Gas Environmental Priority Area conducted a carbon capture technology scan to identify early-stage promising technologies with the potential to capture carbon at significantly lower costs compared to the current state-of-the-art technologies.

As a COSIA member, Suncor is now using those findings and leading a study on carbon capture from synthesis gas in collaboration with Canadian Natural Resources Limited. Hydrogen plants (located at upgraders and refineries) have been identified as a potential capture location with lower cost and by sharing knowledge from the COSIA study and working together with its COSIA partners, Suncor is working to advance environmental improvement in greenhouse gas emissions.

Tailings

Less aqueous extraction

Through industry partnerships with GE Global Research and Alberta Innovates – Technology Futures, we are pursuing new technologies in surface mining and extraction that could reduce the need for water in the extraction of bitumen. Hot water is used in the extraction process to separate the bitumen from the sands. If we can reduce the need for water and replace it with an alternative solvent, we may reduce water usage, the need for tailings ponds and potentially our greenhouse gas footprint by reducing our operating temperature and simplifying our overall process.

Read more about oil sands tailings technology

Land

Nikanotee fen

In 2013, Suncor became one of the first companies in the world to complete reconstruction of this type of wetland in co-operation with numerous university researchers and consultants across the continent. Research over the first year is showing that the fen is remaining wet through the seasonal weather cycles, water quality is good and plants are growing and spreading naturally.

Read more about the Nikanotee fen

Expand all | Collapse all

Lubricants technology: the CIVITAS™ example

Our technology story isn't all about oil sands exploration and production. We produce more than 350 lubricating oil-based stocks and other products that are sold in more than 70 countries. Among them are the CIVITAS line of products which are marketed by Intelligro, a sub-brand of Suncor. CIVITAS is the first commercially available isoparrafin-based fungus control product with Induced Systemic Resistance for the golf industry and is expanding to sports and athletic fields in the U.S. in the fall of 2015. This environmentally responsible product works to prime the turf's genes, stimulate its natural resources and kill or inhibit fungal diseases.

As we continue to market CIVITAS and other products, we are beginning to learn about other potential benefits and applications. We will continue to research and develop these environmentally responsible products to ensure we maximize potential value.

CIVITAS WEEDfree BRAND Concentrate (previously called Clear Choice Concentrate Selective Herbicide products in Canada)

CIVITAS WEEDfree BRAND Concentrate is a revolutionary approach to broadleaf weed control. The innovative microtechnology enables the product to penetrate more effectively into broadleaf weeds, resulting in no offensive odour and significantly less active ingredients (less than 70% compared to other leading herbicide products) required to control weeds right down to the root. This hybrid selective herbicide provides effective, resourceful weed control.

CIVITAS WEEDfree BRAND Concentrate products are available to professional lawn and landscape companies in the U.S. and Western Canada.

Learn more about CIVITAS WEEDfree BRAND Concentrate

Read more about industry innovation and technology in our Oil Sands Question and Response (OSQAR) blog

Read more about COSIA's environmental priority areas on its website

On this page:

Conversations that will lead us to better, more responsible solutions means working with stakeholders, governments and industry partners. And while we might not always agree on everything, we do have a common goal – create energy to improve quality of life and do so in a sustainable way.

Environmental non-government organizations (ENGO) partnerships

It strikes some observers as curious that we seek out relationships with groups and individuals who are openly critical of oil sands development. The fact is ENGOs, like the companies they monitor, are not all the same.

Finding common ground

ENGOs are involved in a variety of activities on a wide range of issues. We may have disagreements on some issues and find common ground and mutual benefit by working together on other issues.

We work hard to understand and learn from ENGOs because we value their knowledge, insights and diverse perspectives.

Environment of mutual respect

We seek to engage with ENGOs in an atmosphere of mutual respect, although this does not mean either side is co-opted by the other. Our ENGO partners are free to publicly criticize our company or industry as they see fit except on specific initiatives in which we've agreed to co-operate. We, in turn, are free to counter statements and research by ENGO partners if we know it to be contrary to established facts. Simply put, both sides can agree to disagree, while

continuing to work together for greater good.

We have entered into several successful partnerships with ENGOs in recent years. These organizations include:

Expand all | Collapse all

The Pembina Institute

The Pembina Institute is an Alberta-based ENGO dedicated to seeking sustainable energy solutions through innovation, research, education, consulting and advocacy. Pembina has worked with us on a number of initiatives, including carbon capture and storage and life cycle value assessments for our renewable energy sector. Additionally, we consulted Pembina on the issue of low carbon fuel standards.

In 2014, the Pembina Institute facilitated and co-convened an expert panel to review and comment on Suncor's water management practices, with a specific emphasis on the Athabasca River watershed.

Learn more at pembina.org

Alberta Conservation Association (ACA)

The ACA delivers a wide range of projects, programs and services aimed at protecting Alberta's wildlife, fish and habitat. In 2003, the Suncor Energy Foundation entered into a unique partnership with the ACA to conserve habitat in the boreal region of northern Alberta. The initiative is designed to find sustainable ways to offset the land disturbed by our operations. Some of the conserved land will be transferred to the Alberta park system.

In 2013, this partnership celebrated its 10-year anniversary. The Suncor Energy Foundation's current commitment to ACA extends to 2015.

Learn more at ab-conservation.com

Ceres

Ceres mobilizes a network of investors, companies and public interest groups to accelerate and expand adoption of sustainable business practices and solutions to build a healthy global economy. We have been a Ceres member company since 2007. We work closely with a diverse stakeholder group assembled by Ceres to discuss our overall sustainability strategy, including reporting, risk analysis and issues management. This Ceres stakeholder panel encouraged us to develop our first set of environmental performance goals and continues to guide future goal development.

Learn more at ceres.org

Boreal Leadership Council (BLC)

BLC is composed of leading conservation groups, First Nations, resource companies and financial institutions, all of which have a stake in the future of Canada's boreal forest. As a member of the BLC, we are a signatory to the Boreal Forest Conservation Framework. We are committed to implementing this national vision through our own sphere of activity and have submitted an action plan to council members outlining our priorities and focus areas.

In 2014, Suncor sponsored a BLC project to review tools, data, practices and governance structures used by Aboriginal Peoples for action planning, including indigenous knowledge, identifying habitat, and monitoring populations and other aspects of caribou conservation.

The project goals were to:

- document existing or developing approaches to Aboriginal-led caribou action planning

- raise awareness of how Aboriginal Peoples protect caribou in Canada's Boreal region and facilitate information sharing between groups

Learn more at the Boreal Leadership Council website

Pollution Probe

Pollution Probe is a national, not-for-profit organization that defines environmental problems through research, promotes understanding through education and presses for practical solutions through advocacy.

We have been involved with Pollution Probe since 2001, most recently supporting Energy Exchange – an entity aimed at taking the national dialogue on Canada's energy future to the next level.

Learn more at pollutionprobe.org

Quality Urban Energy Systems of Tomorrow (QUEST)

We are partnered with QUEST, a collaborative network of stakeholders working to make Canada a leader in the design, development and implementation of Integrated Community Energy Solutions (ICES). ICES creates smart energy communities by linking energy across land use, buildings, transportation and other related infrastructure.

Learn more at questcanada.org

Environmental multi-stakeholder working groups

We believe working with stakeholders to understand their environmental concerns is the best way to develop programs to monitor the environment, and to develop a better understanding of environmental limits. We are a member of:

Expand all | Collapse all

Wood Buffalo Environmental Association (WBEA)

WBEA is a collaboration of communities, environmental groups, industry, governments and Aboriginal stakeholders. The WBEA monitors air quality in the Regional Municipality of Wood Buffalo, 24 hours a day, 365 days a year, and shares the information collected with stakeholders and the public.

Read more about Wood Buffalo Environmental Association

Cumulative Environmental Management Association (CEMA)

CEMA is a multi-stakeholder group that was set up to study the cumulative environmental effects of industrial development in the Wood Buffalo region and produce guidelines and management frameworks. CEMA has developed a number of environmental management frameworks (air, land and water) that have helped to quantify environmental capacity limits.

Read more about Cumulative Environmental Management Association

Alberta Environmental Monitoring (AEMERA)

We support monitoring programs overseen by the Alberta Environmental Monitoring, Evaluation and Reporting Agency (AEMERA). AEMERA is accountable for environmental monitoring throughout Alberta and, as of April 2014, AEMERA assumed provincial responsibility for the Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring.

Read more about AEMERA

Industry collaborations

We also participate in industry organizations that work to improve the industry's environmental, social and economic performance. These organizations include:

Expand all | Collapse all

Canada's Oil Sands Innovation Alliance (COSIA)

COSIA is an alliance of oil sands producers focused on accelerating the pace of improvement in environmental performance in Canada's oil sands through collaborative action and innovation. Through COSIA, participating companies capture, develop and share innovative approaches and best thinking to improve environmental performance in the oil sands. COSIA's 13 member companies, representing 90% of oil sands production in Canada, focus on 4 environmental priority areas:

- tailings
- water
- land
- greenhouse gases

COSIA is taking innovation and environmental performance to the next level through a continued focus on collaboration and transparent exchange.

Learn more at cosia.ca

Oil Sands Community Alliance (OSCA)

Building on the work of the predecessor Oil Sands Developers Group, the Oil Sands Community Alliance (OSCA) aims to help oil sands region communities thrive economically and socially. OSCA's collaborative approach facilitates engagement, builds relationships and creates measurable socio-economic benefits in focus areas of Aboriginal communities, community well-being, infrastructure and workforce planning.

Learn more at oscaalberta.ca

Industry associations

We are a member of several industry associations. There is strength in having forums for creating alignment and discussing issues. We participate in:

- Canadian Association of Petroleum Producers

- Canadian Energy Pipeline Association
- Mining Association of Canada
- Canadian Fuels Association

Advocacy coalitions

We value and advocate reaching out to diverse stakeholders to generate constructive dialogue about energy development. In 2013, we joined 2 multi-stakeholder coalitions to encourage broad dialogue on energy and resource development in Canada. Through these partnerships, we hope to encourage Canadians to learn more about the value the resource sector brings to their daily lives and the Canadian economy.

Learn more at:

- powerofcanada.ca
- resourceworks.com

On this page :

We participate in public policy discussions on energy and the environment, and regularly communicate with governments in jurisdictions where we operate. In doing so, we ensure that we comply with all political contributions and lobbying regulations, and report government interactions consistent with the law and company policies.

We support governments taking a reasoned approach to policy development. We believe policy should be built on evidence-based information and perspectives.

Education and development of solutions are critical in our interaction with government. These activities promote responsible development of existing and new energy sources. We aim to decrease the probability of ad hoc or reactive policy development by working to reduce polarized dialogue.

Our communication with governments includes:

- encouraging a healthy debate about energy solutions
- understanding the role of advancements in research and innovation
- considering energy development and distribution costs and benefits
- meeting demand for skilled labour by matching skill development with job requirements

- encouraging Aboriginal economic collaboration and capacity building
- developing vibrant, sustainable communities
- supporting Canada's long-term prosperity

A snapshot of some of our thoughts and opinions follows:

Expand all | Collapse all

Economic policy

Royalties and taxes

Royalties and taxes should deliver a fair return to government while providing industry with a competitive, stable and predictable fiscal framework on which to base long-term investment decisions. Policies should recognize market factors, such as challenges faced by corporations competing in a global economy. Levies added over and above current royalties and taxes need to be holistically considered and understood in terms of costs, outcomes and competitiveness.

Transparency

We support regulations that promote transparency and advocate for rules that are consistently applied and respect agreements with First Nations.

Cumulative impact of policy changes

We are currently studying the expected cost increases that result from recent and proposed policy changes. The findings from this study will be used to inform our perspective in the energy debate. They will also help us reflect on opportunities from a more holistic standpoint, allowing us to fully consider policy benefits and focus on how to incent constructive outcomes.

Market access

There are several proposals for new or expanded pipelines across the country and into the United States to take oil sands supply to markets. They face significant public scrutiny with concerns being raised about pipeline and marine safety, First Nations rights and their strong relationships to local ecosystems, and broader objections about enabling the North American economy's reliance on fossil fuels. We are working with stakeholders to address many of these concerns from a producer's perspective and are engaged with governments to the same extent.

There is a comprehensive and robust regulatory framework in place that governs development and operation of pipelines and other large infrastructure projects. The key is to ensure infrastructure development is done responsibly and that the respective regulatory bodies are resourced and empowered to deliver this result within an efficient, transparent and effective process.

Read more about market access on Suncor.com

Social policy

Local community capacity

In co-operation with industry partners and local business associations, we have been working with the Regional Municipality of Wood Buffalo in northeast Alberta to better forecast future population growth and infrastructure needs. Building non-profit capacity and supporting key community initiatives – such as the MacDonald Island Park expansion and the 2015 Western Canada Summer Games – continue to be an important component of our work in the region. We also participate in the Athabasca Oil Sands Area Transportation Coordinating Committee, where infrastructure needs, funding and financing options are discussed and prioritized.

Read more about community investment

Skilled labour

Notwithstanding the current economic environment, skilled labour will continue to be a critical talent segment for Suncor. We believe finding the people with the right skills requires a balance of employer-led strategies, industry-led programs, government programs and investment in training and educational partnerships. We continue to work with policy developers to optimize relevant programs. When optimizing programs and/or developing new ones, our priority and priority of government should be:

- hiring available and skilled Canadians
- enabling the mobility of labour within Canada
- creating opportunities for under-skilled Canadians and for those under-represented in our sector

Over the past year, new policies related to temporary foreign workers and the Canada Job Grant have begun to emerge. We believe a balance must be maintained to ensure Canadians have full access to career opportunities while also ensuring that access to necessary talent through Canada's temporary foreign worker program remains for the many cyclical and truly temporary resource needs which often accompany large infrastructure projects.

Read more about skilled labour

Aboriginal consultation in Alberta

A new consultation protocol was legislated across Alberta in 2013 and a new Aboriginal Consultation Office (ACO) was established to support implementation. Suncor recognizes that meaningful consultation with Aboriginal communities is a critical component of how energy projects are developed in Alberta, so we seconded an employee from our Stakeholder and Aboriginal Relations team for most of 2014, to support the ACO in developing programs required for implementation.

Read more about Aboriginal relations

Environment policy

Lower Athabasca Regional Plan (LARP)

In 2008, the Alberta government introduced the Land Use Framework. The purpose of the Land Use Framework was to manage growth in Alberta by balancing economic, social and environmental goals. Under the Framework, 7 regional plans were to be developed. The first regional plan, the LARP, was completed in 2012.

The LARP is designed to allow appropriate economic growth (primarily of oil sands) while ensuring appropriate social and environmental goals are met. The LARP includes management frameworks for:

- Air (SO_2 and NO_x)
- surface water quality
- surface water quantity
- tailings management
- regional groundwater management

Each of these frameworks includes interim triggers to allow early indications of change. A Biodiversity Management Framework and Landscape Management Plan are under development.

LARP also includes:

- 6 new conservation areas increasing the total amount of conserved land in the region to 2 million hectares, or 22% of the region
- a plan to address infrastructure challenges around Fort McMurray
- 9 new provincial recreation areas

- a commitment to engage and work with Aboriginal communities
- support for diversification of the regional economy including tourism and recreational opportunities, and future development of energy, minerals, coal, surface materials, and forestry resources

The LARP provides certainty for industry for the development of the oil sands and will shape the development of the Lower Athabasca Region for many years to come.

On an ongoing basis, we also participate in technical discussions that lay a foundation for future policy and regulation on issues such as tailings management, water return, biodiversity and wetlands.

Read more about water quality monitoring

Greenhouse gas (GHG) emissions

Climate change regulation

We are engaged with all levels of government to establish a carbon policy regulatory framework for the oil and gas sector in Canada. Our position is that Canada's oil sands are a world-class resource that needs to be responsibly developed to meet growing global energy demand.

Part of being a sustainable energy company is recognizing that climate change is a real global challenge and that our operations have an environmental impact. We are a strong voice in the call for credible policy to address the Canadian oil and gas industry's GHG emissions. In our view, this includes a carbon price signal that incents the right behaviour and a practical regulatory architecture. Since 2008, we have spoken publicly in support of a broad-based economy-wide carbon price. This year, we collaborated with Canada's Ecofiscal Commission to develop a report that focused on 2 themes:

- the importance of implementing carbon pricing
- considerations needed for policy design

We support regulatory design that:

- drives best achievable performance from existing facilities
- provides clear support for innovation and technology development that enables game-changing solutions
- positions Canada as a leader in energy innovation
- sets challenging but achievable reduction goals with a process that allows for an increase in ambition as technology develops
- provides for multi-jurisdictional compliance pathways

Read more about our GHG performance

Alberta's Specified Gas Emitters Regulation

Under the current Specified Gas Emitters Regulation (SGER), large final emitters (LFE), like Suncor, must either:

- meet an emissions intensity reduction target
- purchase Alberta-based offset credits or
- contribute to Alberta's Climate Change and Emissions Management Fund (CCEMF) for all emissions that exceed regulated targets

Money collected through the CCEMF is managed by the Climate Change and Emissions Management Corporation, an independent not-for-profit organization with a mandate to establish or participate in funding initiatives that reduce greenhouse gas emissions and improve Alberta's ability to adapt to climate change. In addition to the SGER, Alberta introduced a fuel tax of 0.04 cents per litre of fuel.

We believe it is important for government to link progressive carbon markets in a way that balances environmental performance, energy development and the economy.

Read more about the CCEMF in our blog, OSQAR

Quebec – Cap and Trade

Quebec, with annual average GHG emissions of about 80 million tonnes, has its own target to cut emissions by 20% below 1990 levels by 2020. The Quebec cap and trade guidelines are based on those guiding the Western Climate Initiative (WCI), an economy-wide emissions trading system. The WCI partners (which also include Ontario, Manitoba, British Columbia and California) have agreed to cut GHG emissions by at least 15% below 2005 levels by 2020.

As of Jan. 1, 2015, our Montreal refinery is required to purchase carbon allowances to cover transportation emissions (the tailpipe emissions from vehicles) along with its stationary emissions under the Quebec Cap and Trade program. The WCI cap and trade system imposes a limit on the emissions allowed in each sector of the economy. This provides certainty for industries and creates investment opportunities.

British Columbia – Carbon Tax

In 2008, B.C. implemented a carbon tax that covers most types of fuel use and carbon emissions. It started out with a price of $10 per tonne of carbon dioxide and has risen to $30 per tonne, which works out to about 0.07 cents per litre of fuel. The B.C. carbon tax is revenue-neutral in that the monies collected from the tax are put back into the economy through equivalent cuts to other taxes.

Ontario – Proposed Cap and Trade

The Ontario government on April 13, 2015, announced plans to achieve their 2020 environmental goal of reducing GHG emissions to 15% below 1990 levels by limiting GHG emissions through a cap and trade system. Ontario intends to adopt the WCI system currently used by Quebec and California.

We have experience in working with all forms of carbon regimes and will collaborate with the Ontario Government as it designs its cap and trade regulatory framework.

Low carbon fuel standards

We continue to monitor initiatives to establish low carbon fuel standards (LCFS), like those in California, and are involved in reporting and compliance in British Columbia.

An LCFS is designed to reduce the GHG intensity associated with the production, transport and combustion of transportation fuels. An LCFS regulation requires a percentage reduction in the intensity of GHGs emitted from the production and use of transportation fuels relative to a baseline fuel (i.e. gasoline and diesel).

What distinguishes a low carbon fuel standard from other regulations is the requirement that regulated entities conduct a full life cycle accounting (LCA) of GHG emissions for fuels regulated under the program. Exploration, refining and distribution of transportation fuels (well-to-tank) account for approximately 20% of the total life cycle GHG emissions. The combustion of transportation fuels (tank-to-wheel) accounts for approximately 80% of total life cycle GHG emissions.

Our view is that LCA is a useful and appropriate tool for policy development and evaluating carbon reduction decisions, as well as measuring progress over time. However, when LCA is used as a basis for regulation, the need to simplify an extremely complex analysis that is specific to boundaries, assumptions, site and inherent processes diminishes its relevance and accuracy.

We advocate that the most effective place to regulate well-to-tank emissions is in the jurisdiction in which they occur. In addition, we advocate for a comprehensive transportation sector strategy that addresses each of the 3 areas of transportation sector emissions – vehicle efficiency, vehicle miles travelled and the carbon intensity of fuels.

The European Commission Fuels Quality Directive

On Feb. 6, 2015 after 4 years of negotiations between the Canadian government and the EU, the EU Parliament accepted the latest vote that removed the directive singling out oil sands crude as more carbon intensive. Suncor is pleased with this result as the proposed directive did not treat all fuel sources on a fair analysis of their imbedded GHG emissions. Notwithstanding this result, we maintain that data transparency and independent validation is critical to accurately ascertain carbon intensity values of different fossil fuel pathways. We support international regulation that promotes transparency to the same degree as those applied under Canadian laws.

Renewable energy

Wind power policy activity

We continue to progress wind energy policy discussions. Current activities are focused on supporting efforts through the Canadian Wind Energy Association (CanWEA).

In Alberta, we are working with Alberta Innovates, Energy and Environment Solutions, an agency of the Government of Alberta and a broad group of energy stakeholders to understand opportunities to green Alberta's electrical grid by developing a broad understanding of various generation technologies within the construct of Alberta's deregulated electricity market.

Biofuel policy advocacy

Canada's renewable biofuels industry is quickly maturing, and is working to improve its long-term viability as current government support programs directed at first generation biofuels decline. As opportunities arise, we will consider investing in advanced renewable energy technologies to complement the existing biofuel industry.

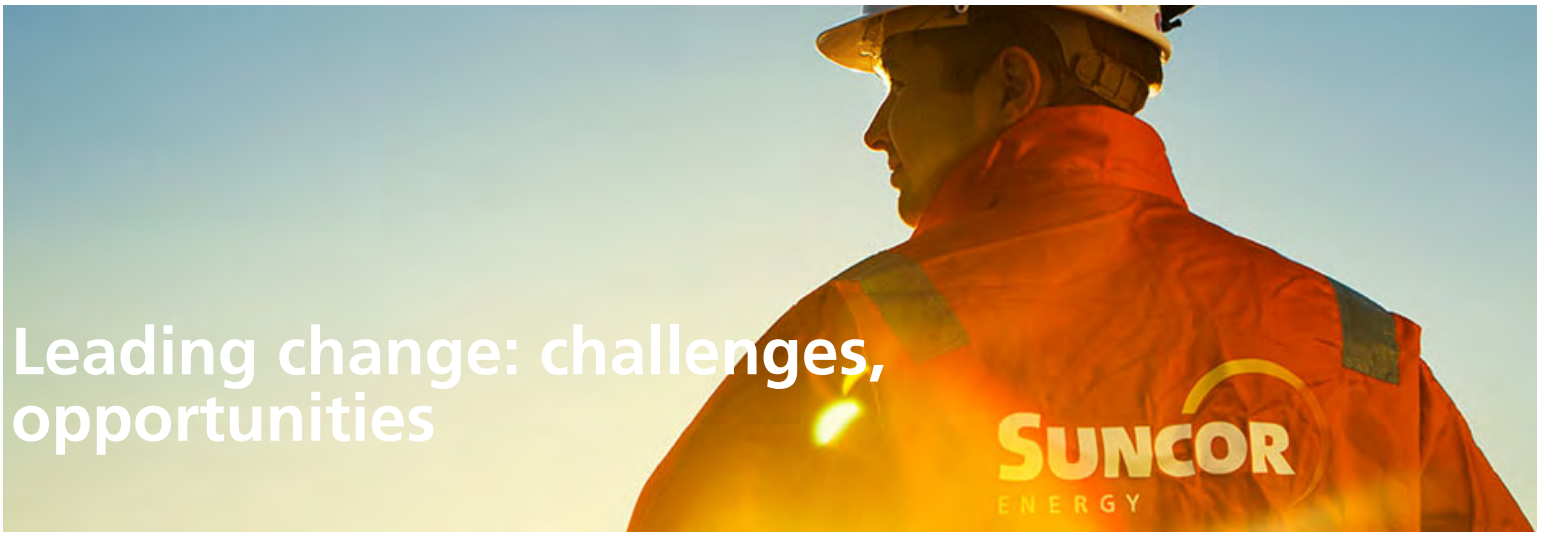
Read more about our renewable energy projects

National sustainable energy strategy

We continue to be a strong advocate of a national sustainable energy strategy for Canada.

Our vision of a sustainable energy future is about harnessing existing strengths, while preparing the way for new opportunities. The future is not about limiting choices; it is about expanding them. The oil sands industry can help to achieve the objectives of a national plan. The industry can mobilize capital and technical expertise, and generate the wealth needed to enable a necessary transition in our energy system.

We continue to support framing a strategy as a process rather than a prescriptive end product. There will be significant energy infrastructure development and replacement needs over the next few decades. There is a critical role for an advisory agency – perhaps similar to Canada's EcoFiscal Commission – to play in bringing deep expertise and consensus-building capability for Canada to successfully navigate the complexities of transitioning our energy system.



Leading change: challenges, opportunities

"We all want to see changed outcomes to some of the biggest challenges, whether it's climate change or social progress in our communities. We have so many common interests; let's work together to find some common ground."

A conversation with Arlene Strom, vice president, sustainability & communications

This year's Report on Sustainability arrives at a time of transition and change in the energy world. While dealing with a significant drop in oil prices, our company – and our industry – is being challenged to lead on several fronts. They include: providing reliable energy sources to meet growing global demands; finding ways to produce and use energy while addressing growing global concerns about the effects of climate change; and collaborating on potential solutions for transforming our energy system.

We asked Arlene Strom, vice-president, sustainability and communications, to discuss these and other issues – and to provide some context on how Suncor's sustainability vision positions the company to play a constructive role in challenging times.

Expand all | Collapse all

What's Suncor's vision of what it means to be a sustainable energy company?

For more than 20 years, we've embraced the principle of a triple bottom line. This is about managing our operations and growth plans in a way that enhances social and economic benefits while striving to minimize our environmental impact. We've made this sustainability vision an integral part of our business strategy. We believe it's been a big part of our success and gives us a competitive advantage.

This vision is built on 3 key priorities:

- The first is to reduce what we call the "resource intensity" of our operations, which includes environmental impacts. So we innovate, collaborate and invest in technology to reduce our people, financial and natural resource intensity.
- The second key priority is to build sustainable and resilient communities. Our Community Investment strategy, through the Suncor Energy Foundation (SEF), focuses on helping communities near our operations grow, thrive and become sustainable. The business partnerships we've formed with Aboriginal Peoples and communities are another way we pursue this priority area.
- The third priority is to meet growing energy demands while addressing the challenges of climate change. For us, that means extracting and producing oil sands in an increasingly efficient manner, but also working hard to be part of the transition to a low carbon economy. While some game-changing technologies required to "bend the curve" on absolute greenhouse gas (GHG) emissions could be a decade away, we are making progress. That's because we're making significant year-over-year investments in technology development, while also collaborating with our industry peers.

But don't the oil price declines we've seen limit your ability to invest in communities and technology development?

As a company, we've had to make some tough spending choices. But one of the things I'm really proud of is that we've honoured our existing community investment commitments. One reason we can do so is because the SEF is drawing on a reserve fund that was put in place for exactly these kinds of circumstances. At the same time, it's true that we're not able to take on a lot of new commitments. But this is simply a reality given the cost-constrained environment.

When it comes to technology, we continue to invest in the potentially game-changing work being done by our own technology and innovation group. We are also very committed to working with industry peers through Canada's Oil Sands Innovation Alliance (COSIA). We take a long term view; this work will help us prosper 10 years from now. So it's an important part of our business strategy and one you won't see us walking away from.

Is the business case for sustainability easier or harder to make in a period of low energy prices?

It's an interesting question because in many ways the answer is that it is easier. Of course the decision to make new investments that don't result in immediate value for the corporation is tough, but the mandate for reducing resource intensity becomes an imperative in a low energy price environment. Reducing the resources we use to produce energy ultimately reduces our costs and increases our competitiveness.

We are clearly moving into a more carbon-restrained future. What does that mean for a company like Suncor?

It means we have to work forcefully on 2 key fronts – continuously improving our operational performance today while working with others to help develop a roadmap for our shared energy future.

Let me give you an example. We've had some success in reducing the GHG intensity of our business – in other words, the amount of carbon we emit for every barrel of oil produced. But we know the future is also about reducing absolute GHG emissions.

On the production side, we believe technology can help us play a positive role in this regard. But if we are going to make meaningful reductions in absolute global GHG emissions, it will require a much bigger effort by all of us – producers and consumers alike – to rethink our energy system and the multiple ways we need and use energy in our everyday lives. As Canada's largest energy company, Suncor needs to be part of that discussion.

So how are you involved in the energy system transition dialogue?

There are a lot of examples, but let me just highlight a couple of them. We are sponsoring and helping convene a new Alberta-based initiative called the Energy Futures Lab (EFL). This is led by The Natural Step Canada and the other convening organizations are the Banff Centre and the Pembina Institute. It's early days, but the goal is to bring diverse interests and expertise to bear on answering a central question: how can Alberta's leadership position in today's energy system serve as a platform for the transition to the energy system the future requires of us?

Another exciting example is Canada's Ecofiscal Commission, which is made up of leading Canadian economists. There is also an advisory council of leaders drawn from political, business and environmental backgrounds. Our CEO, Steve Williams, is a member of that advisory council.

The Commission is looking at "ecofiscal" policies – including tax and pricing mechanisms – that encourage beneficial economic outcomes, such as job creation and investment, while reducing negative environmental outcomes, such as GHG emissions and pollution. This isn't just a pipe dream. In England, Germany and elsewhere, ecofiscal policies are being used to deal with everything from traffic congestion to landfill shortages.

The idea is to develop tools that encourage governments not to make false choices between economic growth and environmental protection. We need to do both, by focusing on smart growth and targeted protection.

Suncor's stakeholders have identified 3 key areas where they want you to provide leadership – water use, GHG emissions and Aboriginal relations. On those first 2, Suncor has made some gains in recent years...

But imminent growth projects will put upward pressure on both. Given that, what's the sustainability argument for continuing to grow production?

We sometimes forget there are 3 pillars to the triple bottom line – **economic, social and environmental**. It's like a three-legged stool; cut any of those legs short and the balance required to support it is gone.

We believe Canada's oil sands represent one of the best resource opportunities in the world. The value created by developing this resource is tremendous in terms of jobs, community investment and providing governments with revenues to support strong health care and education systems. We are also investing in lower carbon forms of energy, including cogeneration, wind and biofuels, and in the technologies that could help make many forms of energy development more productive and sustainable.

The history of the oil sands is all about technology and innovation. So we believe we can produce this resource - and provide the energy the world needs today - while continuously improving our performance as we grow. To that end, Suncor has adopted and pursued beyond-compliance performance goals. We are completing the first set of goals in 2015 and setting new ones for the years ahead.

Where are you on that third-priority area – Aboriginal relations?

Our relationship with Aboriginal Peoples is very important to us. Right now, Suncor has business relationships with about 150 Aboriginal communities in Canada. The Indigenous population in Canada is growing fast and we see the potential for many new and mutually beneficial partnerships. We want to ensure Aboriginal Peoples share in the economic and social benefits associated with resource development. We also want to ensure that Suncor is a company that is open and inclusive to Aboriginal Peoples and to diverse cultures.

What about some of the social challenges facing Aboriginal Peoples? Is that something energy companies can address?

Absolutely. One of Suncor's longtime partners is Indspire, which does tremendous work with Indigenous youth. In 2014, Indspire launched the Building Brighter Futures Campaign, which raised over $13 million for post-secondary bursaries and scholarships for Aboriginal students, a sum the federal government has committed to match. Steve Williams, our CEO, was one of the co-chairs of that campaign.

We recognize that supporting better educational outcomes for the next generation is not just the right thing to do; it's a strategic investment in developing the skilled workforce companies like ours will need to continue competing globally.

I think there's a lot more the energy industry can do by working collaboratively with Indigenous people. Our role isn't to land "solutions" on communities or even to define the challenges. What we need is to find new ways to work together with Aboriginal youth, elders and educators and bring the best possible thinking to bear on what they see as the priorities going forward.

You've talked a lot about the importance of collaboration. Is there still the will to collaborate when energy companies are facing cost pressures due to low commodity prices?

It's actually more important than ever. And I think concerns about cost-containment have made us all laser-focused on the areas where we know we need to work together. So you are not going to see any pullback when it comes to things like COSIA or the Oil Sands Community Alliance, which is a socio-economic collaboration based in northern Alberta.

Collaboration is hard work. We're used to operating within our own organizations, with our own clearly defined roles and rules. When you start collaborating, you have to let some of that go. You also lose some control over where the collaboration will take you. But if we are actually going to change energy systems, as well as social and environmental outcomes, we have to learn to cede some measure of control - and find ways to work together.

That actually leads to a final question. In the past, Suncor has talked a lot about the need to get past the polarization surrounding debates over energy policies and choices. Are you seeing any progress on this front?

I think there's still a lot of polarization, but there's also a renewed interest in breaking through the polarization to address common interests. We all want to see changed outcomes to some of the biggest challenges, whether it's providing energy the world needs, while addressing the challenges of climate change or making social progress in our communities. There's also a real sense that it's not enough to have a conversation about our energy future; what we need is a clear plan of action. We need to understand the direction in which we're headed. So I'm cautiously optimistic. At the end of the day, we have so many common interests and aspirations. It's up to all of us to work together to achieve them.

Goals and progress

On this page :

Six years ago, we set an industry precedent by adopting a series of strategic performance goals on water consumption, reclamation of disturbed lands, energy efficiency and air emissions.

The target year for these planned improvements is 2015, with a baseline year of 2007. The goals were established in 2009 and take into account improvements to our existing operations as well as new technologies.

Why environmental performance goals?

We developed these environmental performance goals to further demonstrate our sustainability leadership and commitment to responsible energy development.

Each goal relates to a significant aspect of our environmental performance and was identified as a priority measure to address:

- business and environmental risk
- concerns expressed by stakeholders
- a means to further our commitment to environmental sustainability

Progress toward 2015 environmental performance targets

We continue to identify capital projects and operational initiatives that will help us move toward the successful achievement of these goals.

Our baselines have been set to include all currently operated assets. Over time, baselines may be adjusted to reflect changes in our operated portfolio resulting from acquisitions and divestitures. In 2014, we had further divestures in North America Onshore; therefore, the baseline and the goals were adjusted to reflect the changes of these divestitures.

What follows is a brief description of our 4 environmental performance goals and how we plan to accomplish them. All of the proposed environmental

improvements are absolute with the exception of energy efficiency, which is intensity based.

Please note: Environmental performance data presented here may differ from that provided elsewhere in our 2015 Report on Sustainability. One of the reasons for this difference is that historical environmental performance data used to establish baselines that we use to report on our environmental performance goals has been adjusted to reflect acquisitions and divestitures whereas data reported elsewhere only reports values for assets operated by Suncor in the reporting year.

Expand all | Collapse all

Reduce fresh water consumption (the amount of fresh-water withdrawn minus the amount of water returned to the environment) by 12% by 2015*

Fresh water is a key resource for each of our business units. It is also of critical importance to our stakeholders, communities and employees. Reducing our fresh water consumption means:

- reducing our fresh water intake
- increasing our return of water to the environment through improved water treatment

A 12% reduction in total fresh water consumption by 2015 was ambitious but we have successfully implemented several initiatives that are helping us meet this goal, with more initiatives in various planning stages.

As we pursue our goal of reducing fresh water consumption, all of our operated upstream and downstream operations are realizing opportunities for more sustainable water use. We're paying particular attention to our existing oil sands mining operations, which represents our biggest draw on fresh water resources. We continue to identify projects that will further reduce our water consumption and are evaluating opportunities to distribute water throughout our Northeast Alberta assets to improve our overall water efficiency.

Find out more about our efforts to reduce fresh water consumption in our operations.

Download

Read more about water

Increase reclamation of disturbed land area by 100% by 2015*

To achieve the proposed 100% increase in land reclamation by 2015 (or double our 2007 baseline), we aimed to significantly increase our yearly reclamation performance. We have developed more aggressive reclamation plans including new technologies, which will help steward toward the goal.

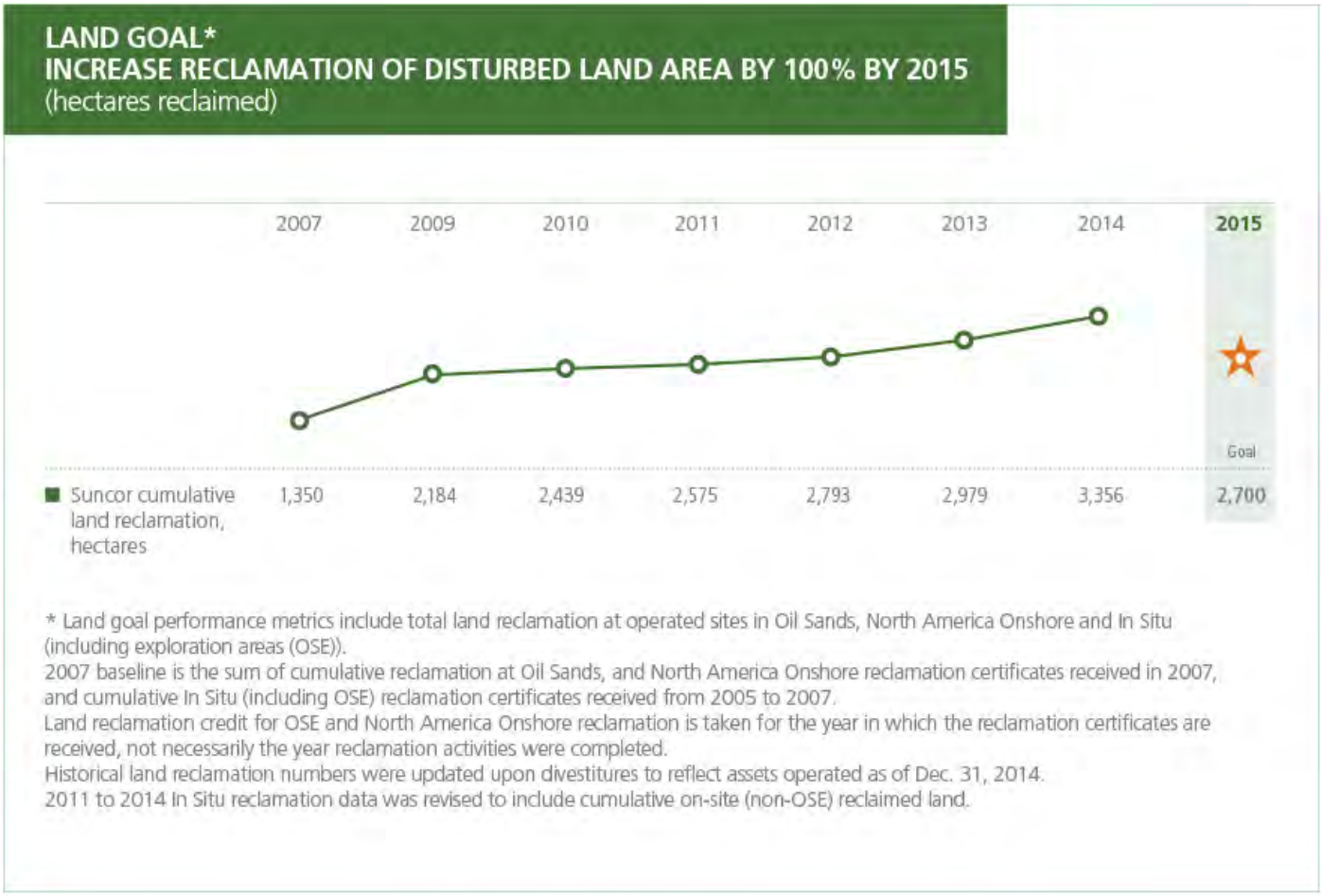
In 2014, Oil Sands reclaimed overburden areas within the Millennium and North Steepbank Extension (NSE) Mines to marsh wetlands, white spruce forest and aspen and white spruce mixed wood forest. During the process, 587,690 plants were established in these areas, increasing the total amount of planted trees, shrubs and aquatic plants to 7.2 million. To establish wildlife habitat and control for erosion, coarse woody debris was recovered from the NSE Mine and reused on the plateau and slopes of reclaimed overburden areas in NSE. Aquatic vegetation was also added to the NSE Compensation Lake to enhance shoreline and riparian complexity and biodiversity for fish utilization.

In situ oil sands exploration requires the creation of temporary drilling pads to effectively explore and delineate bitumen deposits. In order to address the historical oil sands exploration (OSE) footprint, we applied a focused effort in 2012 to identify the persisting factors at individual sites that were preventing corresponding OSE programs from receiving reclamation certification.

Through this targeted survey approximately 78 sites were identified as needing additional reclamation effort. Tree planting treatments, leveraging Canada's Oil Sands Innovation Alliance Faster Forests program, were prescribed for applicable sites.

In 2014, this effort paid dividends with the 2001/02 and 2002/03 Firebag OSE programs and the 2008/09 MacKay River OSE program achieving reclamation certification. The certification of these programs combined added over 174 hectares of reclaimed lands from 290 OSE wells.

Find out more about Suncor's reclamation efforts



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Improve energy efficiency by 10% by 2015*

In 2009, we set an ambitious goal of achieving a 10% improvement in energy efficiency. Since that time, our growth strategy has introduced additional in situ projects with intrinsically higher steam-to-oil ratios. The 2009 merger with Petro-Canada also introduced a broader base of assets, including offshore production, into our portfolio. Offshore production has relatively low energy intensity at peak production but our assets have seen an increase in energy intensity as our wells have been depleted over the goal period.

To reflect this reality, we have developed a 2015 energy efficiency performance target and a complementary longer-term energy intensity goal. The energy efficiency target refers to operating our existing assets as efficiently as possible. The longer-term energy intensity goal reflects a desire to reduce the inherent amount of energy needed to produce our resources, regardless of the type of resource being developed. Currently, the energy intensity of our operations varies significantly according to asset mix and required degree of processing and upgrading of bitumen.

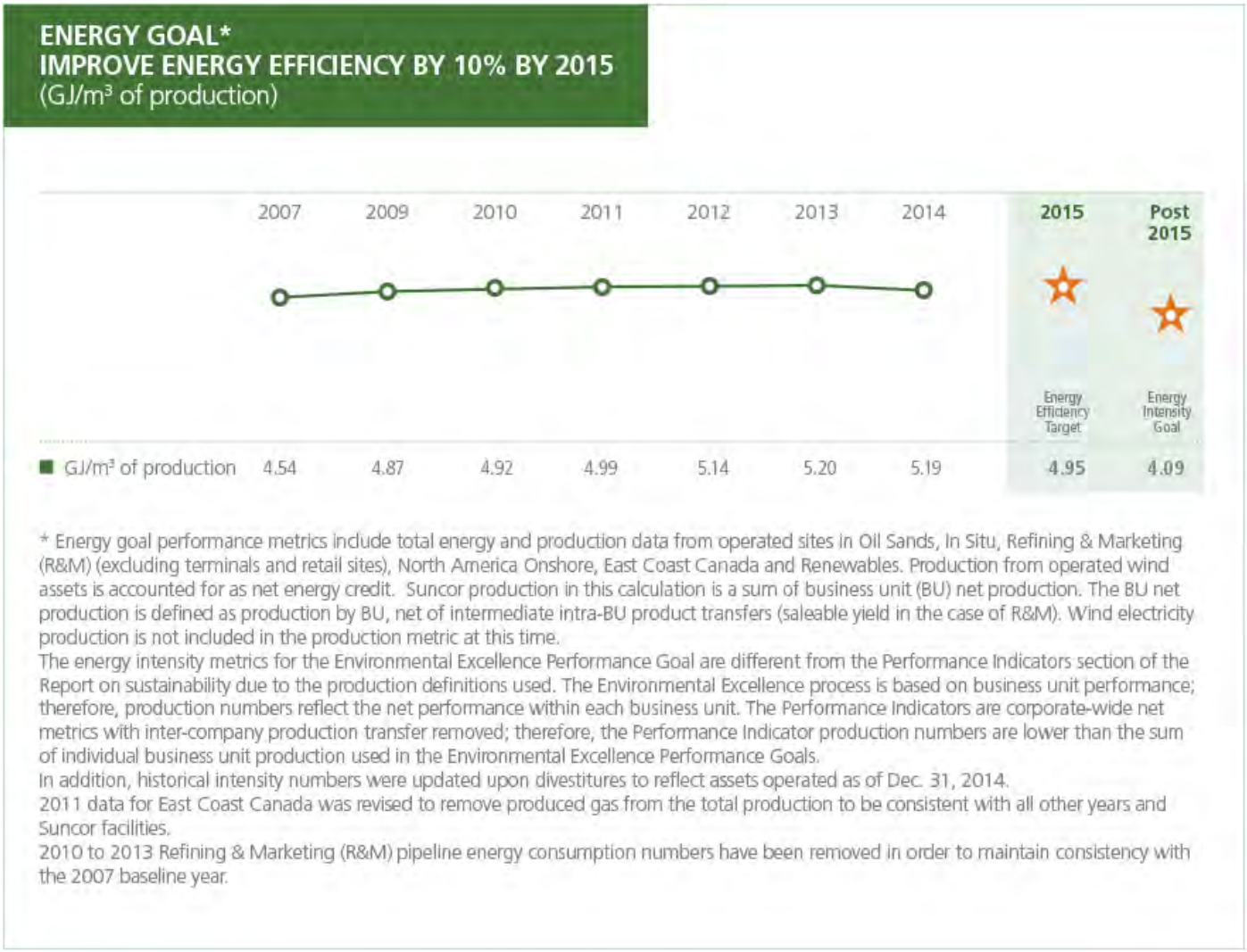
The energy efficiency target will require each of our business units to reduce their energy intensity by approximately 10% as compared to our 2007 baseline year. The 2015 target has become an interim step for delivering measurable progress toward the ultimate post-2015 goal.

A major part of achieving this reduction is the implementation of a corporate Energy Management System (EMS). To date, EMS has been implemented at our 4 refineries: Sarnia, Commerce City, Edmonton and Montreal, at our lubricants facility in Mississauga, and at Oil Sands base plant (Extraction, Energy & Utilities, and Upgrading). EMS implementation at our MacKay River and Firebag in situ facilities will be completed by the end of 2016.

Preliminary results from our EMS implementation have been very promising. We continue to see improvement in energy intensity of between 2% and 3% achieved shortly after implementation. Sites have also identified and commenced implementation of cost-effective energy efficiency project opportunities which have the potential to result in additional energy savings in the range of 3% to 5%.

The longer-term energy intensity goal reflects our intent to reduce our overall company-wide energy intensity by 10% from our 2007 baseline. This target is challenging. Achieving this longer-term goal requires committed investment into the development and deployment of new process flow schemes and technologies in order to achieve both incremental and transformative changes in our overall energy intensity. The long-term energy goal will be rolled into the post-2015 goal.

Please note: The energy intensity metrics used to support this environmental performance goal are different from those found in the Performance Indicators section of this report due to the production definitions used. The environmental performance goal process is based on business unit performance; therefore, the production numbers reflect the net performance within each business unit. The performance indicators are corporate-wide net metrics; therefore, the performance indicator production numbers are lower than the sum of individual business unit production used in the environmental performance goals.



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Reduce air emissions (nitrogen oxides, sulphur dioxide and volatile organic

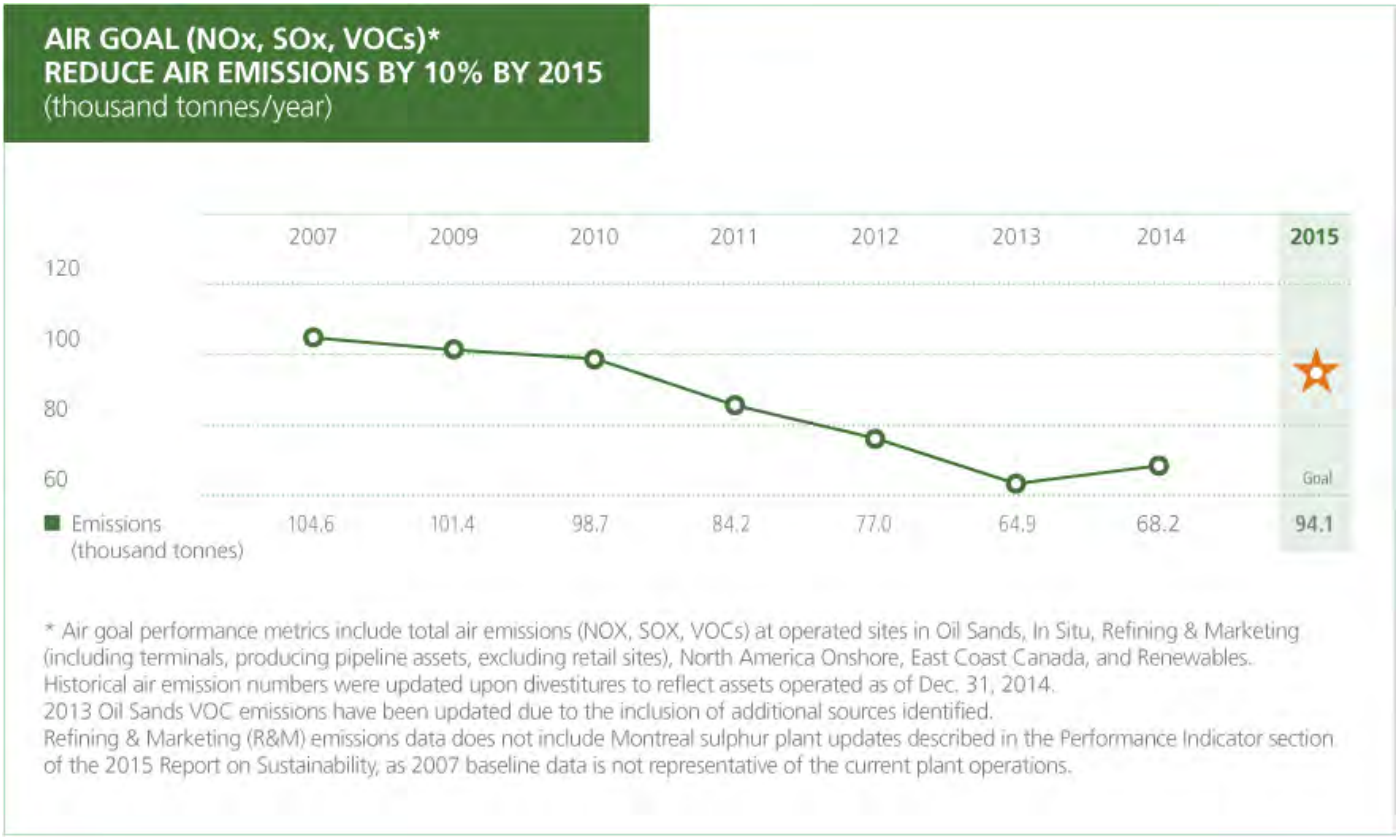
compounds) by 10% by 2015*

A 10% absolute reduction in total nitrogen oxide (NOx), sulphur dioxide (SO_2) and volatile organic compound (VOC) emissions (total tonnes emitted) is an extremely challenging goal given our growing oil sands mining and in situ assets. An increase in production typically results in higher air emissions, making absolute reductions more difficult in growth areas.

Several measures will help to minimize these increases:

- improved reliability of operations and optimization
- equipment upgrades and replacement
- installation of air emissions control technologies

There are many commonalities between our energy efficiency and air emissions goals; however, the ability to implement existing air emission technologies improves our opportunity to achieve this goal.



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Learn more about air

Lessons learned as we plan for beyond 2015

Once 2015 concludes, we will have the data we need to evaluate our success in meeting the strategic environmental performance goals we established for Suncor in 2009. As these goals draw to a conclusion, we are reflecting on the learnings we gained from this goal-setting process and using these learnings to develop our next round of sustainability goals.

What we've learned

- Setting and declaring goals helps us drive a sustainability mindset throughout our operations and businesses. Though there is still significant work to do and this will be an ongoing effort for us, having goals in place provides a valuable directional guide and helps make sustainability a fundamental consideration of how we do business.
- The inherent characteristics of each of our assets and operations contributes to wide variability in sustainability performance, as do commercial decisions driven by factors like market demand and market access. Each of our facilities' sustainability performance data, gathered through our current goals process, helps us better understand the challenges and opportunities for each asset as well as factors within our control. This is valuable detail as we establish our next series of sustainability goals. It also provides additional insight when considering changes to our asset portfolio, as selling or acquiring assets introduces environmental performance challenges and opportunities.
- The choices we make in our facilities' early design phase can have a significant impact on performance. Our new project execution model, introduced in 2014, requires more rigour at the front-end of a project. Going forward, new project execution options will be evaluated based on impacts to our sustainability goals.
- We have recognized we can only meet certain goals by a step change in our technology and processes. This led us to develop a strategy for accelerating technology development and deployment within our business and our industry, including:

    - developing in-house technology and innovation expertise to integrate innovative thinking
    - co-founding Canada's Oil Sands Innovation Alliance
    - investing in venture capital technology, academic research and crowd-sourcing approaches

Beyond 2015

These learnings play an important role in helping us focus our efforts and address major risks and opportunities in a cost-constrained environment as we evaluate our next round of goals.

We have determined there are a few key drivers of improved sustainability performance for Suncor in the coming years. These include:

- greenhouse gases and energy
- water
- commitments to communities. To date, we have not had a sustainability goal related to how we interact with and support communities where we operate. We are now working to establish our first social goal.

We look forward to the release of our next series of sustainability goals.

* The base year for the planned improvements is 2007. The goals were established in 2009.

Operational issues 2014 – 2015

On this page:

Safe, reliable and environmentally responsible operations are integral to our success. Unfortunately, there are occasions where we falter, failing to live up to our own expectations and those of our stakeholders.

Safety efforts intensified

In the first half of 2014, 3 employees and 2 prime contractors lost their lives at work. Immediately following these fatalities, we redoubled our safety efforts. This included:

- candid grassroots dialogue with our employee teams
- 100 safety sessions across the company
- setting up a Safety Step Change Task Force

Working with local union leadership, the Safety Step Change Task Force group developed 16 solutions which we're implementing in 2015.

Incidents impacting operations

The following are brief descriptions of incidents that occurred between June 2014 and June 2015.

Gasoline spill at refined products distribution terminal

On Jan. 1, 2015 we responded to odours of gasoline from our Rimouski Terminal located about 3 hours east of Quebec City. The source of the odours was a gasoline leak from a failed valve on a storage tank. We transferred the gasoline from the affected tank to another tank on site. The design of the terminal includes a secondary containment area which is where we collected the leaked gasoline. By Jan. 5, we had emptied the affected tank and had begun the

process of cleaning up any residual product from the secondary containment area. Throughout this incident we worked in cooperation with the City of Rimouski and other stakeholders.

Product release at Lubricants

On Tuesday, Feb. 17, 2015 we responded to a release of product from a tank at our Lubricants Centre in Mississauga, Ontario. The release was contained to our on-site tank compound and there was no indication of any offsite impact. We notified the local authorities and regulatory agencies as well as posted information on our community line about this incident.

Third-party incidents impacting operations

The following are brief descriptions of third-party incidents occurring between June 2014 and June 2015 that had an impact on our operations.

Weather-related site wide power outage

On July 30, 2014 at 9:30 p.m. there was a weather-related power outage at our Oil Sands operations.

Due to the loss of power, our drinking water system was impacted and we issued a do not drink water advisory for some of our facilities and lodges. In the interim, we provided bottled water for consumption in these locations.

Regulators and local stakeholders were notified and power was restored by 11:15 p.m.

Waterfowl landings

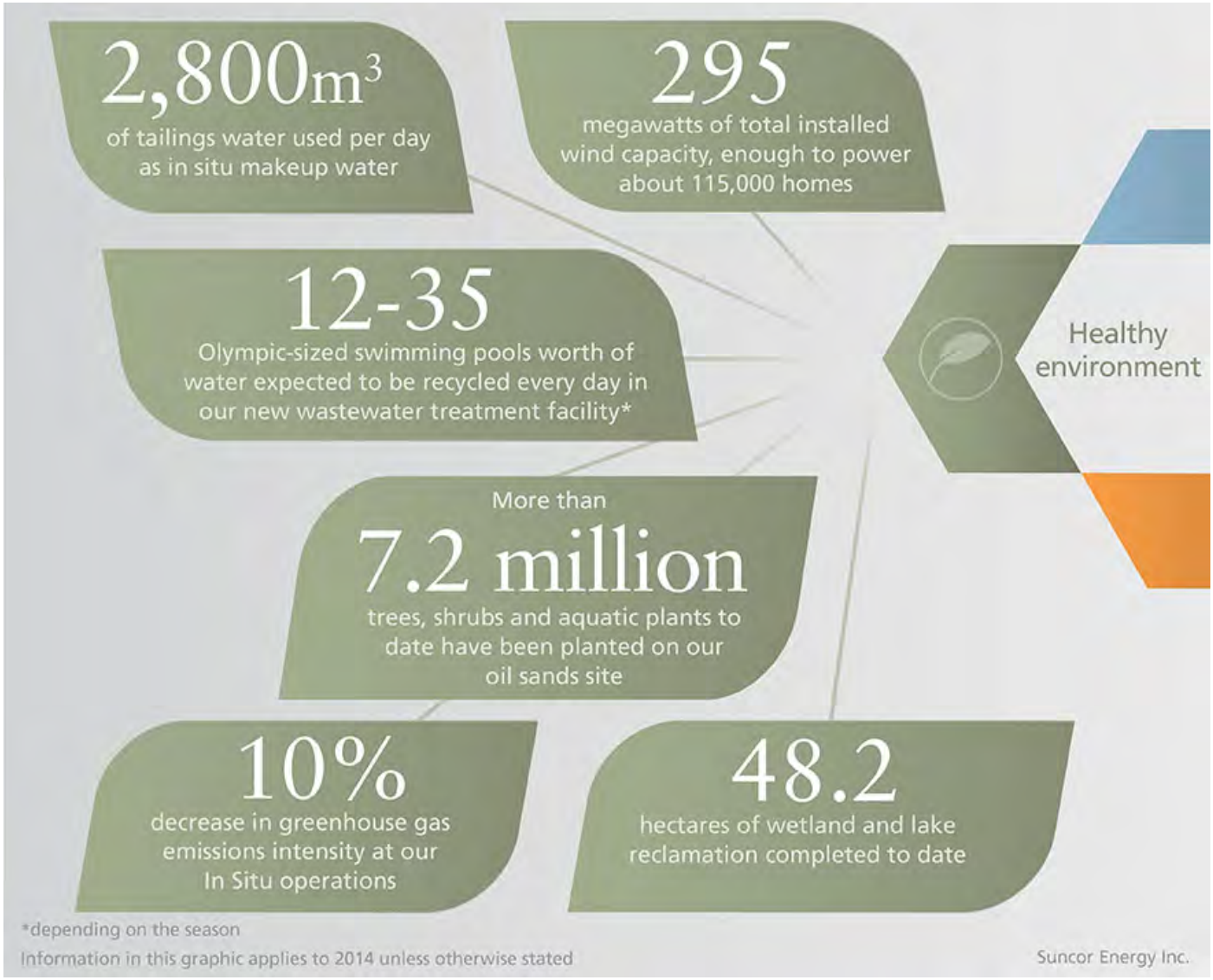
In early November, due to severe weather waterfowl attempted to land on a number of tailings ponds in the Athabasca Oil Sands Area. About 115 waterfowl attempted to land on a Suncor tailings pond. Our deterrent system worked, as intended, and most were scared away with the exception of 6. We immediately notified the regulator.

The Alberta Energy Regulator investigated and noted that the deterrent systems at our operations were operating as planned.

Libya attack on Al Ghani field

In early March 2015, there were news reports of attacks on Libya facilities including the Al Ghani oil field which is a Harouge-operated field. Given the instability in the region, we have been unable to conduct an evaluation of the operations. Suncor is under force majeure with regard to exploration in Libya, and Libya's National Oil Corporation issued a general status of inability to operate with regard to production on 11 fields, including Al Ghani. We have no active field operations and our Tripoli office has a handful of local staff. The conflict in Libya continues to deteriorate and we remain deeply concerned for the Libyan people.

Environment



Download

We know that energy development has an impact. And as we work to responsibly develop the energy the world needs, we have to think about:

- air quality
- how much water we're using
- how we can reduce greenhouse gas emissions
- the land we leave behind when we're done

To preserve a healthy environment, it's crucial we find balance and a better way to get things done. What follows is a snapshot of our management approach to the environmental issues we face, at both the global and local level.

Expand all | Collapse all

Our strategy

At the core, our corporate mission is to be trusted stewards of valuable natural resources. Guided by our values, we will lead the way to deliver economic prosperity, improved social well-being and a healthy environment for today and tomorrow.

One of the pillars of our corporate strategy is to be an industry leader in sustainable development by continued performance improvements in air emissions, water withdrawals, land reclamation and energy efficiency.

Read more about our vision and strategy

Through a bold pursuit of technology, innovation and operational excellence, we work to achieve or exceed performance levels governed by legislation and by evolving environmental, social and economic expectations of our stakeholders.

We use our Operational Excellence Management System (OEMS) to consistently and effectively identify, avoid and/or mitigate operational risks, environmental impacts, and regulatory non-compliance to deliver safe and reliable operations.

Read more about our operational excellence management system

Policy

Supporting our mission and strategy is our Environment, Health & Safety (EHS) policy, which is built on our values and underpins our commitment to environment, health and safety.

Our EHS policy statement is: We are committed to a culture of operational discipline which is foundational in achieving safety, environmental and health & wellness excellence.

We believe that:

- all incidents can be prevented
- to work here, you must be committed to working safely
- environmentally responsible operations are essential for our success
- leadership is accountable for EHS performance
- we deliver on our commitments
- our Operational Excellence Management System (OEMS) enables EHS excellence

The vice president of environment, health & safety is responsible for integrating EHS components of our OEMS and EHS performance measures across our operation.

The business and functional unit senior vice presidents and vice presidents are directly responsible for implementation of policies and practices.

Regulations and policies regarding energy and emissions

We are active participants in public policy discussions on energy and the environment, and regularly communicate with governments in the jurisdictions where we operate. We operate in many jurisdictions that have regulated or have proposed to regulate energy, greenhouse gas (GHG) emissions, water, land and biodiversity.

Read more about our public policy participation and specific regulations and policies on energy and emissions

We assess the ecosystems services and biodiversity on our sites as part of regulatory applications and approval conditions, as required. Biodiversity baseline surveys and protection measures are incorporated into management and operating procedures for exploration and site development, and new projects' construction phase. Risks from indirect impacts on biodiversity are addressed before starting new operations or changing existing ones. We have used conservation offsets for both regulatory and voluntary purposes in a number of jurisdictions.

Read more about biodiversity and offsets

Commitments

Our Environment, Health & Safety (EHS) policy recognizes that environmentally responsible operations are essential to our success and serves as our statement of intent for managing and minimizing all impacts on the environment.

Download our EHS Policy Statement (PDF, 1 pp. 156 KB)

Goals, targets and actions

Six years ago, Suncor stepped out of the industry pack by setting 4 ambitious environmental goals for our organization. We did not know how we were going to achieve those goals, but simply setting them put us on the path towards environmental excellence. Today, we are working towards a systematic process to continually challenge ourselves to do better and to demonstrate our environmental leadership.

Each goal relates to a significant aspect of our environmental performance and was identified as a priority measure to address:

- business and environmental risk
- concerns expressed by stakeholders
- a means to further our commitment to environmental sustainability

To ensure appropriate stewardship of these goals, we developed an Environmental Excellence Plan (EEP). EEP is a business planning process that aligns environmental initiatives to the corporate goals with the aim of accelerating the company's environmental performance over time.

The EEP process involves collaboration between a corporate environmental excellence (EE) team, the business units, and internal leadership teams to enable the development and implementation of environmental initiatives across the company.

Enacted annually, the EEP is an integral part of the business planning cycle reinforcing the principle of integrated environmental progress and business performance that underpins Suncor's environmental sustainability strategy.

Each of the business units develops and submits an environmental plan to the corporate EE team, which lists capital projects and operational initiatives that support the strategic environmental goals and projections of performance in each of the goal areas.

The corporate EE team consolidates and prioritizes company-wide environmental projects and initiatives. This stage of the process is, in many respects, the heart of EEP. It provides a broad and transparent view of the company's projected performance against its environmental goals, and insight into the impact and relative value of the possible projects and initiatives aligned with those goals.

With this information, insights can be developed about where resources should be focused, which initiatives should be highlighted as being particularly impactful, and where there are opportunities for leverage or synergies across business units.

In 2014, the focus of EEP was to continue developing and executing robust plans which steward toward the environmental performance goals. In addition, work is underway to begin defining the next round of sustainability goals.

We also have an internal corporate environmental excellence fund that provides seed funding to the business units to encourage development of initial scoping studies of environmental ideas and initiatives.

Read more about our progress to our current goals and future goals

View our performance data

To manage our GHG emissions, we do use offsets as part of our seven-point action plan.

Read more about our climate change seven-point action plan and specific off-set strategies

Responsibilities, resources and training

The Environment, Health, Safety and Sustainable Development Committee of the Board of Directors meets quarterly to review our effectiveness in meeting our environmental obligations. They also review our effectiveness in establishing appropriate EHS policies.

Download our Environment, Health, Safety & Sustainable Development Committee Mandate (PDF, 3 pp., 31 KB)

Our leadership is ultimately accountable for our environmental performance, and responsible for ensuring employees under their direction have the competencies, knowledge, tools, and resources to work in an environmentally responsible manner. We also conduct workshops and training sessions throughout the year as warranted.

Resources which help us execute our management strategies span several internal centres of expertise including:

- **Environment, Health, Safety (EHS)** – integrates EHS components of our Operational Excellence Management Systems (OEMS) and EHS performance measures for our operations. The business and functional unit senior vice presidents and vice presidents are directly responsible for policies and practices implementation. Environment, health and safety professionals directly support all parts of the business to implement EHS policies and practices and ensure learnings and best practices are shared across the business and functional units
- **Sustainability** – identifies risks and opportunities to our social licence to operate and grow our business and develop a sustainability strategy. This includes:
    - developing corporate sustainability goals and stewarding their performance with the business units and stakeholders
    - non-government organizations outreach and engagement
    - advocating for sound energy and environmental policy
    - developing and stewarding Suncor's community investment strategy
- **Operational Excellence & Technical Services** – drives operational business performance improvement across the enterprise
- **Government Relations** – promotes and enhances strategic relations with all levels of government and informs government about industry and Suncor-specific energy development challenges

Evaluation

Monitoring

We conduct Operational Excellence Management System (OEMS) and compliance self-assessments annually to assess our internal management approach. We participate in external benchmarks and performance ratings to compare our approach to our peers and we seek out diverse opinions that are different from us to change our thinking.

Read more about external benchmarks and performance ratings

Conversations that will lead us to better, more responsible solutions mean working with stakeholders, governments and industry partners. And while we might not always agree on everything, we do have a common goal – create energy to improve quality of life and do so sustainably.

We seek direct feedback from our external stakeholders and incorporate any findings into our management plans.

Read more about stakeholder engagement

Read more about partnerships and collaborations

Results

Our environmental performance for 2014 is reported in the performance data section, and 5-year trends are provided, where possible.

Read more about our progress toward 2015 environmental performance targets

What are we doing differently

We're working hard to address global and local environmental issues. We've made strides in:

- reducing and reusing water at our operations
- improving overall energy efficiency
- reclaiming disturbed lands to restore natural landscapes

We're also investing in new environmental technologies and continuing to develop our renewable energy portfolio through investments in wind power and ethanol facilities.

We absolutely believe an energy company can be environmentally responsible. In fact, to stay in business over the long term, we have to be.

Climate change

"We understand that carbon pricing and emission reduction targets are going nowhere but up."

A conversation with Fiona Jones, general manager, sustainability

We appear to be at a pivotal moment where years of debate and policy stasis over what to do about the global challenge of climate change may finally be yielding to collaboration on practical, sustainable solutions. As Canada's largest integrated energy company, Suncor has a significant role to play, both within its plant gates and as a partner in broader energy discussions and strategies.

Suncor's Fiona Jones, general manager, sustainability, discusses the path ahead.

Expand all | Collapse all

Let's start with a very simple, but fundamental, question: is climate change real?

Yes, we accept the prevailing scientific consensus that climate change is a real and growing global challenge and that human activity, including the burning of fossil fuels, is contributing to increased concentrations of greenhouse gas (GHG) emissions in the atmosphere.

We know our own operations have an impact on the environment and that we must do our part to manage and minimize our carbon footprint. I would also

like to say that this is not a new position but that Suncor has held this view for several years, and has been acting on that in our internal management of our company efforts.

Is it time to set a firm price on carbon?

Yes, in fact I'd argue that it's long past time. Suncor has spoken publicly since 2008 in support of a broadly-based, economy-wide carbon price. In the intervening years, that view has been widely endorsed (PDF 61 pp., 968 KB) in principle by much of corporate Canada, including the CEOs who make up the Canadian Council of Chief Executives.

What we've said about a carbon levy has been pretty consistent over the years. To be effective, the carbon price must apply to both producers and consumers of energy. After all, up to 80% of the GHG emissions from a barrel of oil are generated at the point of consumption – when we drive our cars, heat our homes or travel by rail, airplane or boat.

Designed properly, such a levy could encourage producers and consumers alike to put a premium on energy efficiency and conservation. It could also encourage investments in much-needed technology breakthroughs.

Transparency, fairness and certainty are all critical elements of any carbon price. We need to ensure no one industry or region is unfairly targeted or punished – and that Canada's energy sector and economy is not put at a competitive disadvantage. In that regard, we are encouraged by emerging efforts in Canada and the United States to develop more comprehensive climate change policies.

As a company, Suncor already works under several carbon-pricing regimes, including Quebec's cap-and-trade framework, and Alberta's carbon levy on industrial emitters, which helps support a technology fund.

That's why Suncor also supports Canada's Ecofiscal Commission, a multi-year project that's looking at how the right market price signals can achieve the right environmental outcomes while still maintaining Canada's long-term competitiveness. The Commission is already fostering a deeper national conversation about how the provinces can each set a carbon price that meets their own unique circumstances and, at the same time, contribute to meeting Canada's overall carbon ambitions.

What is Suncor's current GHG emissions profile?

As Canada's largest energy company, with production and processing facilities across the country, we emitted 20.5 million tonnes CO_2 equivalent in 2014. As we continue to grow our production to meet domestic and global demand, our emissions will increase. The same goes for every oil-producing jurisdiction.

It's true that, on average, oil production from the oil sands has higher GHG emissions than conventional crude oil production. On a well-to-wheels basis, which accounts for the fuel's entire life cycle, Suncor's oil sands production is from 5% to 17% higher than the average U.S. crude (though we can only influence well-to-tank emissions within our operations).

In situ operations are typically at the higher end of the range, where the reservoir geology drives the amount of steam needed to release the bitumen. Mines, particularly new facilities, are very comparable to the average of crudes refined in the U.S. and less carbon intense than many of the actual crudes that feed U.S. refineries.

Our ambition is for oil sands to provide one of the lower carbon sources of refined products. That goal will be a challenging one, but we believe it's achievable.

Over the years, Suncor has made progress in improving our energy efficiency, which, in turn, reduces emission intensity. Generally speaking, for every 1% of energy reductions, we realize about 1% in GHG emission reductions. So it's a significant lever for cost and emissions management.

For that reason, we committed in 2009 to a voluntary goal of achieving a 10% improvement in corporate-wide energy efficiency by 2015. Now, of the four environmental goals we adopted in 2009, this has proven the toughest to reach. But we also learned a lot along the way.

What did you learn and what are the prospects for making meaningful emissions reductions?

One of the key lessons is that, regardless of how hard we drive energy efficiency, there are many other factors affecting our overall GHG emissions intensity – or the amount of emissions per barrel of oil production. Each new oil-producing asset we bring into the portfolio has its own inherent characteristics that affect how much energy we use to extract and process the resource.

For example, one reservoir may be better suited to a particular technology than another, while one location might require more energy-intensive extraction options than another. Whether a reservoir is at full production, or nearing the end of its life, changes the emissions intensity of the production process. The pathway each barrel of crude follows to market as gasoline or diesel can also be a significant factor.

So, for a company like Suncor, average emissions intensity can be highly variable and based on factors that are often beyond our control. That means we need to continue to drive hard on energy efficiency opportunities. As we've done in the past, we also need to critically evaluate our processes as technology changes.

For instance, over 95% of the emissions at our in situ facilities come from burning fuel to produce steam. If we could significantly reduce or even remove steam entirely from the process, we could radically change the GHG emissions intensity of our operations. In recent years, we've made large investments in technology and innovation aimed at doing just that.

However, when it comes to achieving meaningful reductions in our absolute GHG emissions, the fact is this could still be a decade away. The reasons are basically two-fold. First, the breakthrough technologies required to achieve those reductions could take that long to become commercially viable. Second, as we bring new assets like the Fort Hills mine on stream, we will not only be producing more oil, but also more emissions.

If substantive emissions reductions are perhaps a decade away, is that something you think your stakeholders will accept?

In some cases, the answer is clearly 'no.' There are some who would like to slow oil sands production to a crawl, or even shut it down. But in discussions with our stakeholders, we find that most understand the limitations we face in reducing emissions while also increasing production to meet rising energy demands. They expect us to reduce our emissions in a diligent and prudent manner. They also recognize the important role companies like Suncor play in generating economic growth, jobs and social well-being.

What I hope stakeholders also appreciate is that we continue to make significant investments in the technological solutions we believe can make our core resource base sustainable over the long run. We have assets with a potential production life of a century or more. We have a strong vested interest in developing and implementing technologies that will significantly lower our environmental impact as well as our costs.

That raises an interesting point. We are clearly moving into a more carbon-restrained future. How can a company like Suncor survive and thrive in that kind of world?

We understand that carbon pricing and emission reduction targets are going nowhere but up. Like many other companies, Suncor has long included a "shadow price" for carbon in its capital planning process to ensure that we take this into account.

We believe hydrocarbons are going to be part of the energy mix for many years to come. But they also have a role in bridging to whatever is next.

Given growing global energy demands, Suncor's vision of the future energy system is one where all sources of energy will be needed. It's about expanding opportunities, not restricting them. What's needed is a parallel path of continuously improving the efficiency of how we produce and use hydrocarbon fuels while also changing our energy system to encourage alternate energy sources, such as renewables.

A thriving oil sands industry can play a critical role in this. Oil sands development drives economic growth which, in turn, allows governments and industry to invest in new environmental technologies that could help make all forms of energy development more productive and sustainable. We believe it's necessary to balance the industry's current emissions footprint – which is less than 0.15% of global CO_2 emissions – against its potential to help facilitate this transition to a cleaner energy future.

At an even more basic level, Suncor has always been thinking about the future in ways that go well beyond its core resource. We began blending ethanol in the gasoline we sell in 1996, a decade ahead of most ethanol regulations. Since 2006, we've operated Canada's largest biofuels production plant, while also investing in wind energy. The combined steam and power cogeneration units at our production facilities export low carbon power to the Alberta grid, displacing higher carbon power producers such as coal power plants.

We continue to assess various alternative energy sources every year as part of our strategic planning. For example, electric vehicle (EV) adoption rates remain low and expensive for the time being. However, we intend to learn more about this area by piloting EV charging stations at some of our Petro Canada retail sites. And we have our energy specialists evaluating other transportation fuels like biodiesel and renewable jet fuel so we can potentially offer these products when they become a more substantial part of the market.

Yet another part of the answer is this: to address the climate change challenge in any meaningful way will require a much larger conversation about how we design our cities, heat our homes, drive our cars and grow our food. Our stakeholders want us to do everything we can to reduce emissions within our plant gates. But they also want us engaged in this broader debate. And that's exactly what we're doing through partnerships like Walrus Talks, Quality Urban Energy Systems of Tomorrow and the Energy Futures Lab.

How seriously do you take the campaigns underway in some quarters to urge investors to sell holdings in oil, gas and coal companies in an effort to address climate change?

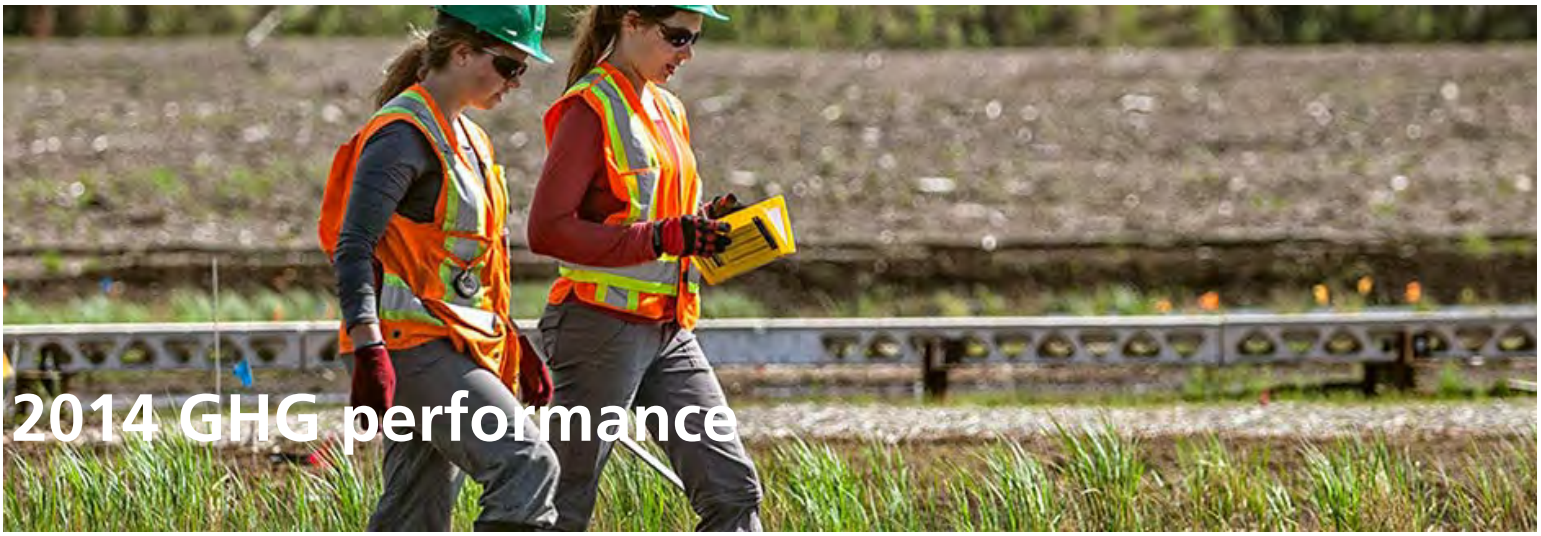
We take the concerns of all of our stakeholders seriously. Many of these divestment campaigns have been initiated by young people who feel very passionate about the issue of climate change – and rightly so, because they will have to live with the consequences of the choices we all make today. Some environmental non-government organizations (ENGOs), church groups, local governments and private foundations have also taken up the cause.

I don't think this is a flash-in-the-pan movement. We all want to do something about climate change and it's easy to feel no progress is being made. So when a simple idea like unloading shares in fossil fuel companies comes along, it has the potential to generate some support.

But it's also a very complex issue. For example, Yale University has responded (PDF, 3 pp., 83 KB) to calls for divestment by pointing out that the buildup of GHG emissions in the atmosphere is primarily due to the combustion of fossil fuels by consumers across the economy. The divesting of oil company shares, they said, would do little to combat climate change – but it could significantly undermine the university's financial capacity to carry out its academic mission.

I'd also urge proponents of these campaigns to understand the risk of unintended consequences. Just because you achieve divestment in Company X, doesn't mean an equivalent amount will be invested in what you might consider more progressive ventures. In fact, in a free market, the opposite could happen: by divesting, you might devalue the stock of Company X, allowing someone far less progressive than you to buy up shares at a lower cost.

Hypotheticals aside, I believe that, when it comes to climate change, Suncor shares many of the concerns of the divestment campaigners. But we'd rather see them stay invested and engaged – and work with us on solutions to shared challenges. We'll achieve much more by building bridges than erecting walls.



2014 GHG performance

On this page:

Our Report on Sustainability provides an annual accounting of our greenhouse gas (GHG) emissions, both in terms of absolute emissions and emissions intensity. The latter is calculated by using full-year net production and the carbon dioxide equivalent (CO_2e) volumes emitted from Suncor-operated facilities.

Production

Production numbers in our 2014 Annual Report are for upstream volumes only, and include our net share of production from non-operated assets as well as operated assets. This differs from production numbers used in our Report on Sustainability to calculate intensity metrics, which includes 100% of the production at Suncor-operated facilities upstream only, and also includes downstream throughput volumes of saleable refined products from Suncor-operated refineries and lubricants plant. For the purposes of our Report on Sustainability, net corporate production in 2014 was approximately 45.4 million cubic metres (m^3), compared to 49.8 million m^3 in 2013. The decrease in 2014 production reflects divestment of some natural gas facilities mid-way through 2013 and additional natural gas facilities in 2014.

Please note: the sum of the individual facilities production volumes will not equal the reported net corporate production. Inter- and intra-business-unit product transfers (hydrocarbon streams that pass through more than one facility) are removed from the corporate and business unit totals to give the net production. This is done to prevent double-counting of hydrocarbon streams sent for further processing within the company.

- Individual facility intensities are calculated based on net facility production not including internally produced fuels and consumed volumes.
- Business unit intensities are calculated using business unit net production. Business unit net production is based on the sum of net facility production from individual facilities within the same business unit minus intra-business-unit intermediate product transfers.
- Corporate GHG intensity is calculated based on the sum of business unit net production minus inter business unit product transfers.

As reported in our 2014 Annual Report, total upstream production averaged 534,900 barrels of oil equivalent per day (boe/d) through the course of 2014, compared to 562,400 boe/d in 2013. Oil Sands production (excluding Syncrude) averaged 390,900 barrels per day (bbls/d) in 2014, compared to 360,500 bbls/d in 2013.

Read the 2014 Annual Report

Our Oil Sands Base business delivered another record-setting year in 2014, resulting in an 8% increase in annual production at Oil Sands Base operations and record synthetic crude oil (SCO) production. These results were achieved despite planned coker maintenance in the spring and fall and unplanned maintenance in upgrading and extraction during the third and fourth quarter.

2014 marked the first full year of production for the Firebag Stage 4 expansion, which further contributed to the significant increase in calendar year production for the combined Firebag 1-to-4 facility. Completion of the Firebag ramp-up contributed to a 20% increase in annual production at Firebag in 2014, compared to 2013. Over the past 3 years, we have tripled our production at Firebag.

Overall absolute emissions and emissions intensity

Absolute full-year carbon dioxide (CO_2) emissions in 2014 totaled 20.5 million tonnes, compared to 20.6 million tonnes in 2013 – a 0.4% or 0.1 megatonne decrease. This slight decrease can be attributed to divestments in our North America Onshore business, slightly offset by increases in our In Situ operations resulting from the first full year of operations at all 4 stages of Firebag.

Using internationally accepted Global Reporting Initiative protocols, our 2014 corporate GHG emissions intensity increased by 9% as our In Situ operations begin to represent a larger portion of our overall corporate portfolio.

Upstream intensity increases at our MacKay River in situ facility were offset by intensity decreases at our Firebag in situ facility and Oil Sands Base operations.

Downstream, intensity increases at our Sarnia refinery, Mississauga lubricants facility and Commerce City refinery were slightly offset by intensity decreases at our Edmonton refinery and St. Clair ethanol plant.

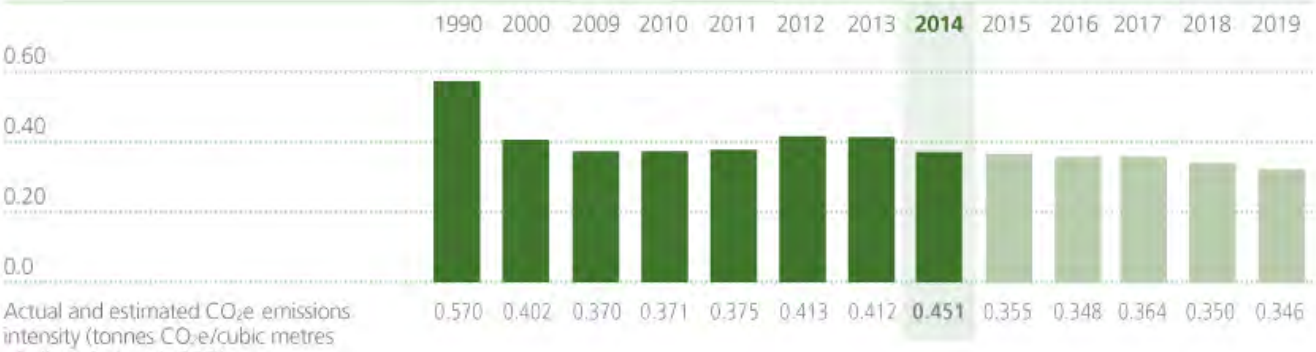
Read about the emission factors that went into calculating our 2014 GHG performance

Please note: All numbers included are for large operated facilities and properties only and represent 100% of the direct and indirect emissions at these facilities. Data is not broken down by working interest and does not include non-operated facilities.

GHG emissions (absolute and intensity)

Fort Hills	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,181	2,349	3,230
In Situ:	–	–	2,074	2,247	2,608	4,079	5,390	**5,610**	5,355	5,425	5,564	5,890	5,883
Firebag	–	–	1,409	1,568	2,001	3,471	4,703	**4,903**	4,725	4,796	4,982	5,286	5,260
MacKay River	–	–	665	679	607	608	687	**707**	630	629	582	604	623
Exploration & Production:	233	531	2,496	2,307	1,637	1,387	1,152	**685**	628	630	627	626	632
North America Onshore	233	531	1,862	1,703	1,035	995	630	**42**	24	19	16	14	12
East Coast Canada	0	0	634	604	602	391	522	**642**	604	611	612	612	619
Refining & Marketing:	968	1,687	5,717	5,472	5,323	5,420	5,406	**5,467**	5,618	5,720	5,713	5,688	5,686
Commerce City	–	–	1,054	1,160	1,011	1,145	1,205	**1,183**	1,212	1,205	1,203	1,203	1,203
Edmonton	–	–	1,957	1,775	1,766	1,742	1,677	**1,694**	1,688	1,735	1,735	1,735	1,735
Lubes	–	–	447	393	421	417	399	**426**	405	405	400	405	403
Montreal	–	–	1,272	1,161	1,123	1,137	1,172	**1,160**	1,241	1,320	1,320	1,290	1,290
Sarnia	–	–	961	934	948	919	889	**918**	972	955	955	955	955
Other (including Burrard terminal and Pipelines)	–	–	27	50	54	60	64	**86**	100	100	100	100	100
Renewables			93	89	159	167	170	**165**	169	161	152	152	152

SUNCOR-WIDE GHG EMISSIONS INTENSITY
actual (1990 – 2014) and estimates (2015 – 2019) (1)(2)(3)(4)(5)(6)(7)(8)(9)
tonnes CO_2e/cubic metres of oil equivalent (m^3OE)



	1990	2000	2009	2010	2011	2012	2013	**2014**	2015	2016	2017	2018	2019
Actual and estimated CO_2e emissions intensity (tonnes CO_2e/cubic metres of oil equivalent (m^3OE))	0.570	0.402	0.370	0.371	0.375	0.413	0.412	**0.451**	0.355	0.348	0.364	0.350	0.346

■ Actual ■ Estimated

Oil Sands	1.196	0.817	0.569	0.587	0.510	0.561	0.503	**0.497**	0.561	0.551	0.547	0.563	0.548
Fort Hills	–	–	–	–	–	–	–	–	–	–	5.383	0.319	0.317
In Situ	–	–	0.458	0.455	0.502	0.535	0.540	**0.484**	0.446	0.452	0.421	0.452	0.448
Exploration & Production			0.163	0.174	0.170	0.157	0.154	**0.238**	0.249	0.241	0.261	0.227	0.216
Refining & Marketing	0.225	0.193	0.222	0.208	0.202	0.199	0.200	**0.203**	0.193	0.191	0.191	0.191	0.191
Renewables	–	–	0.788	0.712	0.684	0.662	0.668	**0.654**	0.664	0.632	0.598	0.598	0.598

(1) Estimates are based on current production forecasts and methodologies. The tables contain forward-looking estimates and users of this information are cautioned that the actual GHG emissions and emission intensity may vary materially from the estimates contained in the table. Please see Advisories.
(2) Data from 1990 and 2000 do not include Suncor's U.S. operations, and only include business areas in operation during these years. These data points have been provided for historical comparability, consistent with previous sustainability reports.
(3) Data here includes both direct and indirect CO_2e emissions, whereas the data included in the Alberta SGER reports and other regulatory reports are direct emissions only. No credit is taken for GHG reductions due to cogen export or purchased offsets. Emissions have been calculated using facility-specific methodologies; various reference methodologies accepted by jurisdictions where each facility is required to report GHG emissions. Where a jurisdiction has a prescribed methodology, it is followed and if none exists, the most applicable and accurate methods available are used to quantify each emission source. Beginning with 2013 data, the latest global warming potentials issued by the Intergovernmental Panel on Climate Change in their 2007 or Fourth Assessment report have been used to calculate CO_2e. Historical data has not been updated to reflect this change as it does not impact corporate-wide emissions materially.
(4) Beginning in 2013 Oil Sands methodology changed to reflect the inclusion of biomass, a methodology change in the calculation of fugitive emissions using flux chamber data, and revisions to emissions factors and calculations based upon AESRD's request. These changes are also consistent with the methodology used for SGER Bill 3 reporting. Additionally, also beginning in 2013, MacKay River implemented a

are also consistent with the methodology used for SGER Bill 3 reporting. Additionally, also beginning in 2013, MacKay River implemented a revised scope 2 emission calculation methodology which has been implemented to the reported data. Also, reported Refining & Marketing emission values reflect classifying purchased hydrogen emissions and sold CO_2 as an indirect scope 3 instead of an indirect scope 2.
(5) Data for 2009 and future years include the full-year emissions for all Petro-Canada operated properties acquired in the 2009 merger, even though the merger did not close until Aug. 1, 2009. This is to allow for a consistent comparison to past and future years.
(For certain business units, combined Suncor / Petro-Canada data is provided for some years prior to 2009 but this is not reflected in the Suncor-wide rollup reported here.
(6) The Suncor-wide emissions intensity uses Net Production, which is the sum of Net Facility Production minus all internal intra- and inter-BU product transfers, to remove any double counting. The sum of the BU intensities will therefore not equal the Suncor-wide intensity. Forecasted emission intensities do not subtract product transfers because the data depends on commercial and markets conditions and is therefore not available for forecasted trends.
(7) Refining & Marketing emissions are inclusive of emissions from the pipeline from Oil Sands to the Edmonton refinery, Firebag to Oil Sands and Fort Hills to Oil Sands), which are included in the Pipelines entity within R&M. The emission total for this source for 2014 was 59,149 tonnes CO_2e. Beginning in 2014, R&M emissions are also inclusive of the Montreal Sulphur Plant, purchased in July 2014. Data for this site has been reported based on the date of the sale and will therefore not be representative of a full year's operations. Forecasted data reflects full year operations.
(8) The Other category includes Burrard terminal in all reported years, Pipelines starting in 2010 and Montreal Sulphur Plant starting in 2014. The Montreal Sulphur Plant's 2014 data has been adjusted to reflect the portion of the year that it was owned and operated by Suncor (July-Dec).
(9) Wind, Terminals, Pipelines and the Montreal Sulphur Plant do not contribute to R&M production or Suncor Wide production (denominator for GHG intensity), only absolute GHG emissions (numerator for GHG intensity) due to the definition of the corporate wide production metric.
Definitions:
Direct GHG emissions: Emissions from sources that are owned or controlled by the reporting company.
Indirect GHG emissions: Energy-related emissions that are a consequence of the operations of the reporting company, but occur at sources owned or controlled by another company (e.g., purchased electricity or steam).
Absolute (total) emissions: The sum of direct and indirect emissions) of a facility or reporting company.
Emission intensity: Ratio that expresses GHG emissions per unit of physical activity or unit of economic value (e.g., here it is total tonnes of CO2e emissions per unit of production in cubic metres).

Download

Overall energy use and energy intensity

GHG emissions are closely linked to energy use with approximately 90% of direct GHG emissions being related to the consumption of energy for operations.

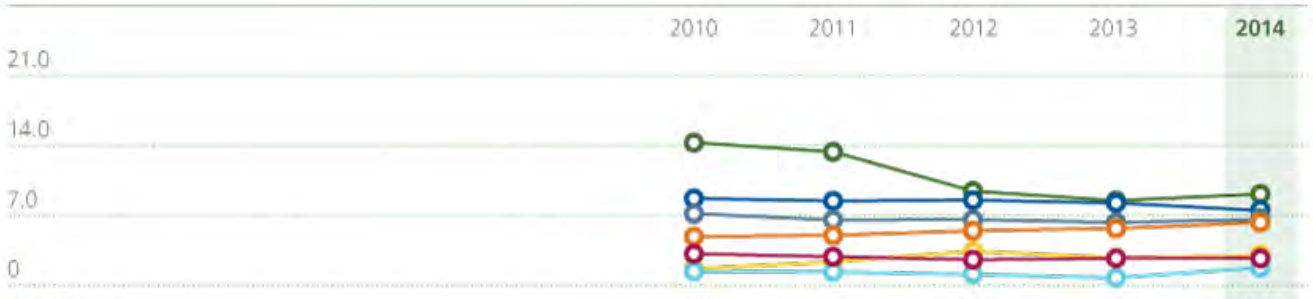
The following energy use and energy intensity graphs show similar year over year trends to the GHG emissions and GHG emissions intensity graphs shown above. One of the key differences, however, is how energy generated as electrical power is treated.

Power generated by our cogeneration facilities (a highly efficient technology used to generate electricity from what would otherwise be waste heat) and wind farms is sold to provincial grids in the regions where facilities are located. This power is converted to an equivalent amount of energy and is deducted from our total energy use since it is sold as a product. Associated GHG emissions reductions are not currently deducted from our total. However, by producing this less GHG intensive electricity and selling to the grid, we are offsetting coal-fired power generations and reducing overall provincial GHG emissions associated with power generation.

Read more about cogeneration in OSQAR

Please note: All numbers included are for operated facilities and properties only. They represent 100% of the direct and indirect energy use at these facilities. Data is not broken down by working interest and does not include non-operated facilities.

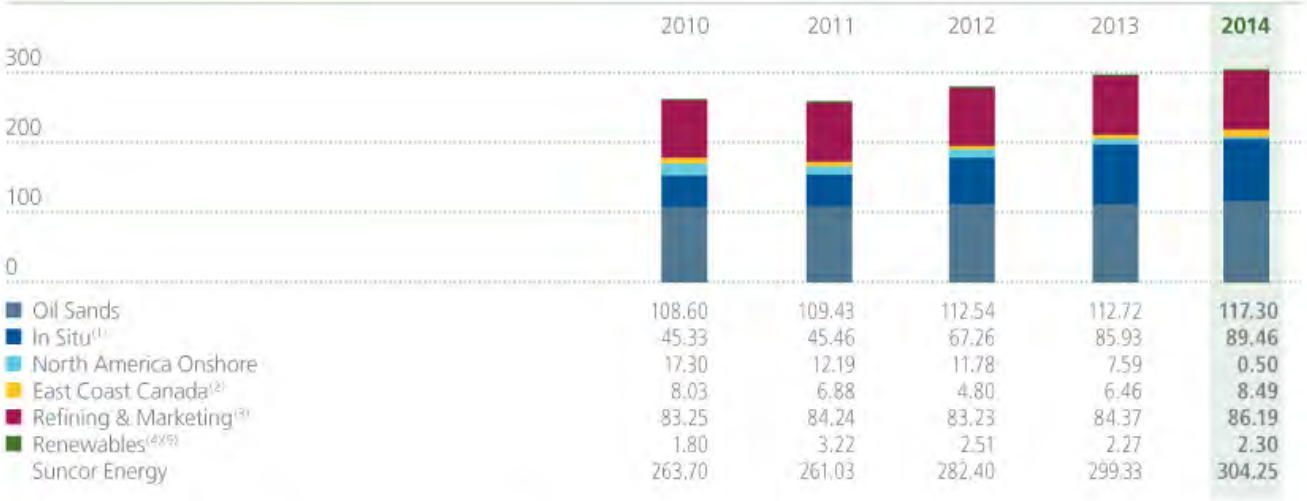
ENERGY INTENSITY
(GJ/m³ of production)



	2010	2011	2012	2013	2014
Oil Sands	7.50	6.71	6.86	6.73	6.83
In Situ[1]	9.18	8.75	8.83	8.60	7.73
North America Onshore	1.80	1.71	1.58	1.44	2.35
East Coast Canada[2]	2.03	2.57	3.56	2.95	3.19
Refining & Marketing[3]	3.34	3.20	3.06	3.11	3.20
Renewables[4,5]	14.45	13.89	9.92	8.93	9.11
Suncor Energy	5.16	5.34	5.75	6.01	6.70

(1) In Situ data includes Firebag and MacKay River operations.
(2) Data only includes energy use and production from the Terra Nova FPSO vessel off the east coast of Canada.
(3) Refining & Marketing business unit is inclusive of the energy use associated with pipeline stations located on the pipeline from Oil Sands to Edmonton and the pipelines from Firebag to Oil Sands and Fort Hills to Oil Sands. The R&M business unit also includes the Burrard terminal and the Montreal Sulphur plant (prorated based on partial ownership from July-Dec 2014).
(4) Renewables business unit is inclusive of the St. Clair ethanol plant for 2010-2014 and Suncor-operated wind farms for 2012-2014.
(5) Electricity that is produced and sold to provincial grids by Oil Sands and In Situ cogens and operated wind farms is converted to an equivalent amount in GJs and deducted from the total energy. This explains why the Renewables 2012 - 2014 intensities decrease due to the start-up of operated Suncor wind farms.

ENERGY USE
(millions of gigajoules)



	2010	2011	2012	2013	2014
Oil Sands	108.60	109.43	112.54	112.72	117.30
In Situ[1]	45.33	45.46	67.26	85.93	89.46
North America Onshore	17.30	12.19	11.78	7.59	0.50
East Coast Canada[2]	8.03	6.88	4.80	6.46	8.49
Refining & Marketing[3]	83.25	84.24	83.23	84.37	86.19
Renewables[4][5]	1.80	3.22	2.51	2.27	2.30
Suncor Energy	263.70	261.03	282.40	299.33	304.25

(1) In Situ data includes Firebag and MacKay River operations.
(2) Data only includes energy use from the Terra Nova FPSO vessel off the east coast of Canada.
(3) Refining & Marketing business unit is inclusive of the energy use associated with pipeline stations located on the pipeline from Oil Sands to Edmonton and the pipelines from Firebag to Oil Sands and Fort Hills to Oil Sands. The R&M business unit also includes the Burrard terminal and the Montreal Sulphur plant (prorated based on partial ownership from July-Dec 2014).
(4) Renewables business unit is inclusive of the St. Clair ethanol plant for 2010-2014 and Suncor-operated wind farms for 2012-2014.
(5) Electricity that is produced and sold to provincial grids by Oil Sands and In Situ cogens and operated wind farms is converted to an equivalent amount in GJs and deducted from the total energy. This explains why the Renewables 2012 – 2014 intensities decrease due to the start-up of operated Suncor wind farms.

Download

Emissions highlights

What follows are highlights and explanations describing the most noteworthy emissions variances at some of our operations. Where emissions were relatively flat or stable, no commentary is offered.

Emissions totals and variances for all operated facilities are available in the performance data section of this report.

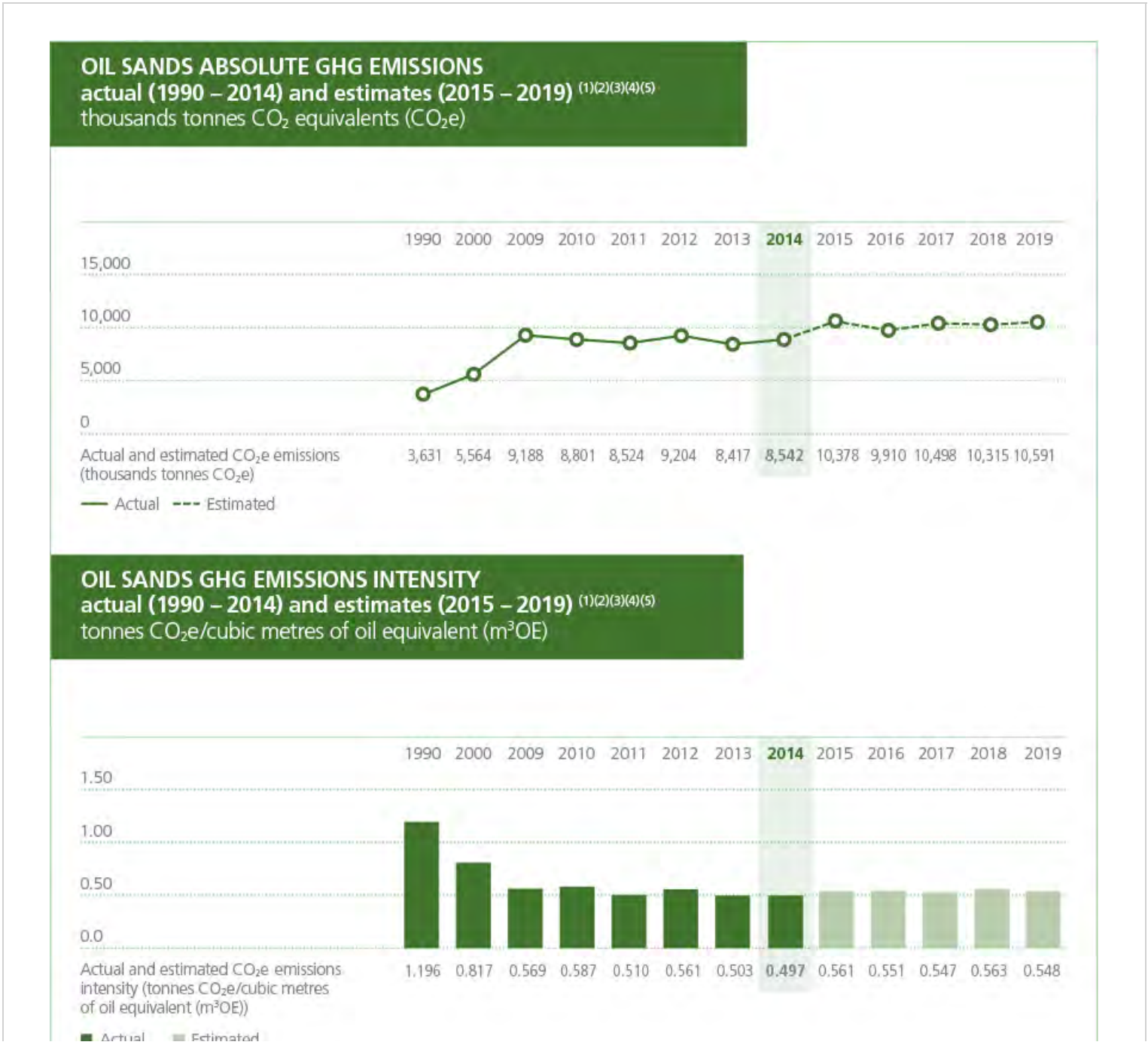
Expand all | Collapse all

Oil Sands

Absolute emissions from our mine and upgrading operations increased slightly by 1.5% in 2014 as compared to 2013 due to increased production, but were offset by lower fugitive emissions measurements and increased reliability.

Emissions intensity decreased by 1% over the same period. The decrease can largely be attributed to improved reliability as well as higher production related to increased supply from Firebag. We also saw record production during this time.

Oil Sands GHG emissions absolute and intensity



(1) Estimates are based on current production forecast and methodologies. The tables contain forward-looking estimates and users of this information are cautioned that the actual GHG emissions and emission intensity may vary materially from the estimates contained in the table. Please see Advisories.
(2) Data here includes both direct and indirect CO_2e emissions, whereas the data included in the Alberta SGER report is direct only. No credit is taken for GHG reductions due to cogen or purchased offsets.
(3) Beginning in 2013 Oil Sands methodology changed to reflect the inclusion of biomass, a methodology change in the calculation of fugitive emissions using flux chamber data in 2012, and revisions to emission factors and calculation methodologies based upon AESRD's request. These changes are also consistent with the methodology used for SGER Bill 3 reporting.
(4) Historical environment data for Oil Sands from 2005 to 2008 includes our Firebag in situ operation, where appropriate, as well as our mining and upgrading operations. In 2009 In Situ (Firebag and MacKay River) began reporting as its own business unit. Data for 2009 and forward includes only Oil Sands base plant mining / extraction / upgrading and Poplar Creek cogen operations. The Poplar Creek cogen is owned and operated by a third party but is part of the Suncor operating agreement and air licence, and therefore all Poplar Creek cogen emissions count toward Oil Sands total direct emissions.
(5) The GHG volumes from 2009 have been restated due to a change in hydrogen plant allocation and diesel emission methodology.

Download

Fort Hills

Sanctioned in 2013, the Fort Hills mining project is expected to have a production capacity of 180,000 bbls/day of bitumen. We expect this to add over 3 megatonnes of CO_2e to our operated GHG emission profile.

To determine how a change to Alberta's current greenhouse gas regulation could impact this project, we applied our shadow carbon price. That means, in addition to using the existing penalty of $15/tonne CO_2e on 12% of emissions, we also explored various regulatory scenarios.

For instance, if the existing carbon penalty were to increase to $40/tonne CO_2e (or $55/tonne when considering inflation over the life of the project) on a steadily increasing percentage of project emissions, the projected decrease to the project's internal rate of return (IRR) would be 0.10%. Now, if we apply the same $40/tonne CO_2e as a flat carbon tax on all Fort Hills GHG emissions, the expected decrease in IRR is 0.39%.

The impact of higher carbon penalties is just one of many risks that are evaluated as part of project economics. When not applied equally to competing projects, it can create a competitive disadvantage.

Please note: The information above assumes a business environment based on $100/barrel Brent crude pricing and includes the use of emission performance credits as permitted under Alberta's current regulatory regime. Production at Fort Hills is not expected to start until late 2017.

In Situ

The overall absolute emissions at our In Situ operations increased by 4.1% in 2014 compared to 2013 due to further ramp up of Firebag's expansion phases 3 and 4. The rise in absolute emissions reflects added steam generation required for increased production. Emission intensity for In Situ in 2014 decreased substantially (10%) mainly due to the maturity of the Firebag phase 3 and 4 wells, which are now operating with much lower steam-to-oil (SOR) ratios than initial production from new in situ steam-assisted gravity drainage wells.

The decrease in emissions intensity compared to the increase in absolute emissions reflects the maturity of the Firebag 3 and 4 expansions as well as a decreased realized SOR due to additional infill wells. Infill production wells take advantage of a pre-heated reservoir by being placed in between 2 existing well pairs, thereby producing additional bitumen with no additional steam required.

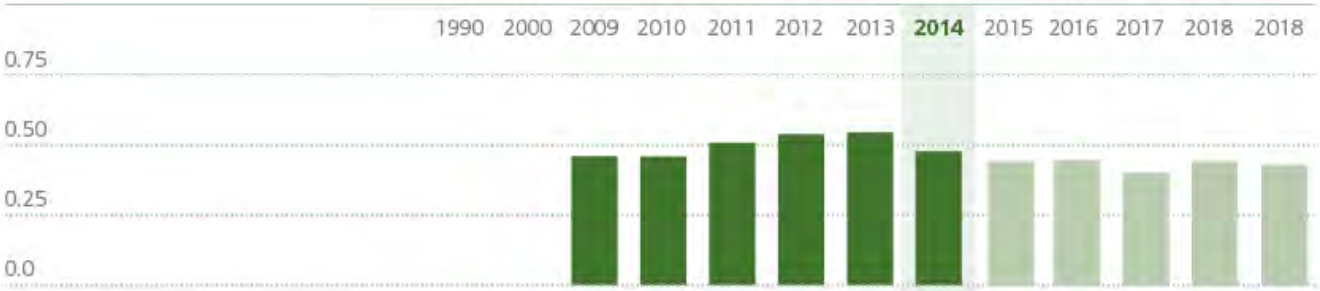
The large emission intensity decrease was offset by an emission intensity increase at MacKay River. This increase in intensity can be attributed to the addition of new wells that are still in a preliminary steaming stage and have not yet reached their optimal production capacity.

IN SITU ABSOLUTE GHG EMISSIONS
actual (1990 – 2014) and estimates (2015 – 2019) [1][2][3][4][5]
thousands tonnes CO_2 equivalents (CO_2e)

	1990	2000	2009	2010	2011	2012	2013	**2014**	2015	2016	2017	2018	2019
MacKay River	N/A	N/A	665	679	607	608	687	**707**	630	629	582	604	623
Firebag	N/A	N/A	1,409	1,568	2,001	3,471	4,703	**4,903**	4,725	4,796	4,982	5,286	5,260
Actual and estimated CO_2e emissions (thousands tonnes CO_2e)	N/A	N/A	2,074	2,247	2,608	4,079	5,390	**5,610**	5,355	5,425	5,564	5,890	5,883

Actual --- Estimated

IN SITU GHG EMISSIONS INTENSITY
actual (1990 – 2014) and estimates (2015 – 2019) [1][2][3][4][5]
tonnes CO_2e/cubic metres of oil equivalent (m^3OE)



	1990	2000	2009	2010	2011	2012	2013	**2014**	2015	2016	2017	2018	2018
Actual and estimated CO_2e emissions intensity (tonnes CO_2e/cubic metres of oil equivalent (m^3OE))	N/A	N/A	0.458	0.455	0.502	0.535	0.540	**0.485**	0.446	0.452	0.421	0.452	0.448

Actual Estimated

(1) Estimates are based on current production forecast and methodologies. The tables contain forward-looking estimates and users of this information are cautioned that the actual GHG emissions and emission intensity may vary materially from the estimates contained in the table. Please see Advisories.
(2) Data here includes both direct and indirect CO_2e emissions, whereas the data included in the Alberta SGER report is direct only. No credit is taken for GHG reductions due to cogen export or purchased offsets.
(3) For MacKay River, indirect emissions include electricity purchased from the grid, electricity purchased from the third party MacKay River cogen and purchased steam also purchased from the third party MacKay River cogen.. Starting in 2013 MacKay River implemented a new methodology for calculating indirect emissions associated with energy streams purchased from the third party MacKay River cogen to remain consistent with the third party cogen that is the source of these energy streams. This change is reflected in the 2014 data and forecasted future years. Firebag cogens are owned and operated by Suncor and therefore all cogen emissions count toward Firebag's total direct emissions including emissions associated with generating electricity that is sold to the AB grid.
(4) Historically, Firebag was reported as part of Oil Sands up to and including 2008. The 2008 Firebag data has already been reported as part of the Oil Sands trend, but has been included again here so that a valid year-over-year comparison can be made. Readers are cautioned that this is 'double-counting' and therefore all the numbers for 2008 will add up to more than the total 2008 Suncor-wide total; this is intentional and is for comparison purposes only.

(5) Values from 2007 and earlier include legacy Suncor facilities only. For comparison, values from 2008 (the year preceding the merger) include both legacy Suncor and Petro-Canada facilities. Data for 2009 includes the full-year emissions for all Suncor and Petro-Canada facilities acquired in the 2009 merger, even though the merger did not close until Aug. 1, 2009. This is to allow for a consistent comparison to past and future years. For historical Petro-Canada emissions please see the Report to the Community at suncor.com.

Download

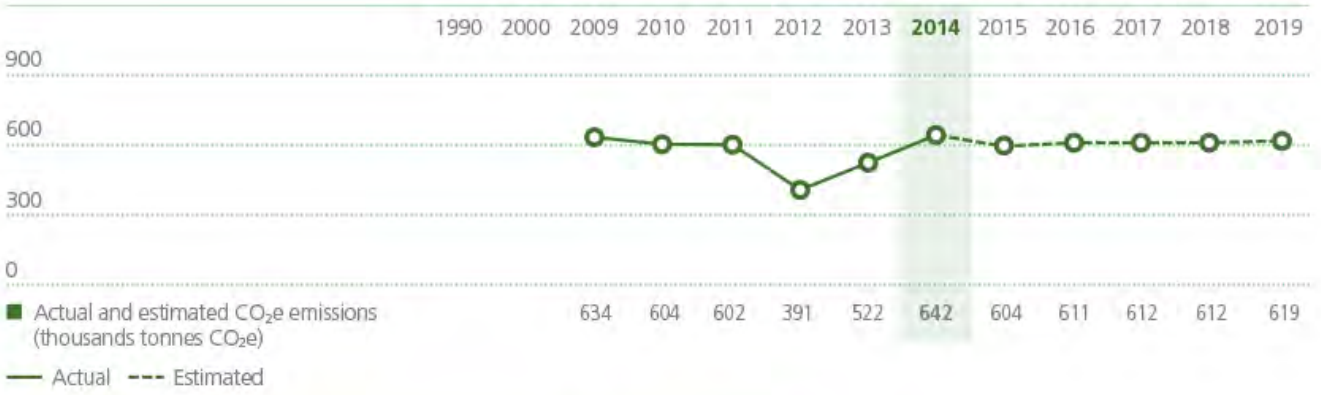
Exploration & Production

East Coast Canada

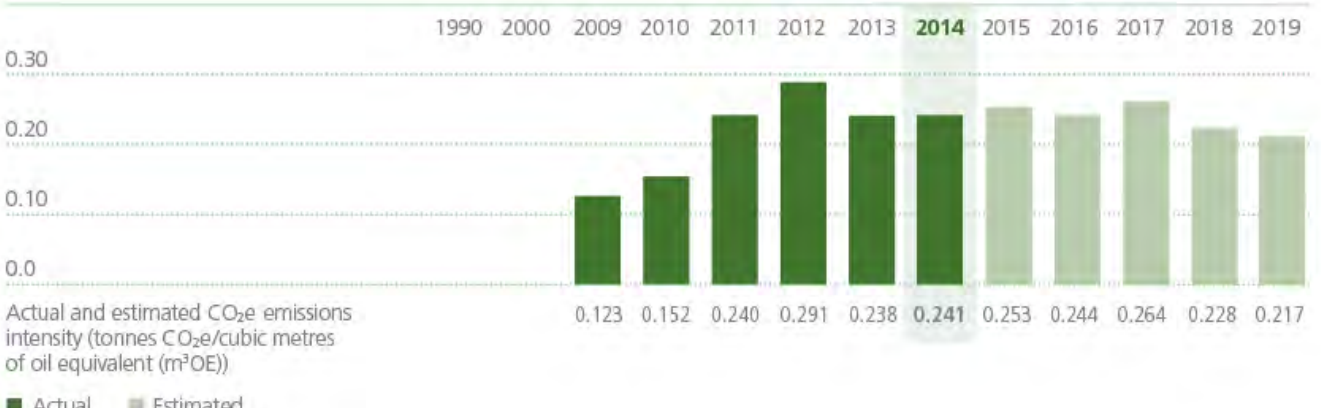
Terra Nova emissions increased by 23% over 2013 and production in 2014 was 22% higher than in 2013 – the result of a normal operational year. A significant maintenance shutdown period in 2013 led to fewer operational days and lower-than-average annual emissions and production. As a result of the 2014 increase in operational days, emissions intensity was relatively flat, with only a slight increase of 1.2%. Of note, 2014 performance was similar to 2011 – a more representative year than 2013.

Currently, Terra Nova is the only East Coast Canada asset we operate. Our other international and offshore production interests are joint ventures and not within our direct operational control. These joint venture operations are not included in this report.

EAST COAST CANADA* ABSOLUTE GHG EMISSIONS
actual (1990 – 2014) and estimates (2015 – 2019) [1][2][3][4][5]
thousands tonnes CO_2 equivalents (CO_2e)



EAST COAST CANADA GHG EMISSIONS INTENSITY
actual (1990 – 2014) and estimates (2015 – 2019) [1][2][3][4][5]
tonnes CO_2e/cubic metres of oil equivalent (m^3OE)



* East Coast Canada was historically referenced as International & Offshore, but since 2010 when Netherlands properties (Hanze and De Ruyter) were sold, data has only included Suncor's Terra Nova offshore facility in eastern Canada. Historical data prior to 2010 references performance data from international operated facilities as well as the Terra Nova facility.
(1) Estimates are based on current production forecast and methodologies. The tables contain forward-looking estimates and users of this information are cautioned that the actual GHG emissions and emission intensity may vary materially from the estimates contained in the table. Please see Advisories.
(2) I&O properties were obtained with the Petro-Canada merger in August 2009. For historical Petro-Canada emissions please see the Report to the Community at suncor.com/.
(3) Data here includes both direct and indirect CO_2e emissions. No credit is taken for GHG reductions due to offsets.
(4) Data is presented for Suncor operated facilities only, and does not include our interests in non-operated joint ventures. Operated facilities are shown as 100%, not adjusted for Suncor's ownership share.
(5) Terra Nova production historically only included oil sales and not flaring and internally produced fuel. In 2011 these additional production volumes were included; however, to be consistent with other major facilities the production metric has been readjusted to only include oil sales.

Download

North America Onshore

North America Onshore (NAO) emissions decreased in 2013 as we completed the sale of our Wilson Creek natural gas plant and field in Alberta late in 2014. With the completion of this sale, Suncor no longer has natural gas operations in Alberta; the only natural gas operation remaining is in Northeast, British Columbia. Absolute emissions dropped by 93% and intensity increased by 66% over 2013.

Reported numbers for NAO reflect assets owned throughout 2014 as well as divested assets up to their date of sale. Therefore, Wilson Creek emissions are included up to its date of sale while emissions from the remaining B.C. facility are included for all of 2014. Similarly, in 2013 NAO assets were reported up to the date of their sale, which explains why 2014 emissions decreased over 2013.

NORTH AMERICA ONSHORE ABSOLUTE GHG EMISSIONS
actual (1990 – 2014) and estimates (2015 – 2019) (1)(2)(3)
thousands tonnes CO_2 equivalents (CO_2e)

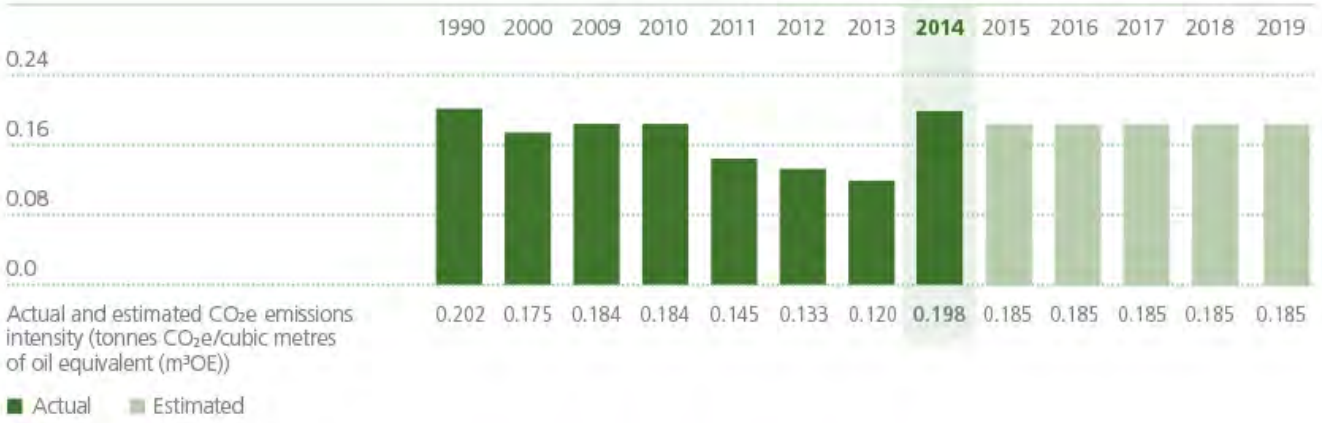
Externally reportable operations:	1990	2000	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Hanlan			411	343	303	283	262	0	0	0	0	0	0
Ferrier			60	59	68	61	80	0	0	0	0	0	0
Other			1,155	1,090	485	494	166	18	0	0	0	0	0
Wildcat			164	0	0	0	0	0	0	0	0	0	0
Simonette			73	0	0	0	0	0	0	0	0	0	0
B.C.				211	180	157	122	25	24	19	16	14	12

Actual and estimated CO_2e emissions (thousands tonnes CO_2e)	233	531	1,862	1,703	1,035	995	630	42	24	19	16	14	12

— Actual --- Estimated

NORTH AMERICA ONSHORE GHG EMISSIONS INTENSITY actual (1990 – 2014) and estimates (2015 – 2019) (1)(2)(3)

tonnes CO_2e/cubic metres of oil equivalent (m^3OE)



(1) Estimates are based on current production forecast and methodologies. The tables contain forward-looking estimates and users of this information are cautioned that the actual GHG emissions and emission intensity may vary materially from the estimates contained in the table due to growth, development and/or dispositions. Please see Advisories.
(2) Data here includes both direct and indirect CO_2e emissions, whereas the data included in the Alberta SGER report or other regulatory reports are direct emissions only.
(3) The increase in 2009 is due to the merger with Petro-Canada; data prior to 2009 is for legacy Suncor properties only and does not include any Petro-Canada facilities. Data for 2009 includes the full-year emissions for all Suncor and Petro-Canada operated natural gas properties acquired in the 2009 merger, even though the merger did not close until Aug. 1, 2009.This is to allow for a consistent comparison to past and future years. For historical Petro-Canada natural gas emissions please see the Report to the Community at suncor.com.

Download

Refining & Marketing

In 2014, GHG emissions and emissions intensity at our Refining & Marketing facilities remained relatively unchanged. Compared to 2013, emissions experienced a slight increase of 1.1% while emission intensity increased by 1.8%. Completion of planned maintenance at several facilities resulted in a small decrease to production. This contributed to the increase in emission intensity.

COMBINED CANADA AND USA REFINING & MARKETING ABSOLUTE GHG EMISSIONS actual (1990 – 2014) and estimates (2015 – 2019) (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)

thousands tonnes CO_2 equivalents (CO_2e)

COMBINED CANADA AND USA REFINING & MARKETING GHG EMISSIONS INTENSITY actual (1990 – 2014) and estimates (2015– 2019) (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11)

tonnes CO_2e/cubic metres of oil equivalent (m^3OE)

(1) Estimates are based on current production forecast and methodologies. The tables contain forward-looking estimates and users of this information are cautioned that the actual GHG emissions and emissions intensity may vary materially from the estimates contained in the table. Please see Advisories.

(2) Data here includes both direct and indirect CO_2e emissions, whereas the data included in the Alberta SGER report and other regulatory reports are direct only.

(3) Historical data and estimates for 2007 until 2008 previously included the St. Clair ethanol plant. The ethanol plant data has been removed from the historical data and has been included in the historical data for the Renewables business unit.

(4) The numbers are gross operated volumes and do not include reductions from ethanol, internally generated emission performance credits or purchased offsets.

(5) Values from 2007 and earlier include legacy Suncor facilities only. For comparison, values from 2008 (the year preceding the merger) include both legacy Suncor and Petro-Canada facilities. Data for 2009 includes the full-year emissions for all Suncor and Petro-Canada facilities acquired in the 2009 merger, even though the merger did not close until Aug. 1, 2009. This is to allow for a consistent comparison to past and future years. For historical Petro-Canada emissions please see the Report to the Community at suncor.com.

(6) R&M emissions from purchased third-party merchant hydrogen plants have not been included in the total GHG emissions (direct + indirect) as these emissions do not meet the definition for an indirect scope 2 emission source. These emissions are included in the indirect scope 3 emissions section of this report.

(7) R&M direct emissions do not include CO_2 transfers to third parties such as the food and beverage industries as they do not meet the

definition for "CO_2 releases". For the purposes of this report, CO_2 volumes sold to third parties are considered to be indirect scope 3 emissions from products, consistent with provincial government reporting requirement in Ontario and Quebec.
(8) Re-reported emissions for previous years include subtracting the indirect emissions from purchased hydrogen and CO_2 sales volumes. Forecasted years also recognize this classification of purchased hydrogen and CO_2 sales emission sources as indirect scope 3 emissions.
(9) Sarnia's 2010 emissions were revised upon further review by third-party assurance.
(10) The Other category includes Burrard terminal in all reported years, Pipelines starting in 2010 and Montreal Sulphur Plant starting in 2014. The Montreal Sulphur Plant's 2014 data has been adjusted to reflect the portion of the year that it was owned and operated by Suncor (July-Dec). Pipelines include pipeline stations on the Oil Sands to Edmonton refinery pipeline as well as the pipeline from Firebag to Oil Sands and Fort Hills to Oil Sands.
(11) Terminals, Pipelines and the Montreal Sulphur Plant do not contribute to R&M production (denominator for GHG intensity), only absolute GHG emissions (numerator for GHG intensity) due to the definition of the corporate wide production metric.

Download

Renewables

We were an early entrant in the renewable energy business in Canada. Our investments to date are focused on wind power and biofuels.

St. Clair ethanol plant

We've been blending ethanol in our retail fuels since 1992. We opened the St. Clair ethanol plant in Mooretown, Ont. in 2006. In 2011 we doubled the plant's production capacity to 400 million litres of corn-based ethanol annually. It is the single largest ethanol production plant in Canada.

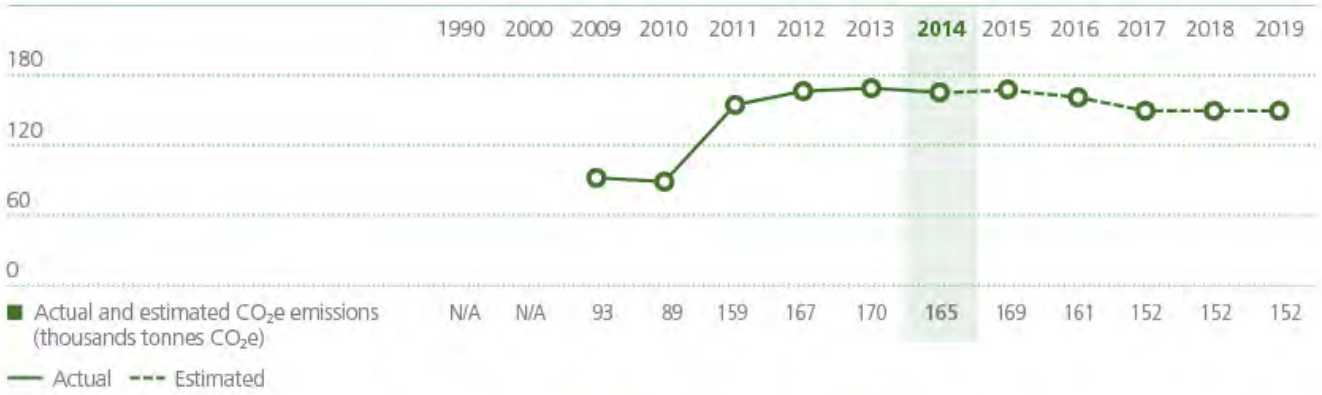
Absolute emissions and emissions intensity from the St. Clair ethanol plant slightly decreased from 2013 to 2014 with decreases of 2.8% and 2.2% respectively.

Wind power

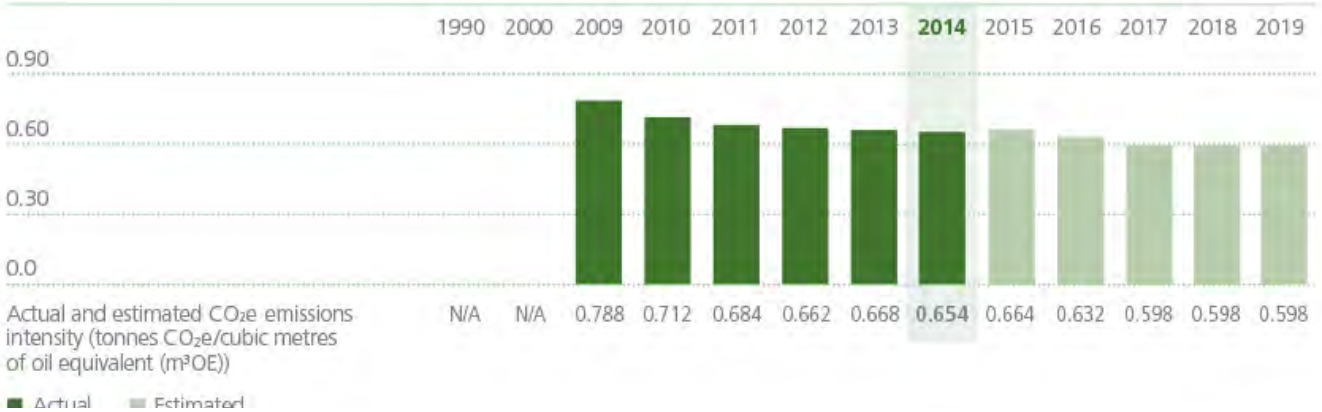
We're currently involved in 7 operating wind farm projects – 6 of which are joint ventures. The total installed wind capacity of these operations is 295 megawatts (MW), enough to power about 115,000 Canadian homes.

Performance data is reported 100% for operated wind farms only and is not adjusted to reflect ownership share. This includes the 20 MW Kent Breeze farm in Ontario and the 88 MW Wintering Hills farm in Alberta. In 2014, these two farms emitted less than 500 tonnes CO_2e and produced over 320,000 MW. For reference, an equivalent size natural gas power plant producing a comparable amount of electricity would emit over 120,000 tonnes CO_2e annually. That's 250 times more emissions than our wind farms.

RENEWABLES ABSOLUTE GHG EMISSIONS
actual (1990 – 2014) and estimates (2015 – 2019) (1)(2)(3)(4)(5)(6)
thousands tonnes CO_2 equivalents (CO_2e)



RENEWABLES GHG EMISSIONS INTENSITY
actual (1990 – 2014) and estimates (2015 – 2019) (1)(2)(3)(4)(5)(6)
tonnes CO_2e/cubic metres of oil equivalent (m^3OE)



(1) Estimates are based on current production forecast and methodologies. The tables contain forward-looking estimates and users of this information are cautioned that the actual GHG emissions and emission intensity may vary materially from the estimates contained in the table. Please see Advisories.
(2) Data here includes both direct and indirect CO_2e emission. No credit is taken for GHG reductions due to ethanol lifecycle GHG reductions or wind generated offsets.
(3) Historically, ethanol numbers for 2007 until 2008 were reported in R&M Canada. Those numbers have been backed out of R&M and placed here.
(4) The GHG and production numbers for the ethanol plant are constant from year to year as the plant runs at ~100% essentially all the time. Production is dependent on how much corn we can purchase and how much ethanol we can sell, which are predictable and mainly within our control.
(5) The capacity of the ethanol plant was doubled in 2011 to 400 million litres of ethanol per year.
(6) Beginning in 2012, Renewables includes total emissions (direct and indirect) from operated wind farms and the St. Clair ethanol plant. No credit is taken for generated wind offsets and generated electricity is not reflected as production in the intensity metric.

Download

2014 Emissions factors

On this page :

Measuring GHG emissions is complex, and it's important we do so in a transparent, consistent, verifiable and regulatory-compliant manner. Emissions factors, which allow us to estimate GHG emissions from a unit of available activity data (i.e., quantity of fuel consumed, quantity of product produced), help us achieve this.

Metric for reporting GHG emissions

The metric for reporting GHG emissions that is used in the Report on Sustainability is metric tonnes of carbon dioxide equivalent (CO_2e). This unit, which is commonly used for reporting GHGs, represents volumes of gases that have been studied to have an impact on the global atmosphere. CO_2e means that individual GHGs have been multiplied by their assessed global warming potential (GWP) compared to carbon dioxide (CO_2). This report uses the GWPs issued by the Intergovernmental Panel on Climate Change's (IPCC) fourth assessment report, which aligns to several jurisdictions of GHG reporting including Environment Canada and the U.S. Environmental Protection Agency (EPA). This is consistent with our 2014 Report on Sustainability; however sustainability reports prior to 2014 used the IPCC's third assessment report.

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 (N_2O) 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.

Measuring potential 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 – either 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 where prescribed by regulation, secondarily from site-specific factors if available and finally, from published emission factors for remaining emission sources.

Due to the unique nature of each site, we have over 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.

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, Ontario and British Columbia all required operators to use specified factors for the 2014 reporting year.

Alberta requires large emitting facilities to use the methodology and emission factors used in their site-specific and government-approved Specified Gas Emitters Regulation (SGER) baseline, and changes cannot be made without restating and re-verifying the baseline and previous year's emissions. Each of our sites that report through the SGER successfully generated positive (approved) verifications for the 2014 reporting year at a reasonable level of assurance.

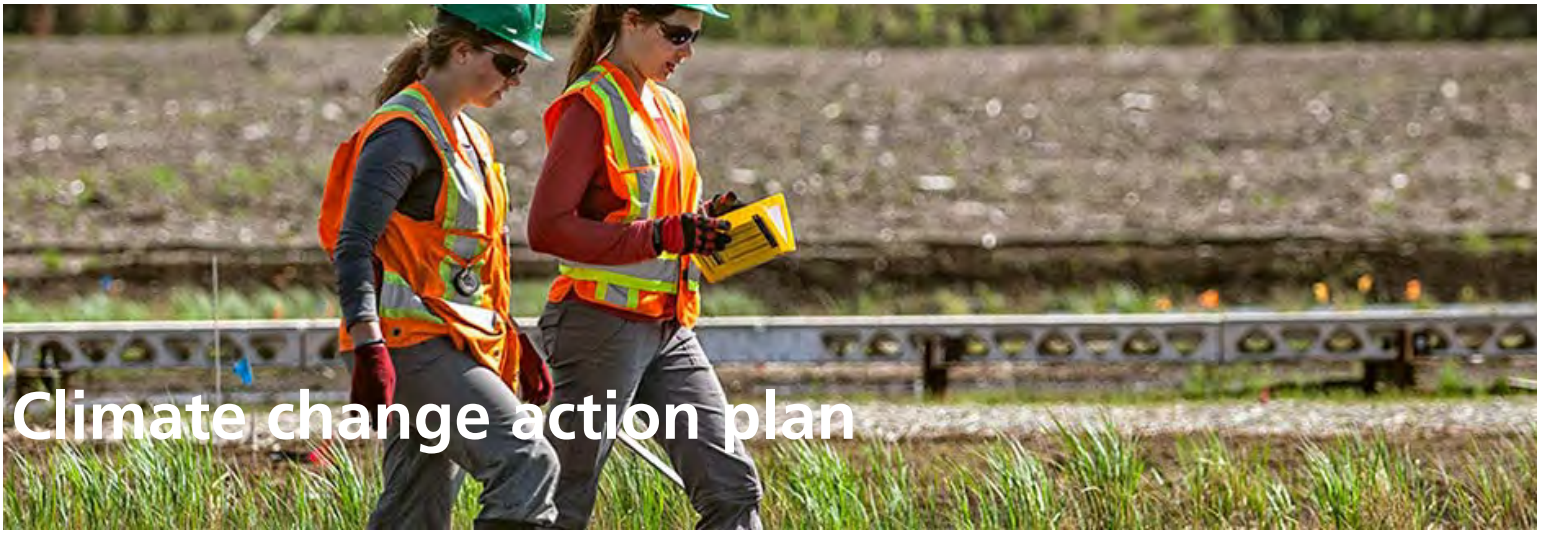
Standard practices and methodologies

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 that 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:

- IPCC fourth assessment report 2007
- American Petroleum Institute Compendium 2009
- World Business Council for Sustainable Development/World Resources Institute Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard 2004
- U.S. Environmental Protection Agency AP-42 Fifth Edition June 2007
- Environment Canada Greenhouse Gas Inventory 1990 – 2007 Report 2009
- Environment Canada Facility Greenhouse Gas Reporting Program
- Canadian Industrial Energy End-use Data and Analysis Centre 2009
- Intergovernmental Panel on Climate Change 2006 Guidelines for National Greenhouse Gas Inventories
- IPCC Guidelines Reference Manual (volume 2)
- Western Climate Initiative (WCI) Design for the WCI Regional Program, July 2010
- Alberta Environment and Sustainable Resource Development Specified Gas Emitters Regulation Technical Guidance Documents

- U.S. Environmental Protection Agency Mandatory Reporting Rule: GHG Reporting Program
- National Renewable Energy Laboratory Life Cycle Assessment of Hydrogen Production via Natural Gas Steam Reforming (PDF, 33 pp., 634.43 KB)



Climate change action plan

On this page:

We recognized early on that climate change would be an important issue for our company and our stakeholders. That's why we introduced a seven-point action plan in 1997.

Guided by this plan, we have made substantial progress in reducing the overall carbon intensity of our operations (i.e. the amount of carbon emitted for each barrel or cubic metre (m^3) of oil produced or refined).

While much has changed over the years, our climate change strategy remains a reliable guide for an era when there is increased focus on the need for collaboration, investment in emissions-reducing technologies and constructive public policy development.

Read more about our public policy participation

Seven-point action plan

Below is a summary of actions we continued to take in 2014 on our seven-point action plan to better manage our greenhouse gas (GHG) emissions and constructively address the climate change challenge.

Expand all | Collapse all

1. Manage our own emissions

- Absolute emissions slightly decreased while emissions intensity increased. The slight decrease in absolute emissions was mainly due to divestments in the North American Onshore (NAO) business unit in late 2013 and 2014, and was offset by record production at Firebag after the completion of the Stage 4 ramp-up to full rates. The overall Suncor increase in emission intensity can be attributed to additional In Situ production, which has higher emission intensity and is now starting to represent a larger portion of our overall corporate portfolio than in past years.
- We believe our most effective near-term opportunity for reducing our GHG emissions and emissions intensity is through improved energy efficiency and plant reliability. We also continue to invest in longer-term technologies that hold the potential of significantly reducing emissions intensity and ultimately bending the curve on absolute emissions growth.
- In 2014, we continued to implement a comprehensive Energy Management System (EMS) across all of our onshore operated facilities. While much progress has been made, we now expect to complete this by the end of 2016.

  EMS is one enabler for us to achieve our company-wide 10% improvement in energy efficiency target by 2015 (as compared to 2007). EMS involves the implementation and sustainment of a comprehensive system that monitors, benchmarks and improves the energy efficiency of our facilities through operational discipline and targeted projects.

2. Develop renewable sources of energy

We continued to pursue our 'parallel path' for energy development – building today's oil sands, offshore oil and natural gas resources while also bringing along new sources of energy for tomorrow.

- We operate Canada's largest ethanol production plant, and are currently involved in 7 wind farms, totaling 295 megawatts (MW) of capacity.
- The 40 MW Adelaide wind farm is now operational.
- The 100 MW Cedar Point II wind farm is currently under construction with a commission date planned for December 2015.
- Currently, our combined renewable energy portfolio displaces about 1 million tonnes of carbon dioxide (CO_2) per year – the equivalent of the annual tailpipe emissions of about 235,000 typical cars.

Read more about renewable energy

3. Invest in technology and innovation

We continued to play a leading role in 2014 in developing long-term alternative bitumen extraction technologies that could result in significantly reducing the GHG emissions intensity of oil sands production.

To achieve further carbon intensity reductions and advance potential long-term climate change solutions, including carbon capture and storage (CCS), we continued to work through organizations like:

- Integrated CO_2 Network
- Carbon Management Canada
- CO_2 Capture Project
- Alberta Innovates – Energy and Environment Solutions
- Alberta Innovates – Tech Futures

- University of Alberta – Industrial Research Chair on Energy Systems

Among other initiatives, we are leading a collaborative research and development project that could improve the prospects for implementing CCS at in situ extraction sites.

See technology development for details

In 2012, we co-founded Canada's Oil Sands Innovation Alliance (COSIA), an alliance of 13 companies representing 90% of Canadian oil sands production.

- COSIA is committed to collaborative action to accelerate improvements in environmental performance in 4 key areas, including GHGs.
- COSIA will build on the work of other collaborative networks to share knowledge and expertise about new technologies and innovation.
- In terms of developing potential high-impact emissions-reducing solutions, COSIA is bringing together a broader range of ideas and resources and an increased capacity for implementing new approaches in a structured and disciplined way.

Visit the COSIA website for details

4. Use domestic and international offsets

Our operating wind farms continued to generate GHG offset credits. In Alberta, our offset credits accrue based on the Wind-Powered Electricity Systems Offset Protocol in the Offset Credit System. In other jurisdictions where we operate, the credits or environmental attributes accrue to the Crown utilities that purchase power. The offset credits generated at our Alberta wind farms were used by our oil sands facilities to help comply with the Alberta Specified Gas Emitters Regulation.

Read more about our wind farms on Suncor.com

Similar to our participation as a member of the Industry Provincial Offsets Group, an organization dedicated to the design of a domestic offset system, we belong to the International Emissions Trading Association (IETA).

IETA is dedicated to establishing a functional international framework for trading in GHG emission reductions. Through these affiliations, we participate in various working groups to ensure environmental integrity first and foremost, but also to create flexibility for business solutions that leverage actions and opportunities across the globe and the entire Canadian economy.

The IETA Canadian Working Group has been effective in:

- collaborating to help structure dialogue and alignment work related to harmonizing GHG emissions monitoring, reporting, and verification systems
- compatibility of market infrastructure (i.e., tracking and registries)
- offset system development and protocol alignment
- technology fund design
- informing provincial-federal GHG emission equivalency agreements through regular dialogue between industry, provincial, territorial and federal governments

We also made a 10-year commitment to the Rio Bravo Carbon Sequestration Project in Belize. The project involves the conservation and sustainable management of more than 51,000 acres of forest in northwest Belize.

In 2011, part of this project was certified under the Verified Carbon Standard as a United Nations Reducing Emissions from Deforestation and Forest Degradation project. The balance, in which Suncor has an interest, suffered hurricane damage in 2010 and likely will not be certified until an assessment can be made of the long-term impacts.

The project is providing valuable learning to the forestry community, offset developers and policymakers on issues such as permanence and leakage, and demonstrates how saving forests is part of the climate change solution.

5. Collaborate on policy development

We consult with provincial, state and federal governments on energy and climate change policy. We're also working with Canada's EcoFiscal Commission on fiscal policies that will support economic growth and improved environmental performance.

When it comes to climate change regulations, we continue to press for:

- clarity and certainty – our investors want to know what the rules are and be assured of their longevity, given that our major projects require significant capital up front and are operational for decades
- fairness (nationally and internationally) so no one industry or region is unfairly targeted or disadvantaged
- international standards that promote sustainability reporting and transparency
- flexibility in compliance mechanisms, so that companies can take the action that is the most cost-effective and appropriate considering the specifics of their operation
- harmonization that occurs across jurisdictions to avoid overlap and inefficiencies, particularly across the integrated North American energy market
- the technology fund construct as a means to harnessing oil sands wealth in the research and innovation necessary to change the Canadian energy system over the long term and keep Canada a competitive global energy player

We view GHG emissions trading and other carbon pricing mechanisms as useful tools. We also believe that to be effective, climate change policy must encourage consistent and patient investment in new technologies that will transform how we produce and use energy. Strategic technology investments can lead to deep emission reductions, but there needs to be a willingness to direct industry and public funds toward innovation. Cap-and-trade or carbon pricing policies alone will not accomplish this.

Read more about public policy participation

6. Educate employees and the public

Energy literacy is a necessary foundation for truly innovative and practical energy solutions. We continue to work with leading organizations to promote energy literacy.

Through Suncor and the Suncor Energy Foundation, we've invested in:

- The Natural Step in the development of an Energy Futures Lab in Alberta, bringing together innovators and influencers to collectively address current and future energy challenges
- Pollution Probe's efforts to advance energy literacy and a systems-based approach to thinking about energy through the Energy Exchange
- Quality Urban Energy Systems of Tomorrow, an organization that seeks to foster an integrated, community-based approach to resolving energy and environmental challenges
- the development of a national community of practice for energy literacy through the Canada Science and Technology Museum
- a speaker series in partnership with The Walrus Foundation called The Walrus Talks Energy. In 2014, Talks were held in Vancouver and Ottawa highlighting various perspectives on the current and future energy system
- an initiative by The Pembina Institute, called Green Energy Futures, which profiles stories of real people and their experiences with using green energy technologies in their homes and communities through a multi-media platform
- Student Energy and their global activities to educate and connect people and ideas around the future of energy development
- Alberta Council for Environmental Education and its efforts to develop and introduce environmental and energy literacy into the Alberta education curriculum
- GreenLearning's development of an educational dialogue for high school students on the sustainable development of Canada's oil sands

- our employees, who continue to take individual accountability for reducing waste and improving energy efficiency as part of our employee engagement initiative. This initiative extends from lunchtime sessions on energy conservation to recognizing employees for energy efficiency and GHG emission reduction projects through our President's Operational Excellence Awards.

Read more about community investment on Suncor.com

7. Measure and report our progress

- In March 2015, we filed our 8 annual GHG emission compliance reports for our Alberta operations with the Alberta government to the province's Specified Gas Emitters Regulation.
- We are also in compliance with all applicable requirements of the European Union Emission Trading System.
- We annually report to Environment Canada for all our facilities in Canada that emit over 50,000 tonnes of CO_2 equivalent, to the U.S. Environmental Protection Agency for our Commerce City facility and to the provincial jurisdictions of Alberta, Ontario, Quebec and British Columbia in compliance with their reporting requirements.
- We report our overall progress on managing GHG emissions to all stakeholders through our Report on Sustainability and CDP Climate Change.
- For business planning purposes, we model the emissions associated with all of our future operated production, including growth projects, to assess our risks and identify opportunities associated with existing and anticipated carbon regulatory regimes. Our future carbon price assumption takes into account the best information we have from carbon markets and emerging public policy in the jurisdictions where we have material operations. Our model includes a carbon price that starts at $15 per tonne and rises to about $60 per tonne. Our model assumes the carbon price applies to a gradual increased percentage of our emissions over time. Read our 2015 CDP response (PDF, 86 pp., 962 KB).

Water

On this page:

We believe water is a shared and precious resource that must be managed wisely. Responsible energy development means balancing industry's water requirements with the need to maintain a clean, safe and plentiful supply of this important natural resource for current and future generations. We strive to always raise the bar on company-wide water performance and water management practices.

Our water performance

We view water management as a key part of our Environmental Excellence Plan. As we pursue our goal of reducing corporate-wide fresh water consumption by 12% by 2015 (as compared to 2007), all of our upstream and downstream operations are realizing opportunities for more sustainable water use.

We are paying particular attention to our oil sands mining operations, which represent our biggest draw on fresh water resources.

Read more about mining

A key benchmark – particularly during periods of production growth – is the amount of water consumed for each barrel of oil produced, also known as water consumption intensity. Suncor is making significant progress in this area.

In 2014, our oil sands mining operation consumed 1.60 cubic metres (m^3) of water to produce 1 m^3 of oil – a 30.7% reduction in water consumption intensity since 2007.

Read more about our fresh water consumption goal

How we use and recycle water

Water is an essential part of our operations. It's important to find ways to more effectively and efficiently use and recycle water across our business units.

Some key examples:

Expand all | Collapse all

Mining

Our mining operations mix oil sands with water to separate out the bitumen. The cleaned sand and water are then sent to tailings storage ponds where the sand settles out and the water is recycled back to the extraction process.

Approximately 85% of the water used by our mining and extraction operations is recycled tailings water. The primary source for the rest is the Athabasca River in one of Alberta's largest river basins.

Read more about our mining operations on Suncor.com

Our Oil Sands base plant is licenced to withdraw up to 59.8 million m^3 of water annually from the Athabasca – about 0.3% of the river's annual average flow. We continue to operate well below our water licence even as production levels increase.

In 2014, for example, we withdrew 18.65 million m^3 of water from the Athabasca, while releasing 1.45 million m^3 of treated water back into the river.

We have a separate water licence allocation of up to 32.3 million m^3 of water annually for the Fort Hills project, which was sanctioned in 2013 and is expected to begin production in late 2017. Taken together, the base plant and Fort Hills allocations represent about 0.47% of the Athabasca River's annual average flow.

Another leading indicator of our oil sands mining water performance is that our gross fresh water withdrawal from the Athabasca River has declined by 57% since 2007 when 43.7 million m^3 of fresh water was withdrawn.

Collaboration on regional water stewardship

As the oil sands industry grows, we recognize the need to increasingly focus on the cumulative demands development places on regional water resources over the long term. Understanding that water impacts and challenges extend well beyond our own plant gates, we are also working closely with fellow oil sands operators, regulators and other stakeholders to move beyond just water management to water stewardship in the Athabasca River watershed.

Beginning in 2009, we've worked as part of the Oil Sands Leadership Initiative, now Canada's Oil Sands Innovation Alliance (COSIA), to advance a regional understanding of water. Suncor has either led or collaborated on projects that target 3 critical areas:

- understanding the watershed (users, flow, water quality and regional stakeholders) now and in the future
- understanding water use on our operational site and opportunities to reduce, reuse and return water in the watershed
- continuing to develop strong environmental monitoring in the watershed

Our regional collaborative work is key to ensure we find the right balance for all water users and the environment.

Through COSIA, Suncor and other member companies have executed more than 17 projects and contributed more than 100 technologies on these 3 critical areas of water stewardship.

Read more about our water management strategies

In situ

Our in situ operations reach oil sands deposits buried too deep to be mined (about 97% of the reserves that underlie the oil sands surface area are in this

category). We use water to create the high-pressure steam that is injected through a well to heat the bitumen underground.

This process makes the bitumen less viscous, allowing it to flow to the surface. Most of the steam condenses in the reservoir and returns to the surface with the oil. This water is then separated, treated and recycled.

Approximately 96% of the water used at our Firebag in situ sites is recycled. The makeup is drawn from recycled wastewater from our oil sands upgrading and utilities operations, eliminating the need for fresh surface water or groundwater, which could be used for drinking water. Starting in 2013, we've sent tailings water as makeup water to Firebag.

Read more about our oil sands water management strategy

At our MacKay River in situ facility (where about 98% of the water is recycled), the majority of makeup water comes from groundwater. Most of that water is too high in salt and mineral content to be used for drinking water or agriculture.

Advancing in situ water technologies

As part of COSIA, we are working with industry partners to develop the Water Technology Development Centre (WTDC), which will advance new water treatment and recycling technologies for in situ oil sands development. The $165 million WTDC, which is expected to begin construction in 2015 and open in 2017, will be attached to our Firebag in situ operations, allowing researchers to test new technologies on 'live' process fluids.

The WTDC will also allow participating companies to test more technologies than could be evaluated by each company individually while collaboratively managing the risks and costs of technology development. It will shorten the time required to field test technologies and move them to commercial application. Other targeted benefits include:

- reducing the cost of water recycling
- increasing steam and bitumen production
- improving the reliability of water recycling technology
- reducing water use and energy efficiency
- developing and applying improved technologies and practices for managing water treatment byproducts

Our refineries draw on local fresh water sources

Our 4 refineries use water for heating and cooling. The Montreal, Edmonton, Sarnia and Commerce City refineries draw on local freshwater sources.

In the case of our Edmonton refinery, approximately 34% of the total water withdrawn in 2014 was recycled wastewater supplied from the municipal Gold Bar Wastewater Treatment Plant, significantly reducing the amount of freshwater withdrawn from the North Saskatchewan River.

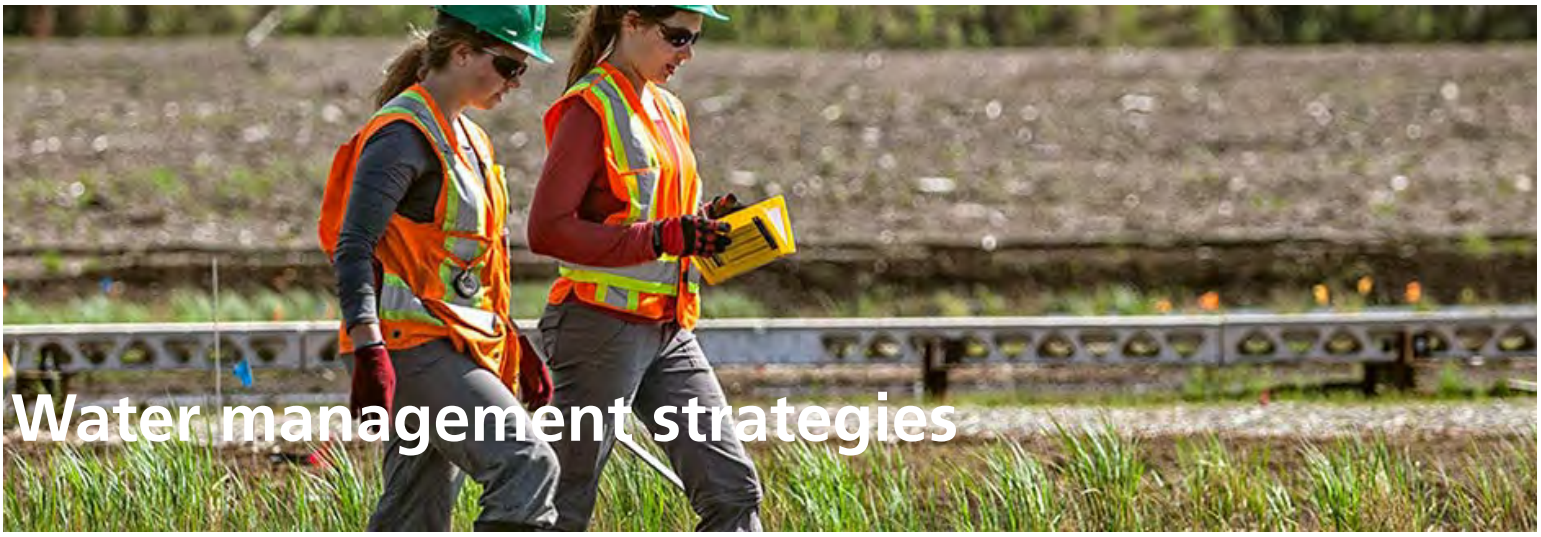
Our lubricants centre in Mississauga, Ont. also uses water, drawing it from Lake Ontario for process use in the manufacture of lubricants. Once that water has been used, it is treated through the facility's own full-scale wastewater treatment plant before being returned to the lake.

Visit lubricants.petro-canada.ca for more information

East Coast Canada

The only fresh water consumed in our offshore operations is for cooking, drinking, showers and other domestic purposes. In our East Coast Canada operations water is either produced offshore through desalination or is transferred via vessel from St. John's, N.L.

Read more about offshore operations on Suncor.com



Water management strategies

On this page :

Water stewardship

Suncor's approach to water stewardship is focused on 4 key principles:

- shared value of water in society
- taking a watershed-wide perspective (taking into consideration all users and stakeholders in the Athabasca watershed, an area that extends from the headwaters near Jasper, Alta. all the way to the Arctic Ocean)
- reduce, reuse and return (such as having a responsible water footprint that reuses water whenever we can and returns water back to the watershed in a responsible manner
- ensuring we balance the trade-offs inherent in managing water (like balancing the need to reduce our water footprint against the energy risks, including greenhouse gas (GHG) emissions, and land disturbance risks inherent in water management and treatment processes)

These 4 principles guide the major components of our water stewardship framework. Those components are:

- understanding our water use in the context of the watershed we operate
- understanding our water use on our sites to know our risks and opportunities for reducing, reusing and returning water
- monitoring water both on our site and in the watershed to enable the framework to adapt to changes in water quality and quantity over time

Using this approach, Suncor is currently executing a water management strategy to reduce the amount of water stored on site in tailings ponds and manage water quality in the system. The strategy contains 3 phases and more than 15 projects that:

- conserve or eliminate water use
- reuse water where possible
- return water back to the environment

Our industry-leading oil sands water strategy is designed to help us reduce our water footprint and improve water quality. Overall, we will accomplish this through a combination of 2 major concepts:

Concept #1: Directly reuse tailings water

The first major phase of our water strategy, formally commissioned in 2013, involves sending treated tailings water from our Oil Sands base plant to our Firebag in situ facility through an existing pipeline. There, the tailings water is used as a makeup water supply.

The result is a system designed to allow up to 10,000 cubic metres (m^3) (or 4 Olympic-sized swimming pools) of tailings water per day to be used as in situ makeup water instead of being stored in tailings ponds. In 2014, we transferred 2,800 m^3 of tailings water per day, which helps to manage excess water in tailings and improve water quality.

This project is unique in several respects. Reusing tailings water for makeup water in the in situ extraction process is new not only for us, but for the entire industry.

This initiative was 1 of 3 separate projects to be honoured with the President's Award during the Canadian Association of Petroleum Producers (CAPP) Responsible Canadian Energy Awards in 2014.

Concept #2: Recycling industrial wastewater

Our plans for a $190 million wastewater treatment facility have moved from conception to implementation. The plant, which opened in 2014, is designed to take wastewater from our upgrading pond and remove solids and oils, so we can reuse that water in our operations or return it to the environment.

The plant can recycle all of the upgrading wastewater (between 22,550 and 43,222 litres of water per minute, depending on the time of year). That's the equivalent of 12 to 35 Olympic-sized swimming pools per day and could offset the need for river water by an equivalent amount.

This project allows Suncor greater flexibility to manage water across the site depending on overall needs and changes to the watershed. With the wastewater treatment plant in operation, Suncor is capable of reducing our river water withdrawal by about 65% compared to 2007.

The next step: expand initiatives to treat and reuse tailings water and wastewater

The third phase of our strategy will target further water use reductions by designing more systems to reduce and reuse water (tailings or wastewater) from operations for a variety of purposes. These improvements in efficiency will reduce the amount of fresh water we require.

As we continue to lead and innovate, we will share the lessons learned with our industry peers through Canada's Oil Sands Innovation Alliance (COSIA). By doing so, we are confident we can reduce the regional operational footprint and better protect natural water resources.

Read more about collaborative water management in OSQAR

Water quality monitoring

On this page:

Suncor recognizes the importance of preserving the health of the Athabasca River. We are working with governments, industry peers and stakeholders to support strengthened aquatic monitoring programs aimed at minimizing the impact of oil sands development on the Athabasca watershed.

Water quality monitoring is an integral component of water stewardship, and there are multiple points where we monitor water quality and then use that information to adapt our water use. Water quality monitoring occurs inside our operations, at the points where we return water and also in the watershed:

- Monitoring water on our site allows us to understand the drivers for managing risks as well as opportunities to reduce, reuse and return water. It also provides us with information on the need to develop new water technologies.
- Monitoring water where it is returned to the river ensures we meet all stringent quality standards. It also helps identify how our treatment systems operate and areas where we need to make improvements.
- Monitoring in the river is the key step to detecting and understanding changes in the river. This information is used to set water use as well as effluent guidelines for all watershed users.

Taken together, these monitoring efforts create an overall water stewardship framework that contributes to preserving the value of water in the watershed.

Ongoing aquatic monitoring

The Athabasca River provides habitat for many fish species and other aquatic organisms, and feeds into Lake Athabasca. It is also a water source for the industry.

To ensure the health of the river is maintained, we analyze our discharges and support ongoing aquatic monitoring of the Athabasca River. In the past, aquatic monitoring was carried out through the Regional Aquatic Monitoring Program (RAMP). That function is now overseen by the Alberta Environmental Monitoring, Evaluation and Reporting Agency (AEMERA).

Suncor and other oil sands developers provide up to $50 million annually to support AEMERA's environmental monitoring programs. AEMERA is accountable for environmental monitoring throughout Alberta and, as of April 2014, AEMERA assumed provincial responsibility for the Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring.

The Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring

In 2012, the Government of Canada and the Government of Alberta launched the Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring. The plan was jointly managed by the 2 governments to strengthen existing environmental monitoring programs for air, water, land and biodiversity in the oil sands region.

The plan was implemented over 3 years, ending in March 2015. It has resulted in:

- a larger number of sampling sites over a larger area
- a larger number and additional types of parameters being sampled
- a higher frequency of sampling
- improved methodologies for monitoring both air and water
- an integrated, open data management program

In terms of water monitoring, key features include:

- improved co-ordination of sampling practices to improve the understanding of potential cumulative impacts
- new sediment monitoring throughout the Athabasca River system to establish baseline and downstream conditions of potential contaminant
- new systematic sampling of snow and rainfall to assess the relationship between airborne processes, deposition and surface runoff entering tributaries and moving downstream
- new monitoring techniques for measuring potential ice contaminants, ice processes, the impact of freeze-up and breakup, sediment processes and water measurement under ice
- new integrated and intensive scientific investigations on representative watershed
- new intensive monitoring of sources of potential near-surface groundwater contaminants and pathways

The monitoring program will undergo external expert peer review after the third year of implementation and at 5-year intervals thereafter. The data from the monitoring program, and the methodology used to produce it, will be made public on an ongoing basis.

We strongly support AEMERA as it continues to develop the programs initiated under the Joint Oil Sands monitoring program. We are working with governments, industry peers and other stakeholders to ensure the strengthened monitoring system is implemented effectively and efficiently as we pursue the shared goal of minimizing the impact of oil sands development on the Athabasca watershed.

Read more about the Alberta Environmental Monitoring, Evaluation and Reporting Agency (AEMERA)

Water withdrawal in low flow conditions

On this page:

Of all major rivers in Alberta, the Athabasca River already has one of the lowest allocations, or licensed withdrawals levels – just 4.3%. By comparison, 28% of the North Saskatchewan River's flow is allocated, while more than 66% of both the Oldman and the Bow rivers are licensed for withdrawal.

Despite the low allocation, oil sands operators withdraw as little water as possible for operations. The more water operators withdraw, the more we have to treat and store in tailings ponds. Using less water is not only good for the environment but it also makes good business sense.

Reducing our water withdrawals

Suncor strives to continuously improve its water management practices. Through better water reuse and recycling in our operations, we have reduced our gross water withdrawal from the Athabasca River by approximately 57% since 2007, when 43.7 million cubic metres (m^3) of fresh water was withdrawn. Our total water withdrawal is now below 1998 levels, even though production has more than tripled since that time.

We have committed to reducing our company-wide freshwater intake by 12% by 2015 (as compared to 2007).

Addressing stakeholder concerns

Many of our stakeholders remain concerned about the amount of water oil sands producers are allowed to withdraw from the Lower Athabasca River. Industry, First Nations, Aboriginal Peoples, environmental groups and government bodies have discussed the issue at length. To address those concerns,

Alberta Environment and Sustainable Resource Development (AESRD) announced the Lower Athabasca Regional Plan (LARP) Surface Water Quantity Framework.

Water management frameworks

In 2007, the Alberta and Canadian governments introduced the Phase I Water Management Framework for the Athabasca River, which set new restrictions on how much water the oil sands industry can cumulatively withdraw from the river during varying flow conditions – in particular, during low flow periods in the winter.

Following implementation of Phase I, a multi-stakeholder committee developed the Phase II Water Management Framework, which AESRD has used as the basis for the LARP Surface Water Quantity Framework.

The LARP Surface Water Quantity Framework, scheduled to come into force in 2015, includes an ecosystem base flow (EBF). The EBF defines flow rates at which most oil sands water withdrawals would cease as a way of minimizing the risk of harm to river biodiversity.

Studying the Athabasca River

Millions of dollars have been invested to study the Athabasca River and try to predict what could happen at low flows. This has included:

- modelling low flows
- seeking out traditional knowledge from Aboriginal Peoples in the region
- involving world-class experts
- extensive sampling and monitoring

Water withdrawals have been happening since the 1960s with no apparent impacts. The new Surface Water Quantity Framework should ensure no impacts occur in the future.

Recommended base flow rate

The LARP Surface Water Quantity Framework's EBF for the river is 87 cubic metres per second (m^3/s) – a rate so low that it has never happened since river monitoring began. At that flow, most current and future oil sands mining operators would stop withdrawals from the river and rely entirely on stored water.

The exceptions are Suncor and Syncrude, which due to legacy plant designs are unable to store the water required to completely cease water withdrawals. However, we have both agreed to reduce our withdrawal rate by 50% at the EBF and we are evaluating additional measures to reduce withdrawals even further.

The reason for the exemption for Canada's 2 oldest oil sands operators is that our licences were granted in the 1960s and 1970s based on the way plants were designed then – without on-site water storage facilities. Our mining operations, as well as Syncrude's, cannot operate without at least some fresh water intake, especially in the winter.

All new oil sands mines, including Suncor's Fort Hills mine scheduled to begin operations in late 2017, have on-site water storage facilities to supply water when withdrawals are not permitted.

The general consensus (including ours) is that, at some extreme low flow, all water withdrawals should cease. However, we believe further monitoring, such as the programs undertaken by AEMERA, is required before the appropriate level can be determined. In the meantime, both Suncor and Syncrude have agreed to voluntarily reduce water withdrawals to half the maximum permitted allocation during periods of low flow.

Water storage and land disturbance

For us to build water storage facilities now would require significant land disturbance beyond our existing mining footprint. The energy required to pump water to and from the storage facility would be significant. We believe this would have a negative impact on the environment, especially given the rare occurrence of the base flow rates envisioned by the LARP Surface Water Quantity Framework.

Read more about our reclamation efforts

Air

On this page:

We responsibly manage our operations and are committed to reducing air emissions to preserve healthy ecosystems. Our key focus areas for air emissions include:

- SO_2
- NO_x
- VOCs

Overall, total Suncor air emissions in 2014 decreased by 2.2% compared to 2013 levels. This change can be attributed to a decrease in emissions at our downstream operations and divestments in our North America Onshore (NAO) business*, slightly offset by increases in our In Situ and Oil Sands operations. The Firebag stage 4 expansion was completed in 2014 and overall production at Firebag increased 20% compared to 2013.

*Note: In late 2014, we closed the sale of our Wilson Creek natural gas plant and other fields in Alberta. Reported numbers for NAO reflect assets owned throughout 2014 as well as divested assets up to their date of sale.

Air quality monitoring

We are a member of the Alberta-based Wood Buffalo Environmental Association (WBEA), which monitors air quality across the oil sands region 24 hours a day, 365 days a year. WBEA provides ambient air quality data and a real-time air quality index (updated hourly) that are available to the public through the WBEA website.

We also support air monitoring through the following multi-stakeholder airsheds/organizations which monitor and report air quality around the clock, and ensure timely availability of air quality monitoring results to the public and government agencies, as required.

Alberta

- Peace Airshed Zone Association
- Parkland Airshed Management Zone
- Alberta Capital Airshed, through involvement in the Strathcona Industrial Association
- Alberta Clean Air Strategic Alliance

Ontario

- Sarnia Lambton Environmental Association
- Clarkson Airshed Study, through participation in the Clarkson Airshed Industrial Association

Montreal

- We collaborate with the Service de l'environnement de la ville de Montréal by providing ambient air quality monitoring data for reporting and analysis.

We strongly support the Alberta Environmental Monitoring Evaluation and Reporting Agency (AEMERA), which started operation in 2014 and is legislated under Bill 31, Protecting Alberta's Environment Act. AEMERA also leads the province's involvement in the Joint Oil Sands Monitoring (JOSM) project, working with the federal government and stakeholders in the oils sands region to coordinate and enhance environmental monitoring activities in the area. AEMERA provides open and transparent access to credible and relevant scientific data and information on the condition of Alberta's environment to policymakers, regulators, planners, researchers, communities, stakeholder groups, industries and the general public.

We also continuously work with governments, industry peers and other stakeholders to ensure these additional monitoring measures are implemented effectively and efficiently as we pursue the shared goal of minimizing the impact of oil sands development on regional air quality.

Sulphur dioxide (SO_2)

SO_2 emissions directly affect air quality.

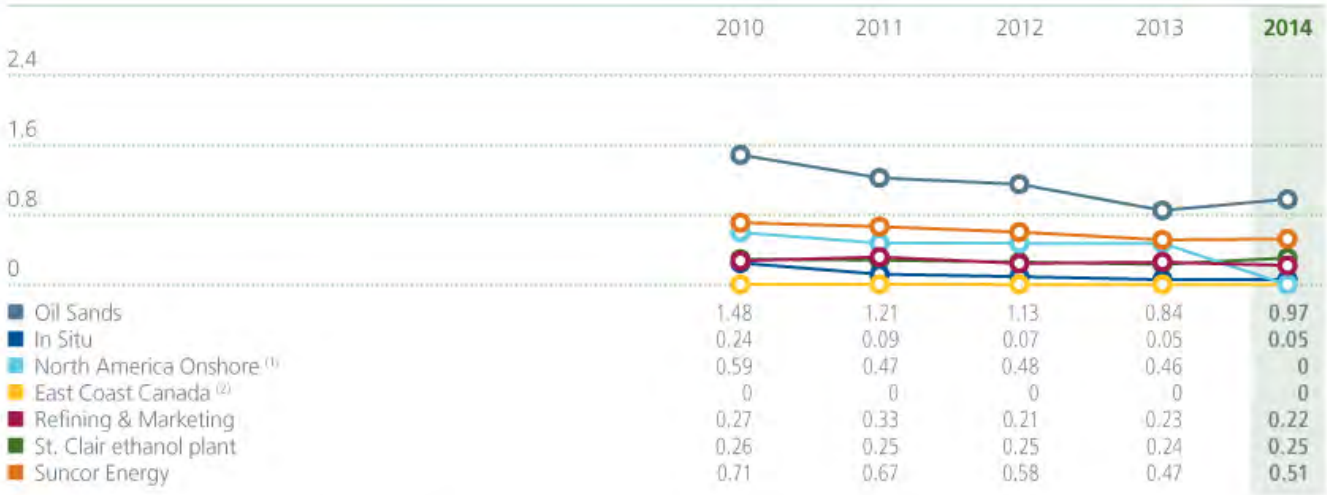
In 2014, company-wide SO_2 emissions intensity increased by 8.5% as compared to 2013. The increase in year-over-year emissions was primarily due to differences in how outages were managed from our Oil Sands energy and utilities plant.

In 2013, we had an extensive plant turnaround during which there were no emissions from the coke-fired boilers. However, in 2014, our flue gas desulphurization was under routine maintenance, so emissions from the coke-fired boilers were routed to another stack. Compared to years prior to 2013, our SO_x intensity has been steadily decreasing through the use of alternate fuels (such as natural gas) and improved management systems.

While absolute SO_2 emissions from our In Situ facilities also increased year-over-year mainly due to completion of Firebag's 3 and 4 expansion phases, overall intensity remained the same. Absolute SO_2 emissions also decreased within North America Onshore due to divesture of assets.

In mid-2014, Suncor completed acquisition of a Montreal sulphur plant, a sulphur recovery facility now integrated into our Montreal refinery operations. SO_2 emissions from this facility since acquisition are also included in total Suncor SO_2 emissions.

SO_2 EMISSIONS INTENSITY
(kg/m³ production)



	2010	2011	2012	2013	2014
Oil Sands	1.48	1.21	1.13	0.84	0.97
In Situ	0.24	0.09	0.07	0.05	0.05
North America Onshore (1)	0.59	0.47	0.48	0.46	0
East Coast Canada (2)	0	0	0	0	0
Refining & Marketing	0.27	0.33	0.21	0.23	0.22
St. Clair ethanol plant	0.26	0.25	0.25	0.24	0.25
Suncor Energy	0.71	0.67	0.58	0.47	0.51

(1) Reported numbers in 2014 for North America Onshore represent assets owned throughout 2014 as well as divested assets up to their date of sale.
(2) Data only includes emissions from the Terra Nova FPSO vessel off the east coast of Canada.

Download

Nitrogen oxides (NO_x)

NO_x emissions also directly affect air quality.

Company-wide absolute NO_x emissions and emissions intensity decreased in 2014. Compared to 2013, absolute NO_x emissions decreased by almost 16% and emissions intensity decreased by 9%. The lower NO_x emissions in 2014 are mainly due to decreased emissions from our downstream facilities, Oil Sands operations, and divestiture of NAO operations.

The decrease in total NO_x emissions and intensity in Oil Sands is largely from mining operations' use of low emissions technology improvements in mining equipment and decrease in haul truck operating hours.

The decrease in NO_x emissions intensity from Terra Nova and our Firebag in situ facility was the result of increased production from the facility in 2014 as compared to 2013.

The increase in NO_x emissions intensity from our NAO assets was a result of less production due to the asset divestures.

NOx EMISSIONS INTENSITY
(kg/m³ production)

	2010	2011	2012	2013	2014
Oil Sands	1.44	1.30	1.29	1.13	1.06
In Situ	0.21	0.37	0.27	0.25	0.23
North America Onshore (1)	1.17	1.07	0.93	0.99	1.81
East Coast Canada (2)	0.62	0.89	1.09	0.93	0.90
Refining & Marketing	0.16	0.17	0.17	0.17	0.15
St. Clair ethanol plant	0.49	0.47	0.46	0.46	0.47
Suncor Energy	0.79	0.78	0.74	0.67	0.61

(1) In 2014, North America Onshore (NAO) absolute NOx emissions reduced; intensity increased as a result of less production due to the divestures of NAO assets in 2013 and 2014.
(2) Data only includes emissions from the Terra Nova FPSO vessel off the east coast of Canada.

Download

Volatile organic compounds (VOCs)

VOCs can directly, as well as indirectly, affect air quality though synergistic interactions with other substances in the natural environment.

Annually we measure our fugitive VOC emissions from mining areas, dedicated disposal sites and ponds. The measurement program is in accordance with the 2014 AESRD guidelines. However, we know that the methodology recommended to conduct fugitive emissions monitoring is highly dependent on weather conditions and results in significant uncertainty in the accuracy of the measurements. Collaborative efforts are underway through Canada's Oil Sands Innovation Alliance to improve accuracy of fugitive atmospheric emissions monitoring.

Significant reductions in VOCs from Terra Nova in 2014 can be attributed to installation of our hydrocarbon blanket gas and recovery system. This system blankets cargo tanks with pure hydrocarbon gas recovered during production and effectively eliminates the release of VOCs. The hydrocarbon blanket was 100% efficient for 11 months in 2014, resulting in a reduction of inert gas usage and fewer emissions of this substance to air. The system was only operational for 7 months in 2013.

Increases in VOC emissions from other business areas were largely the result of increased production.

Flaring

On this page:

Flaring can concern stakeholders as it involves a visible flame at the end of a tall stack. While flaring is important from a safety and environmental standpoint, we are working to reduce flaring events across our operations.

What is flaring?

Flaring is the controlled combustion of excess hydrocarbons, and other contaminants that cannot be handled by processing facilities, at the end of a flare stack or boom. It is a necessary practice at any energy facility to manage gases that accumulate as hydrocarbon feedstocks are transformed into useful products.

Why do we flare?

There are many safety and environmental reasons for flaring:

- Dispose of waste gas that would pose a hazard to workers, nearby residents and facility equipment if it were released in non-routine occurrences like emergencies, process upsets, equipment failures or power outages
- Safely depressurize a process unit to reduce risk of pressure build up that, if unmanaged, could lead to a combustive incident
- Reduce the toxicity of gases by converting those toxic components, such as hydrogen sulphide (often found in sour gas), into less harmful substances like sulphur dioxide
- Convert hydrocarbons into carbon dioxide, which is a less harmful greenhouse gas and easier on the atmosphere than volatile organic compounds

How is flaring controlled?

Flaring, like other aspects of energy production, is tightly regulated. In Alberta, the Alberta Energy Regulator ensures companies that flare are doing so in a controlled and monitored way.

For certain types of emissions, like sulphur dioxide, releases must fall within regulator-approved quantity limits. These limits are put in place to maintain high quality air standards for areas neighbouring operations. Emission levels exceeding these limits are subject to penalty.

Can flaring be eliminated?

New technologies and industry best practices show promise for reducing or even eliminating flaring by:

- minimizing waste gas production from processing units
- using waste gas in production instead of releasing it

Using these technologies and best practices it would be possible for us to:

- capture energy value that would have otherwise been wasted
- minimize emissions of greenhouse gases and other air pollutants

The reliability of our operations and equipment used also greatly impacts the need to flare. Implementing effective procedures and controls throughout our operations is critical to minimizing overall flare volumes. Through stringent procedures and controls, we can minimize waste gas volumes, make use of waste gas recovery systems and recycle recovered gas for reuse as fuel or process gas.

Flaring simply because it is convenient or because it has been a long-standing industry operating practice is unacceptable; however, while industry's objective is to eliminate routine flaring and minimize non-routine flaring, emergency flaring is still the most fail-safe operational measure available to prevent a serious incident.

Land

On this page:

We recognize our operations have an impact on our shared environment, including valuable land resources.

Energy development disturbs land – there is no way around that. However, the land is not lost forever. We undertake detailed planning to reclaim land affected by development before the first tree is removed or the first shovel hits the ground.

Reducing our footprint, reclaiming land, promoting biodiversity

Our land stewardship efforts are focused in 3 key areas:

- reducing the impact of our operations on land resources through scientific research and best management practices, while also working with neighbouring companies to reduce the cumulative effects of development
- accelerating the pace of progressive reclamation of disturbed lands, including the reclamation of tailings ponds
- preserving biodiversity by working internally and with industry peers and multi-stakeholder organizations on initiatives to conserve and promote natural habitat for birds, mammals, fish and other species

Reserves that underlie 97% of the oil sands surface area are recoverable only using in situ drilling technology, which is similar to conventional oil production. In situ operations disturb about 15% of the land required for mining operations and do not produce tailing ponds. However, in situ operations contribute to forest fragmentation – an issue we are addressing through initiatives undertaken by Canada's Oil Sands Innovation Alliance.

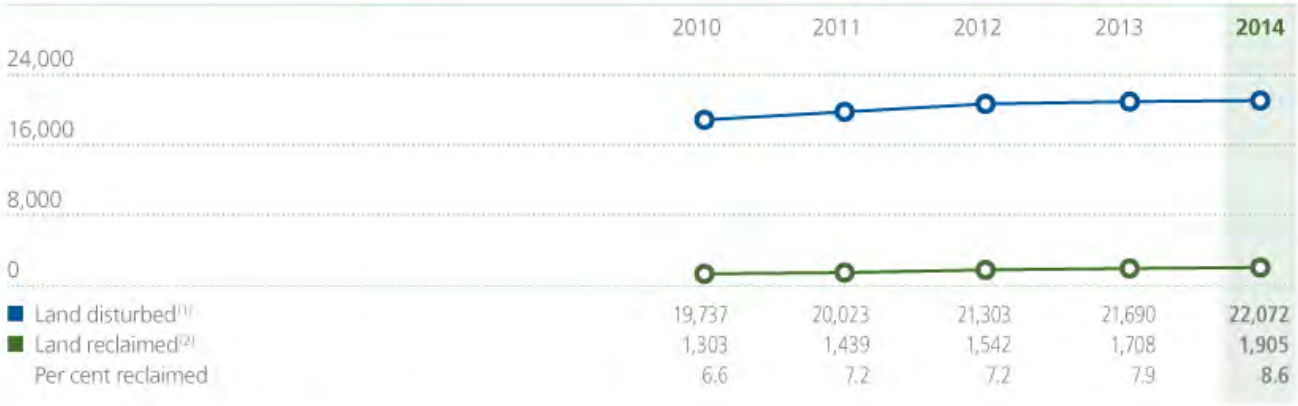
Reclamation

On this page:

Wherever our developments disturb land, we pursue progressive reclamation efforts, including reclaiming tailings ponds.

Since Suncor opened Canada's first oil sands mine in 1967, our oil sands operations have disturbed approximately 22,072 hectares of land. As of the end of 2014, the company had reclaimed* approximately 1905 hectares of this mine, or about 9% of the total land disturbance to date.

LAND USE AT OIL SANDS
(cumulative hectares)



	2010	2011	2012	2013	2014
Land disturbed[1]	19,737	20,023	21,303	21,690	22,072
Land reclaimed[2]	1,303	1,439	1,542	1,708	1,905
Per cent reclaimed	6.6	7.2	7.2	7.9	8.6

(1) Land disturbed is the total active footprint which includes the cumulative hectares (ha) for areas cleared, disturbed, ready for reclamation, soils placed and permanently reclaimed. This is used to represent all land area that has been or is currently disturbed at Oil Sands. The area reported as land reclaimed is a subset of the total active footprint and the area of non-reclaimed land at Oil Sands is 20,167 ha for the 2014 reporting year.
(2) Following Alberta Environment & Sustainable Resource Development's issuance of standards for Geographic Information Systems spatial data reporting in 2010, Suncor re-digitized all permanent reclamation areas and removed disturbance feature types (such as roads, power lines, pipelines, etc.) that occurred post-reclamation. This resulted in a removal of 96.3 hectares of re-disturbance from the total of reclaimed areas prior to 2010. As such, the changes in the reclamation areas for each year and the total area permanently reclaimed to the end of 2010 have been updated to reflect these changes. Reclaimed lands have not been certified as such. For further details on the definition of reclaimed, see the Advisories page.

Download

Land reclamation takes place once the disturbed land is no longer part of active operations. We are targeting a 100% increase in land area reclaimed* by 2015 (as compared to 2007).

Read more about our environmental performance goals

Improving reclamation techniques and accelerating the rate at which land is reclaimed are 2 key ways we strive to balance responsible resource development with the need to preserve a healthy environment for future generations.

Here are some details on Suncor's reclamation procedures and performance in 2014:

Expand all | Collapse all

Progressive reclamation: A multi-phase process

We are committed to ultimately returning all lands disturbed by our oil sands mining and in situ operations to a self-sustaining boreal forest ecosystem native to the area.

Developing a reclamation plan

Before constructing a new mine, we develop a reclamation plan in consultation with local stakeholders and government regulators. We also develop conservation and reclamation plans with respect to land disturbed by our in situ operations. The Alberta government must approve reclamation plans for all new projects.

Mining oil sands requires digging about 50 metres below the surface, creating a pit. The removed soil is known as overburden and is stored close to the mine site. These pits are often filled in with liquid tailings from the extraction process.

In the past, there was a lag time of many years between when overburden was removed and land reclamation could begin. Today, we work to reclaim disturbed lands shortly after they are created, a process known as progressive reclamation. In the case of oil sands tailings ponds, reclamation involves 2 distinct components:

- transformation of the tailings ponds into a solid, soil-capped deposit that can be re-vegetated and reclaimed
- re-vegetation in a way that the reclaimed landscape can support native boreal vegetation and wildlife as self-sustaining ecosystems

Collaborating on tailings technologies

As a company committed to accelerating environmental performance improvements, Suncor has shared details specific to our TRO™ tailings management process with fellow members of Canada's Oil Sands Innovation Alliance (COSIA). In return, we have gained access to technologies that other member companies are using to manage existing tailings ponds.

By sharing research, experience, expertise and financial commitments, we are able to investigate new tailings technologies at a more rapid pace. We expect this will result in improved tailings management now and at future oil sands mine sites.

Learn more about COSIA's tailings environmental priority area

Read more about our water management strategies

Returning the land to a self-sustaining ecosystem

Once solid enough to support vegetation, the next step is to contour the land to allow for proper drainage and a natural appearance. The landform is then capped with soil and erosion-prone areas are seeded with oats or native bunch grasses.

Native tree, shrub and aquatic seedlings are planted, and the soil is fertilized directly at the seedling roots to give the young plants help during early development years. As the trees, shrubs and aquatics take hold on the reclaimed lands, ongoing scientific monitoring is done to ensure the new forest and wetlands mature into a healthy, self-sustaining ecosystem.

By the end of 2014, Suncor had planted more than 7.2 million trees, shrubs and aquatic plants on our oil sands site – including 587,690 trees in the previous year alone.

All of the trees came from local seed, which was gathered from the surrounding natural areas adjacent to operations, or on the undisturbed parts of our leases. This ensures the trees are equipped to withstand regional climate extremes.

Areas planted in the 1980s are now seeing young conifer seedlings take root under mature trees – a positive sign of regeneration.

Another indicator of success is the increase in wildlife returning to reclaimed lands. The species spotted on our reclamation sites include:

- sensitive avian species, including green-winged teal, horned grebe, common yellow throat and least fly-catcher
- coyote
- grey wolf
- red fox
- mule deer and white-tailed deer
- snowshoe hare

- moose
- sensitive amphibian species, such as the Canadian toad
- muskrat
- otter
- beaver
- lynx

Learn about our biodiversity initiatives

Wapisiw Lookout: A reclamation milestone

In 2010, we became the first oil sands company to reclaim a tailings pond to a trafficable surface (meaning it is able to support the weight of vehicles). The pond was transformed into a 220-hectare watershed, named Wapisiw Lookout, composed of a developing mixed wood forest, streams and a small marsh wetland capable of supporting a variety of plants and wildlife.

Over the next few decades, we will closely monitor progress on Wapisiw Lookout, including the growth of 620,000 trees, shrubs and aquatics planted in 2010. Ongoing soil, water, vegetation and wildlife assessments help ensure this site is on course for return to a self-sustaining boreal ecosystem.

Read more about the Wapisiw Lookout reclamation

Wetland reclamation: Pioneering fen research

Wetlands are an important part of reclamation efforts. To date, 48.2 hectares of wetland and lake reclamation have been completed. A high research priority is developing the ability to reconstruct wetlands, including swamps, marshes and fens. Until recently, reclamation efforts had primarily focused on marshes.

In 2013, Suncor marked a milestone in wetland reclamation – the official opening of a reconstructed fen that is planned to emulate the properties of a natural fen. Our fen – one of the first reclaimed fen wetland watersheds in the world – is named Nikanotee (pronounced Nee-ga-no-tee), a Cree word meaning future.

A fen is the most common boreal wetland type found in the mineable oil sands region. Fens tend to:

- accumulate large deposits of organic matter (called peat) and are primarily fed by groundwater inputs
- be perpetually wet, storing water and releasing it slowly during dry periods
- act as filters for streams and rivers lower down, improving water quality by capturing runoff and scrubbing out nutrients and sediments
- be home to diverse biota, such as amphibians, birds, moose, and a wide range of plants – including the insect-eating pitcher plant

Located at our Oil Sands base plant near Fort McMurray, Alta., our 3-hectare fen is fed by a man-made 32-hectare watershed. The project is the culmination of 10 years of collaborative research.

The University of Waterloo led the fen hydrological feasibility modeling, in partnership with the Cumulative Environmental Management Association (CEMA). Suncor funded the design and construction of the fen. Along with Shell and Imperial Oil, we are funding ongoing research and monitoring of the constructed site.

Ongoing research and monitoring of the fen wetland watershed is conducted by students from 5 universities and colleges – Waterloo, Calgary, Colorado State, Wilfrid Laurier and Keyano – as well as our staff. It's expected this work will reveal a lot about the potential for recreating these natural habitats.

The Nikanotee Fen is now a joint industry project, contributed by Suncor to other members of Canada's Oil Sands Innovation Alliance (COSIA).

Suncor is undertaking another wetland challenge. We are partnering with Ducks Unlimited Canada to investigate boreal swamp reclamation.

Between 2012 and 2014, research was completed to identify natural boreal swamp habitat, vegetation, soils and hydrology. We continue to research the potential for boreal swamp reclamation with the goal of one day reconstructing boreal swamps on our reclamation areas.

Read more about wetland reclamation in OSQAR

Certification of reclaimed lands: A complex issue

Some question why so few of the lands described by the oil sands industry as 'reclaimed' have been certified as such by government regulators. Part of the answer is that, under the current regulations, companies can only apply for a reclamation certificate when the lands in question are fully functioning ecosystems – that can take many years to achieve.

For example, even after the completion of surface reclamation and re-vegetation at Wapisiw Lookout in 2010, it will take at least a decade for the seedlings to become tall forest and to confirm the area is self-sustaining and reflective of the locally common boreal forest.

This helps explain why some industry observers are able to assert that, to date, only 0.2% of the land disturbed by oil sands development has been certified as reclaimed by the Alberta government. While technically accurate, the statement is incomplete.

A more complete story would give operators some credit for achieving intermediate stages on the way to reclamation. According to the Canadian Association of Petroleum Producers, approximately 10% of the area disturbed by oil sands mining since operations began in the 1960s has been reclaimed by industry.

It is also worth noting the oil sands industry is relatively young, so it is not surprising that only a small part of the total production area has yet to be reclaimed. As mines mature, reclamation is likely to accelerate.

Even when oil sands reclamation has run its full course, there are additional reasons why industry is reluctant to seek certification under the current regulations. Lands certified as reclaimed revert to Crown ownership and can be accessed by the public. Since most of the reclaimed land is adjacent to, or entirely within, ongoing operating areas, granting public access to such lands could create a concern for public safety.

A transparent reclamation reporting system

The Province of Alberta has implemented a reclamation reporting system that gives stakeholders a clear understanding of the progress being made along every step of the reclamation process. The Oil Sands Information Portal is a one-window source for information; the portal has both an interactive map display and a data library.

Reclamation progress is reported with 8 key milestones:

- cleared
- disturbed
- ready for reclamation
- soils placed – terrestrial, wetlands and aquatics
- temporary reclamation – terrestrial
- permanent reclamation – terrestrial
- permanent reclamation – wetlands and aquatics
- certified

The system is transparent to the public, with reclamation data available through an interactive, map-based website.

In situ land disturbance

As the oil sands industry grows, the ratio of land being disturbed by development is expected to decline. That is because reserves that underlie approximately 97% of Canada's oil sands surface area are recoverable using in situ (drilling) technology, which is similar to conventional oil production. In situ operations disturb only 15% of the land required for traditional mining operations and do not produce tailings ponds.

But in situ oil sands projects, along with oil and gas exploration, forestry and other industrial activities, do have an impact. The associated roads, seismic lines, power corridors and pipelines leave linear paths that cause forest fragmentation, which negatively impacts wildlife habitat.

As part of Canada's Oil Sands Innovation Alliance, we are participating in several projects to address the issue of forest fragmentation. These include:

- The Faster Forests Program, which in 2014 saw approximately 660,000 trees and shrubs strategically planted in disturbed areas across the oil sands region
- The Algar Restoration Plan, which in 2014 saw 54,500 trees planted in 98 kilometers of linear disturbance southeast of Fort McMurray

Cumulatively since 2012, 127,750 trees have been planted over 210 linear kilometers. These tree plantings are taking place outside of actual license areas as part of an effort to reduce the regional impact of seismic lines and restore woodland caribou habitat.

Other land disturbance challenges

As a matter of course, we undertake remediation at our downstream retail sites operated under the Petro-Canada, Shell and Phillips66 brands. Remediation is done in conjunction with upgrades to facilities and tanks at existing operations and at sites slated for closure.

Read more about Shell and Phillips66 brands on Suncor.com

Remediation is also conducted at our conventional oil and natural gas sites impacted by historical activities. Where remediation has been completed, the next phase is reclamation, including the establishment of proper vegetation. Reclamation certificates are issued on sites that have been returned to equivalent pre-disturbance land capability.

Reclamation research and monitoring

Suncor participates in a number of ongoing research and monitoring projects that are helping us understand the impact of development on the boreal forest and the steps we can take to improve reclamation designs and minimize habitat disturbance.

Among these are:

Projects to support native shrub and wetland species that are an ecologically and culturally important component of boreal forest ecosystems.

- The Improving Seed Longevity of Native Shrubs program identifies optimal storage conditions for native shrub seed so a steady supply for reclamation will be possible.
- The Native Plant Establishment program determines how best to collect and prepare seed, and how to establish dozens of native shrub and wetland plants in reclaimed sites.
- The Understory Plant Community Development study is optimizing long-term vegetation development by determining the impacts of different reclamation options (e.g., soil type, fertilization and weed management strategy) on the development of plant life growing beneath the forest canopy.

Projects to support the successful establishment of tree species, which can be limited by low nutrient and water availability, soil compaction and competition from ground cover.

- The Identifying Limiting Factors for Tree Growth on Reclaimed Sites program is focused on determining potential limiting factors to boreal tree growth in reclaimed landscapes and providing best management practices to correct any growth-limiting factors.
- The Controlled-released Fertilization and Fertilization to Optimize Growth programs are complementary research studies that evaluate the potential for different fertilization techniques to improve re-vegetation success. The latter program also assesses whether groundcover competition has an effect on tree seedling establishment.

- The Industrial Research Chair in Forest Land Reclamation is expanding its early success in better understanding forest canopy development and working to improve tree growth during forest stand initiation and development. The program is also developing recommendations for establishing more spatially diverse site conditions and forest communities.
- One program is focused on determining the right type and amount of nutrients (e.g., phosphorus) to add while the seedlings are produced in the greenhouse to improve early establishment, growth and land reclamation success.

Part of a larger, continent-wide initiative, the Boreal Monitoring Avian Productivity and Survivorship program is advancing our understanding of avian population dynamics and diversity in reclaimed and disturbed habitats in the Athabasca Oil Sands region. Through ongoing monitoring, the program is evaluating disturbance effects on avian habitat quality and assessing reclamation designs to help guide our reclamation work.

The Wildlife Habitat Effectiveness and Connectivity program is advancing our understanding of the effects of mine activities on wildlife population dynamics. Through ongoing research and monitoring, the program is evaluating the function of undisturbed or reclaimed buffers adjacent to mines and the buffers' effects on wildlife dispersion, connectivity and predator/prey interactions.

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* Reclaimed lands have not been certified as such by government regulators. For further details on what we mean by reclaimed, see the legal advisories.

Biodiversity

On this page:

The impacts of our operations are assessed in many ways, including for their impact on biodiversity when permits change or an expansion project warrants a review.

Local stakeholders are often involved in monitoring significant risks and/or potential impacts on biodiversity. We're required to provide the provincial government with plans to manage our impacts on many components of biodiversity within the areas where we operate. This includes:

- re-vegetation plans
- wildlife mitigation and monitoring plans
- annual vegetation assessments to measure and plan species richness and density of reclaimed sites

Environmental impact assessments and/or socio-economic impact assessments are required by law at all sites where we operate.

Suncor is involved with many stakeholder groups, research activities and monitoring programs aimed at understanding and mitigating potential industry impacts on biodiversity. This includes oil sands development in Canada's boreal forest, one of the world's largest intact ecosystems.

We're committed to being a responsible steward of the boreal forest by striving to preserve the region's biodiversity. We work independently, and with industry peers and multi-stakeholder organizations, to conserve and promote natural habitat for species including those potentially impacted by our operations.

We are a signatory to the Boreal Forest Conservation Framework – a ground-breaking national conservation vision developed by 20 First Nations, environmental groups and resource companies. 2013 marked the 10th anniversary of this important multi-stakeholder collaboration.

In 2014, Suncor sponsored a Boreal Leadership Council (BLC) project to review tools, data, practices and governance structures currently used by Aboriginal Peoples for action-planning, including Indigenous Knowledge, habitat identification, population monitoring and aspects of caribou conservation.

Learn more at the Boreal Leadership Council website

Working to minimize our impact

We are working on a number of other fronts to minimize our impact in the boreal region:

- **Advancing progressive reclamation techniques at our oil sands mining operations.** We're working to reclaim mined lands as they are disturbed and to accelerate the time it takes to return disturbed lands to a self-sustaining, locally common boreal forest ecosystem.
- **Pioneering research and innovation** on wetland reclamation, including the official opening, in 2013, of one of the world's first man-made fens. (A fen is the most common boreal wetland found in the oil sands region). We've also partnered with Ducks Unlimited to investigate potential for boreal swamp reclamation.

Learn more about reclamation efforts

- **Conservation of environmentally sensitive boreal habitats.** Work started by the Alberta Conservation Association (ACA) and supported by the Suncor Energy Foundation led to an inaugural project to protect 480 acres (2 square kilometres (km^2) of boreal forest surrounding Winagami Lake in Alberta's Peace Country. Building on this pilot project's success, we're continuing to work with ACA and in 2013 and 2014 secured 3 land parcels, enabling expansion of 1 conservation site and the establishment 2 others.

  In total this resulted in 611 additional acres of habitat across the Boreal Forest Natural Regions. This partnership entered its second decade in 2013.

- **Managing our in situ footprint.** We continue to work with industry peers to pilot techniques and increase understanding of how to effectively reduce fragmentation of natural habitat related to in situ bitumen extraction and other resource activity in the boreal forest.
- **Collaborating on regional biodiversity.** We're a member of the Cumulative Environmental Management Association, a multi-stakeholder group that advises provincial and federal governments on the cumulative impacts of development on the boreal forest's air, land, water and biodiversity.

  We work through Canada's Oil Sands Innovation Alliance on a wide range of projects aimed at restoring disturbed lands and protecting natural habitat.

Some examples of our ongoing biodiversity initiatives:

Expand all | Collapse all

Our wildlife monitoring and mitigation programs

We pay close attention to how our operations affect the environment, especially wildlife. We invest in research, monitoring and conservation activities in partnership with a variety of organizations. This includes habitat restoration for caribou along the North Cabin natural gas pipeline, as well as avian monitoring projects and bat mortality studies at our wind farms. We follow an integrated approach to landscape management and wildlife protection. Reducing impact to wildlife is incorporated into our project planning process.

The wildlife management program

The objective of Suncor's Wildlife Management Program on our oil sands leases in the Regional Municipality of Wood Buffalo is to minimize human-wildlife conflicts and wildlife habituation and conditioning while maintaining a healthy wildlife population and diversity.

In 2014, Suncor continued to be vigilant in its wildlife management program, with a focus on waste management, wildlife conflict prevention inspections and education.

We regularly consult and collaborate with the Alberta Energy Regulator's (AER) wildlife biologists and local Fish & Wildlife officers.

Investigating wildlife incidents helps us understand the cause and prevent future occurrences. Following a fatal bear attack at our Oil Sands site in May 2014, we have implemented additional preventive measures to minimize risk of future human-wildlife encounters at our Wood Buffalo region leases:

- mandatory wildlife awareness training for all workers on Suncor sites or projects in the Regional Municipality of Wood Buffalo
- an online wildlife-tracking tool within Suncor to increase awareness and understanding of wildlife present on our leases
- additional training for personnel working in natural habitats such as remote locations away from vehicles or buildings

- wildlife specialists focused on bear aversion conditioning, effective waste management and education on site
- the addition of wildlife hazard considerations in our standards and procedures

The bird protection program

Suncor is committed to minimizing interactions between birds and the process-affected ponds required for its operations in the oil sands through:

- adoption and refinement of deterrent methods
- monitoring for bird contacts
- searching for bird mortalities

We implement a combination of radar linked deterrents, non-radar linked deterrents and physical deterrents to discourage waterfowl from landing on tailings and other process-affected ponds. We closely monitor our deterrents and attend to any impacted birds in consultation with the AER.

A total of 45 birds died on our oil sands mine leases in 2014, compared to 62 in 2013.

While we deter wildlife from our active operations, we encourage wildlife onto our reclaimed sites by incorporating wildlife habitat enhancement techniques.

At Wapisiw Lookout, the first tailings pond reclaimed in the oil sands region, enhancement techniques included:

- coarse woody debris, wood piles and rock piles to provide dens for small mammals
- snag or wildlife tree installations to provide raptor perches and habitat for woodpeckers and flickers
- bird and bat box installations to encourage the return of birds and bats
- incorporation of a small wetland which provides habitat and food for a number of different species

Industry collaboration on biodiversity

As the oil sands industry grows it becomes increasingly important to work together to address the cumulative impacts of development on wildlife and biodiversity. One way we do this is through our participation in Canada's Oil Sands Innovation Alliance (COSIA), a network of 13 companies responsible for nearly 90% of Canadian oil sands production.

COSIA is focused on improved performance in 4 environmental priority areas (EPAs):

- land
- water
- tailings
- greenhouse gases

COSIA's land EPA is focused on reducing the footprint intensity and impact of oil sands mining and in situ operations on the land and wildlife of northern Alberta. Through COSIA we work on a wide range of projects aimed at footprint reduction, accelerating reclamation and preserving biodiversity.

Read more about COSIA

Some examples of COSIA projects related to boreal forest biodiversity:

The Landscape Ecological Assessment and Planning (LEAP) tool

A database and modelling tool known as LEAP is helping COSIA member companies better understand how reforestation and reclamation work undertaken today will impact the health of tomorrow's boreal forest.

LEAP uses geospatial data on the location of oil and gas leases, forest types, lakes, watercourses and other pertinent geographic information to target where and how conservation and reclamation efforts can have the greatest desired net impact. It also allows planners to visually project what current areas of reclamation and reforestation will look like 10, 20 and even 50 years down the road.

The LEAP study encompasses some 32,455 km^2 – an area slightly larger than the country of Belgium – that includes a majority of existing in situ oil sands operations, 342 townships and 7 woodland caribou herds. Although the amount of land disturbed by oil and gas operations is a relatively small percentage of the total area, linear disturbances such as seismic lines and pipeline corridors have a relatively higher cumulative impact because of forest fragmentation, which affects the wildlife habitat, including woodland caribou.

If LEAP indicates a disturbed area will benefit from additional re-vegetation efforts, consideration will be given to planting those areas with trees, shrubs and other native vegetation. These plantings are then added into the LEAP program to provide a future view of reclamation results.

Reclamation efforts in the Algar region

LEAP is being used to plan caribou habitat restoration in the Algar region, an area covering 570 km^2 along the Athabasca River southeast of Fort McMurray. The Algar project takes an integrated regional approach, with other COSIA companies working together to repair fragmented habitat across an area of land outside of their actual license areas.

The project includes a 5-year program to replant trees and shrubs within the Algar region, to reduce fragmentation due to seismic lines and to help restore woodland caribou habitat. A wildlife monitoring program will help track how the restoration work affects wildlife movement in the area.

Read more about the restoration of Algar

Read more about protecting woodland caribou in OSQAR

The Faster Forests program

The Faster Forests program is designed to address forest fragmentation by strategically planting trees in disturbed areas across the oil sands region. In 2014, nearly 700,000 trees and shrubs were planted, bringing the total number of trees and shrubs planted since 2009 to approximately 3 million.

Planting shrubs native to the area is a major focus. These shrubs will help tree seedlings grow healthier, faster and with less competition for nutrients and water from fast-growing grasses. The result: greater ecological integrity and biodiversity. Berry-bearing shrubs such as blueberry and saskatoon are important to Aboriginal communities and wildlife.

Suncor has adapted learnings from the Faster Forests program and incorporated them into our operations. This practice has allowed us to address historical disturbances that were not otherwise re-vegetating.

Read more about the Faster Forests program

Alberta Biodiversity Conservation Chairs

COSIA is sponsoring the Alberta Biodiversity Research Chairs Program that's intended to fast-track biodiversity science and support on-the-ground research on the environmental impact of development in the boreal forest of northern Alberta.

The current program includes 2 research chairs at the University of Alberta, which cover 4 integrated research themes:

- rare and endangered species monitoring and conservation
- cause and effect assessment of biodiversity change as the foundation for effective management
- improve monitoring, modeling and management of terrestrial biodiversity for regional land use planning
- integrated restoration – from site to landscape levels

Waste management

On this page:

We closely manage waste material of all kinds. In addition to ensuring we comply with all regulatory waste material production, control and disposal requirements, we see waste recycling, reuse and recovery as an opportunity to generate economic, social and environmental benefits.

Our operations run 7 days a week, 24 hours a day, so many of our sites are like small towns or communities and we face many of the same challenges and opportunities.

Like individuals and communities, we regularly recycle items such as fluorescent tubes, batteries and cardboard from our operations. We also work with contractors, suppliers and waste receivers to improve waste management practices at our job sites and across our operations. We collaborate with industry peers to identify and act on shared waste management opportunities.

Recycling vehicle oil at oil sands

Since October 2012, we've been recycling used oil and glycol from haul truck and light vehicles, which operate at our Oil Sands Base Plant to lower our environmental footprint and reduce costs.

We developed a standardized process for used lube oil pickup and recycling. Our contractor waives the monthly pick-up fee and pays Suncor for the used oil. Waste materials from vehicle oil changes are now properly recycled at an Edmonton, Alta. facility, which has recycled more than 3 million litres of our used oil so far. Additionally Suncor now saves on trucking fees, and rebates from the recycled oil have generated revenue for the company.

Waste management in our Refining & Marketing operations

Our Refining & Marketing waste management includes several recycling opportunities and programs at our refinery sites, such as:

- waste wood for pallets
- battery recycling
- aerosol can recycling
- plastic barrel and pail recycling
- slop oil and off spec product recycling
- cement and aggregate recycling
- metals recycling

Additionally, on-site soil recycling centres at select sites allow contaminated soil removed from our marketing sites during renovations to be bio-remediated. Much of the soil can then be reused as fill at select locations. We reduce the need for soil disposal at designated municipal landfills by operating our soil recycling centres and reusing much of the remediated soil.

We also participate in several recycling initiatives, such as refinery catalysts and waste materials recycling programs. Catalysts are chemicals used in certain types of processing applications and are normally regenerated in the refinery production units. After many cycles, the materials can no longer be regenerated and the spent catalyst is sent to specialty recyclers for metal reclamation. Catalysts used in other types of applications cannot be regenerated; once spent, they are also sent for metals reclamation.

Major Projects and Oil Sands embraces waste diversion

An innovative waste management initiative that began with a single project in 2004 has since evolved into a standard practice in our Oil Sands business. At the outset, the idea was to minimize our resource use by incorporating recycling and reuse of construction materials into plans for the proposed Voyageur upgrader.* Then, in 2010, we rolled out the recycling initiative to the Millennium Naphtha Unit and TRO™ tailings management projects. Today, this program includes not just construction wastes, but all waste streams produced at Oil Sands sites and is part of the entire Oil Sands business.

* In March 2013, Suncor announced that it would not proceed with the Voyageur upgrader project. The decision was the result of a strategic and economic review launch by Suncor and its joint venture partner, Total E&P Canada Ltd. in late 2012.

Oil sands tailings

On this page:

Finding ways to get fluid oil sands tailings to dewater more quickly and become suitable for reclaiming is critical to improving our overall reclamation performance. Left unmanaged, these fluid tailings could take centuries to naturally dewater enough to be reclaimed.

All forms of mining – whether coal, gold, uranium or potash – produce tailings. Mining operators must determine how to safely and effectively dispose of this byproduct. With mining operations on the scale of the oil sands, the challenge is all the more daunting.

Oil sands tailings are the remaining water, clay, silt, sand and residual hydrocarbons left after the majority of the hydrocarbons are extracted from the ore during our water-based bitumen extraction process. In situ drilling of oil sands bitumen does not produce tailings.

The traditional industry practice has been to pump oil sands tailings into large engineered settling ponds, called tailings ponds. Initially, tailings are stored above grade until room is opened up for below grade storage of tailings in the space left in previously mined areas.

There, the majority of the sand settles to the bottom and captures some of the fine solids. The remaining water and fine solids flow out to form:

- a top layer of water, which can be recycled
- a middle layer, known as fluid fine tailings (FFT), which is about 70% water and 30% fine solids

As mining operations expanded, it became necessary to build more and larger tailings ponds. Suncor currently has 8 oil sands tailings ponds containing about 299 million cubic metres (m^3) of fluid tailings. This inventory has been stable over the past 6 years.

Oil sands tailings management

Over the past 6 years, Suncor's approach has allowed us to reclaim a tailings pond (Wapisiw Lookout) and make another one trafficable through the use of coke capping technology. We are now converting a third tailings pond to a drying area with our TRO™ process.

Suncor is also working with other oil sands producers to accelerate tailings management performance improvements.

Expand all | Collapse all

Tailings Management Framework

In 2015, Alberta Environment and Sustainable Resource Development (AESRD) introduced a new oil sands policy called the Tailings Management Framework. This policy outlines expectations for new and legacy fluid tailings and sets requirements for each operation to steward to a fluid tailings volume profile.

We look forward to working with key stakeholders and the lead organization, Alberta Energy Regulator, to support development of the regulations that are required under this new provincial policy.

Raising the bar: tailings collaboration

As a member of Canada's Oil Sands Innovation Alliance (COSIA), Suncor is sharing details of our tailings technologies with other member companies. In return, we are provided access to the technologies that others are using to manage their tailings.

Through shared research, experience, expertise and financial commitments we are able to investigate new tailings technologies at a more rapid pace. We anticipate this resource-sharing through COSIA will improve tailings management now and at future oil sands mine sites.

Learn more about COSIA's tailings environmental priority area.

Coke capping technology

Suncor is also accelerating tailings pond reclamation by using petroleum coke, a byproduct of upgraded bitumen, to help create a solid surface on the company's Pond 5.

The coke capping layer is light enough to float on the surface of the pond and yet strong enough to allow trucks to drive over the pond surface. Wicking drains in the coke cap, which act like straws, remove the water and potentially separate tailings and reclamation material.

The Pond 5 coke capping project is one of the largest field trials of a tailings technology anywhere in the world. The required consolidation is expected to be complete by 2019; at that point, sand will be spread over the coke until tailings can support vegetation and further reclamation.

Read more about coke capping in OSQAR

Renewables

On this page:

Renewable energy is going to be an increasingly important part of the global energy mix as we work toward a sustainable energy future. According to the International Energy Agency's 2014 World Energy Outlook, renewables are expected to account for nearly half of the increase in global power generation between now and 2040, with wind power representing over one third of the increase.

We were an early entrant into Canada's renewable energy business. Our investments to date are focused on wind power and biofuels, although we continue to evaluate opportunities in other renewable technologies, including solar.

Why renewable energy?

Why would a company like Suncor, whose primary expertise lies in developing oil and natural gas, commit time, money and resources to wind power, biofuels and other alternative energy projects? It's a question the Pembina Institute, an Alberta-based environmental think-tank, recently asked.

Pembina notes oil and gas companies have the key skills necessary to develop renewable energy, from understanding markets and complex technologies to running large projects and working with communities. Oil and gas companies can also have access to capital, thanks to good credit histories and valuable resource assets.

Developing renewable energy is part of our long-standing climate change action plan. Currently, our combined renewable energy portfolio displaces about one million tonnes of carbon dioxide (CO_2) per year – the equivalent of the annual tailpipe emissions of about 235,000 typical cars.

Advancing different forms of energy also makes good business sense. Wind power and biofuels are some of the future's energy sources – and we want to be among the providers of multiple energy solutions through what we believe are strategic, and relatively low-risk, investments.

Read more about renewable energy in OSQAR

Wind power

Our first wind power project opened in 2002. Currently, we are involved in 7 operating wind farm projects, 6 of which are joint ventures. The total installed wind capacity of these operations is 295 megawatts (MW), enough to power about 115,000 Canadian homes per year.

Our Adelaide wind power project, located in southwestern Ontario, is now operational and has added an additional 40 MW to the portfolio.

Our eighth project, Cedar Point, received a Renewable Energy Approval (REA) in August 2014 but was subsequently challenged at an Environmental Review Tribunal (ERT). In March 2015, the ERT issued a ruling that upheld the REA. Construction is underway on the project and when commissioned, it is expected to add another 100 MW in late 2015. This will increase our total installed wind capacity to 395 MW.

Wind power concerns

Despite support for wind power in general, people living close to our proposed projects have raised concerns about the installation of wind turbines near their homes. This is common in any community where a significant development project is planned.

Some of the primary concerns expressed relate to the interruption of views and the potential for impacts to regional property values. The potential for health risks has been addressed in Health Canada's recently completed Wind Turbine Noise and Health Study. The preliminary results of the study found no evidence to support a direct causal link between living in close proximity to wind turbines and health-related issues. We continue to support fact-based, scientific studies that assess these concerns.

We endeavour to work in an open, respectful and transparent way, engaging with communities early to alleviate and resolve issues wherever possible. While these conversations can be difficult, we prefer to reach mutually acceptable solutions. Our wind projects strive to meet or exceed all regulations. For example, our project design philosophy aims to minimize visual impact, reduce turbine density and maximize setbacks wherever practical.

We believe wind power is a safe and reliable energy source. Producing wind energy is efficient and the fuel input is not only free, but emissions-free. Recent studies have shown that wind, along with natural gas (especially when the latter is paired with cogeneration, as it is at our oil sands facilities), are 2 of the lowest-cost options for building new power plants today.

Wind energy continues to be a key component of our commitment to advancing different forms of energy.

Biofuels

We also operate Canada's largest ethanol production plant, near Sarnia, Ont. The St. Clair ethanol facility has a production capacity of 400 million litres per year.

Virtually all the ethanol produced at the St. Clair plant is blended into Petro-Canada gasoline.

"Since it is a requirement for various biofuels mandates across the country, we can either purchase the product or we can produce it," says Jim Provias, vice president renewable energy. "By operating the St. Clair plant, we are better able to control cost and quality, further reinforcing the value of Suncor's integrated operating model."

In 2014 Suncor made an investment in a biodiesel technology commercialization company. Along with this investment, we are participating in our first

commercial-scale biodiesel plant currently under construction in Nebraska; the plant is expected to be operational by the end of 2015.

Our investment in ethanol

We have been blending ethanol in our retail fuels since 1992. The St. Clair ethanol plant opened in Mooretown, Ont., in 2006 and we doubled the plant's production capacity to 400 million litres of corn-based ethanol annually in 2011.

The ethanol produced at the St. Clair plant is blended into our Petro-Canada branded gasoline, providing a lower environmental impact than regular, non-ethanolized gasoline and ensuring we meet government-mandated blending standards.

In Canada, the Federal Renewable Fuel Regulations requires an average of 5% renewable ethanol content in gasoline across Canada. There is also a requirement for an average of 2% renewable fuel content in diesel fuel.

Some provinces have their own mandates for biofuel blending requirements, which means we purchase product from third parties to complement our supply from our St. Clair ethanol plant in Ontario.

There is growing evidence that biofuels such as ethanol are proven energy sources with demonstrable benefits.

The Conference Board of Canada concluded in a report titled Ethanol's Potential Contribution to Canada's Transportation Sector that:

- ethanol reduces greenhouse gas emissions relative to gasoline by between 40% and 62% depending on agricultural and production practices
- improved farming techniques have significantly increased the average bushels of corn produced per acre, positively impacting water and fertilizer efficiency
- today's corn production is also more energy efficient and most of the corn produced is not suited for human consumption

Although 10% ethanol-blended gasoline contains about 3% less energy than pure gasoline, it is an oxygenated fuel that has the ability to improve combustion efficiency in many vehicles. For most vehicles, this increased efficiency helps to offset the slightly lower energy content in the ethanol-blended gasoline.

Life cycle assessments

We believe it is appropriate to look at the full life cycle of ethanol production when discussing environmental benefits.

Before building our ethanol plant, we asked the Alberta-based Pembina Institute to conduct 2 life cycle assessments, which looked at all of the energy inputs from the corn field to the gas pump. Once the first phase of our facility was operational, we asked Pembina to revisit the study to ensure both the latest scientific methodology, along with actual operating data, were used.

Visit the Pembina Institute website to learn more

From its assessment, which was independently verified by the U.S. government's Argonne National Laboratory, Pembina estimated that overall CO_2 emissions could be reduced by up to 300,000 tonnes per year by blending all of the ethanol from the original St. Clair plant into gasoline. With the expansion of the plant, that environmental benefit has doubled to 600,000 tonnes per year. St. Clair's ethanol provides about a 60% reduction in GHG emissions compared to gasoline. These estimates were more recently reconfirmed by internal calculations.

Alternative land uses and crops

Much of the agricultural land used to produce ethanol today was previously used to grow tobacco. With the demand for tobacco on the decline, corn ethanol is providing a sustainable alternative crop for farmers.

The type of corn used as feedstock at the St. Clair plant has traditionally been used to feed livestock. Once the sugars and starches are extracted from the corn to make ethanol, the remaining elements are used to make premium cattle feed, which is then sold back to local livestock operators.

In sum, many parties benefit:

- farmers have an alternative crop to market
- livestock producers still get the feed they need for their cattle

- we are able to produce a fuel additive that boosts combustion efficiency and reduces the environmental impact of transportation fuels

We believe the biofuels industry is here to stay and we are committed to best-in-class production practices at our St. Clair plant.

Spills and releases

On this page :

We manage spills by sharing best practices to increase awareness and mitigate risks of future incidents.

Spill events are recorded and investigated. Root cause is determined and remedial actions are implemented to minimize risk and chance of recurrence.

Incident prevention

Our focus is always on incident prevention. This means having:

- capable and well-trained people
- rigorously controlled working procedures
- equipment and technology designed for our operating environment
- appropriately vetted contractors

All of these elements, combined with careful planning and risk assessment, reduce the probability that a spill or release will occur.

Spill reporting and emergency response plans

We have systems in place to inspect and audit our facilities and have emergency response plans at all our locations, including:

- upstream and offshore facilities

- refineries and other downstream operations
- distribution terminals
- our network of service stations

In addition to our own internal response capability, we're a participating member in a number of response organizations, including:

- Eastern Canada Response Corporation
- Western Canada Marine Response Corporation
- Western Canada Spill Services Ltd.
- Oil Spill Response Ltd.

Growth and increasing complexity in our operations mean we must continuously improve our reporting practices and strengthen mitigation efforts to further reduce the number and volume of spills.

A tiered approach to offshore oil spill response

We have 3 tiers of spill response:

- **Tier 1:** This is the immediate front-line response conducted by trained staff and contractors using procedures and equipment identified in the oil spill response plan. Tier 1 equipment is kept readily available on both support vessels and the offshore installation.
- **Tier 2:** This response is provided by local onshore oil spill resources. For example, the Eastern Canada Response Corporation (ECRC) provides support services for our operations off the coast of Newfoundland and Labrador. ECRC is a Transport Canada-certified response organization contracted to provide additional resources for regional oil spill response staff and equipment.
- **Tier 3:** This response is provided by an international company that specializes in oil spill response, Oil Spill Response Limited (OSRL). OSRL provides access to oil spill response resources and equipment that can be deployed rapidly to any of our assets globally.

Continually improving response capability

We are committed to continually improving our oil spill response capability.

As part of our contingency plans, we conduct regular tabletop and on-water training exercises. We invite regulatory agencies and oil-spill response organizations to participate in these preparedness exercises.

We work with other companies in the regions where we operate, to build capacity through shared knowledge, experience and resources.

We also work with industry associations to ensure subsea well control equipment, including capping devices and dispersant tool kits, are available to our operations in the unlikely event of a subsea release during drilling.

For example, Oil & Gas UK, through the Oil Spill Prevention and Response Advisory Group, has designed, constructed and tested a capping stack which is now available for use by companies with operations on the United Kingdom continental shelf.

To ensure that well control/intervention equipment is also available for our operations on Canada's East Coast and in Norway, we subscribe to the Subsea Well Intervention Service through a supplementary agreement with OSRL.

Our primary focus is to execute our drilling projects with careful planning and due diligence to prevent incidents from occurring. We also ensure suitable well control/intervention equipment is in place for our drilling operations.

Watch a video from the Canadian Association of Petroleum Producers about spill prevention and response in the offshore energy industry

Social responsibility

Download

Having a positive impact on society and communities where we operate through responsible energy development is critical to our business.

We know that contributing to a better future starts with listening to and understanding the perspectives of others. By listening, we can establish effective, long-term relationships and create conversations that are open, honest and transparent.

What follows is a summary of strategies and tools we have in place to support our engagement.

Expand all | Collapse all

Our strategy

Suncor understands people and communities are affected by our activities. It is important that people and communities impacted by our operations benefit from our presence.

Suncor engages with stakeholders on both a project-specific basis and in our daily operations. On a project level, we solicit feedback related to proposed projects, looking to understand issues or concerns and avoid or mitigate them within the project design. Similarly we look to find opportunities the development may bring to support community needs, such as training, employment or business development.

Our interactions can take place through informal conversations or formal interaction through workshops, advisory panels and committees, or other community groups. These forums enable us to share our management and monitoring processes.

Our approach to engagement is to partner with communities, look for common understanding and collaborate to improve our performance.

Policy

We have policies and frameworks that outline our commitments and key beliefs with respect to stakeholders and communities where we operate.

Read our policies:

- Human Rights (PDF, 2 pp., 19 KB)
- Stakeholder Relations (PDF, 2 pp., 1.6 MB)
- Aboriginal Relations (PDF, 2 pp., 1.4 MB)

Related policies include:

- Improper Payments policy (PDF, 10 pp., 70 KB)
- International Security policy
- Harassment and violence-free working environment

Part of our risk management approach is to provide appropriate supervision, training, resources and equipment required to maintain acceptable safety standards. We establish standards to ensure employees and contractors meet company expectations in each operating area.

We consider environmental and social impacts and risks within project planning and development. Formal tools and processes to further integrate these considerations into our activities are being developed through 2015. We complete environmental and socio-economic impact assessments when required by regulation.

All Suncor employees and contractors engaged in activities under our operational control are responsible for applying these policies. All managers are also responsible for promoting our beliefs and principles underlying these policies in joint ventures not operated by Suncor.

Commitments

Commitments are formal agreements made by the organization to a regulator or other authority (including communities and stakeholders). Commitments to communities often result from the consultation process to mitigate potential impacts.

We are applying a Commitment Management process to ensure we consistently steward legal requirements and commitments with stakeholders and communities.

Goals, targets and actions

The company targeted to have 100% of identified employees complete Suncor Standards of Business Conduct training in 2014, and systems can and do report success toward the goal.

Supporting procedures used:

- Environmental and social impact assessments
- Life Cycle Value Analysis tools
- Asset development execution model
- Stakeholder Relations framework, including tools for stakeholder mapping and planning
- Strategic Issues Management Process
- Enterprise risk management process, tools and governance
- Toll-free integrity/ethics hotline
- Human Rights framework
- Grievance mechanism

Our Stakeholder Relations framework was rolled out to the employees responsible for engaging with the community in 2014 to enable a consistent approach to stakeholder engagement practices. The framework includes a standard, guidelines and various tools and templates to enable proactive engagement.

Our first year of implementation was one of shared learning and increasing understanding of how the framework impacts our work. Pursuing a systematic approach across business units has identified gaps which are being addressed in 2015. The framework's assessment and performance management elements support ongoing engagement process review and improvement. This includes annual review and updating of requirements, plans, documentation and competency requirements.

We have a grievance mechanism for receiving, investigating and responding to complaints from affected stakeholders in a timely and consistent manner. Implementation across all operations is ongoing. Claims related to potential Human Rights violations are immediately escalated to senior management. The grievance mechanism supports consistent documentation and tracking of complaints or concerns.

On an enterprise level, each year Suncor hosts one multi-stakeholder forum to address and discuss all material issues. This annual forum is an integral part of Suncor's reporting process, where key issues are identified for reporting. Suncor also engages with stakeholders throughout the year. Ongoing engagement generally takes the forms listed below:

- Employees: regular communication through surveys, focus groups and written communication
- Community residents, landowners: frequent communication through community panels/town halls and Suncor's consultation process
- Aboriginal communities, trappers: frequent communication through face-to-face, community panels, Suncor's consultation process and meetings
- Government and regulators: frequent communication through meetings, government events and written communication
- Non-government organizations, environmental groups: regular communication through written communication, face-to-face meetings, advisory panels and stakeholder forums
- Business group, customers, suppliers: regular communication through focus groups, community panels, written communication, surveys, face-to-face meetings
- Periodic research through a third-party vendor

We use these research results, along with results from industry research and other publicly-available data, to understand what key stakeholders think about our performance.

Internally, we use a variety of mechanisms to engage with stakeholders, including feedback from stakeholders, and community leaders. Non-government organizations, such as Ceres and the Pembina Institute, provide inputs which supports our learning of material issues.

We don't have national 'goals and targets' for stakeholder relations. Regionally, the Stakeholder and Aboriginal Relations framework leads stakeholder relations practitioners to identify community priorities or initiatives which may guide our engagement activities, thus setting regional engagement strategies.

Engaging with government in a variety of public policy spheres occurs through our government relations team.

As our desire is to be as transparent as possible, there is no significant difference between our stated position policies and our lobbying activities.

Responsibilities, resources and training

Our senior vice president, exploration & production; senior vice president, general counsel & corporate secretary; executive vice president, business services and vice president, sustainability & communications are each accountable for different issues which comprise social risks identified through risk assessment and strategic issues management processes. Executive leadership teams meet regularly to ensure such risks are managed.

Our stakeholder and Aboriginal relations team practitioners are embedded in the business units that support operations in community engagement. We also

maintain a corporate stakeholder and Aboriginal relations team, responsible for standards and guidelines, as well as the consistent implementation of proactive engagement across the company. This team acts as a resource for the regional practitioners as well as providing advice and sharing of best practices.

The corporate stakeholder and Aboriginal relations team also supports documentation and tracking of complaints or grievances through the Stakeholder and Information Management System (SIMS). Training is provided on an as-required basis.

Evaluation

Monitoring

Mechanisms and processes that our Stakeholder & Aboriginal Relations Framework have in place to monitor stakeholder engagement include:

- performance measurement
- annual performance assessment, which includes feedback from operating areas, and stakeholder and Aboriginal relations practitioners
- tracking stakeholder concerns
- our grievance mechanism, which supports a process for receiving and responding to grievances or complaints from stakeholders

Additionally, to ensure the safety of our employees, contractors and communities where we operate, we:

- reinforce, verify and improve our emergency preparedness and response capabilities through regular employee and contractor training, emergency drills and tabletop exercises
- emphasize learnings and increase effectiveness across all operating areas through debriefs to learn and share lessons from drills, exercises and real events

Results

Work continues on developing our strategic issues management process in order to better identify emerging risks and develop proactive management strategies.

The corporate stakeholder and Aboriginal relations team compiles lessons learned from the operating areas to share both best practices and learnings with the extended team annually.

Implementation of our grievance mechanism is ongoing and is most robust in our Wood Buffalo operations where stakeholders are able to report grievances and complaints via email, toll-free phone or directly to Suncor personnel. In 2014, there were no significant disputes reported through this mechanism.

What we are doing differently

In 2010, Suncor developed and introduced Operational Excellence Management System (OEMS), an enterprise-wide management system framework based on a series of management system elements. The management system structure uses a continual improvement cycle (plan-do-check-act) approach. Communications and stakeholder relations is an OEMS element.

The stakeholder and Aboriginal relations framework implementation is helping practitioners share information across operating areas, allowing for greater consistency and continuous improvement.

In 2014, Suncor applied to the Canadian Council for Aboriginal Business for Progressive Aboriginal Relations (PAR) certification. PAR is a certification program that rates corporate Aboriginal relations performance at a Bronze, Silver or Gold level.

We are pleased to achieve Silver level certification. We are able to demonstrate significant performance in Aboriginal relations; however, work is underway to close the gaps identified in the certification review.

Learn more about Aboriginal relations

Our stakeholders

On this page:

Collaborative and proactive relationships are needed to create successful and vibrant communities. Having the trust of our stakeholders is the foundation from which we work together.

To achieve this, we must:

- understand the interests, issues, needs and concerns of our stakeholders
- develop relationships that are based on transparency, mutual respect and trust

Suncor's stakeholders

Our stakeholders, are the individuals and groups who could be affected by our operations or who could, through their actions, affect our business. Examples of our stakeholders and respective engagement approaches include:

- community residents
- landowners
- Aboriginal communities
- trappers
- governments and regulators
- non-government organizations

- environmental groups
- community investment partner groups
- business groups
- customers
- suppliers
- employees

Those affected by our business have a right to be informed about our activities, participate in a transparent engagement process and be involved in the issues and opportunities affecting them.

Our Stakeholder Relations policy

Our Stakeholder Relations policy (PDF, 2 pp., 1.58 MB) guides the way we engage with those people who are affected by our operations. The principles found within this policy are:

Expand all | Collapse all

Respect

Mutual respect is the keystone around which productive stakeholder engagement must be constructed. We respect the values and cultures of our stakeholders, as well as those of their communities and countries. Even where we must agree to disagree, our employees will always demonstrate respect for the diversity of views presented.

Responsibility

We acknowledge and accept our responsibility to engage stakeholders wherever they are affected by our operations. In fulfilling this responsibility, we encourage stakeholders to define how they wish to be consulted and will strive to meet their needs. Recognizing that not all stakeholders have the same needs or are equally affected by our activities, we endeavour to engage with each in a way that best fits the nature of our relationship.

Responsiveness

We will:

- actively seek stakeholders' input and feedback on activities and decisions
- strive to take into account the needs and concerns of stakeholders when making decisions

We are willing to be influenced by stakeholders, even if it means making changes to how we operate our business, and we will keep stakeholders informed of our response to their concerns.

Transparency

We will be transparent and accountable by engaging regularly, openly and honestly with stakeholders and by reporting objectively on our activities. Subject to legal obligations for competitiveness, confidentiality and securities regulation, our stakeholders will be provided with relevant, understandable and accurate information needed to facilitate dialogue.

Timeliness

We will engage with stakeholders in a timely and appropriate manner. Consultation will allow for disclosure of plans and information before the company makes key decisions and, ideally, consultation will apply to the full life cycle of our activities.

Mutual benefit

We are committed to:

- contributing to the economic and social development of the communities in which we have a presence
- conducting our activities in those communities in a safe and environmentally responsible manner

Community input

Open and respectful dialogue with stakeholders is important to developing the kind of relationships we hope to have with communities. Being proactive and making sure our communities have the information they need to participate in that dialogue is also essential.

Community input is especially important when it comes to proposals for new energy infrastructure such as wind turbine builds, which are typically opposed in Ontario. This is evident in Southwestern Ontario, for example, where our stakeholders have helped us to understand how we can better work together. Our Cedar Point Community Liaison Committee is a forum to gather community input as we build this project.

Collaborative community initiatives

Collaboration: Suncor and Regional Municipality of Wood Buffalo (RMWB) Aboriginal Peoples' joint planning for winter drilling programs

We are always looking for better ways to share information about our operations and development plans so that we can incorporate feedback from the community into the design and planning.

Suncor has been working closely with these groups in joint planning sessions to develop exploration and seismic programs in the oil sands:

- Athabasca Chipewyan First Nation (ACFN)
- Mikisew Cree First Nation (MCFN)
- Chipewyan Prairie Dene First Nation (CPDFN)
- Fort McMurray 468 First Nation (FMFN)
- Métis Local 1935

We're using the new LiDAR system, an aerial remote sensing technology, so we show an aerial view of the area we are proposing to drill.

Early engagement enables us to incorporate local traditional knowledge in the planning. Potential impacts to treaty rights, wildlife populations and sensitive wetlands are examples of input we've received from Aboriginal communities. In turn, this input has helped us reduce project costs and improved planning

efficiency because of the early confirmation of timelines.

In the past year our winter drilling program, which involves 70 individual notices, was successfully approved and completed in the RMWB with active First Nation and Métis involvement.

Collaboration: Suncor USA Rocky Mountain Pipeline Expansion

Construction began in July on a new pipeline to bring crude oil to the Commerce City refinery in Colorado. The project is critical to maintaining long-term supplies of quality fuel in Colorado and to the reliability and safety of our refinery. Because it runs through multiple counties and municipalities in 2 states, our public consultation involved residents, landowners, government officials and many other stakeholders.

In order to be completed safely, we know we had to dedicate resources to incorporate needs of each community. An integrated team of Suncor employees – from the pipeline business to several functional groups – worked closely to develop the engagement plan.

Listening and being responsive to stakeholders was key to building support. Suncor communicated with:

- business partners
- regulators
- impacted landowners
- the public
- elected officials, who ultimately had to approve it

Construction is underway. The project is expected to be completed in 2015.

Collaboration: Social Prosperity Wood Buffalo

Our Stakeholder Relations policy also supports the work of our Community Investment strategy. Social Prosperity Wood Buffalo is an integral part of how we partner with organizations to understand the interests, issues and needs of the communities near our operations to help improve quality of life.

Aboriginal relations

On this page:

Responsible development takes into account Aboriginal Peoples' interests regarding the opportunities and impacts of energy development. Many of our operations are located on the traditional lands of Aboriginal Peoples. We know we have an impact on the environment and the communities where we operate.

We work with these communities to:

- understand and mitigate those impacts
- build effective, long-term and mutually beneficial relationships

To achieve this, we strive for relationships that are based on transparency, mutual respect and trust.

Responsible development takes into account communities' issues and concerns about the effects – positive and negative – of energy development. People and communities affected by our activities should have the opportunity to benefit from energy development through:

- employment
- business development
- education
- training

- community investment

“We believe the way forward is to focus on initiatives where the outcome will close the socio-economic gaps between Aboriginal Peoples and non-Aboriginal people,” says Mary Pat Campbell, manager, stakeholder and Aboriginal relations.

Expand all | Collapse all

Aboriginal relations policy

Our Aboriginal relations policy is guided by these principles:

- **Respect**. We recognize the unique legal and constitutional rights of Aboriginal Peoples and seek to understand and respect their history, customs, beliefs and traditions. This recognition and respect should be integrated into our business approach and the way we operate.
- **Communication.** We commit to listening and communicating with Aboriginal Peoples directly and openly about events, issues and ideas. We seek to consult in a timely, interactive and culturally-appropriate manner. Where appropriate, we will provide opportunities for Aboriginal Peoples to increase their understanding of the energy business.
- **Benefits.** We strive to increase Aboriginal Peoples’ long-term capability to participate in the economy and to share in our success.
    - We support strategies and programs that build capacity in Aboriginal communities, and enhance their ability to benefit from economic opportunities associated with energy development.
    - We are committed to increasing Aboriginal Peoples’ participation in our workforce through full-time employment and contracting opportunities.
    - We work proactively to ensure Aboriginal contractors can provide safe, reliable and competitive goods and services to our operations.
    - We work with communities to identify community investment opportunities that support Aboriginal cultures and priorities.
- **Environment.** We recognize the close cultural ties Aboriginal Peoples have to the land and the environment. We accept our own obligations toward the land and to conduct our business in an environmentally responsible way over the long term.

Listen to our Aboriginal relations policy in Cree and Dene:

- Cree audio translation – Download MP3 file (10 MB)
- Dene audio translation – Download MP3 file (11 MB)

Download the Aboriginal relations policy (PDF, 2 pp., 1.3 MB)

While there is still work to be done, we are making progress.

Improving alignment

In 2013, a governance structure to steward Aboriginal relations in the Regional Municipality of Wood Buffalo was introduced. The framework has 3 levels:

- project teams
- working groups
- VP steering committee

This structure has increased alignment and coordination, which is improving integration of this work within our business.

While our focus in Aboriginal relations has been largely in the Regional Municipality of Wood Buffalo, we are applying our knowledge and experience in other

areas of our operations.

Applying what we've learned

We have learned a lot from our work in the Regional Municipality of Wood Buffalo, which we are applying to other operations. We want to advance economic opportunities and the social well-being of Aboriginal Peoples across Canada.

We are working to continuously improve our environmental performance – including taking the necessary steps to minimize the impact of our business on the land, water and air quality for residents.

For example, flaring has been an area of focus for our Sarnia operations. Some of the measures we've taken include:

- the Sarnia refinery's flare gas recovery unit, which reduces emissions by recovering flare gas and reusing it as refinery fuel
- the reduction of flaring by 85% over the past 3 years, resulting in significantly fewer and much shorter periods of visible and audible flaring
- notification to our neighbours, the Aamjiwnaang First Nation, when flaring is required, either in advance or immediately once flaring has begun

"Timely communications is imperative, especially since the refinery is in such close proximity to the Aamjiwnaang First Nation," says Jennifer Johnson, senior stakeholder relations advisor at our refinery in Sarnia. "It takes years to build trust and only a minute to lose it."

Progressive Aboriginal Relations (PAR) certification

In 2014, Suncor applied to the Canadian Council for Aboriginal Business (CCAB) for Progressive Aboriginal Relations (PAR) certification. PAR is a certification program that rates corporate Aboriginal relations performance at a Bronze, Silver or Gold level.

We are pleased to achieve Silver level certification.

The certification process includes an externally-verified and independent jury review of our Aboriginal relations activities in 4 key performance areas:

- employment
- business development
- community investment
- community engagement

This third-party review verified where we have integrated Aboriginal relations into our processes and where we need to improve. The feedback from the review and evaluation has been incorporated into our planning. PAR certification demonstrates that we are a company that is committed to working closely with Aboriginal Peoples.

As a first attempt at getting certified, achieving Silver level is an accomplishment. We are able to demonstrate significant performance in Aboriginal relations; however, work is underway to close the gaps identified in the certification review. A key focus of this work is replicating consistent processes and approaches across the company.

Aboriginal awareness training

Common understanding and mutual respect are the foundation to building strong relationships between Canada's Aboriginal Peoples and companies like Suncor.

Fostering understanding is the basis of our Aboriginal awareness training program. Our workshops include:

- an overview of the history of Canada’s Aboriginal Peoples, from before the first European contact to the present day
- discussion around the spirituality, culture, traditions and customs of Aboriginal Peoples
- reflection on the current issues facing Aboriginal Peoples, including the impact of the Indian residential school system
- explanation of Suncor’s approach to Aboriginal relations

The response to our training is very positive. Wherever possible, we use trainers from Aboriginal communities close to our operations so they can speak directly to the impact energy development has on their family and community.

About 200 employees participated in the program in 2014, representing many parts of the business including Human Resources and Supply Chain Management. Outside the formal training, several of our leaders, along with leaders from Aboriginal communities in the Regional Municipality of Wood Buffalo, participated in the Truth and Reconciliation Canada workshops in Alberta.

In 2015, we’re working to expand the options available to learn more about Aboriginal Peoples.

Supporting Aboriginal youth

On this page :

Through the Suncor Energy Foundation (SEF) and the company, support for Aboriginal youth across Canada continues to be a priority. We invest in organizations that support cultural learning experiences, leadership development and learning. Initiatives like the SEF Gathering provide a place to convene diverse voices and partners to discuss and understand complex issues and imagine innovative solutions. We work to ensure Aboriginal youth participate as a key voice in these conversations about the future, reconciliation and prosperity.

Hearing from Aboriginal youth directly is important in understanding barriers they face in accessing education opportunities which can limit their employment potential and future success. These barriers cause large social and economic gaps between Aboriginal Peoples – First Nations, Métis and Inuit – and other Canadians. Today's youth are tomorrow's leaders – that's why we're focused on building stronger connections with Aboriginal youth.

Investing in Aboriginal youth with Indspire

For more than a decade, Suncor has hosted youth and chaperones from communities near our operations at the annual Indspire awards. The youth participate in a 3-day "Inspired Youth Experience" where they tour local post-secondary institutions, meet Indspire award recipients and attend the awards ceremony. They explore educational possibilities that help broaden their perspectives about the future and the role education plays in providing more options. They also meet successful role models who challenge their thinking about their own potential.

Based on feedback from past youth participants, attending the Indspire Awards was remembered as a life-changing and pivotal moment. The experience provided opportunity for youth to see positive stories and pride in their culture.

Read more about indigenous education and Indspire in our Oil Sands Question and Response (OSQAR) blog

Partnering on opportunities for Aboriginal youth

Below are some partner organizations supported through Suncor and SEF that are working to improve the education, leadership and cultural opportunities for Aboriginal youth in Canada:

Sustainable Communities Initiative (SCI) – Lake Athabasca Youth Council (LAYC) and Sekwena: Since 2012, Suncor, along with other industry in northern Alberta, has funded SCI to explore how communities and companies could work together to create a safe space for Aboriginal youth to grow and learn. Janvier and Fort Chipewyan (our partner communities) are working alongside industry partners, with a common vision of co-creating safe, healthy, sustainable communities where people can work, live, play and raise their children. To achieve this vision, SCI focuses on youth to engage in a common future with their community.

Native Ambassador Post-Secondary Initiative (NAPI): The NAPI Program is designed for Aboriginal youth, ages 13-24. Through their 2 programs, Educational Outreach and Youth Leadership Training, they provide educational support to help youth make decisions about their future. By developing leadership skills, self-awareness and encouraging Aboriginal youth to pursue post-secondary education, the vision is for Aboriginal youth to realize their potential and become leaders in their community.

Bridges Social Development: Bridges is a Calgary-based non-profit organization that works with communities in Canada to build capacity and train youth leaders. Among its annual events is Aboriginal Youth Explosion, which brings together young people who have participated in Bridges' Unveiling Youth Potential program to share their stories with the broader public.

Assembly of First Nations – Youth Summit: In 2001, The Assembly of First Nations (AFN) committed to creating a national youth council (NYC) to work with the AFN in its efforts to hear and address concerns from national youth representatives. As part of the AFN's Annual General Assembly, the youth council hosts a youth summit. This is a critical platform where national youth initiatives are discussed, worked on and presented back to the AFN national body.

Currently the AFN NYC is working with the 4Rs youth movement to build upon their work in an effort to facilitate engagement of First Nation youth across a variety of sectors. The theme for the 2014 summit focused on the notion of increased and more meaningful engagement with First Nation youth.

The Banff Centre: The Centre is home to one of Canada's most recognized Indigenous leadership and management development programs, designed to help community representatives lead change and achieve results. Our support of the Centre provides bursaries for the participants of the program.

Partnering with Aboriginal businesses

On this page :

Successful businesses are a key component of a sustainable community. Working closely with our Aboriginal communities, we have been able to identify business opportunities that tap into local skills and expertise.

However, supporting Aboriginal businesses is about more than direct purchases of goods and services. It also means working collaboratively with our Aboriginal partners to create conditions that build capacity within their communities.

In 2014, we spent $463 million with Aboriginal businesses, bringing our total to almost $3 billion since 1999. While the Regional Municipality of Wood Buffalo, home to our oil sands operations, currently accounts for the vast majority of our total Aboriginal spend, we continue to work to find new opportunities to work with Aboriginal businesses across Canada.

Our Aboriginal economic collaboration strategy is built on 4 strategic pillars:

- proactive Aboriginal business development
- respectful relationships and capacity development
- community-driven economic development
- meaningful partnerships and collaboration

Pillar 1: Proactive Aboriginal business development

Our Regional Business Development team continued improving the collaboration between Suncor and Aboriginal businesses in the Regional Municipality of

Wood Buffalo in 2014. One initiative that was generated was the joint business development plans for First Nation-owned companies in the region. These plans, co-created by both Suncor and Aboriginal business, allowed Suncor to better understand their business interests and capacity while improving the identification of business opportunities for the companies.

While we've learned a great deal in Wood Buffalo, there is tremendous opportunity in working with Aboriginal businesses across Canada.

Our Petro-Canada retail brand currently has 15 fuelling stations owned by First Nations across Canada and we are actively pursuing growth opportunities.

In October 2014, Petro-Canada co-hosted an information conference called "Imagine the Possibilities" in Osoyoos, B.C., with the Osoyoos Indian Band. Over 150 delegates attended from over 50 First Nations communities to learn more about our Petro-Canada business and the benefits of collaborating with a strong, recognizable brand. Some of the objectives were:

- to share success stories of existing long-term relationships
- highlight what it takes to be successful
- explore new retail and wholesale opportunities in Aboriginal communities

The conference also fit perfectly with our strategy of building capacity within Aboriginal communities and creating mutually beneficial relationships.

"Demonstrating a shared common purpose with our owners and associates makes sound, strategic business sense," says Eric Griffiths, general manager, retail operations, Petro-Canada. "Aboriginal business owners of Petro-Canada sites can benefit from the partnership through employment, business development, education and training."

Pillar 2: Respectful relationships and capability development

We recognize that developing cultural understanding and awareness of our employees and contractors is part of the way we can build relationships with Aboriginal communities.

One method we use to increase our workforce's awareness and understanding about Aboriginal experiences and culture is through our Aboriginal awareness training for employees who work closely with Aboriginal communities and businesses. In 2014, about 200 people participated in this awareness training.

We also support our Aboriginal suppliers by working with organizations like the Northeastern Alberta Aboriginal Business Association to share information about supplier engagement and contractor readiness. We work closely with Aboriginal businesses with which we have relationships and debrief Aboriginal suppliers on proposal submissions, so they understand our processes and improve their ability to compete for new contracts.

Safety above all else is our most important value; we have the same expectations for all our contractors. Helping suppliers build and integrate internal safety programs is a win-win opportunity for both parties.

In 2014, we engaged many Aboriginal partners in our contractor performance management (CPM) program, which includes two-way communication scorecards. The results of CPM with our Aboriginal suppliers are significant in terms of:

- increased communication and trust
- safety and performance improvements
- more efficient invoicing and payment
- value creation

Our suppliers appreciate CPM because they understand how performance is evaluated and can better meet our expectations. An example of this is a supplier who received feedback about their invoicing process. They agreed to change the process, increasing upfront workload for them. However, the result was more accurate, detailed invoicing and much quicker supplier payment because of reduced follow up required.

Pillar 3: Community-driven economic development

Successful economic development opportunities should reflect the skills, needs and goals of each unique community. In other words, it needs to be community-driven.

The Tsuu T'ina small business incubator (SBI), on the Tsuu T'ina First Nation near Calgary, is one such example. Formed under the leadership of Ivonne Crane, the SBI was truly a community initiative. Bringing together entrepreneurs from the Nation and Suncor volunteers, it provided an opportunity for shared learning and capacity building through a small business education platform.

The SBI was conceived as part of a four-pronged approach to employment on the Nation and was complimented by a number of other employment support programs. Originally a one-year pilot, the SBI was designed to help support and promote economic growth and job creation at the grassroots levels of the Tsuu T'ina Nation.

Collaboration between the SBI staff and Suncor volunteers proposed a series of 4 workshops to build capacity of the attendees:

1. Starting Out: determining if your business idea is a good one
2. Business Plan Writing 101
3. Marketing and Promotion
4. Business to Business: Preparing proposals

Suncor employees with relevant background and expertise volunteered to develop and deliver these workshops. The workshops were delivered from February to June to approximately 50 participants. The pilot came to a close in September when our volunteers, the SBI staff and several guests held a handover workshop to transfer facilitation of the program over to the SBI staff.

The program also had positive benefits for the Suncor employees – increasing their knowledge and understanding of not only the Aboriginal culture and business but also of the challenges faced by entrepreneurs in the community. Many asked to be involved in similar future opportunities.

The entrepreneurs from Tsuu T'ina Nation reported increased confidence in shaping their business futures.

Pillar 4: Meaningful partnerships

A new partnership that we have developed this year is with Reconciliation Canada. This organization is focused on building new relationships among Aboriginal Peoples and all Canadians. This is a very important partnership for us as the concept of reconciliation and its place in the development of relationships with Aboriginal communities provides a different approach in Aboriginal relations; one that we are keen to explore.

One of the benefits we have seen through this relationship was the attendance of our employees in their Reconciliation Dialogue Workshops. These experiences, attended by both Aboriginal and non-Aboriginal people, allowed participants to:

- learn more about our shared history
- reflect on our biases
- commit to a common path forward

We were a founding partner of the Northeastern Alberta Aboriginal Business Association (NAABA) in 1983. We regularly attend NAABA general meetings and industry meetings, and have a close working relationship with the organization.

As a member of the Aboriginal Human Resource Council, we engaged them to provide input to our Aboriginal workforce development initiatives. Specifically, we had them deliver a tailored cultural awareness training session for Human Resources staff. They reviewed our recruitment and selection practices through interviews with Aboriginal employees and stakeholders, made recommendations for enhancements and led a workshop to help us think about how we can better support Suncor managers in hiring and working with Aboriginal employees.

Measuring our success

In 2014, Suncor was proud to achieve Silver level certification through the Canadian Council for Aboriginal Business Progressive Aboriginal Relations (PAR) program.

First Nations advisory committees

On this page :

We are committed to meaningful consultation and engagement with First Nations. By seeking to understand First Nations' interests, issues and concerns, we are able to identify new ways to improve our performance.

Established advisory committees

One important way we gather this information is by working with community advisory committees. We presently have 2 of these committees in place, 1 with Fort McKay First Nation and another with the Athabasca Chipewyan First Nation (ACFN).

The advisory committees were put in place by the First Nations to provide input on our existing operations, growth projects and community investments. The committees normally meet quarterly, and include site visits. In the summer of 2014, both the Fort McKay First Nation and ACFN committees toured the Fort Hills site, including our recently-constructed habitat compensation lake.

The Mikisew Cree First Nations, Fort McMurray First Nations and Chipewyan Prairie Dene First Nations have all expressed interest in establishing their own advisory committees. We hope that, by working collaboratively with the First Nations and other operators in Wood Buffalo, these committees could be up and running in 2015.

Advisory committee mandates

The mandate of these advisory committees is to provide a forum to exchange and discuss information about our operations. They are an opportunity for community members to:

- learn more about our business
- voice their concerns
- provide suggestions for improvements

We've found the committees to be a good venue to look differently at environmental issues. By bringing community members such as Elders, land users and youth together with our subject matter experts, we have seen an exchange of information that has increased their understanding of our operations as we've increased our understanding of the communities' interests and needs.

Through these advisory committees, we can work collaboratively and proactively to:

- minimize our impact on treaty and Aboriginal rights
- minimize our impact on land, water and air resources
- further improve our environmental monitoring and reclamation efforts

We believe this is the right way to operate and that it will help us continuously improve our environmental performance.

Community investment

On this page :

As stewards of valuable natural resources, we have the opportunity – and responsibility – to help build a better future. By supporting resilience, skill development and social well-being in the communities around us, we strive to create shared value and benefit for all involved.

We are here to connect and support, as well as learn with our community partners. By working with others, we increase our body of knowledge and make progress toward resolving complex social challenges.

Our community investment strategy

Suncor and our private, non-profit, charitable organization, the Suncor Energy Foundation (SEF), are guided by a strategy focused on targeted investments intended to help communities near our operations grow, thrive and become sustainable.

We define a sustainable community as a place where there is:

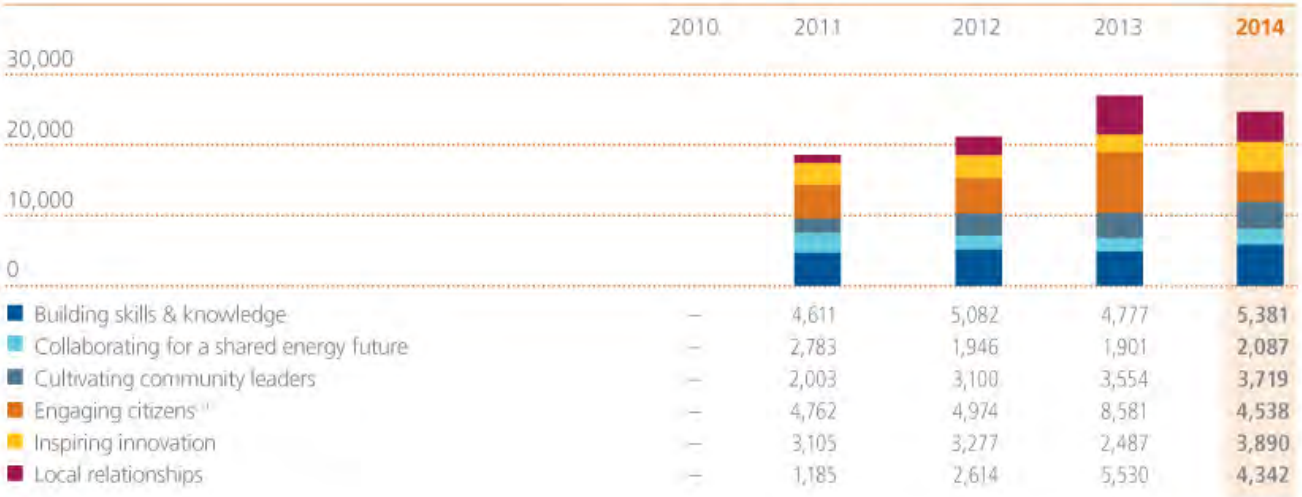
- a high quality of life that attracts people and keeps them there
- an abundance of clean, natural resources
- ample economic opportunity

We believe we can be an effective partner in supporting sustainable, resilient communities by leveraging our strengths as an integrated energy company. That's why we focus our investments in 5 key areas to support integrated initiatives that:

- strengthen communities by cultivating community leaders
- support building skills and knowledge for the current and future workforce

- foster the ability to think creatively through inspiring innovation
- build employee and volunteer capability by engaging citizens in community activities
- engage employees and communities in collaborating on our energy future

COMMUNITY INVESTMENT BY FUNDING PRIORITY*
($ thousands)



	2010	2011	2012	2013	2014
Building skills & knowledge	–	4,611	5,082	4,777	5,381
Collaborating for a shared energy future	–	2,783	1,946	1,901	2,087
Cultivating community leaders	–	2,003	3,100	3,554	3,719
Engaging citizens (1)	–	4,762	4,974	8,581	4,538
Inspiring innovation	–	3,105	3,277	2,487	3,890
Local relationships	–	1,185	2,614	5,530	4,342

* Suncor and the Suncor Energy Foundation have a Community Investment strategy in place, with set funding priorities that reflect our commitment to be actively engaged in the development of sustainable communities in our key operating areas. For historical community investment information under previous funding priorities prior to 2011, please refer to Suncor's archived reports on sustainability.
(1) Contributions in 2013 to the "engaging citizens" priority were significantly higher as a result of the activation of several Suncares Humanitarian matching grant programs for employees (Alberta floods, Colorado floods, Haiyan typhoon).

Download

Collaboration is at the heart of our community investment strategy. By working collaboratively, we can find and realize opportunities for long-term solutions that can positively impact communities, future generations and our company. It also ensures we continue to understand each other's interests, issues, needs and concerns.

"This collaborative approach allows us to work in partnership with communities to make a real difference on some of the big issues that impact both society and Suncor," says Cathy Glover, director, community investment and the SEF. "Whether it's supporting Aboriginal youth, addressing skilled labour challenges or facilitating a dialogue on our shared energy future, our investments have the potential to be transformative, rather than transactional."

Read more about our Community Investment strategy and the Suncor Energy Foundation.

Community investment: Contributing to our shared future

In 2014, Suncor's community investment team and the SEF continued to progress our community investment strategy aimed at helping communities near our operations grow, thrive and become sustainable.

"The community investment strategy we embarked on in 2012 has helped deepen our relationships with community, and taken us into new territory in many

ways," reflects Cathy Glover, director community investment and the SEF. "For many years, we were doing what we thought was right, doing things 'to' community. Now we've started to move into that 'with' and 'of' space: how do we do it together in partnership for the common good? One key learning we've had is that we can't force outcomes, and we have to be prepared to allow ourselves and our organization to be changed by what we're seeing and hearing."

Examples of our strategy in action

Here are some examples of the community investment strategy in action in 2014, and what we've learned:

Expand all | Collapse all

Social Prosperity Wood Buffalo

To get a better idea of the kind of initiatives our community investment strategy is designed to support, you need look no further than Social Prosperity Wood Buffalo (SPWB), a 5-year partnership between stakeholders in the Regional Municipality of Wood Buffalo in northeast Alberta, the United Way of Fort McMurray, the SEF and the University of Waterloo. The goal is to improve the quality of life in rapidly-growing Wood Buffalo by strengthening its non-profit (social profit) sector.

Since beginning in 2010, SPWB has mixed education, convening, and supportive activities (workshops, conferences, research, etc.) with concepts like social innovation, collective impact, and systems and design thinking. The result has helped build capacity in the non-profit sector and provided a safe space for social change. A number of key shifts have been observed including:

- increased understanding of the importance of all sectors working together to ensure Wood Buffalo offers a high quality of life
- growing interest in social profit sector collaboration
- movement toward a collective voice and collective impact
- a new, more positive language that uses terms such as 'social profit' and 'social benefit' interchangeably with the more common term 'non-profit sector' to reflect the sector's contributions to improved quality of life

"Through SPWB we were able to show the benefit of going beyond traditional community investment," says Kim Nordbye, manager of community investment, SEF. "This creative approach challenged our role as a funder, pushing us to become more active participants and encouraging the social profit sector to work with us in a different way."

Check out the SPWB website for further detail on what's been accomplished.

Read more about Social Prosperity Wood Buffalo in our Oil Sands Question and Response (OSQAR) blog

The Gathering

Another example of our community investment strategy in action is the second Gathering event, held October 3 to 5, 2014. First held in 2013 to mark the 15th anniversary of the SEF, The Gathering events explore complex social issues that require collaboration to make progress and see lasting community change. The Gathering does not seek to solve these issues, but provides a forum to:

- connect existing work and initiatives
- take a system-wide view
- explore a variety of perspectives
- strengthen partnerships

The 2014 Gathering brought together 140 funding partners, community organizations, social innovators, government representatives, Aboriginal youth and thought leaders. The event focused on 2 topics: Aboriginal youth engagement and capacity building for non-profit organizations.

“What we’re trying to achieve at The Gathering is a sense of collective purpose. That the sum is greater than the parts, and by breaking down the silos that keep us separated, we can work collectively to find solutions to some of the challenges we’re all facing,” says Lori Gammell, senior advisor, social innovation and partnerships. “This isn’t something that will happen overnight, but by continuing to host Gathering events and providing a forum for us all to come together – Suncor, community partners, thought leaders, government and other funders – we can create an opportunity for connection and progress.”

Learn more about the 2014 Gathering event, and some of the key learnings and themes that emerged, through a series of videos from the event.

Investing in social innovation

To further support the new skills and thinking that will be required for emerging leaders to make progress on complex community challenges, in 2014 SEF, in partnership with The Peter Lougheed Leadership Institute (PLLI) at The Banff Centre, invested in establishing a social innovation residency program.

The 28-day *Getting to Maybe* social innovation residency is designed to connect diverse corporate, government, and community leaders as they look at ways to make communities better places to live. It will launch in the summer of 2015 at The Banff Centre with 24 participants and will integrate learnings from:

- systems research
- the environment
- Indigenous knowledge
- the arts on a foundation of social innovation theory

The program has been collaboratively designed by academic experts affiliated with the Waterloo Institute for Social Innovation and Resilience at the University of Waterloo, and expert faculty and thought leaders from PLLI and SEF.

“To make tangible progress on the complex issues facing communities, we know we need to foster and participate in new thinking and leadership at a system-wide level,” says Eric Axford, executive vice president, business services, Suncor and chair of the SEF board of directors. “This investment underscores our commitment to fostering collaboration across multiple disciplines, so together we can address complex social issues and develop strong and sustainable communities.”

Find out more about the *Getting to Maybe* social innovation residency.

Collaborating on our energy future

Meeting society’s energy challenges today and tomorrow is all about making informed choices. That’s why Suncor and the SEF are investing in an evolving set of initiatives under the umbrella of Collaborating on the Energy Future. Our goal is to leverage our strengths as an energy company and be a catalyst for an inclusive national dialogue that will enable Canada to use our energy resources wisely and pave the way for a sustainable energy future.

"Canada is an energy producer and user,” says Lori Gammell, senior advisor, social innovation and partnerships. “It’s something to be proud of, but also a big responsibility on the shoulders of Canadians. Opinions on energy may differ, but with everyone in the conversation, we can make informed decisions that create shared value for all Canadians.”

Initiatives we have supported to date include:

- **The Energy Futures Lab**, an Alberta-based, multi-sector collaboration designed to help shape Alberta’s energy future and strengthen its position and reputation as a global energy leader. The Energy Lab, led by The Natural Step (TNS) Canada, is supported by 3 convening organizations: the SEF, The Banff Centre and the Pembina Institute. The lab will launch in the fall of 2015.
- **Student Energy**, a global not-for-profit that is helping to create the next generation of leaders committed to transitioning the world to a sustainable energy future. Their approach of engaging all perspectives for a balanced understanding aligns with how we want to have the conversation about our energy future.
- **Walrus Talks Energy**, a cross-country series that brings together high-profile speakers from many disciplines for 80 minutes of lively, thought-provoking discussion. The series, which began in April 2013, sees us partner with the Walrus Foundation, which supports public debate on issues vital

to Canadians. In 2014, the conversation continued as the Walrus Talks Energy hosted events in Vancouver and Ottawa.

- **Quality Urban Energy Systems of Tomorrow (QUEST)**, a collaborative network of stakeholders who are working to make Canada a leader in the design, development and implementation of Integrated Community Energy Solutions (ICES). ICES are all about creating smart energy communities by linking energy across land use, buildings, transportation, waste, water and related infrastructure. The QUEST vision is that by 2030, ICES will be the preferred way of doing development and redevelopment in communities.

Supporting our employees

Volunteerism has long been part of how our employees contribute to the community. We recently expanded our SunCares employee program to provide employees with improved tools and resources to help them more readily identify volunteer opportunities in the following categories:

- Individual volunteering – through our partnership with Volunteer Canada and Volunteer Match, employees can find local volunteer activities that align with their interests and skills.
- Team volunteering – employees interested in team-building volunteer activities have access to planning tools and information on the several non-profit and charitable organizations with whom we are partnered.
- Volunteering at Suncor-sponsored events – throughout the year, we sponsor community events in which employees can take part and make an important contribution.

Thanks to the community efforts of our employees in 2014, Suncor was recognized with the Outstanding Community Partner of the Year award from the Metro North Chamber of Commerce in Denver, and with the National Community Champion award from United Way Centraide Canada.

Olympic and Paralympic Games support

Through our Petro-Canada brand, we are a long-time supporter of the Canadian Olympic and Paralympic movement. Our current sponsorship agreement extends our support for Canadian Olympic and Paralympic athletes, as well as their coaches and families, through to 2016.

Our involvement in the Canadian Olympic movement is a journey that began in 1987, when Petro-Canada organized and sponsored the Torch Relay for the 1988 Olympic Winter Games in Calgary. We are proud to continue our support of the Canadian Olympic and Paralympic movement past the 2016 Olympic and Paralympic Games in Rio de Janeiro.

Since 1988, our corporate support has helped more than 2,600 young Canadian athletes and coaches, and has contributed more than $8.5 million in direct financial support through the Fuelling Athlete and Coaching Excellence program (formerly the Olympic Torch Scholarship Fund).

We also believe one of the best ways to promote Canadian athletes is to help their biggest supporters, namely their families. We continue to support a ticketing program that will help ensure family members have the opportunity to see their athletes compete in Rio in 2016.

Other examples

You can find more examples of our community investment strategy in action in other areas of the Report on Sustainability, including how we:

- support Aboriginal youth
- are helping address skilled labour challenges

Operating internationally and human rights

On this page :

Operating internationally

We work to ensure our values are maintained throughout our global operations which include assets in the United Kingdom, Norway, Libya and Syria.

Starting in 2011, political unrest in Libya created broad upheaval in the country, affecting our operations:

- **February 2011**: we suspended oil operations in Libya and evacuated all expatriate staff
- **End of 2011**: we began a gradual return following a change in the political regime and the lifting of international sanctions
- **2012**: production was restarted, and work began to resume our drilling exploration program
- **July 2013**: production was substantially shut-in due to political unrest
- **July 2014**: evacuation of all expatriate staff
- **2014**: sporadic production throughout 2014
- **December 2014**: we declared exploration force majeure with respect to its 6 Libyan Exploration and Production Sharing Agreements
- **December 2014**: further political unrest has resulted in the Libya National Oil Corporation periodically declaring force majeure and/or shutting in various Libyan oil export terminals, pipelines and production fields, significantly reducing our oil production and export

In December 2011, we suspended our operations in Syria to comply with international sanctions announced that month. Operations there remain suspended.

Operating in politically volatile regions

We recognize that a heightened level of risk is present in more politically-volatile regions, and therefore we review and practice emergency plans, as well as monitor security situations through interaction with various embassies and security-oriented personnel network.

Our longer-term planning reflects relationships with industry, various governments and other stakeholders. These relationships help us understand and mitigate risks associated with doing business in these countries.

Our top priority is always the safety of our employees. We will not operate in any country unless we can do so safely, responsibly and in compliance with international law.

Working for Suncor offers local staff well-paying jobs with career development opportunities. We expect this will help improve living standards over time.

We review and assess on-the-ground security and safety conditions to ensure we can operate in a safe, responsible and principled manner.

In Syria, the political unrest made it impossible to operate there without violating our principles and we suspended operations in compliance with international sanctions.

In Libya, we abide by a series of exploration agreements signed with the country's leadership. While we were able to resume production and our exploration program, in-country activity has subsequently been interrupted by political and regional instability that has continued throughout 2013 and 2014.

As with any of our operations, the goal is to live our values and honour our human rights and ethical guidelines, while generating shareholder value.

Committed to respecting human rights

We are responsible for respecting human rights and ensuring we are not complicit in human rights abuses. Our responsibility to respect human rights applies to all our activities and business relationships with others.

The above are some of the central tenets of our Human Rights policy, which we adopted in 2011 and are working to embed into:

- employee policies and practices
- our approach to community and stakeholder engagement
- the way we manage employee and facility security

Download our Human Rights policy (PDF, 2 pp., 19 KB)

We integrated human rights considerations into our company-wide Operational Excellence Management System.

Employee awareness is key to meeting these goals, and we're committed to training staff and proactively communicating our human rights approach. At the same time, we look for opportunities to further promote understanding of human rights values and corporate social responsibility best practices among our stakeholders.

Our commitment to respect human rights is based on the Universal Declaration of Human Rights and informed by international law and standards developed since the declaration's adoption 6 decades ago. We support the Voluntary Principles on Security and Human Rights, and we are a member of the United Nations Global Compact.

United Nations Global Compact (UNGC)

The UNGC is the world's largest voluntary corporate citizenship initiative. Companies join the Global Compact because they believe that business practices rooted in universal principles contribute to a more stable and inclusive global market.

Universal principles also help build prosperous and thriving societies – very much in keeping with our mission to create energy for a better world. We were one of 7 Canadian companies who established the United Nations Global Compact local network in Canada in 2013. As a member, we support and advance

the 10 Principles of the Global Compact with respect to:

- human rights
- labour
- environment
- anti-corruption

Throughout 2014, we participated in 2 working groups looking at how to embed the 10 Principles throughout a company's transparency and disclosure efforts as well as throughout its supply chain. Results are captured in 2 guidance documents expected to be published in 2015 for use by companies to adopt the principles.

Implementing tools on the ground

We recognize that a heightened level of due diligence is required in high-risk and post-conflict environments. In early 2014, prior to shutting down exploration operations in Libya, we piloted various human rights and corporate social responsibility (CSR) tools.

One of those tools was a CSR assessment (with an emphasis on human rights) that aimed to identify gaps and document current best practices in our key business processes (i.e. human resources and supply chain management). Through this assessment, we gathered data used to identify potential risks and generate gap closure plans to improve future performance. We also implemented a company-wide grievance mechanism for resolving stakeholder complaints against the company.

Supporting education in Libya

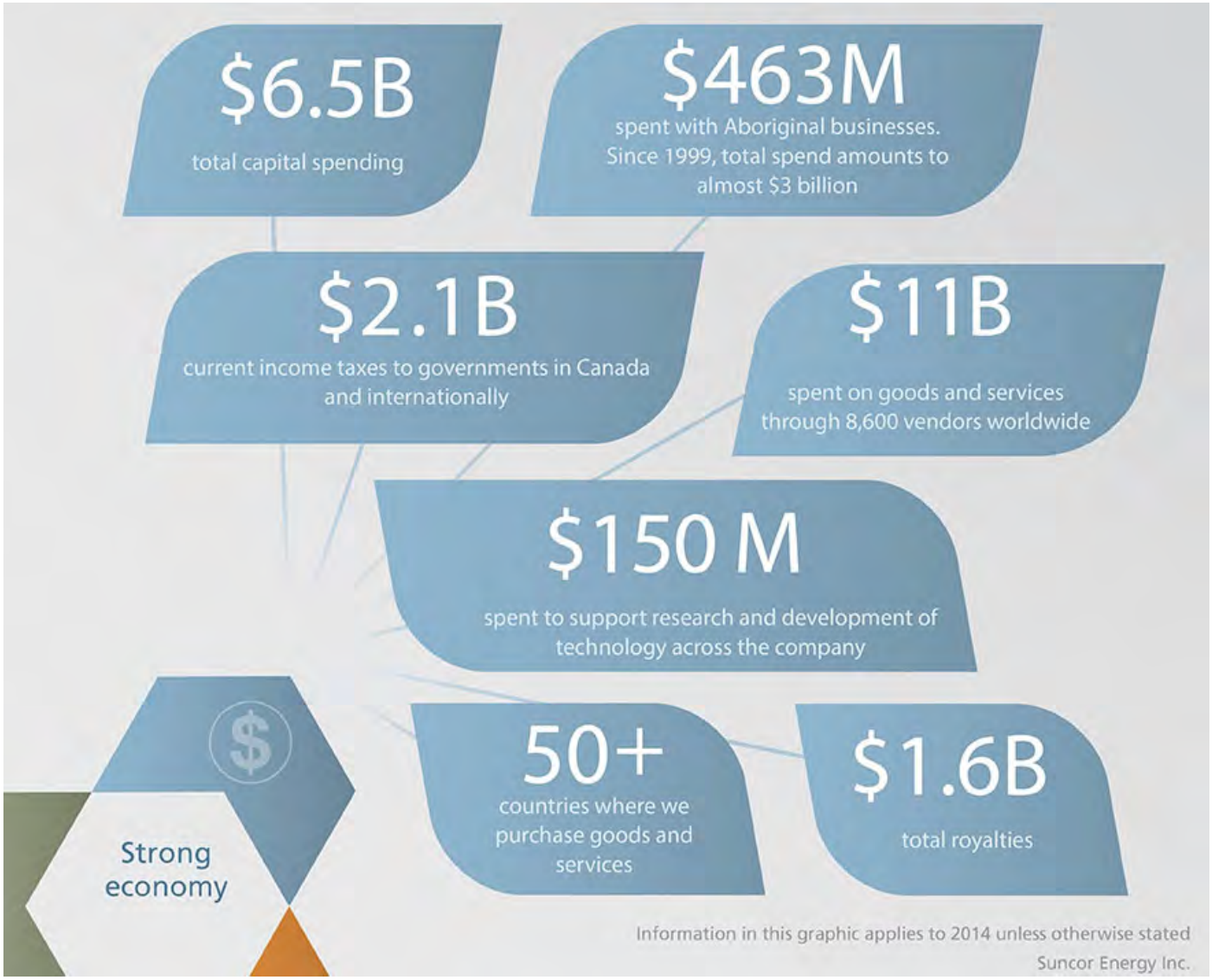
In consultation with Libya's National Oil Corporation (NOC), our sustainability efforts focus on education initiatives to meet growing demand for trade qualifications within Libya.

We provide equipment funding, instructor training and curriculum development for the Petroleum Training and Qualifying Institute (PTQI) in Tripoli and Swawia Technical Center in Zawiyah. These institutes prepare high school students from across the country for work in Libya's oil sector.

Training develops skills integral to the country's oil and gas industry, such as welding, instrumentation and electrical courses. The inaugural student class graduated in June 2013.

We continue to work with the NOC to develop a future Benghazi Petroleum Institute of Technology. As with PTQI, this facility is intended to equip high school students from the Benghazi region with skills for apprenticeship entry with a sponsoring company immediately following graduation. Front end engineering and design planning is currently underway and program curriculum is in development.

Economic



Download

"Sustainability is about striking a balance between opportunity and risk. Businesses and economies are at risk if we fail to meet society's rising expectations for our performance."

– Steve Williams, president and CEO

Strong economic performance, social responsibility and environmental stewardship is foundational to being a sustainable energy company. What follows is a high-level overview of our economic management approach.

Expand all | Collapse all

Our strategy

We are committed to delivering competitive and sustainable returns to shareholders by focusing on:

- capital discipline
- operational excellence
- long-term profitable growth
- leveraging our competitive differentiators

Our management approach to economic risk is to mitigate negative impacts while enhancing positive impacts, where possible. We also continue to execute well on our strategy which focuses on:

Capital discipline

Strong cost management, focusing on core assets and investing in projects that deliver the best possible returns are all examples of creating value for every dollar spent. Our prudent capital spending in 2014 resulted in us finishing the year $300 million below our revised budget.

Operational excellence

We strive to continuously raise the bar on operational performance through consistently applied standards and principles. In 2014, for example, our refining facilities achieved 93% overall utilization despite planned maintenance. Operational excellence is also about becoming a more sustainable energy company. Every barrel of water conserved and every emission reduced means lower input costs and supports our social licence to operate and grow.

Profitable growth

Our focus is on smart, profitable growth. Our Fort Hills mining project, for example, continues on schedule and all critical milestones set for 2014 have been achieved.

Read more about our growth plans and capital spending

Read more about our vision and strategy

Download our 2014 Management's Discussion and Analysis (PDF, 58 pp., 226 KB)

We also ensure that the management of economic risks by joint venture partners and subsidiaries are in line with our vision and strategy.

Policy

We have adopted several policies related to economic performance. These include:

- competition
- accounting reporting and business control
- business conduct
- enterprise risk management

Our strategy leverages our competitive differentiators and paves the way for us to unlock our company's full potential for the benefit of our employees, shareholders and stakeholders. We will profitably operate and develop our oil sands resources, optimize value through integration, achieve industry-leading unit costs in each business segment and be an industry leader in sustainable development.

Implementation of our Operational Excellence Management System (OEMS) across the entire enterprise is a key example of continually improving the reliability and performance of our assets. This means integrated and consistent standards, processes and procedures that reduce risk and enable continuous improvement.

For more information on our business strategy, growth projects, performance, financial goals and objectives, visit Suncor's Investor Centre.

Additional policies and practices include:

- Prevention of Improper Payments, which sets out that funds and facilities are not to be used for any illegal or improper purposes.

- Read more about prevention of improper payments
- Download our PG&S on the Prevention of Improper Payments (PDF, 10 pp., 72 KB)

- Conflict of interest, which sets out conduct for Suncor personnel in a conflict of interest situation.

  - Read more about corporate governance
  - Learn more about our governance policies on Suncor.com

- Aboriginal relations, which encourages each business unit to plan and measure business activities and partnerships that create opportunities for Aboriginal-owned businesses.

  - Read more about partnering with Aboriginal businesses
  - Download the Aboriginal relations policy (PDF, 2 pp., 1.3 MB)

We also have specific practices in place related to local supplier selection. Regional development clauses are in place with suppliers and in contracts across all businesses, and sourcing documents often have criteria that evaluate suppliers on Aboriginal or local content. Additionally, our common practice is to post local contract and supplier opportunities on regional organizations' websites such as Regional Economic Development (REDlink) and North East Alberta Aboriginal Business Association (NAABA). This is to ensure local businesses and suppliers are the first to be aware of opportunities in their region.

Commitments

We are committed to a mission, vision and values which guide our business decisions.

Strong economic performance, along with social responsibility and environmental stewardship, is part of being a sustainable energy company. Our investment in energy production, upgrading, refining and marketing benefits the economy by:

- creating well-paying jobs
- promoting economic growth
- providing governments and suppliers with revenues

Development of our core assets also allows us to invest in our renewable energy business and in new technologies to improve company-wide operational efficiency and environmental performance.

In all of these ways, we continue to create value – for our shareholders and society at large.

Read more about our vision and strategy

Goals, targets and actions

We are committed to 5 enterprise-wide value driving goals:

- continue to advance our journey to operational excellence
- improve maintenance and reliability across Suncor's operations
- accelerate progress on Suncor's culture and workforce performance
- generate and sustain industry-leading returns
- achieve long-term sustainability goals

For information about how we delivered on these goals in 2014, download our 2014 Annual Report (PDF, 138 pp., 2.54 MB) and see pp. 8-9.

Technology investment

Our strong balance sheet allows us to invest in new technologies, for potential use to reduce carbon emissions, water use and the overall environmental footprint of our business. In 2014, Suncor spent approximately $150 million to support technology research and development. These investments include an oil sands wastewater treatment facility that began operations in 2014, and focuses on the reuse of makeup water in upgrading and utilities. Suncor also

shares 777 environmental technologies through Canada's Oil Sands Innovation Alliance (COSIA) that cost over $950 million to develop.

Read more about our latest developments in technology

Community investment

Through the company and our private, non-profit charitable organization, the Suncor Energy Foundation, we provide targeted investments intended to help communities near our operations grow, thrive and become sustainable. In 2014, our community investments totalled more than $26 million.

Read more about our community investment strategy

Responsibilities, resources and training

Our senior management team is responsible for delivering significant growth while maintaining operational excellence, led by our president and chief executive officer Steve Williams.

Our senior executive compensation program is designed to support and reinforce Suncor's value drivers:

- continue to advance Suncor's journey to Operational Excellence
- materially improve maintenance and reliability
- accelerate progress on Suncor culture and workforce performance
- generate and sustain industry leading returns
- achieve long-term sustainability goals

More information about compensation programs can be found in our 2015 Management Proxy Circular (PDF, 111 pp., 888 KB)

Resources and training

- In 2012, we developed a comprehensive anti-bribery compliance program. The program includes training, contractual protections, audits and third-party contractor prequalification.
- We conduct an annual business conduct compliance program with employees, contract staff and directors, who must review our business conduct policies and affirm policy compliance during the preceding calendar year.
- In light of the current crude price environment, Suncor has reduced the size of our workforce and implemented a number of directives around discretionary spending to continue to drive a sustainable, cost-conscious culture across all levels of the organization. This cost-conscious culture will not deter our focus on safe, reliable and environmentally sound operations and these areas are critical to the long-term viability and to the success of Suncor.

Read more about our standards of business conduct code

Results and evaluation

Our integrated business model, along with a relentless focus on execution, generated another strong financial year in 2014.

We continued to demonstrate:

- industry-leading free cash flow from our integrated model and a strong focus on execution
- emphasis on capital discipline by maintaining a strong balance sheet, with a decreasing net debt balance while steadily increasing the return of cash to shareholders

Our strong economic performance allows us to invest in profitable growth and continuous improvements in our existing operations, despite an uncertain oil price environment. The ripple effects of that investment are felt across the North American economy and well beyond.

Financial performance information is included in our 2014 annual disclosure documents.

- Download our 2014 Annual Report (PDF, 138 pp., 2.54 MB)
- Download our Annual Information Form dated Feb. 26, 2015 (PDF, 98 pp., 357 KB)

Read about our economic performance

What we are doing differently

Read about our growth plans and capital spending

Economic performance

On this page :

We are one of a few energy companies in Canada to operate across the value chain – from resource extraction and upgrading to midstream logistics to refining and marketing. This integrated business model, along with a strong focus on execution, continues to generate solid results.

Here is a look at the main indicators of our internal economic performance in 2014:

Expand all | Collapse all

Production

Total upstream production averaged 534,900 barrels of oil equivalent per day (boe/d) in 2014, compared to 562,400 boe/d in 2013. This amount reflected a decrease in volumes from Exploration & Production as a result of the sale of the company's conventional natural gas business which took place in 2013, partially offset by higher production from Oil Sands.

The production of 534,900 boe/d in 2014 included 421,900 barrels per day (bbls/d) from our Oil Sands business unit and 113,000 boe/d from Exploration & Production.

Driven primarily by increased Firebag production, our Oil Sands operations increased production by approximately 8% in 2014, compared to 2013. Production levels at Firebag have increased by more than 65% since 2012, and the facility attained rates above nameplate capacity of 180,000 bbls/d in the

fourth quarter of 2014.

A record low steam-to-oil ratio of 2.8 at Firebag was achieved for 2014, primarily due to optimized reservoir management strategies and strong infill well performance.

Please note: The production numbers cited above are from Suncor's 2014 Annual Report. These are for upstream volumes only, and include production from non-operated assets. This differs from production numbers used in the performance data section of Suncor's Report on Sustainability, which includes 100% of the production at Suncor-operated facilities only, and also includes downstream throughput volumes of saleable refined products. For the purposes of our sustainability report, total production in 2014 was approximately 3.4 million cubic metres (m^3), compared to 3.5 million m^3 in 2013.

Earnings

We reported net earnings of $2.699 billion in 2014, compared to $3.911 billion in 2013. Operating earnings* for 2014 were $4.620 billion, compared to $4.700 billion, in 2013.

Consolidated cash flow from operations* for 2014 was $9.058 billion, compared to $9.412 billion in 2013. Cash flow from operations decreased primarily due to incremental current income tax expense related to the company's Canadian operations recorded in 2013 and higher operating expenses, partially offset by higher production volumes and higher price realizations.

Operating costs

Reducing our cash operating costs* continues to be a focus for us. We reduced annual cash operating costs per barrel from $37 per barrel (bbl) in 2013 to $33.80/bbl in 2014.

Share prices and dividends

Our common share price closed at $36.90 on the Toronto Stock Exchange on Dec. 31, 2014, a decrease of approximately 1% from the year before.

- We returned $3.2 billion in dividends and share repurchases in 2014, a 14% increase versus 2013.
- With 2 increases totaling over 40%, 2014 marked the twelfth consecutive year in which Suncor's dividend has increased.

Balance sheet and financial position

Our approach to prudent capital spending in 2014 resulted in the company finishing the year $300 million below its revised 2014 capital guidance of $6.8 billion and ending the year with $5.5 billion in cash and cash equivalents.

Read more about our economic performance in our 2014 financial reports

*Non-GAAP financial measure. Please see the Advisories.

Growth plans and capital spending

On this page:

We have made significant progress on the Fort Hills mining project. We are targeting first oil for the fourth quarter of 2017. To date, we have achieved all critical milestones according to plan.

We are also making significant progress on our growth projects in Exploration & Production:

- The Golden Eagle Area Development achieved first oil in 2014.
- The Hebron project continued to progress on budget and schedule, with first oil expected in late 2017.
- We secured several long-term exploration opportunities in East Coast Canada and the North Sea.

Preserving energy and economic growth opportunities for the future

In response to the current lower-crude price environment, we have elected to defer some capital spending. This means that projects such as MacKay River 2 and the White Rose Extension will await more favourable market conditions. We'll carefully stage these projects so that when the time comes to bring them back into development, previously invested capital will be preserved.

Expanding market access

Growth requires access to markets. We're well-positioned with more than 600,000 barrels per day of takeaway capacity for our oil sands production. Key 2014 highlights include:

- New rail and marine loading and unloading arrangements expanded connectivity to Eastern Canada, the U.S. and new coastal markets
- Optimization of our midstream assets added approximately $2 per barrel in value to our Oil Sands production

- Secured new pipeline access to the U.S. Gulf Coast. Over 11 million barrels of storage capacity across North America supporting our marketing and trading activities

2015 capital spending plan and production outlook

For corporate guidance on 2015 capital spending and anticipated production, please visit Suncor.com/guidance.

Contribution to economy

On this page:

The economic benefits of our success extend well beyond the returns we provide to shareholders. In 2014, we contributed a combined $3.8 billion in royalties and taxes for governments – revenues that were then available to help fund public sector programs, including education, health care and vital infrastructure.

We also generate economic growth and prosperity through our purchase of goods and services. Our combined spending on goods and services in 2014 totalled $11 billion. We had more than 8,600 vendors worldwide.

Royalties and taxes

In 2014, royalties totalled over $1.6 billion, including $982 million directed to the oil sands royalties. As well, income taxes totalled approximately $2.1 billion to governments in Canada and internationally.*

* Does not include excise taxes collected and remitted by Suncor.

Capital spending

Capital and exploration expenditures totalled $6.5 billion in 2014, compared to $6.4 billion in 2013.

Goods and services

A look at our supply chain spending shows we had more than 6,500 Canadian vendors spanning all 10 provinces as well as the Northwest Territories and Yukon. The United States was our next biggest supplier (more than 1,600 vendors), and we also purchased from 50-plus other countries.

We segment our suppliers based on a compilation of spend and risk. Based upon our segmentation tool output, we have approximately 50 Tier 1 and 165 Tier 2 suppliers. (Tier levels correspond to the size of supplier, with respect to risk and spend.) Together, these 2 groups of suppliers represent approximately 80% of our total supply chain spend.

We use 14 major category groups that are rolled up from 120 sub-categories. The taxonomy used to define and create these categories and sub-categories is the United Nations Standard Products and Services Code (UNSPC) that is used globally to classify products and services.

The range of goods and services is extensive and includes:

- heavy equipment
- drilling
- construction
- engineering
- environmental services
- mining services
- chemicals
- structural steel products
- electrical
- catering
- pipes, flanges and fittings
- marine and subsea services

The typical split of materials versus services depends on the type of worksite, such as the following:

- operating facilities, where the spend is typically 60% services and 40% materials
- major greenfield construction sites, where the spend is typically 70% services and 30% materials

Aboriginal partners

In 2014, we spent $463 million on direct purchases from Aboriginal businesses. Since 1999, Suncor has spent over $3 billion with Aboriginal businesses, nearly half of which was spent since 2011. We prefer to use local vendors whenever possible.

Read more about economic contribution in our Oil Sands Question and Response (OSQAR) blog

Corporate governance

On this page :

Good corporate governance is a critical part of our business culture and practice. Making decisions responsibly and in the best interests of our shareholders and stakeholders is a key focus, from the Board of Directors to every employee.

Leadership starts at the top

Our Board of Directors sets the standard for our governance structure. The Board oversees the management of Suncor's business and affairs on behalf of our shareholders. It has processes in place to help ensure we live up to regulatory requirements and the standards of excellence we set for ourselves.

The Board's responsibilities include:

- identifying risks and ensuring systems are in place to manage and monitor risks
- strategic planning
- overseeing the establishment and enforcement of the Standards of Business Conduct
- ensuring systems are in place for communication with investors and other stakeholders
- selecting, monitoring and evaluating executive leadership and aligning management's decision-making with long-term shareholder interest

Read about our Board of Directors on suncor.com

Experienced and diverse leaders

According to the Canadian Board Diversity Council (CBDC), having a diverse, experienced and well-credentialed Board of Directors helps:

- consider challenges and opportunities from a variety of perspectives
- generate powerful ideas and innovative solutions
- create shareholder value

The Board aims to be comprised of directors who have a range of perspectives, insights and views in relation to the issues affecting Suncor. It looks for members from diverse backgrounds, having regard to gender, ethnicity/aboriginal status, age, business experience, professional expertise, personal skills, stakeholder perspectives and geographic background.

To encourage board diversity across Canada, our president and chief executive officer, Steve Williams, is a supporting CEO of the CBDC, while Suncor is a founding sponsor.

Learn more about CBDC

Learn more about our governance policies on suncor.com

Corporate governance structure

Effective corporate governance comes from leadership and good corporate structure. Economic, environmental and social issues aren't considered separately but evaluated together as part of our strategic decision-making process. This has informed our corporate structure and its key features:

- Our Board of Directors and its committees have clearly defined and distinct oversight roles to protect the interests of our shareholders and stakeholders set out in terms of reference
- The Board's environment, health, safety and sustainable development committee monitors management's performance in areas within its mandate. They also review emerging trends and issues in the areas of health, environment, climate change, safety and sustainable development to ensure we are anticipating future challenges and positioning ourselves to minimize risks
- Our senior management team integrates key operational and functional accountabilities for maximum efficiency and effectiveness
- The vice president, sustainability and communications reports directly to our executive vice president, business services
- Environment, health & safety and sustainability employees have direct access to senior management

Download the company's annual Management Proxy Circular and related governance policies on suncor.com.

Sustainability governance

Suncor takes pride in having an efficient and accountable work environment. Environment, health and safety (eh&s) and sustainability employees have direct access to senior management and our Board of Directors.

Download

Ethical business conduct

On this page:

Our commitment to integrity and ethics is the foundation for our Standards of Business Conduct Code and the company policy guidance and standards that reinforce it.

The code requires strict compliance with legal requirements and sets standards for the ethical conduct of our business, allowing us to maintain the confidence of our customers, colleagues, shareholders, vendors, and the governments and communities where we do business globally.

Standards of Business Conduct Code

Our business conduct policy statement articulates our commitment to sound legal and ethical business practices. We meet this commitment through our Standards of Business Conduct Code, which is comprised of a number of detailed policy guidance and standards (PG&S) and a code compliance program.

Under the code, every Suncor director, officer, employee and contract worker is required annually to review the code and certify that he or she:

- has reviewed a summary of the code
- understands the requirements of the code
- has complied with the code, alternatively has disclosed and resolved any non-compliance with the code

Consultants working on our behalf or in our name through outsourcing of services, processes or business activity, are required to abide by the code when representing Suncor.

Topics addressed in the code, and detailed further in various PG&S, include:

- competition
- conflict of interest and confidentiality
- trading in shares and securities
- improper payments
- fair dealing in trade relations
- harassment
- accounting, reporting and business control
- protection and proper use of corporate assets and opportunities

Stewarding to business conduct code

- Our Board of Directors exercises stewardship over the code
- Internal auditors audit the compliance program annually
- The general manager of internal audit & enterprise risk, who has a direct reporting relationship with the audit committee, reports on compliance to that committee

At least once annually, the code is reviewed, and if appropriate, updated. Management reports to the governance committee annually on this process, and any recommended changes are approved by the governance committee.

Any waivers of code requirements for executive officers or members of the board must be approved by the board or appropriate board committee and disclosed. No such waivers were granted in 2014.

Raising ethical concerns

We encourage employees to raise ethical concerns without fear of reprisal with these teams/departments:

- management
- Legal
- Corporate Security
- Human Resources
- Internal Audit

In addition, we have established an integrity hotline to provide a means for our employees and contractors to report issues of concern anonymously to a third-party service provider.

The integrity hotline is available 24 hours a day, 7 days a week. All serious issues are investigated by Internal Audit or the chief compliance officer. The audit committee receives regular updates on integrity hotline activities.

Download The Way We Do Business Guide (PDF, 24 pp., 1 MB)

Prevention of improper payments

Corruption constrains sustainable economic activity. It hinders the development of fair market structures and distorts competition. More important, corrupt

business practices undermines citizens' trust in political and business systems, its institutions and its leadership. We strive to act transparently and in the best interests of the communities where we operate.

Our position on bribery and corruption is clear, and detailed in the PG&S on the Prevention of Improper Payments. Funds and facilities aren't to be used for any illegal or improper purposes. Bribery, kickbacks or any payment to a person to commit an unlawful act, or to influence a person performing public duties, are prohibited, as is the diversion of assets for personal benefit. Personnel are required to comply with all applicable laws concerning improper payments to foreign officials or other third parties.

Supervisors and managers are expected to promote a working environment consistent with this PG&S, and assist all personnel within their supervision to understand and comply with it.

Our Board of Directors reviews compliance with this PG&S as part of its annual review of the Standards of Business Conduct Compliance Program. Our chief compliance officer oversees this PG&S and provides periodic reports to the general counsel and Board of Directors.

Download our PG&S on the Prevention of Improper Payments (PDF, 10 pp., 71 KB)

Privacy

We collect, use and store personal information about employees, contractors, customers, suppliers, associates and others in the course of business activities. The collection, use and disclosure of personal information is subject to provincial, federal and international laws. We respect privacy rights of all individuals and have policies, procedures and practices to protect those rights.

Competitive practices

We strive not to engage in anti-competitive activities. We compete for business vigorously, honestly and in material compliance with all applicable antitrust and competition laws. These laws encourage fair competition in the marketplace for products and services.

Those negotiating or administering agreements, involved in advertising and promotion, or participating in industry associations or similar groups, are required to be familiar with local laws regarding competition and trade practices. We try to identify, select and do business with suppliers who enhance our competitiveness and who have a consistent vision of sustainability and business ethics.

- Download our PG&S on Competition (PDF, 19 pp., 102 KB)
- Download our PG&S on Trade Relations (PDF, 2 pp., 24 KB)

Open, honest and transparent relationships support sound corporate governance and high ethical standards. Within the bounds of commercial confidentiality, we commit to transparent relationships with employees, shareholders and stakeholders alike. We encourage transparent transactions and operating agreements with provisions that respect the local laws of wherever we operate around the world.

Many of our investments and projects are long-term in nature and we expect to be a corporate citizen in communities where we're located for many years. We have a clear interest in social and economic development in regions and countries where we work.

As such, we support public accountability by governments, and transparency of revenues, as a means to promote political and economic stability in regions where we operate. We acknowledge work that the Extractive Industries Transparency Initiative does in this regard and, while we haven't formally endorsed the initiative, we consider supporting host countries seeking to implement greater transparency if requested.

Conflict of interest

Our governance committee annually reviews a declaration of interest from each board member to determine if any conflicts of interest exist. In addition, directors are required to maintain with the corporate secretary a current list of all other entities in which they have a material interest or on which they serve as a director, trustee, or in a similar capacity.

- Download Suncor's 2015 management proxy circular (PDF, 111 pp. 900 KB)

As per the Board's conflict of interest policy, if a director is a party to, or has an interest in any party to, a contract or transaction before the Board of Directors (regardless of the materiality of the contract or transaction), the director must immediately advise the board chair or the particular committee chair. The director's conflict or potential conflict is recorded in the meeting minutes and the director is required to exit from the meeting for any material discussions or deliberations concerning the subject matter of the contract or transaction. The director is required to abstain from voting on any resolution in respect of such contract or transaction. The corporate secretary also ensures that directors don't receive board materials in situations where the subject matter of the

materials could involve an actual or potential conflict of interest.

Executive pay

On this page :

Interest in executive pay from shareholders, other stakeholders and the general public has continued to grow. This increased attention can be seen in evolving regulatory requirements, a strong focus on pay-for-performance, and clear expectations for transparency in disclosure of executive pay and demonstration of good governance practices.

Compensation linked to goals

Our executive compensation plans, policies and programs are designed to support and reinforce successful strategy execution and achievement of our corporate and business unit goals, resulting in profitable growth and long-term shareholder value.

To ensure alignment on key priorities, our goal-setting process begins with the president and chief executive officer and cascades through the organization. Goals are established by each of the business units in key areas that will drive the most value:

- continue to advance operational excellence
- improve maintenance and reliability
- achieve long-term sustainability goals
- generate and sustain industry-leading returns
- enhance our culture and workforce performance

We ensure our executives' focus is consistent with the interests of our shareholders by ensuring alignment on key priorities, and linking executive compensation directly to the achievement of strategy and goals.

Pay-for-performance approach

To deliver sustained performance and increased shareholder value, it is essential that we attract, engage and retain talented, capable executives who can lead and execute business plans that position us for long-term success. One of the ways we do this is by designing and implementing compensation plans, policies and programs that provide an attractive and competitive total compensation opportunity.

This is demonstrated in the total direct compensation we provide to executives, which has a significant portion (70% to 85% for senior executives) at risk, in the form of short-, medium- and long-term incentive-based pay. Annual, medium- and long-term incentive plans are tied directly to operational performance and to absolute and relative increases in shareholder return.

Our incentive-based pay-for-performance design provides executives with the opportunity to increase their compensation when above-target operational and shareholder return performance is achieved, and limits their compensation when performance warrants.

This pay-for-performance approach is a fundamental part of our identity, underpins the design of our incentive programs and responds to shareholder expectations of a strong link between executive pay and longer-term value creation.

Oversight of compensation programs

An important responsibility of the board is ensuring that executive compensation plans, policies and programs are aligned with shareholder interests, are competitive and that compensation risks are limited.

This governance responsibility is carried out with the assistance of the human resources and compensation committee. It is accomplished through:

- review and approval of performance goals
- monitoring and feedback on company performance
- application of sound executive compensation governance practices
- design of executive compensation plans, policies and programs to include thresholds, caps or maximums, performance hurdles and robust share ownership requirements

For more information on executive compensation, download the 2015 Management Proxy Circular (PDF, 107pp., 905KB)

Managing enterprise risk

On this page:

Like any responsible business, we must constantly identify, assess, monitor and manage risks inherent to our assets, activities and operations. Suncor's Risk Management Policy drives a culture of being:

- Proactive – we do the right thing by identifying and managing risks in advance.
- Transparent – we foster a culture that is open and honest about our risks. We actively provide and seek out information so we can make better decisions.
- Consistent – we take a disciplined approach to achieve excellence in risk management. We do the right thing the right way.

Our rigorous enterprise risk management (ERM) process engages all levels of the corporation – from the Board of Directors and Audit Committee, which are responsible for oversight of our principal risks and ensuring there are systems in place to manage their impact, to individual business units and functions, which regularly identify, review and report on critical risks in their areas of business.

Risk matrix tool

Once identified, risks are assessed and evaluated in terms of likelihood and magnitude of impact by using an internal risk matrix tool. A risk owner is assigned and that owner is responsible for developing a plan to address the risk. The options for addressing a risk include:

- eliminating
- reducing
- sharing
- accepting

Follow-up measures are in place to ensure risk management decisions are properly and effectively implemented.

Identifying principal risks

We define principal risks as those that have the potential to materially impact the ability of 1 of our businesses or functions to meet or support a company objective.

In 2014, we focused on 11 principal risks:

1. **Commodity price:** fluctuations due to market dynamics that affect our profitability
2. **Government policy impact:** changes relating to air, water, land, climate change or health regulations or to tax and royalty structures that materially affect us and our competitive position
3. **Reliability:** significant or catastrophic asset failure affecting profitability and/or stakeholder confidence
4. **Environmental/safety:** one that causes potential harm to people or the environment or a threat to our operations
5. **Regulatory approval and compliance:** delays in approvals that could affect project execution or disrupt core operations and being materially offside with regulations, resulting in financial penalties or lost production
6. **Project execution:** inability of a project to meet business requirements, achieve expected benefits or realize optimal life cycle costs
7. **Fossil fuel industry reputation:** inability to meet corporate social responsibilities or a significant event that jeopardizes company goodwill
8. **Change capacity:** concurrent demand to deliver operational excellence and growth activities exceeds our capacity to adopt and implement change
9. **Cost management:** escalating operating costs and/or major project capital costs could reduce cash flow and profitability
10. **Market access:** macro-economic conditions that affect the ability to maintain or increase access to markets
11. **Information security:** potential impacts to technology systems could lead to economic loss and brand damage

All principal risks must be reported annually to the Board of Directors and Audit Committee. Reporting includes details on what's being done to address these risks, how the risks are being monitored and any changes in the risk profile.

Evolving risks

In the constantly evolving energy business, new risks can emerge and established risks can take on new forms or orders of magnitude. In 2014, a new principal risk, 'information security' was added to reflect more focus the organization has put behind this potential risk. As we've progressed key initiatives established to mitigate supply risk for key segments, 'skill and resource shortage' was moved to the principal risk watch list.

'EH&S regulatory non-compliance' and 'permit approvals' were combined into a single 'regulatory approval and compliance' risk to reflect progress on planned project approvals in a background of changing approval requirements and evolving regulatory behavior.

Two principal risks were recast:

- 'operating cost management' was updated to 'cost management' to reflect the entire organizational focus on cost-reduction efforts
- 'corporate reputation' was narrowed to 'fossil fuel industry reputation' to focus on the work we are doing within a highly polarized environment

Our risk matrix tool was reviewed by the Board of Directors and is used to support employees in assessing risks and evaluating the likelihood and consequence risk events. The consequence is based on the following 6 receptors on the risk matrix:

- health and safety (to the public and employees)
- reputation
- regulatory
- environmental consequences

- economic consequences
- project costs

Pamela Tisdale, general manager, enterprise risk management, notes that proactive risk conversations, at all levels of the organization, have been driving a culture of risk transparency and clear accountability. “These important conversations are leading to informed risk-based, decision-making across the company.”

Our employees

Download

Our vision to be trusted stewards of valuable natural resources and lead the way to deliver economic prosperity, improved social well-being and a healthy environment depends on the commitment, development and performance of an engaged, highly skilled and high performing workforce that shares our values. Our people are the key to our success. Below summarizes our management approach of our people.

Expand all | Collapse all

Our strategy

Beginning in January 2015, as part of an overall cost management program that began in 2014 and accelerated by a low crude price environment, we

reduced the size of our workforce by approximately 1,200 people:

- primarily through our contract workforce
- not backfilling attrition for non-critical positions
- employee reductions

Despite this market downturn, we know from our own research and experience that there will likely be an increase in the demand for skilled labour over the long-term, given expected global demand for the products we develop and produce.

While there is a skills shortage nationwide, Alberta feels it acutely because the oil sands are the single largest employer of skilled tradespeople in Canada. The province is forecasted to need more tradespeople in the next 2 decades. This means our hiring will support our oil sands operation with a particular focus on recruiting:

- engineers
- process operators
- skilled trades
- heavy equipment operators.

Suncor's hiring includes securing the workforce we currently need while also ensuring we have strong succession plans for the future.

To address workforce challenges we're open to working with:

- government
- labour
- contractors
- trainers
- educators

We also partner with other companies who share our values. In certain commercial agreements, we include the expectation that our partners understand our employee policies and have policies of their own which, at a minimum, adhere to employment standards and human rights legislation in all jurisdictions where we operate.

We're taking proactive steps to manage our workforce requirements. This means we're focused on keeping people here and we're purposefully planning for future workforce needs through the following:

- As baby boomers retire we've focused on mentoring to transfer knowledge to our next generation of leaders.
- We continue our strong push for senior technical types of roles, such as reliability engineers, process engineers, and power engineers.
- We foster a diverse and inclusive work environment that provides employee programs to support quality of life and career development while offering a 'total rewards' compensation package including: flexible benefits, pension and savings plans. This is in addition to a competitive pay package, generous vacation and performance-based annual incentive bonuses.
- We work with industry and educational institutions to encourage Canadians, especially young Canadians, to consider training for careers in the oil and gas sector.
- All salaried employees have an annual development goal, in support of their work priorities and performance goals. Employees may also have required training for their role, which is assigned and managed through a central, corporate learning system. Our learning and development programs are aligned in this way to help employees further develop the skills they need to execute our business strategy in a safe, reliable, and cost-effective way.

Policy

Internal policies are communicated to ensure the workplace is safe and respectful. Among others, these include:

- Standards of Business Conduct (PDF, 24 pp., 1.06 MB)
- Harassment and violence-free working environment (PDF, 7 pp., 171 KB)
- Environment, Health and Safety (PDF, 1 pp., 162 KB)
- Human Rights (PDF, 2 pp., 19 KB)

The above policies are applicable to all Suncor employees, contractors and entities. The policies are approved by various members of senior leadership who are responsible for the stewardship of that subject matter.

Most policies are reviewed annually, with the Environment, Health and Safety Policy reviewed every 3 years. In all cases, we respect the International Labor Organization Principles.

Workplace diversity, inclusion and respect

We are committed to equal opportunity employment and cultivating diversity within a respectful, inclusive workplace. We believe in creating an environment where all employees, wherever we do business, are treated respectfully and feel valued.

A diverse and inclusive workforce enables us to benefit from a wide range of backgrounds, perspectives and experiences. Suncor believes diversity and inclusion leads to a healthier and more successful workplace and ultimately, better performance.

Our diversity and inclusion strategies are focused on increasing the attraction, representation and progression of women and Aboriginal Peoples in our workforce.

In 2014, we:

- Worked with the Athabasca Delta Community School in Fort Chipewyan to build modules for Career and Life Management curriculum which included a trip for students to Fort McMurray to visit a Suncor site, Keyano College and Careers: The Next Generation to help them explore potential career options in the trades and technologies.
- Developed a framework to start an Aboriginal Employee Resource Group that will be open to both Aboriginal and non-Aboriginal employees who are interested in advancing Aboriginal inclusion at Suncor.
- Worked with the Aboriginal Human Resource Council to review our recruitment practices, resulting in key recommendations to enhance our recruitment practices. Opportunities include building stronger relationships with Aboriginal community employment organizations, initiating an Aboriginal branded recruitment campaign, investing in grassroots initiatives to support Aboriginal career awareness, and working more closely with primary and secondary students.
- Began work to understand and remove the barriers for advancement of women through to leadership roles, defining root causes and systemic improvements that may impact the representation of women in leadership roles.
- Engaged all senior leaders of the organization in conversation with a leading researcher in the field of unconscious bias to better understand how to lead in a culture of inclusivity, and what could be getting in the way.
- Supported the development of networks to positively impact attraction, engagement, retention and advancement of women within business areas.

Commitments

Where labour or employment issues arise, we have mechanisms in place for employees to raise concerns in good faith.

Employees can raise an issue with their:

- supervisor
- business unit manager
- legal department
- corporate security representative
- human resources representative
- internal audit

Alternately, employees and contractors can file a report about a suspected violation of Suncor’s Business Code of Conduct through our integrity hotline – a third-party service where concerns can be reported anonymously and confidentially.

In certain commercial agreements, we ensure that suppliers have employee policies in place that adhere to legislated employment standards and match our values.

Suncor has a corporate responsibility to respect human rights and to ensure that we are not complicit in human rights abuses. In our human rights policy, we acknowledge that our responsibility to respect human rights applies to all of our activities and to our business relationships with others. The scope of our human rights responsibility includes our own operations and where we can influence our third-party business relationships, those of others.

Goals, targets and actions

We use an integrated workforce planning process which identifies the skills and capabilities required over the next 10 years. This work allows us to strategize for and recruit the right balance of early talent, mid-career employees and senior contributors, which ensures our workforce meets our strategic needs, now and in the future.

Supporting educational institutions

To help build the skills and knowledge needed for careers in trade, we support educational institutions that offer programs that produce qualified individuals for our workforce. Our long-term partnership with Keyano College in Fort McMurray, Alta., as an example, helps us meet industry needs for skilled trades in the Regional Municipality of Wood Buffalo. Since 1998, we've invested more than $4,100,000 to support this partnership. Our contribution primarily supports the college's mining and process operations programs.

Women and First Nations in our workforce

We develop strategies to increase the attraction, representation and progression of women and Aboriginal Peoples in our workforce.

Some of our other programs/initiatives that facilitate our integrated workforce planning approach include:

- sourcing talent from geographic regions that best support operations
- hiring from the local population where possible. Suncor actively develops skills in the communities in which we operate by sponsoring programs at local colleges. The only recruiting that occurs out of country is typically for 'hard-to-fill' positions, such as mid-career professionals. This consists of fewer than 5% of total hiring volume
- aligning goals annually (extensive goal alignment process), and progress is tracked as part of ongoing conversations between employees and leaders, and then formally reviewed at mid-year and year-end. This process creates a clear line of sight for employees to Suncor strategy and prioritized work
- emphasizing high-quality employee development plans remains an important focus area and is enabled through our annual development goal setting process

Rewards and career opportunities

Suncor is a company where talented people thrive. With a comprehensive rewards package and diverse career opportunities, we attract, recruit and retain some of the most capable individuals in the industry. It takes great people to make a great company, and we value our employees' hard work.

Our total rewards approach for employees is robust. It includes:

- competitive compensation
- health and insurance benefits
- career development
- pension and savings plan

Rounding out this picture are other programs designed to enhance quality of life for employees and their families. These include:

- time-off programs
- employee and family assistance
- scholarships for dependent children
- some benefits that accompany employees into retirement

We continue to conduct exit interviews with employees who choose to leave the company. Through these opportunities, we learn why employees leave Suncor and how we might minimize employee turnover, which is among the lowest in our industry.

Responsibilities, resources and training

Suncor's senior vice president, Human Resources, oversees policies and programs relating to our employment practices, and reports to the chief executive officer as well as to the board of directors.

The corporate human resources team develops tools and provides oversight and consistency to the business units. Business unit vice presidents are directly

responsible for the implementation of policies and practices and are supported by human resources advisors.

We have a central, specialized labour and employee relations team that supports human resources advisors in handling labour and employee relations issues that arise within the business.

Human resources advisors involved in labour negotiations, collective agreement interpretations, and grievance and arbitration issues can call on the central labour relations and employee relations team for expertise and corporate guidance in handling this area of human resources in the various business areas across Suncor.

Examples of the technological capital we invest in to manage our workforce are a central system to maintain employee information and manage payroll, and a performance management tool.

Suncor is also taking the first step towards a single learning technology for all employees and contractors. Released in early 2015, the new Suncor Learning Management System integrates with our talent management tools to improve the tracking and reporting of employee competency and related training, including safety, technical and other learning activities, and has room to grow with developments in our learning program.

Strategic Human Resources Business Partners

Our technological investments are enhanced by Strategic Human Resources Business Partners who support leaders in every part of our business to understand the people implications of Suncor's business strategies and decisions. Their role is to:

- assess workforce challenges
- partner with a central human resources team to deliver the best possible solutions for the business
- work with the business in advancing, and delivering on our existing operations and growth projects, such as our Fort Hills oil sands development
- support our human resources functional groups in:
    - compensation
    - talent management
    - payroll operations
    - pension and benefits
- deliver annual performance management and compensation cycles by supporting leaders and employees through cycle processes

Employee and Family Assistance Program (EFAP)

Suncor offers an EFAP, a third-party administered counselling and support program that provides confidential, professional assistance to employees and their eligible family members.

Suncor's EFAP provides a range of services, including referrals to support services for employees dealing with substance abuse issues related to alcohol and drugs.

Employees can access these services 24 hours a day, 7 days a week by:

- phone
- online access
- online chat

Suncor is committed to ensuring a safe work environment. We have an alcohol and drug policy in place to minimize risks in the workplace associated with its use, and to ensure our workers are fit for duty. The policy applies to all Suncor workers in Canada. For Suncor locations outside of Canada, existing drug and alcohol programs are in effect.

Evaluation

Monitoring

Human Resources shares a monthly workforce stewardship report with the executive leadership team that provides a point-in-time view of our business and functional unit people statistics, and communicates year-to-date changes in our business and functional unit workforce. Other monitoring mechanisms

include:

- compliance with our business code of conduct policies (employees and contractors are asked to annually acknowledge their compliance). Online and in-person training is available
- a confidential integrity hotline available for employees and contractors. An internal audit team addresses issues raised and the board is updated regularly
- labour and employee relations issues are centrally governed and managed locally

About every 2 years, Suncor encourages employees to participate in an engagement survey as a way to collect feedback on what employees say about:

- working at Suncor
- what drives them to stay with the company
- what degree they go over and above
- what is expected of them in their role

Employees are also given opportunities to provide more immediate feedback on their work or ask questions about the company through:

- quarterly company-wide town halls
- regular business unit or function town halls
- access to the Employee Centre
- regular check-ins with their leader as part of the annual performance management cycle
- one-to-one sessions with their manager's leader

For in-demand talent segments, the creation and implementation of key strategies will continue to be a focus in order to ensure talent is available. Suncor monitors these segments and continually assesses internal and external health so that our investment in programs is driven by need and risk.

Results

Integrating the learning and competence discipline into the Human Resources function is a significant achievement in pursuit of building enterprise capability. We continue to evolve and integrate Suncor culture to support our business strategy through operational excellence.

In 2014, we conducted an employee engagement survey; the results gave us valuable insight on Suncor's strengths and opportunities as an employer. We will continue to focus on the priorities and opportunities identified by our employees, including:

- managing performance
- work processes
- resources (people, tools and systems)
- career opportunities

Every year, human resources information related to senior leadership succession planning, the annual incentive program and executive compensation is shared with Suncor's Board of Directors.

Top-rated employer

We are currently recognized by the Globe and Mail as one of Canada's Top 100 Employers 2015. Other awards we've achieved include:

- Globe and Mail Top Employers for Young People 2014
- Alberta's Top 70 Employers 2015
- Financial Post's 10 Best Companies to Work For 2013

Through our recruitment campaigns we continue to attract co-op students, new graduates and experienced people to Suncor.

Browse the Go ahead, expect more e-brochure

What we are doing differently

Results from the 2014 survey show that we need to focus on:

- managing performance
- work processes
- resources (people, tools and systems)
- career opportunities

Across the company, action plans were developed to address 2 priority themes from those areas in 2014 and 2015:

- improving leadership effectiveness and support
- work processes

Business units and functions are also working on action plans to address specific feedback in their areas. The next planned employee engagement survey is scheduled for 2016.

Cost management program and impact of low crude price environment

Beginning in January 2015, as part of an overall cost management program that began in 2014 and was accelerated by a low crude price environment, Suncor reduced the size of our workforce by approximately 1,200 people, primarily through our contract workforce, not backfilling attrition for non-critical positions, and employee reductions; this was largely completed by the beginning of April.

These were difficult decisions and our goal was to move quickly and treat people fairly and with respect. There are a number of positions critical to operations and safety, and wherever possible we looked to redeploy people into these roles if they had the right skills and experience. For employees who leave the company, we provide career transition services, including job search techniques, resume preparation, networking and interviewing skills.

Suncor also put in place a hiring freeze for roles that are not critical to safety and operations. Some hiring continued in 2015 to ensure that we:

- have the specific sets of specialized skills needed to run our business safely and reliably
- fill business critical positions that are vacant through normal attrition
- can execute our Fort Hills oil sands project in Alberta
- support long-term talent recruitment needs (students, new graduates, Engineers in Training and apprenticeships) or help maintain post-secondary relationships

We are committed to maintaining a strong workforce to deliver reliable, safe and environmentally responsible operations.

Safety, health and security

On this page:

Nothing is more important than protecting ourselves and others from harm. Our top priority is ensuring the health and safety of people, both in the workplace and in the communities where we operate.

Suncor's health, safety and security programs, and the people and policies that oversee them, are critical to providing a safe and healthy environment for all. Our programs build a safety culture and recognize those who exhibit exceptional commitment to health and safety practices.

Expand all | Collapse all

Management system

Suncor has a company-wide Operational Excellence Management System (OEMS) to ensure the company complies with regulations while managing risks to:

- people
- environment
- equipment
- products

Process safety

Our OEMS includes process safety standards to address hazardous process risks in our operations. If not properly managed, these risks can result in incidents with high consequences to people, the environment, health and property. Process safety standards mitigate these risks and help establish and maintain safe, clean and reliable operations.

Our major facilities have taken part in a four-step process safety program that includes:

- an initial site assessment
- identifying gaps and opportunities to improve performance as measured against a consistent set of operating standards
- ongoing monitoring to ensure continuous progress
- using lessons learned from the process to set continuous improvement targets for each subsequent year and sharing those lessons with other sites

Emergency management

Effective emergency management is integral to protecting our people, the environment and our operations. To guide our work, we've developed these vision and mission statements for emergency management:

- Guided by Suncor's values, we will influence the evolution to operational excellence in emergency management by collaborating with business partners, industry peers and other stakeholders.
- We act responsibly to protect people, environment, and property to ensure the ongoing integrity of our business. We continuously improve our organizational capability through effective prevention, mitigation, preparedness, response, recovery and business continuity activities.

Our integrated model is an important part of our OEMS. By using established protocols, we can effectively respond to emergencies and unplanned events.

Our employees and contractors regularly conduct training, emergency drills and tabletop exercises to reinforce, verify and improve our emergency preparedness capabilities. Practice prepares us for unplanned situations. Debriefs emphasize learnings and increase effectiveness across all business units. We seek to learn and share lessons from drills, exercises and real events across our business to continuously improve preparedness and response capabilities.

Product safety

As a Suncor Energy business, **Petro-Canada™** Lubricants Inc. produces some of the purest base oils in the world (99.9% pure). Petro-Canada is also one of the world's largest producers of pharmaceutical white oils. With 350-plus premium quality lubricants, specialty fluids and greases, which are available in more than 70 countries around the world, Petro-Canada achieves product safety through its commitment to quality.

Learn more at lubricants.petro-canada.ca

Our products are manufactured to the world's most demanding standards as demonstrated by our current registrations:

- **ISO 9001** – In November 1993, Petro-Canada Lubricants earned the distinction of being the first manufacturer in this industry to be awarded ISO 9001 registration in North America.
- **ISO/TS 16949** – Petro-Canada Lubricants was the first lubricants manufacturer, and the first oil and gas company, to achieve these stringent quality standards.
- **ISO 14001** – Petro-Canada Lubricants' continuous improvement program is ongoing, and earned the company registration to the ISO 14001 environmental management standard in 2001.

Personal safety

On this page:

Our environment, health and safety policy states our unwavering commitment to our value of safety above all else.

Our Journey to Zero program asks all employees and contractors to honour our beliefs and commitments:

- all incidents can be prevented
- to work here you must be committed to working safely
- leadership is accountable for environment, health and safety performance
- we deliver on our commitments
- our Operational Excellence Management System (OEMS) enables environmental, health and safety excellence

We're working to continuously learn, share and improve personal safety efforts by embedding safety leadership into our culture, fully engaging all employees in safety and providing a safe work environment for all employees and contractors.

Our 5 fatalities in 2014 (3 employees and 2 prime contractors) were a sad reminder that we can never let up on our journey toward ensuring that every employee and contractor goes home safe at the end of the day.

Read more about our environment, health and safety policy on Suncor.com

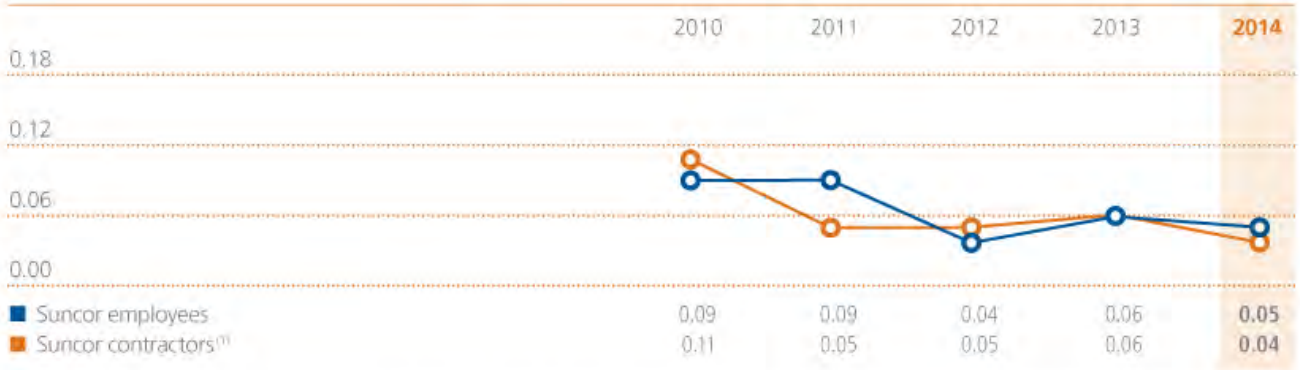
Read more about our Journey to Zero program on Suncor.com

Read about our winter safety practices in our Oil Sands Question and Response (OSQAR) blog

2014 safety performance

Based on the standard industry safety measures, we continue to make progress on reaching our safety goals. The recordable injury frequency (RIF) rate declined from 0.56 in 2013 to 0.45 in 2014 – a 20% decrease. Our lost time injury frequency (LTIF) rate improved from 0.06 in 2013 to 0.04 in 2014 for a 33% decrease.

LOST TIME INJURY FREQUENCY*
(injuries per 200,00 hours worked)



	2010	2011	2012	2013	2014
Suncor employees	0.09	0.09	0.04	0.06	0.05
Suncor contractors(1)	0.11	0.05	0.05	0.06	0.04

* Lost time injury is a work related injury that results in lost days from work. Fatalities are included in lost time injuries. Frequency is calculated as the number of lost time injuries multiplied by 200,000 (based on 100 workers working full time for 1 year) divided by the actual exposure hours. This tells us how many people are injured for every 100.
(1) Contractors refer to any organization, company or individual who provides goods and/or services to Suncor. Prime contractor incident data is excluded from this metric.

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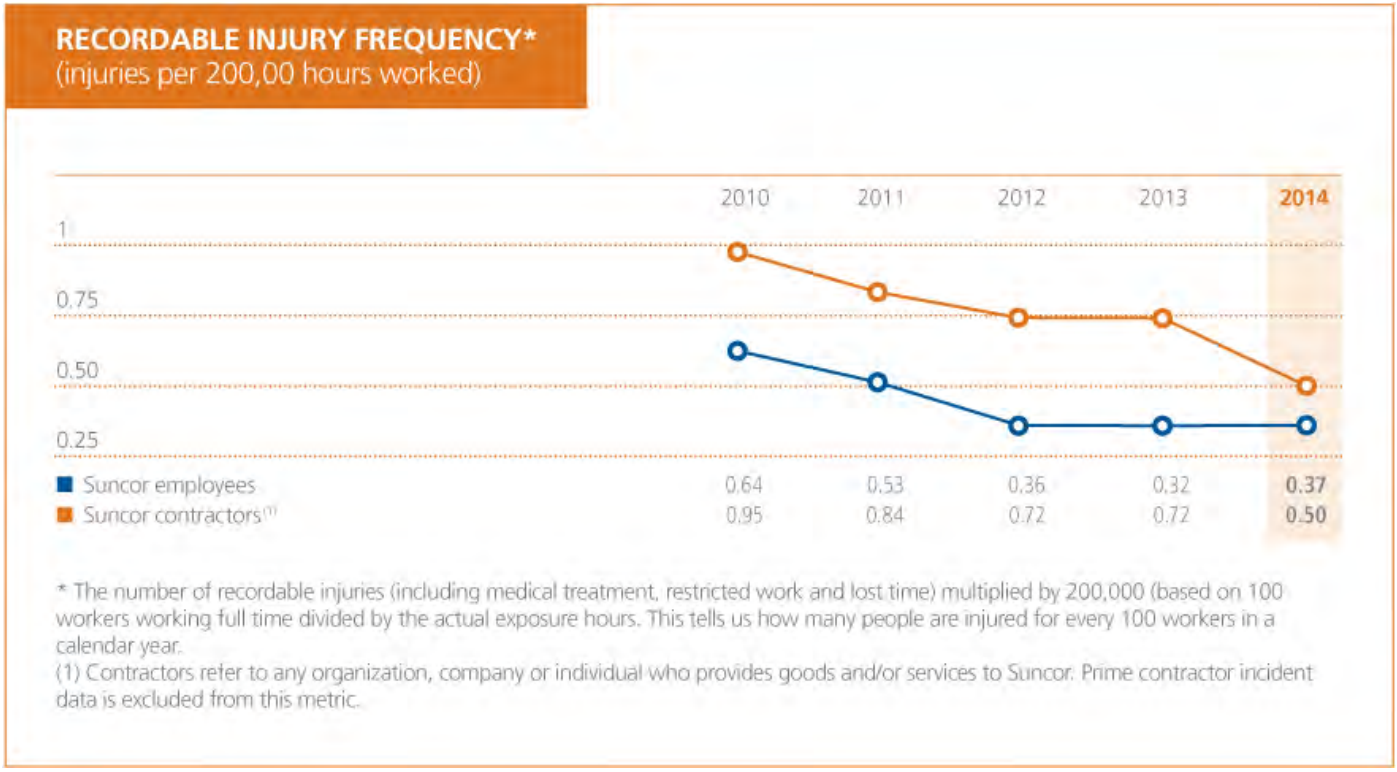

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Safety initiatives

We promote workforce safety dialogues and participation through various activities and processes, including:

- procedures to secure site access and ensure we know who's working on our sites
- safety meetings to exchange information, concerns and increase safety awareness
- toolbox talks at worksites focused on specific hazards
- regular safety stand-down sessions to reflect on performance and reinforce our commitment to safety
- a dedicated management system element outlining requirements for reporting, investigation and management of incidents, hazards and near misses

Other initiatives include Get a Grip on Safety, an annual corporate-wide campaign that first launched in 2013 with a 47% reduction in related injuries. This campaign focuses on the unsafe conditions and unsafe behaviours that contribute to slip, trip and fall injuries.

Additionally, our first corporate-wide Line of Fire safety campaign kicked off in May 2014 and resulted in a 40% reduction in related injuries over the same time period in 2013. This annual three-phase campaign calls attention to:

- stored energy
- striking hazards
- crushing hazards

We have shared materials from our Get a Grip and Line of Fire safety campaigns with the Oil Sands Safety Association and our contractors. Many member companies have made use of the information to further promote these safe work practices.

We started several initiatives in response to our 2014 fatalities. In May 2014, we formed the Safety Step Change Task Force to lead an assessment of unacceptable safety performance and recommend a path forward to improve safety at Oil Sands.

Beginning in June 2014, more than 100 safety stand-down sessions were held across the organization. Employees and contractors came together to recognize the tragic loss of life which occurred, reflect on our safety efforts and, as individuals, recommit ourselves to our most critical value.

Raising the bar on workplace safety

We continue to work on several initiatives to help us achieve our safety goals. Priority initiatives include:

- serious injury and fatality prevention focuses specifically on eliminating life-threating and life-altering injuries at work
- incident management and corrective actions work underway to design tools and simplify company-wide processes for effective investigations, corrective actions and incident learning
- Safety communications work has been completed as part of the Safety Step Change Task Force. The safety communications repository allows employees and contractors to access searchable safety communications. It houses:
    - safety and incident alerts
    - incident learnings
    - safety moments
    - toolbox talks
    - information on safety meetings
    - guidelines for safety stand downs

Occupational health and wellness

On this page:

In support of our Journey to Zero initiative and the prevention of illnesses and injuries, we identify potential occupational health risks and proactively monitor working environments to minimize potential hazards.

Medical monitoring programs

Medical monitoring programs are recommended for workers who are at risk of exposure to potential health hazards. This is coupled with ongoing industrial hygiene sampling to proactively measure workplace exposures and provide exposure control solutions.

Integrated disability management

Our integrated disability management program involves early intervention to positively alter the course of medical absence due to an illness or injury, for both occupational and non-occupational injuries and illnesses. The process is overseen by a cross functional group of professionals, including:

- health advisors
- disability advisors
- human resources advisors

This group works collaboratively with the employee, the employee's medical practitioners and the supervisor to facilitate early, safe and productive return to

work.

Promoting wellness and healthy lifestyles

Promoting wellness and healthy lifestyles is part of our safety commitment to employees and contractors. We have programs that are tailored to specific business needs and environments. These include our annual influenza vaccination program and ergonomics workshops.

Employee and Family Assistance program

Our employees and their families can access the Employee and Family Assistance program at any time. It provides confidential, professional assistance to help employees and their families resolve problems that affect their personal – and in some cases, professional – lives.

Alcohol and Drug policy

Alcohol and drugs can adversely affect a safe work environment.

Our Alcohol and Drug policy aims to minimize risks in the workplace associated with alcohol and drug use and ensure our workers are fit for duty. It outlines specific responsibilities, requirements and expectations to adequately mitigate the workplace risks associated with alcohol and drugs.

Alcohol and drug dependencies are treatable illnesses. We encourage employees who suspect they have a substance dependency or an emerging alcohol or drug problem to seek immediate assistance and follow appropriate treatment. In cases where there is an alcohol and/or drug dependency, we support employees through any treatment program recommended by an approved substance abuse professional.

Product safety

Our health and safety focus extends to products we manufacture and purchase. We use product safety information to communicate safety, health and regulatory information for all our products. This detail enables our customers to handle our products safely and meets regulatory requirements.

Purchased chemical products undergo a rigorous approval process to ensure the environment, health and safety aspects are incorporated within our facilities before the product is brought on site.

Building talent

On this page:

We help our employees and leaders build skills and knowledge to master the roles they're in today as well as prepare them for future roles.

We want our employees to build their skills through development goals that align their work to business needs and priorities. Suncor's approach to learning and development is grounded in a 70/20/10 development formula. That is, development occurs in 3 main ways:

- 70% from real-life and on-the-job experience
- 20% from feedback and observing and working with role models
- 10% from formal training

Helping people continue to develop is key to high performance and the company achieving its goals.

Watch our employee testimonials on Suncor.com

Navigating career development

Our company offers a variety of career paths for operations, technical, professional and leadership streams. The Career Compass is a tool that gives insight into careers at Suncor and the different ways people can move into a new position or stay in their current role for a satisfying career.

Within the career tool, there are many resources that help identify potential career paths. It also shows how others have navigated their careers at Suncor and gives a standard way to talk about career and development.

The Career Compass, along with other resources in our development toolkit, supports our ability to retain and engage people to meet our business needs.

Educational assistance programs

This program provides financial support to employees who want to further their education on their own time. Courses must be applicable to an employee's current or future position.

We also offer a company-wide scholarship program to help employees' children access post-secondary education.

Developing our leaders

Suncor has a succession-planning process that identifies and prepares those employees with the capability and interest to take on leadership roles. By doing so, we can plan for leadership roles that are critical to executing our business strategy and build talent from within the company.

Orienting and onboarding new leaders

In 2014, we introduced a leader onboarding program that helps new front-line leaders in their first 90 days in the role. This program offers a comprehensive suite of tools and resources to assist new leaders in their transition from individual contributor to leader, or from external hire to new leader.

Managing performance and development

Performance management is central to the company's ability to meet our business objectives and helps us create an environment where our employees can achieve outstanding business results.

Performance management also helps align the organization. Through guided discussions with their leader, employees understand how their performance will be measured. Our process includes formal and informal feedback on both 'the what' and 'the how' of achieving goals.

Effective performance management:

- ensures strong performance
- provides an opportunity for leaders to recognize and reward performance
- gives leaders the information they need to support employees' ongoing development

Salaried employees across the company use an online tool to document performance and development discussions throughout the year, including:

- **Goal setting:** leaders work with employees to establish and agree upon goals and make sure individual goals align with those of the business, as well as personal development needs and aspirations.
- **Manager-once-removed discussions:** an annual opportunity for employees to meet with their leader's leader to discuss their work, career aspirations and development goals.
- **Mid-year reviews:** a mid-year check-in between employees and their leader to see if they are on track to meet goals and to identify any challenges.
- **Year-end performance review:** employees meet with their leader to go over performance and measure their results. This discussion forms the basis for our salaried employees' performance rating and associated rewards.
- **Live Profile:** employees can document their experience, education, aspirations, ability to relocate for new roles and other specific skills in an online tool. This information – visible only to the employee's leader and their leader's manager – supports effective discussions about an employee's experience, interests, aspirations and career development.

Skilled labour

On this page:

For several years, business and industry have been preparing for when baby boomers retire from the workforce, while the demand for skilled labour in the construction and oil and gas sectors increases. We have developed a proactive approach to managing our skilled and technical workforce needs today and into the future.

We believe in hiring in the communities where we operate. But not all of our recruitment needs can be filled locally. That's why we look for qualified candidates across Canada first, and then look internationally to create the robust workforce we need.

Our multi-pronged approach is the best way to meet our skilled and technical workforce demands.

Building awareness of career opportunities for trades and operations

Along with our industry partners, we work to build awareness of career opportunities and the important role skilled tradespeople play in our industry and across the Canadian economy.

This includes telling an authentic and compelling employment story in print, traditional, digital and social media. It also means engaging a broader and more diverse workforce to explore career options within the sector.

We accomplish this through our work with First Nations communities and unique groups such as:

- Women Building Futures – an organization based in Edmonton, Alta. which specializes in recruiting and training women for careers in the heavy industrial workforce, including the skilled trades

- CAREERS: The Next Generation – an organization based in Edmonton, Alta. which partners with government, educators, communities, industry, parents and students to introduce youth in high school to rewarding career opportunities and develop the skilled workers of the future

We also look to inform all Canadians about our industry and showcase the variety of employment opportunities available to them. We partner with groups like Calgary Economic Development and the Edmonton Economic Development Corporation to help tell the Alberta labour story nationally and internationally in an effort to help attract qualified labour to the province.

We are active members in the Canadian Apprenticeship Forum, a national non-profit organization that connects the apprenticeship community across the country. Everyone with an interest in skilled trades continues to work collaboratively to support vibrant and innovative apprenticeship systems and policies, with a view to developing a highly skilled, inclusive and mobile skilled trades workforce.

Our executive team has an important role to play in sharing the industry's employment story. Through our Speakers Bureau program, executives provide speeches and presentations to a variety of stakeholder groups across North America and beyond.

Encouraging careers in the trades

To help build skills and knowledge needed for careers in trade, we support educational institutions that offer programs that feed our workforce.

- We have a long-term partnership with Keyano College in Fort McMurray, Alta. to help meet industry needs for skilled trades in the Regional Municipality of Wood Buffalo. Since 1998, we have invested more than $4.1 million to support this partnership. Our contribution primarily supports the college's mining and process operations programs.
- Through our campus recruiting program, we visit several schools across Canada each year, talking with students about trades and technical careers in the energy sector.
- We also support a number of post-secondary co-op education programs. We are involved with Mohawk College and the Hamilton Skilled Trades Apprenticeship Consortium in Ontario, which provide students with work experience placements at our lubricants business in Mississauga.
- We also work with organizations like Skills Canada (Alberta, Ontario and national organizing bodies) to educate youth, parents and high school counsellors about opportunities to work in skilled trades. This includes:
    - supporting Skills Canada national and regional events
    - Skills Alberta's Skills in the Classroom program
    - Skills Ontario's Skills Work! What's Out There program.

Having information about opportunities in skilled trades is particularly important to youth as they make decisions about future career opportunities.

Once someone has made the decision to pursue a trades career, we support their development. We hire apprentices and support them as they develop essential skills required to become a full-fledged journeyperson. This commitment to career progression is key to building a workforce that supports us in achieving our high safety and reliability standards.

- One example of our commitment to apprenticeship is our participation in Alberta's Registered Apprenticeship Program. This program is designed for high school students who know they want to pursue a career in the trades. Participating students have the opportunity to earn school credit for their apprenticeship and divide their time between an approved worksite, like ours, and their high-school studies.
- In partnership with Southern Alberta Institute of Technology (SAIT), the SEF supports a blended learning program that allows apprentices to learn through online modules while on the jobsite. This saves time for students as they only need to come to campus for the lab and testing phases of their training. It also offers SAIT more training capacity and more options for using its physical space.
- We partner with Lambton College, in Sarnia, Ont., by supporting its chemical/power engineering training programs that help meet the needs of industry in Eastern Canada. This builds on a previous partnership – creating the college's Suncor Sustainability Centre, which has become a focal point for sustainability initiatives and programs in the Sarnia-Lambton region.

Among the industry's need for a skilled workforce, process operators rank near the top – with an estimated 1,500 needed in oil sands operations alone in the next few years.

- In 2014, in partnership with the Oil Sands Community Alliance, we launched the Workforce Joint Initiative Pilot Project for Process Operators. Composed of industry members, post-secondary institutions and other stakeholders, this group is working together to determine how best to place process operators in practicums so they can get hands-on experience for certification and fulfill this critical program requirement for graduation.

Participating in unconventional solutions

We're proud to collaborate with other companies in our industry to attract skilled workers. We, along with 6 other oil sands construction owners, have formed the Association for Construction Worker Acquisition (ACWA) to work with government to address the shortage of skilled construction workers in the Alberta oil sands region. ACWA's chair is Ron Genereux, vice president, productivity and construction in Suncor's Major Projects business unit.

In 2013, construction industry leaders from across Canada formed BuildForce Canada, a national organization to help keep a steady flow of highly skilled workers available to the growing construction industry, where the pinch for skilled labour will be felt the most.

We are also a member of the Alberta Council of Turnaround Industry Maintenance Stakeholders, which is a not-for-profit organization representing:

- 3 major oil sands owners (Shell, Syncrude and Suncor)
- various industrial maintenance contractors
- the building trades labour providers

This unique collaboration benefits both the industry and the people qualified to work in the heavy industrial maintenance industry.

The benefit to the prospective tradesperson is that their resumé is shared with and reviewed by many contractors. This gives them the opportunity to work on multiple sites, one after the other. Industry benefits include timely acquisition of skilled and qualified workers for the owners' turnaround maintenance events.

Read more about skilled labour in our Oil Sands Question and Response (OSQAR) blog

Unions and agreements

Wherever we do business, we respect the right of eligible employee groups to choose representation by a bargaining agent. Where employee groups have made that choice, we bargain in good faith to reach and renew collective agreements that balance the needs of the business and represented employees with settlements reflecting current economic and business realities.

Our current collective agreements stipulate a 3-6 month notice to employees of significant operational changes. The collective agreements also include provision for consultation and negotiation. All our collective agreements contain articles on health and safety. Specific requirements for union or employee representation on joint health and safety committees are also included in all collective agreements.

Existing collective agreements

Approximately 4,800 or nearly one-third of our employees are covered by collective agreements and about 90% of our represented employees are members of Unifor – a union representing workers in oil sands, in situ, refining, distribution and Canadian offshore operations. The majority of our represented employees are covered by collective agreements linked to a national template agreement with Unifor. The existing template agreement expires in 2016.

Collective agreements at our London terminal and Sarnia refinery are currently in negotiations.

Performance data

On this page:

Report framework

This report has been prepared based on the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines and Oil & Gas Sector Disclosures to the Core option. It represents a balanced and reasonable presentation of our company's social, environmental and economic performance.

Steve Williams

president and chief executive officer

Boundary conditions

We measure progress by monitoring selected performance indicators. These indicators provide insight on the environmental, economic and social impacts and benefits of our business and are used to continuously improve performance.

The performance data section of our 2015 Report on Sustainability includes social, environmental and economic performance indicators from the 2014 reporting year. Data is reported by significant operating business segments and consolidated to Suncor-wide totals, where feasible. A 5-year trend is provided, where applicable.

Environmental performance indicators are reported on operated assets only, unless otherwise stated. Economic performance indicators are reported in a manner consistent with our 2014 annual report (PDF, 138 pp., 2.54 MB).

Select 2014 economic indicators have been calculated according to the International Financial Reporting Standards (IFRS).

Footnotes available in performance data tables provide additional information for specific boundary conditions, changes in methodology and definitions.

Third party assurance

Deloitte LLP was engaged to provide independent assurance on selected performance indicators for Suncor's Report on Sustainability for the year ended Dec. 31, 2014.

Read the Independent Assurance report and the performance indicators reviewed (PDF, 3 pp., 56.9 KB)

Any data point that is accompanied by the **A** symbol has been independently reviewed and assured by Deloitte LLP.

Performance indicators

Business segment structure changes and explanations on re-statements or changes to historical data are reflected accordingly in the introductory statements for the following:

- Suncor-wide(rollup of all data where relevant and applicable)
- Oil Sands (includes the oil sands mining and upgrading facility but does not include Syncrude)
- In Situ (includes Firebag and MacKay River)
- Exploration & Production (see additional information below) – reported as:
  - North America Onshore
  - East Coast Canada (Terra Nova offshore platform only)
- Refining & Marketing (R&M) (facilities include the Montreal, Edmonton, Commerce City and Sarnia refineries, the Mississauga lubricants plant, and various Canadian pipelines and terminals. See additional information below)
- Renewable Energy – reported as:
  - St. Clair ethanol plant
  - Wind (2 wind energy facilities)
- Major Projects

When data for performance indicators was not available a line entry (--) appears in the table.

Exploration & Production

Suncor is also a part of several joint ventures in our Exploration & Production business unit off the east coast of Newfoundland, the North Sea and onshore in Libya and Syria.

These include:

- White Rose
- Hibernia
- Terra Nova
- Buzzard offshore projects
- Syria and Libya facilities (Note: operations in Syria have been suspended indefinitely due to political unrest and resulting sanctions. Production in Libya has been substantially shut-in due to political unrest, with the timing of return to normal operations remaining uncertain).

As Suncor is the operator and has significant impact over the Terra Nova platform off the east coast of Newfoundland, only environmental performance indicators for this facility are included in the East Coast Canada performance indicator section of this report.

Suncor does not have control over the other joint ventures; however, it can be considered to have significant influence due to board voting rights. These joint ventures are not deemed to pose significant risk to Suncor's sustainability performance and thus are not included in the performance indicators.

Refining & Marketing

Suncor is part of several joint ventures in our Refining & Marketing business unit, including the Sun-Canadian Pipe Line Company Limited, UPI Energy LP, Pioneer Petroleum, Trans-Northern Pipeline, Portland-Montreal Pipeline, Alberta Products Pipeline (APPL), Sun Petrochemicals, ParaChem Chemicals L.P. (ParaChem), and with numerous terminal sites.

As Suncor has control and significant impact over the Sun-Canadian Pipeline Company Limited, applicable performance indicators for this entity are included in the Refining & Marketing performance data section.

Suncor holds a 51% interest in ParaChem, which owns and operates a petrochemicals plant located adjacent to the Montreal refinery. Suncor does not exercise significant control or influence over this wholly independent operation, despite the majority ownership position. This investment is not deemed to pose a significant risk to Suncor's sustainability performance, and thus is also not included in the performance indicators.

Suncor-wide

This 2015 Report on Sustainability summarizes our sustainability performance for the 2014 reporting year and provides 5-year performance trends on consolidated social, environmental and economic data, where possible.

Expand all | Collapse all

Filter display

Environment

The A symbol (**A**) reflects data that has been assured by a third party. View a complete list of reviewed data to confirm the performance indicators that have been assured.
In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Production								
Upstream processed volumes and net production	million barrels of oil equivalent / year	A	OG1	154.8	175.9	176.39	186.64	**162.03 A**
Upstream processed volumes and net production	million cubic metres (m^3) of oil equivalent / year	A	OG1	24.6	27.8	28.04	29.67	**25.75 A**
Downstream net production	million m^3 refined product / year	B	OG1	26.4	26.55	27.46	27.35	**27.16 A**
Total upstream and downstream production	million m^3 / year	C	OG1	51	48.7	49.09	49.79	**45.38 A**
Air emissions		D						
Greenhouse gas (GHG)	thousand tonnes carbon dioxide equivalent (CO_2e)	E	G4-EN15 G4-EN16	18,915	18,251	20,257	20,535	**20,468 A**

GHG emissions intensity	tonnes CO_2e/m^3 OE production	F	G4-EN15 G4-EN16	0.37	0.38	0.41	0.41	**0.45 A**
Indirect (Scope 3) GHG emissions	thousand tonnes CO_2e	G	G4-EN17	1,468	1,485	1,594	1,628	1,466
Sulphur dioxide (SO_2)	thousand tonnes		G4-EN21	36.2	32.8	28.5	23.2	23.1
SO_2 emission intensity	kilograms/m^3 production		G4-EN21	0.7	0.67	0.58	0.47	0.51
Nitrogen oxides (NO_x)	thousand tonnes		G4-EN21	40.3	38.3	36.2	33.3	27.8
NO_x emissions intensity	kilograms/m^3 production		G4-EN21	0.79	0.78	0.74	0.67	0.61
Volatile organic compounds (VOCs)	thousand tonnes		G4-EN21	38.9	24.6	22.7	13.4	17.5
• Benzene	tonnes		G4-EN21	156.9	94	87.2	95.23	88.0
National Pollutant Release Inventory (NPRI) on-site releases	thousand tonnes	H	G4-EN21	123.4	117.6	115.4	82.87	96.7
Toxins Release Inventory (TRI) on-site releases (U.S.)	tonnes	H	G4-EN21	38.2	55.8	66.9	19.22	18.63
Energy consumption		I						
Energy use	million gigajoules (GJ)		G4-EN3 G4-EN4	263.7	261	282.4	299.3	304.3
• Direct energy use	million GJ	J	G4-EN3	244.3	243.7	269.8	291	296
• Indirect energy use	million GJ	J	G4-EN4	19.45	17.35	12.51	8.37	8.24
Energy intensity	GJ / m^3 production	J	G4-EN5	5.16	5.34	5.75	6.01	6.70
Water use								
Total water withdrawal	million m^3	K	G4-EN8	138.98	137.6	143.63	155.91	**149.27 A**
• Surface water withdrawal	million m^3		G4-EN8	129.28	121.23	110.88	113.02	116.36
• Groundwater withdrawal	million m^3		G4-EN8	3.42	2.73	3.2	3.04	2.1
• Municipality / city / district water withdrawal	million m^3		G4-EN8	3.16	3.85	4.14	4	3.49
• Treated waste water withdrawal	million m^3	L	G4-EN8	3.03	1.79	2.7	1.54	1.29

• Industrial run-off water withdrawal	million m³	M	G4-EN8	0.09	8.01	22.71	34.3	26.03
Surface water withdrawal intensity	million m³		G4-EN8	2.53	2.48	2	2.27	2.56
Groundwater withdrawal intensity	million m³		G4-EN8	0.07	0.06	0.06	0.06	0.05
Municipality / city / district water withdrawal intensity	million m³		G4-EN8	0.06	0.08	0.07	0.08	0.08
Total water withdrawal intensity	m³ / m³ production		G4-EN8	2.72	2.82	2.59	3.13	**3.29 A**
Total water returned	million m³		G4-EN22	89	97.7	87.06	97.14	101.22
Water consumption	million m³	N		50.1	39.86	56.57	58.77	49.14
Water consumption intensity	m³ / m³ production			1	0.82	1.02	1.18	1.08
Waste management		O						
Hazardous waste generated	thousand tonnes		G4-EN23	111.86	466.34	2,086.49	2,230.90	2,298.70
Non-hazardous waste generated	thousand tonnes		G4-EN23	257.52	281.04	434.63	235.34	213.87
Drilling waste disposed or treated	thousand tonnes	P	OG7	--	--	63.19	116.1	126.9
Waste recycled, reused, or recovered	thousand tonnes		G4-EN23	202.71	242.29	125.22	96.95	88.72
Products and services								
Ethanol blended in gasoline	thousand m³		G4-EN27	521.3	927.9	979	828	1,000
Sulphur content of gasoline	parts per million (ppm)			18.5	24.9	25.8	22.7	18.7
Compliance								
Regulatory contraventions		Q	G4-EN29	201	147	171	89	63
Regulatory fines	thousand $	R	G4-EN29	1,073	722	2,366	130	2,257
Total volume of reportable spills	m³		G4-EN24	949	1,402	2,419	3,134	2,949
Environment, Health & Safety (EH&S) management								
EH&S professionals on staff		S	G4-EN31	327	323	356	374	361

Suncor-wide Environment Footnotes

A Beginning in 2010, upstream production includes: Oil Sands, North America Onshore, In Situ and East Coast Canada.
Transfers between In Situ and Oil Sands have been removed from the Suncor-wide total. Updated production definition for East Coast Canada resulted in updated 2011 production number.

B Downstream production data includes saleable yield from Refining & Marketing Canada and Refining & Marketing U.S.A. Data from Suncor's Refining & Marketing (R&M) business units and the St. Clair ethanol plant.Transfers within R&M have been removed from downstream production.

C The sum of upstream and downstream net production minus upstream to downstream transfers. Production numbers found in Suncor's annual report are for upstream volumes only and include production from non-operated assets.
This differs from production numbers used in Suncor's Report on Sustainability, which include only operated facilities, but also include downstream volumes. Sustainability reports net production on a facility basis, which is a measure of total saleable product. Updated production definition for East Coast Canada resulted in an updated 2011 upstream production number which impacted this value as well.

D Emissions from the production of crude oil, natural gas, natural gas liquids, ethanol and refined products. Emissions are also from the production of retail products at the Mississauga, Ont. lubricants facility. Emissions from product consumption by others are not included.

E Greenhouse gas (GHG) emissions are calculated using a facility-specific methodology which utilizes various reference methodologies that have been accepted by the relevant jurisdictions within which each facility is required to report GHG emissions. Methodology has been followed where a jurisdiction has a prescribed one and if none exists, then the most applicable and accurate methods available are used to quantify each emission source.
This report uses global warming potentials (GWPs) from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (2007) to convert individual GHGs into CO_2e units.

F Suncor-wide GHG intensity is calculated using total upstream and downstream.

G Indirect Scope 3 GHG emissions reported here include GHG emissions reported for R&M consisting of purchased hydrogen and CO_2 streams we produce that are sold to third parties for further processing as well as corporate wide emissions from:
- commercial air travel
- Sunjet travel
- Sunjet chartered flights
- leased buildings (Suncor Energy Centre, Sheridan Park and Suncor Business Centre)
- ground transportation services for employees and contractors in Fort McMurray
- licensed Canadian fleet vehicles

In 2013 it was brought to our attention that industry best practice for disclosing emissions associated with the purchasing of hydrogen should be classified as a Scope 3 indirect source as they do not fall under the Scope 2 indirect emission categories of purchased electricity, purchased steam, purchased heating or purchased cooling. Therefore emissions from purchased hydrogen are reported as a Scope 3 indirect source and are not reported as a Scope 2 indirect emission source. 2010-2011 data does not include licensed fleet emissions which have been reported since 2012.
The breakdown for 2014 includes:
- facilities: 7,503 tonnes of CO_2e
- ground transportation: 16,461 tonnes of CO_2e
- Canadian light truck fuel fleet: 3,716 tonnes of CO_2e
- business travel: 56,437 tonnes of CO_2e (applies to both commercial air travel and Sunjet scheduled and chartered flights)
- Hydrogen purchased from third parties: 1,199,914 tonnes of CO_2e
- CO2 sold from our facilities to third parties: 182,317 tonnes of CO_2e

Based on the defined scope, Suncor's 2014 Scope 3 emissions were 1,466,348 tonnes of CO_2e.

H National Pollutant Release Inventory (NPRI) on-site releases include all NPRI-reportable nitrogen oxides, sulphur dioxide, total volatile organic compounds, carbon monoxide and total particulate matter.
More information about the Toxic Release Inventory (TRI) can be found on the Environmental Protection Agency website.
View Suncor's submissions to the:
- Facility Reported Data on the National Pollutant Release Inventory (NPRI)
- U.S. Toxins Release Inventory (TRI) program

I Energy consumption by source is not reported at this time.
Suncor-wide total energy is inclusive of energy consumed by pipeline stations located in Alberta, which are included in R&M business unit values. The energy total for this source for 2014 was approximately 768,358 GJ.

J Direct energy is primary energy consumed on-site by Suncor operated facilities.
Indirect energy includes imported electricity, steam, heating and cooling duty from third parties. Beginning in 2011, the indirect energy calculation methodology was changed to credit operations for electricity exported to external users and/or other Suncor facilities. The facility that exports the electricity subtracts the equivalent gigajoules of electricity from their indirect energy use. The facility that receives the electricity counts it as a Scope 2 indirect energy use, regardless of source. Suncor's renewable operations produced over 320,000 MWh (1.15 million GJ) to the Alberta and Ontario power grids from operated wind farms. This power then ultimately supplies Suncor's operations in Alberta and Ontario with renewable electricity through the provincial power grids. Energy intensity is calculated using total upstream and downstream production.

K Includes all water withdrawn from rivers, groundwater wells, industrial runoff and water purchased (municipality/city/district), either permanently or temporarily.

L Beginning in 2011, as per GRI guidance, the volume of treated wastewater transferred between Suncor facilities has been reported in the water withdrawal total for the facility sending the water. It is not included in the water withdrawal total for the facility receiving that water.

M Beginning in 2011, a methodology change was introduced for including industrial runoff water as water withdrawn for all relevant facilities.

N Water consumed is the quantity of water used and not returned to its proximate source or no longer available for use. Includes water used and/or retained within an operation.

O Beginning in 2011, to better align with the GRI reporting guidelines, Suncor expanded the number of indicators for which it collects and reports data in the Waste Management category.

P Suncor began reporting this GRI Oil and Gas Sector Supplement indicator in 2012. It is inclusive of drilling mud waste from drilling operations. This value has not been captured in the hazardous waste generated and non-hazardous waste generated values.

Q A regulatory contravention is an environmental incident that breaches a regulatory limit (prescribed threshold required by legislation, approval or permit from a regulatory authority) or requirement (any law, act, regulation, licence, standard, approval, directive and/or permit applicable to Suncor's activities) and that triggers formal regulatory reporting.

R Data includes regulatory fines related to environmental contraventions paid during the stated year. Details of regulatory fines can be found on applicable performance pages, by business area.

S Professionals (not including Professional Services Agreements (PSAs) and non-positioned contractors) dedicated to environment, health or safety matters, including the corporate office, Major Projects and personal and process safety management. Beginning in 2014 the Operational Excellence Management System (OEMS) enablement group was added to this total.

Economic[1]

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Economic value generated and distributed		T						
Revenues	$ millions		G4-EC1	32,604	39,790	38,526	40,297	40,490
Operating, selling and general expense (OS&G)	$ millions		G4-EC1	7,984	8,424	8,897	9,462	9,749
• Employee costs	$ billions	U	G4-EC1	2.4	2.5	3.2	3.3	3.4
Taxes and royalties paid	$ millions	V	G4-EC4	3,290	3,161	3,828	3,347	5,259
Community investments	$ thousands	W	G4-EC1	15,671	19,176	22,619	30,594	27,246
Distribution to shareholders	$ millions		G4-EC1	1,328	1,337	1,411	1,826	2,267

• Dividends paid on common shares	$ millions		G4-EC1	611	664	756	1,095	1,490
• Share capital issued under dividends reinvestment plan	$ millions		G4-EC1	13	12	15	28	83
• Interest payment on debt	$ millions		G4-EC1	704	661	640	703	739
Economic value retained								
Economic value retained	$ millions	X	G4-EC1	--	--	--	--	23,188
Other financials								
Market capitalization (debt plus equity)	$ billions		G4-9	70	56	60	66	66
Capital and exploration expenditures	$ millions		G4-EC1	6,010	6,850	6,957	6,777	6,961
Taxes and royalty credits earned	$ millions	Y	G4-EC4	28.78	21.85	31.56	31.1	21.8
Political donations	$ thousands	Z	G4-EC1 G4-SO6	50.8	58.3	80.1	73.4	95.6
Purchases								
Goods and services	$ millions	AA		9,371	10,853	11,220	11,487	11,951
Goods and services purchased in or from:								
• Canada	$ millions			8,284	9,794	10,284	10,584	10,915
• Local businesses and suppliers	$ millions	AA	G4-EC9	5,138	5,110	5,536	3,498	4,375
Aboriginal spend	$ millions	BB	G4-EC9	277	290	284	431	463

Suncor-wide economic footnotes

I Select economic figures have been calculated according to the International Financial Reporting Standards (IFRS). For complete disclosure of our financial information, see our 2014 Annual Report (PDF, 138 pp., 2.54 MB)

T To better align with the Global Reporting Initiative guidelines, the number of economic indicators typically reported have been reduced to align with G4-EC1 in calculating the economic value generated, distributed and ultimately retained.

U Employee costs are reported in our Annual Report under Operating, Selling & General and include salaries, benefits and share-based compensation. Typically a portion of employee costs are capitalized as part of fixed assets.

V Monies remitted to government, including income, property, and other taxes; Crown royalties; and lease bonuses and rentals.

W Data reported for 2014 has been calculated by Suncor and the Suncor Energy Foundation (SEF). Values are not defined by the London Benchmarking Group (LBG) model as it is no longer an accurate reflection of our programs and strategies. 2010 to 2013 community investment values were reported according to this model.

X 2014 reflects the first year that Suncor has reported Economic value retained, to better align with GRI reporting guidelines. This reflects the direct economic value generated (revenues) minus economic value distributed (operating costs [including employee costs], taxes and royalties paid, distribution to shareholders and community investments).

Y Includes the Investment Tax Credit on Scientific Research and Experimental Development Expenditures, Deep Gas Royalty Holiday Program and Alberta Royalty Tax Credit. The decrease in 2014 is due to decreased drilling activity by North America Onshore, resulting in lower royalty credits.

Z We provide financial donations to political parties at the provincial level in jurisdictions where we operate (Alberta, British Columbia, Ontario and Newfoundland). We do not make political contributions outside of Canada, or donate in-kind to political parties or individuals. We make political contributions to support the democratic process in Canada. Our Political Communications standard governs these contributions. All political contributions, including political fundraising events, are authorized and recorded by the vice president, government relations, within a pre-allocated budget approved by the executive vice president, Business Services. Contributions are reviewed annually by our executive leadership team.

AA Goods and services: 2013 and 2014 local spend excludes Oil Sands operations and Major Projects, due to data management capabilities of tracking local spend in these business areas.
Suncor-wide spend excludes Syria and Libya.

BB Aboriginal businesses include those:
• with a minimum of 51% ownership by Aboriginal individuals or organizations
Values reported for Aboriginal supplier revenues earned from 2010-2013 include GST. Beginning in 2014, values reported reflect amounts captured in our enterprise software data management system, minus 5% GST. Inclusion of contracts in the reporting year is based on the payment date, not the date of services rendered. Data includes Aboriginal spend across Suncor's operations Canada-wide. Prior to 2012, data was limited to spend within the Regional Municipality of Wood Buffalo.

Social

Filter display

The A symbol (**A**) reflects data that has been assured by a third party. View a complete list of reviewed data to confirm the performance indicators that have been assured.
In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Health and safety		CC						
Employee lost-time injury frequency		DD	G4-LA6	0.09	0.09	0.04	0.06	0.05
Contractor lost-time injury frequency		DD	G4-LA6	0.11	0.05	0.05	0.06	0.04
Employee recordable injury frequency		EE	G4-LA6	0.64	0.53	0.36	0.32	0.37
Contractor recordable injury frequency		EE	G4-LA6	0.95	0.84	0.72	0.72	0.50
Fatalities		FF	G4-LA6	0	1	0	0	3 **A**
Employee relations								
Employees receiving performance reviews	%	GG	G4-LA11	91.8	96	100	100	100
Training and development	$ thousands	HH	G4-LA9	14,069	16,942	24,262	20,210	20,534
Employee and Family Assistance Program	% utilization	II		12.9	11.7	11.7	12.2	
Education assistance plan	$ thousands		G4-LA10	329	499	725	1,107	1,246

Scholarships for employee dependents	$ thousands	JJ	G4-EC1	1491.57	1,669	1,158	--	1,300
Jobs offered to jobs accepted	%	KK		--	--	--	--	
New employee hires:		LL	G4-LA1					
• Male	%		G4-LA1	--	--	70.5	73.9	72.8
• Female	%		G4-LA1	--	--	29.5	26.1	27.2
• Age less than 30	%		G4-LA1	--	--	31.5	30.9	32.4
• Age 30 to 50	%		G4-LA1	--	--	57.9	57.1	58.6
• Age greater than 50	%		G4-LA1	--	--	10.5	11.7	9.0
Employee turnover:	%	MM	G4-LA1	10.9	4.2	6.5	4.1	5.0
• Male	%		G4-LA1	7.4	3	6.5	4.1	4.9
• Female	%		G4-LA1	3.4	1.2	6.8	4.2	5.4
• Age less than 30	%		G4-LA1	1.7	0.9	7.4	5.5	6.8
• Age 30 to 50	%		G4-LA1	7.4	2.9	7.5	4.8	5.5
• Age greater than 50	%		G4-LA1	1.8	0.4	4.1	1.9	3.2
Parental leave:		NN	G4-LA3					
• Male employees that took parental leave	#	NN	G4-LA3	--	--	59	63	61
• Male employees who returned to work after parental leave ended	#	NN	G4-LA3	--	--	53	60	66
• Male employees who returned to work after parental leave ended who were still employed 12 months after their return to work	%	NN	G4-LA3	--	--	--	--	88
• Female employees that took parental leave	#	NN	G4-LA3	--	--	174	169	246
• Female employees who returned to work after parental leave ended	#	NN	G4-LA3	--	--	49	60	159
• Female employees who returned to work after parental leave ended who were still employed 12 months after their return to work	%	NN	G4-LA3	--	--	--	--	88

Workforce								
Suncor employees	#		G4-9	12,750	13,469	14,198	14,132	14,425
• Full-time	#		G4-10	12,202	13,188	13,836	13,815	14,056
• Part-time	#		G4-10	79	78	96	67	108
• Temporary/casual	#		G4-10	469	280	266	250	261
Long-term contractors	#	OO	G4-10	8,298	3,394	3,505	3,669	3,231
Workforce unionized	%	PP	G4-11	37	33.4	32.8	32.3	32.4
Equal opportunities and workforce diversity	% of total workforce	QQ						
Aboriginals / American Indians	%	QQ	G4-LA12	2.9	2.8	2.7	2.6	1.5
Visible minorities	%	QQ	G4-LA12	10.7	10.6	11.1	12.1	10.4
Persons with disabilities	%	QQ	G4-LA12	1.1	1	0.9	0.8	0.5
Women	%	QQ	G4-LA12	24.2	23.2	23.3	23.5	25.1
Men	%	QQ	G4-LA12	75.8	75.3	74.3	74.6	74.7
Age less than 30	%		G4-LA12	16.6	15.7	14.6	14.4	12.7
Age 30 to 50	%		G4-LA12	56.8	56.2	56.8	57.7	60.0
Age greater than 50	%		G4-LA12	26.6	26.7	26.3	26.1	27.1
Percentage of basic salary (women to men):		RR						
• Management	%	RR	G4-LA13	90.1	92.9	89.2	90.9	96
• Professional	%	RR	G4-LA13	84.7	79.5	82	83.9	95
• Business support	%	RR	G4-LA13	105.4	91.6	87.7	96.8	104
• Operations	%	RR	G4-LA13	85.7	81.9	94.7	95	98
Diversity in management		SS						
Employees in management	%		G4-LA12	16	19	19.4	21.7	20.4
Women in management	%		G4-LA12	20	20.6	21.3	21.3	21.7
Persons with disabilities in management	%		G4-LA12	1.6	1.2	1	1	0.7
Age less than 30 in management	%		G4-LA12	2.5	2.5	2.6	2.3	2.1
Age 30 to 50 in management	%		G4-LA12	64.8	59.9	64.6	65.5	66.8
Age greater than 50 in management	%		G4-LA12	32.8	30.4	26.3	32.1	31.3

Community investment		TT						
Total value of all contributions made to charitable, non-charitable and community groups (categorized below):	$ thousands		G4-EC1	15,671	19,176	22,619	30,534	27,246
• Total value of cash donations	$ thousands		G4-EC1	14,269	16,561	18,115	23,367	23,745
• Total value of time donations	$ thousands	UU	G4-EC1	57	389	945	747	798
• Total value of in-kind donations	$ thousands	VV	G4-EC1	185	330	367	2,716	214
• Total value of management cost donations	$ thousands	WW	G4-EC1	603	1,080	1,525	1,625	1,384
• Total value of external resources leveraged	$ thousands	XX	G4-EC1	557	816	1,665	2,079	1,105
Suncor's donation to the Suncor Energy Foundation (SEF)	$ thousands	YY	G4-EC1	9,350	13,900	18,800	19,740	19,530
Suncor Energy Foundation / Suncor Energy Inc. disbursements (distribution by funding priority)			G4-EC1					
• Building Skills & Knowledge	$ thousands		G4-EC1	--	4,611	5,082	4,777	5,381
• Collaborating for a Shared Energy Future	$ thousands		G4-EC1	--	2,783	1,946	1,901	2,087
• Cultivating Community Leaders	$ thousands		G4-EC1	--	2,003	3,100	3,554	3,719
• Engaging Citizens	$ thousands	ZZ	G4-EC1	--	4,762	4,974	8,581	4,538
• Inspiring Innovation	$ thousands		G4-EC1	--	3,015	3,237	2,487	3,890
• Local Relationships	$ thousands		G4-EC1	--	1,185	2,614	5,530	4,342
United Way donations								
Suncor Energy Foundation	$ thousands		G4-EC1	1,791	1,920	2,225	2,510	2,315
Suncor Energy Inc.	$ thousands	AAA	G4-EC1	82	70	82	100	100
Suncor employee and retiree contributions	$ thousands		G4-EC1	3,107	4,295	4,494	4,779	5,013

Suncor-wide social footnotes

CC Rates of absenteeism, lost days and occupational disease are tracked but not reported by Suncor.

DD Lost time injury requires medical attention and results in an employee being absent from work on the next regularly-scheduled work day or any subsequent work day. Lost time injury frequency is the number of such injuries per 200,000 hours worked.

EE Recordable injuries include lost-time injuries as well as medical aid injuries. Medical aid injuries require medical attention but do not result in an employee being absent from work. Recordable injury frequency is the sum of lost-time and medical aid injuries per 200,000 hours worked.

FF The number of fatalities reported are for employees and contractors (excluding prime contractors). The prime contractor for a work site is (a) the contractor, employer or other person who enters into an agreement with the owner of the work site to be the prime contractor, or (b) if no agreement has been made or if no agreement is in force, the owner of the work site.
We experienced 3 tragic employee fatalities at Oil Sands in 2014:
•January 19, 2014 – an employee was fatally injured when he fell through the surface into a cavity containing sand and water.
•April 20, 2014 – an employee was fatally electrocuted when working on a compressor/electrical panel.
•May 7, 2014 – an employee was fatally injured when attacked by a black bear while working in a lay down yard.
Two prime contractors were also fatally injured in 2014 on Suncor's sites. Prime contractors have full care, custody and control meaning they manage their own work and are responsible for maintaining safe working environments. These incidents are described below:
•March 14, 2014 – A worker was overcome by water and the elements when a backhoe broke through the ice that was over top of a borrow pit.
•June 2, 2014 – A worker was fatally injured when he was struck by a plate while performing maintenance work on a piece of heavy equipment.

GG Everyone receives performance reviews, except those paid hourly. Hourly workers receive informal evaluations.

HH Training and development is representative of fees for professional development courses taken by Suncor employees. This total consists of values reported for all business areas (Oil Sands, Exploration & Production, Refining & Marketing and St. Clair ethanol) and our corporate operations.

II The Employee and Family Assistance Program is a confidential counselling service available to employees and their families. In 2009, statistics do not include Refining & Marketing U.S.A. since a different service is available to employees in the U.S. Beginning in 2011 a breakdown by business unit is not available.

JJ In 2013, scholarships for employee dependents was rolled into the employee benefits indicator G4-LA3.

KK Beginning in 2014, jobs offered to jobs accepted is reported at a Suncor-wide level.

LL Any externally hired regular full-time or regular part-time employee whose permanent start date falls within the period being reported.

MM Defined as the percentage of employees who leave the organization under any circumstance in a given year. Beginning in 2009, only terminations are included and numbers are based on full-time and part-time Suncor employees only.

NN All regular full-time and regular part-time employees may apply for maternity leave, parental leave and paternity leave. These are unpaid leaves. To qualify, you must have completed 13 continuous weeks of service before the anticipated date of placement of the child or prior to the commencement of your leave. Beginning in 2014, we began reporting the number of employees who took parental leave and returned to work after their leave ended, opposed to percentages (as in past reports) to be in alignment with G4 reporting guidelines. After an alignment in methodology to determine retention rates, 2014 is the first year where reporting retention after 12 months of leave was possible. Determining retention rates in 2014 requires leave data from 2012, return data from 2013 and employment status in 2014.
Historical data prior to 2012 is not available as this is a new GRI indicator

OO Contractor data includes both staged and structured contractors that are workforce or capacity planned.

PP Unionized data is only applicable in areas where there is a unionized environment

QQ	Certain operating regions prohibit collecting information on gender, therefore data presented here may not be reflective of our entire workforce due to data availability. Workforce diversity is calculated based on information provided voluntarily by employees. Indicators referring to ethnicity and disability reflect only those employees who consent for release of this information have been included.
RR	Beginning in 2014, categories were determined using job groupings standard in compensation reporting (Management, Professional, Business Support, Hourly, Temporary). Average salaries within these categories were calculated using a weighted average to ensure the data represents a comparison of equal level positions between men and women. Reporting for this metric is now Suncor-wide as position levels are centrally administered and do not vary based on operating area. Base pay is linked to how an employee's job is classified within job families to ensure consistency of how work is assessed and valued across the company. Variation within a job's salary band recognizes an individual's position on the learning curve and demonstration of job capacity.
SS	Management is classified as front-line leaders, mid-level leaders, members of the management committee or members of the corporate committee.
TT	Data reported for 2010-2013 for Total value of all contributions made to charitable, non-charitable and community groups was defined by the London Benchmarking Group (LBG) Canada model. Data reported for 2014 has been calculated by Suncor and the Suncor Energy Foundation (SEF). Values are not defined by the LBG model as it is no longer an accurate reflection of our programs and strategies. The SEF is audited annually by PricewaterhouseCoopers (PWC).
UU	Volunteer time is reported by employees to Suncor on a voluntary basis. The hours shown represent hours volunteered during working hours.
VV	In-kind contributions in 2013 were significantly higher as a result of the Alberta floods, the Colorado floods and our decommissioning of the Voyageur Upgrader site.
WW	Data reported in 2014 is no longer defined by the LBG Canada model as it no longer accurately reflects our programs and strategies. The value of management costs in 2014 is for the Suncor Energy Foundation only.
XX	External resources leveraged represents cash and in-kind value generated as a result of Suncor's involvement, but which is not a cost to the company (e.g. employee contributions through our Suncares employee programs, food donations, matching donations from another funder, etc.).
YY	Suncor established the Suncor Energy Foundation (SEF) in March 1998. The SEF is limited to providing donations to registered Canadian charitable organizations. This figure includes the donation allocation, the SEF operating budget and allocation to a reserve fund which protects multi-year commitments going forward. Charitable contributions to the community made by the SEF are included in the community investment values presented at the beginning of the table.
ZZ	2013 contributions were significantly higher as a result of the activation of several Suncares Humanitarian matching grant programs for employees (Alberta floods, Colorado floods, Haiyan typhoon).
AAA	United Way contributions for Suncor Energy U.S.A.

Oil Sands

Environmental data consists of Oil Sands mining operations (does not include Syncrude).

All economic data for Oil Sands includes our In Situ operations as well as the Oil Sands mining operations in alignment with our Annual Report (including Syncrude).

Expand all | Collapse all

Environment

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Production								
Gross production	million barrels of oil/year	A	OG1	94.3	105.1	103.25	105.31	108.18
Gross production	million cubic metres (m^3) of oil/year	A	OG1	15	16.7	16.4	16.7	17.2
Air emissions								
Greenhouse gas (GHG)	thousand tonnes carbon dioxide equivalent (CO_2e)	B	G4-EN15 G4-EN16	8,801	8,524	9,204	8,417	8,542
GHG emissions intensity	tonnes CO_2e/m^3 production		G4-EN18	0.59	0.51	0.56	0.5	0.50
Ozone-depleting substances	kilograms (kg) of chlorofluorocarbon (CFC)11 equivalent	C	G4-EN20	1.1	0	0	0	0
Sulphur dioxide (SO_2)	thousand tonnes	D	G4-EN21	22.15	20.23	18.54	14.1	16.68
SO_2 emissions intensity	kg/m^3 production		G4-EN21	1.48	1.21	1.13	0.84	0.97
Nitrogen oxides (NO_x)	thousand tonnes	E	G4-EN21	21.6	21.8	21.1	18.8	18.3

NO_x emissions intensity	kg/m³ production		G4-EN21	1.44	1.3	1.29	1.13	1.06
Volatile organic compounds (VOCs)	thousand tonnes	F	G4-EN21	28.9	16.5	16.1	6.77	12.27
• Benzene	tonnes		G4-EN21	89.6	21.5	11.5	13.6	18.1
• Toluene	tonnes		G4-EN21	1,551.80	198.2	127.2	144	265
• Ethylbenzene	tonnes		G4-EN21	593.1	86	70	36.43	80.4
• Xylene	tonnes		G4-EN21	3,085.90	315.1	188.5	175.14	387.1
VOC emissions intensity	kg/m³ production		G4-EN21	1.93	0.99	0.98	0.4	0.71
National Pollutant Release Inventory (NPRI) on-site releases	thousand tonnes		G4-EN21	80.3	66.9	70.5	50.1	63.77
Flared gas	million m³	G	OG6	35.1	43.6	60.3	92.9	54.3
Flared gas intensity	m³/m³ production		OG6	2.3	2.61	3.67	5.55	3.16
Energy consumption								
Total energy use	million gigajoules (GJ)	H	G4-EN3 G4-EN4	108.6	109.4	112.8	112.72	117.30
• Direct energy use	million GJ	I	G4-EN3	107.7	111.7	114.9	115.19	119.32
• Indirect energy use	million GJ	I	G4-EN4	0.94	-2.29	-2.38	-2.47	-2.02
Energy intensity	GJ/m³ production		G4-EN5	7.5	6.7	6.86	6.73	6.83
Water use								
Total water withdrawal	million m³	J	G4-EN8	37.3	38.7	44.81	51.35	37.36
• Surface water withdrawal	million m³		G4-EN8	35.6	27.7	26.6	22.83	18.65
• Groundwater withdrawal	million m³		G4-EN8	1.7	1.7	1.7	1.38	1.13
• Industrial run-off water withdrawal	million m³	K	G4-EN8	–	9.32	16.54	26.14	17.58
Water withdrawal intensity	m³/m³ production		G4-EN8	2.5	2.3	2.73	3.07	2.17
Water returned	million m³	K	G4-EN22	6.7	10.3	11	17.73	9.92
Water consumption	million m³	L		30.6	28.4	33.79	33.62	27.44
Water consumption intensity	m³/m³ production			2	1.7	2.06	2.01	1.60
Water discharge quality								
Oil and grease in effluent	tonnes	M	G4-EN22	14.6	17.7	7.67	11.57	7.23
Total suspended sediment	tonnes	M	G4-EN22	148.4	149.3	77.6	138.82	77.44

Chemical oxygen demand	tonnes		G4-EN22	369.5	609.5	609.93	995.01	477.15
Phenol	tonnes	M	G4-EN22	0.1	0.08	0	0	0
Metals in effluent	tonnes	M	G4-EN22	40.4	34.5	20.3	43.51	25.25
Waste management		N						
Total hazardous waste generated	thousand tonnes	O	G4-EN23	4.2	3.9	0.38	0.28	7.81
• Hazardous waste incinerated	tonnes	O	G4-EN23	–	13.4	5.92	17.23	4.06
• Hazardous waste deep well injected	tonnes	O	G4-EN23	–	44.1	7.42	3.17	13.39
• Hazardous waste landfilled	tonnes	O	G4-EN23		3,792.30	352	223.46	256.90
• Hazardous waste otherwise disposed	tonnes	O	G4-EN23		28.4	13.05	39.29	58.01
• Hazardous waste recycled, recovered or reused	tonnes	O	G4-EN23	–	–	–	–	7,479.50
Total non-hazardous waste generated	thousand tonnes	P	G4-EN23	39	40.5	84.4	42.8	103.73
• Non-hazardous waste incinerated	tonnes		G4-EN23	–	0.7	0.18	0	0
• Non-hazardous waste deep well injected	tonnes		G4-EN23	–	2	1.02	1.58	0
• Non-hazardous waste landfilled	tonnes	P	G4-EN23	–	40,477.90	84,334.30	42,758.50	89,069.18
• Non-hazardous waste otherwise disposed	tonnes		G4-EN23	–	0	0	36.8	0
• Non-hazardous waste recycled, recovered or reused	tonnes	P	G4-EN23	–	–	–	–	14,663.20
Waste reused, recycled or recovered (off-site)	thousand tonnes	Q	G4-EN23	45.1	25.3	29.5	26.5	–
Waste reused, recycled or recovered (on-site)	thousand tonnes	Q	G4-EN23	5	2.43	2.1	1.28	–

Land disturbance and reclamation								
Total land lease holdings for potential development (mineable oil sands)	hectares		G4-EN11	70,263	70,263	70,263	70,263	70,263
Total land holdings approved for development (mineable oil sands)	hectares		G4-EN11	24,064	24,064	24,432	24,432	22,458
Total land disturbed	cumulative hectares		G4-EN12	19,737	20,023	21,303	21,690	**22,072 A**
Land reclaimed	cumulative hectares	R	G4-EN13	1,303	1,439	1,542	1,708	**1,905 A**
Combined surface area of tailings ponds	hectares	S	G4-EN23	2,689	2,761	2,712	2,864	2,654
Compliance								
Regulatory contraventions	#	T	G4-EN29	14	11	9	8	6
Regulatory fines	$ thousands	U	G4-EN29	237	475	0	0	0
Reportable spills	#	V	G4-EN24	17	9	7	5	11
• Spills to natural water bodies	#		G4-EN24	0	0	0	2	0
Total volume of reportable spills	m^3	W	G4-EN24	0	0	1,058	353	2,558
Air quality exceedances	#	X	G4-EN29	–	0	0	0	0
Industrial wastewater limit exceedances	#		G4-EN29	2	2	1	1	0
Environment, Health & Safety (EH&S) management								
EH&S professionals on staff	#	Y	G4-EN31	126	75	69	72	92

Oil Sands environment footnotes

A Gross sweet and sour synthetic crude oil production. This volume is used to calculate emission intensities since it represents emissions associated with mining, extraction and upgrading. This volume is reported as a gross total as it includes unprocessed volumes.

B Greenhouse gas (GHG) emissions are calculated using a facility-specific methodology which utilizes various reference methodologies that have been accepted by the relevant jurisdictions each facility is required to report its GHG emissions. Methodology has been followed where a jurisdiction has a prescribed one and if none exists then the most applicable and accurate methods available are used to quantify each emission source. GHG emissions and emissions intensity values are consistent with Suncor's Specified Gas Emitters Regulation (SGER) Bill 3 reported Total Annual Emission (TAE) values, with a few exceptions. The reported TAE in the SGER Compliance report excludes carbon dioxide (CO2) emissions from biomass, industrial process emissions and total indirect emissions. Our Report on Sustainability GHG emissions includes industrial process and total indirect emissions, and biomass. Oil Sands GHG data in this report also includes the emissions associated with TransAlta's Poplar Creek cogeneration facility which is within the Oil Sands facility boundary. Additionally the production definition used in SGER is different than what is reported here. SGER production is a weighted production value which takes into account mining and upgrading operations, not gross synthetic crude oil production.
2012 and 2013 emission methodology was updated as required by Alberta Environment and Sustainable Resource Development (AESRD). This updated methodology has been used since 2012, but not used in years prior to 2012. Data stated for 2010 and 2011 has been revised to remove the previously-included pipelines stations which have now been moved within the Refining & Marketing business unit.

C Retrofitting of refrigeration systems currently using R-22 or any other hydrofluorocarbons (HCFCs) are part of Suncor's ongoing program to phase out the use of ozone-depleting substances on-site. The conversion of all remaining R-22 systems with RS-44 with more than 10 kg in it is ongoing and will continue until complete. RS-44 is a non-ozone depleting substance.

D We use low or ultra-low-sulphur diesel in our mining equipment. Beginning in 2014 we include mining combustion equipment emissions in our total sulphur dioxide (SO2) emissions, even though emissions from these sources are minimal.

E Site-wide nitrogen oxide (NO_x) emissions as reported to Alberta Environment and Sustainable Resource Development (ESRD). This also includes NO_x emissions from mobile sources.

F We discovered that a portion of the total VOC emissions reported in 2013 was inadvertently omitted and if this was included in the VOC emissions, the 2013 value would increase by approximately 29%.

G These values include both emergency and non-emergency flaring volumes. In 2014, the maintenance plan was modified to have annual inspections of the sulphur recovery units, subsequently resulting in reduced emergency flaring events.

H Total energy is the sum of direct and indirect energy.

I Direct energy is primary energy consumed on-site by Suncor-operated facilities including the energy consumed by TransAlta's Poplar Creek cogeneration facility which is within the Oil Sands facility boundary. Direct energy includes combustion of petroleum coke, natural gas and internally produced fuels; diesel combusted as fuel in mine trucks, and flaring.
Indirect energy includes imported electricity, steam, heating and cooling duty from third parties. Beginning in 2011, the indirect energy calculation methodology was changed to credit operations for electricity exported to external users and/or other Suncor facilities. The facility that exports the electricity subtracts the export value from its indirect energy use. The facility that receives the electricity counts it as a Scope 2 indirect energy use, regardless of source. As such, since 2011, the Oil Sands indirect energy figures have been negative because the amount of electricity exported by the Poplar Creek cogen was greater in value than the amount of electricity imported.

J Includes surface water, groundwater and industrial run-off water as per Alberta Environment and Sustainable Resource Development withdrawal licences. 2011 water withdrawal metrics have been revised based on data and process improvements in 2012 that improved the understanding of site conditions for specific facilities.
In 2014 the wastewater treatment plant became operational, resulting in the use of more recycled water and reductions in our river water withdrawal.

K Beginning in 2011, industrial run-off outfall volumes have been incorporated and include precipitation on process and non-process areas.
Water returned is comprised of treated industrial waste-water and runoff from non-process areas that gets collected, diverted and eventually discharged to the environment (destination is the Athabasca River).

L Water consumption is the total water withdrawn minus the water returned.

M The destination of water discharge for our Oil Sands operations is the Athabasca River. In 2011, the water quality discharge parameters increased or decreased due to the Pond C closure that occurred from April to December, and/or the inclusion of the industrial run-off water quality data. Additionally, Pond C was closed all of 2012 and pond E was also closed the majority of the year.

N Beginning in 2011, in order to better align with the Global Reporting Initiative guidelines, Suncor expanded the number of indicators for which it collects and reports data in the Waste Management category.

O	Prior to 2014, waste that was reused, recycled and recovered was not included in the totals for hazardous and non-hazardous waste generated and was reported as an aggregated total. Beginning in 2014, in order to provide a more detailed depiction of the waste streams created due to our operations, we have included this category of waste in both hazardous and non-hazardous total waste generated. Reduction in hazardous waste volume in 2012 resulted from no sulphur being sent to landfill. In 2014, a change in third party waste receivers is reflected in the volumes of hazardous waste reported in individual categories as the final method of waste disposal is dependent on the options available at those sites.
P	Non-hazardous waste volume is dependent on site activities and may fluctuate annually. Prior to 2014, waste that was reused, recycled and recovered was not included in the totals for hazardous and non-hazardous waste generated and was reported as an aggregated total. Beginning in 2014, in order to provide a more detailed depiction of the waste streams created due to our operations, we have included this category of waste in both hazardous and non-hazardous total waste generated.
Q	Beginning in 2014, in order to provide a more detailed depiction of the waste streams created due to our operations, we have included this category of waste in both hazardous and non-hazardous total waste generated. In 2012, a third-party contractor transported used oil offsite for recycling; in previous years this was done on-site.
R	Reclaimed lands have not been certified by government regulators. Following Alberta Environment's issuance of standards for Geographic Information System spatial data reporting, issued in 2010, Suncor annually re-evaluates permanent reclamation areas and recalculates historical reclamation totals. Disturbance feature types (such as roads, power lines, pipelines, etc.) that occurred post-reclamation are removed and any new areas of reclamation are added. As such, the reclamation areas for each year, and the total area permanently reclaimed to the end of 2014, have been updated to reflect these changes.
S	The tailings pond area calculation is based on fluids area only and does not include solid structures such as beaches and dykes.
T	A regulatory contravention is an environmental incident that breaches a regulatory limit (prescribed threshold required by legislation, approval or permit from a regulatory authority) or requirement (any law, act, regulation, licence, standard, approval, directive and/or permit applicable to Suncor's activities) and that triggers formal regulatory reporting.
U	Data includes regulatory fines related to environmental, health and safety contraventions paid during the stated year. 2010: Fines that were paid in 2010 related to incidents that occurred in 2008. 2011: •Suncor paid a $275,000 fine in 2011 for violations of Section 142(1)(e) of the Water Act that occurred between May and September 2008. The violation was a result of Suncor failing to comply with a term of its approval relating to the adherence to the water management plan applicable to the East Tank Farm site. •A $150,000 fine was paid pursuant to Sections 40(2) and 79.2(f) of the Fisheries Act relating to a June 23, 2008 rain event which overwhelmed Suncor's sedimentation ponds at the North Steepbank Extension, and resulted in discharges into the Athabasca River which contained elevated levels of total suspended solids. •A $50,000 fine was paid pursuant to Sections 40(2) and 79.2(f) of the Fisheries Act relating to rain events on Aug. 2, 2008 and from Aug. 11 to 13, 2008, which overwhelmed Suncor's sedimentation ponds at the North Steepbank Extension, and resulted in discharges into the Athabasca River which contained elevated levels of total suspended solids.
V	A reportable spill is an unplanned or accidental event resulting in a release of material either into the environment or into a location that does not usually contain the material, as specified by Alberta regulation. In 2014, regulations placed greater emphasis on spill reporting, resulting in a greater emphasis on spill reporting, including contractors.
W	All recovered spill volumes are discounted from final spill volumes. Spills are also discounted when the material was spilled into a containment system that was intended for the material, or into a system that would fully recover the material. In 2010 and 2011, the entire estimated spill volume was recovered resulting in zero net spill volume.
X	Suncor continues to investigate and evaluate changes that may improve air quality. Ambient ground level concentration exceedances are not provided, as other reduced sulphur compounds and possibly non-sulphur containing compounds may interfere with hydrogen sulphide (H_2S) analyzers, leading to results that are not accurate reflections of the actual H_2S concentrations in the ambient air.
Y	Professionals dedicated to environment, health or safety matters. Professional Services Agreements (PSAs) and non-positioned contractors are not included in this total. The increase from 2013 to 2014 reflects business unit restructuring; this total now includes EH&S professionals from our In Situ operations.

Economic

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Financials		Z						
Tax and royalty credits earned	$ millions	AA	G4-EC4	12.5	6.1	14.5	10.3	15.6
Investments								
Capital and exploration expenditures	$ millions		G4-EC1	3,709	5,100	4,957	4,311	3,826
Purchases								
Goods and services	$ millions			3,643	4,315	4,194	4,651	4,244
Goods and services purchased in or from:								
• Canada	$ millions			3,455	4,139	4,076	4,512	4,081
• Local businesses and suppliers	$ millions	BB	G4-EC9	1,844	2,056	1,929	–	–

Oil Sands economic footnotes

Z For complete disclosure of financial information, see our 2014 Annual Report (PDF, 138pp. 2.54 MB).

AA Investment Tax Credit on Scientific Research and Experimental Development Expenditures.

BB Local is defined as businesses and suppliers based in the Regional Municipality of Wood Buffalo. Data from 2010 to 2012 includes Oil Sands mining and In Situ spend. Beginning in 2013, this number is reported on a Suncor-wide basis.

Social

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Health and safety								
Employee lost-time injury frequency		CC	G4-LA6	0.17	0.12	0.09	0.04	0.07
Contractor lost-time injury frequency		CC	G4-LA6	0.06	0.07	0.08	0.01	0.02
Employee recordable injury frequency		DD	G4-LA6	1.37	0.98	0.69	0.5	0.65
Contractor recordable injury frequency		DD	G4-LA6	0.81	1.05	0.87	0.67	0.54
Fatalities		EE	G4-LA6	0	0	0	0	3

Employee relations								
Employees receiving performance reviews	%		G4-LA11	91	98	100	100	100
Training and development	$ thousands	FF	G4-LA9	9,489	11,965	9,879	10,331	11,249
Ratio of lowest wage to minimum wage		GG	G4-EC5	1.9	1.6	1.6	2.3	1.6
Ratio of average wage to minimum wage		GG	G4-EC5	5.7	5.7	5.3	5.5	5.7
Ratio of jobs offered to jobs accepted		HH		1.14	1.1	1.11	1.13	--
New employee hires:		II	G4-LA1					
• Male	%		G4-LA1	--	--	84.1	84.1	80.5
• Female	%		G4-LA1	--	--	15.9	15.7	19.5
• Age less than 30	%		G4-LA1	--	--	36.3	28.2	33.0
• Age 30 to 50	%		G4-LA1	--	--	53.7	56.9	59.4
• Age greater than 50	%		G4-LA1	--	--	9.7	14.4	7.6
Employee turnover:			G4-LA1	5.5	4.2	6.4	4.4	5.8
• Male	%		G4-LA1	5.4	4.2	6.2	4.2	5.8
• Female	%		G4-LA1	6.5	4.3	1.2	5.3	5.1
• Age less than 30	%		G4-LA1	7.3	4.8	8.1	5	8.1
• Age 30 to 50	%		G4-LA1	5.8	4.9	7.1	5.1	5.8
• Age greater than 50	%		G4-LA1	3	1.8	3.1	1.8	4.1
Workforce								
Suncor employees	#		G4-10	4,315	4,585	5,192	5,768	5,710
• Full time	#		G4-10	4,238	4,561	5,156	5,741	5,636
• Part time	#		G4-10	3	1	8	3	13
• Temporary/casual	#		G4-10	74	23	28	24	61
Long-term contractors	#		G4-10	4,796	386	465	615	676
Workforce unionized	%		G4-11	65.1	63.4	57.2	52.9	51.6

Equal opportunity and workforce diversity		JJ						
Aboriginals	%	JJ	G4-LA12	5.8	5.3	4.9	4.6	2.3
Visible minorities	%	JJ	G4-LA12	10.5	10.2	10.6	10.8	8.3
Persons with disabilities	%	JJ	G4-LA12	1	0.9	0.8	0.7	0.3
Women	%	JJ	G4-LA12	12.9	12	13.1	13.5	15.1
Men	%	JJ	G4-LA12	87.1	87	86.3	86.1	86.1
Age less than 30	%		G4-LA12	21	19.9	18.8	17.1	14.7
Age 30 to 50	%		G4-LA12	57.5	56.7	57.9	58.8	61.3
Age greater than 50	%		G4-LA12	21.6	22.4	22.7	23.7	25.0
Percentage of basic salary (women to men):		KK	G4-LA13					
• Management	%	KK	G4-LA13	88.1	90.2	91.7	91.2	--
• Professional	%	KK	G4-LA13	84.3	86.1	85.4	89.5	--
• Business support	%	KK	G4-LA13	86.1	74.9	78.8	81.9	--
• Operations	%	KK	G4-LA13	94.9	82	91.9	91.7	--
Diversity in management	% in management							
Employees in management	%		G4-LA12	11.8	13.4	14.3	18.2	17.8
Women in management	%		G4-LA12	8.5	9.5	10.9	10.4	11.6
Persons with disabilities in management	%		G4-LA12	1.6	0.8	0.8	0.6	0.6
Age less than 30 in management	%		G4-LA12	3.7	3.3	4.1	3.3	3.6
Age 30 to 50 in management	%		G4-LA12	66.1	56.3	65.7	67.3	69.7
Age greater than 50 in management	%		G4-LA12	30.1	25.6	30.3	29.4	26.7

Oil Sands social footnotes

CC A lost-time injury requires medical attention and results in an employee being absent from work on the next regularly scheduled work day or any subsequent work day. Lost-time injury frequency is the number of such injuries per 200,000 hours worked.

DD Recordable injuries include lost-time injuries as well as medical aid injuries. Medical aid injuries require medical attention but do not result in an employee being absent from work. Recordable injury frequency is the sum of lost-time and medical aid injuries per 200,000 hours worked.

EE The number of fatalities reported are for employees and contractors (excluding prime contractors). The prime contractor for a work site is (a) the contractor, employer or other person who enters into an agreement with the owner of the work site to be the prime contractor, or (b) if no agreement has been made or if no agreement is in force, the owner of the work site.
We experienced 3 tragic employee fatalities at Oil Sands in 2014:
• January 19, 2014 – an employee was fatally injured when he fell through the surface into a cavity containing sand and water.
• April 20, 2014 – an employee was fatally electrocuted when working on a compressor/electrical panel.
• May 7, 2014 – an employee was fatally injured when attacked by a black bear while working in a lay down yard.
Two prime contractors were also fatally injured in 2014 on Suncor's sites. Prime contractors have full care, custody and control meaning they manage their own work and are responsible for maintaining safe working environments. These incidents are described below:
• March 14, 2014 – A worker was overcome by water and the elements when a backhoe broke through the ice that was over top of a borrow pit.
• June 2, 2014 – A worker was fatally injured when he was struck by a plate while performing maintenance work on a piece of heavy equipment.

FF Fees for professional development courses taken by Suncor employees. Includes the educational assistance plan that reimburses tuition upon successful completion of a course or program.

GG Compares full-time base wage to the province of Alberta's minimum wage ($10.20/hour in 2014). Beginning in 2014, Alberta's minimum wage was used across our operations for this metric for comparison purposes due to the minimal variances of minimum wages across Canada.

HH Beginning in 2014, this indicator is reported Suncor-wide.

II Any externally-hired regular full-time or regular part-time employee whose permanent start date falls within the reporting period. No historical data available prior to 2012 as this is the first year this indicator was reported.

JJ Certain operating regions prohibit collecting information on gender, therefore data presented here may not be reflective of our entire workforce due to data availability.
Workforce diversity is calculated based on information provided voluntarily by employees. Indicators referring to ethnicity and disability reflect only those employees who consent for release of this information have been included.

KK Beginning in 2014, salary comparison data between women and men is reported on a Suncor-wide basis as position levels are corporately administered and do not differ based on operating areas.

In Situ

Performance data for our In Situ business includes MacKay River and Firebag operations.

Economic data for In Situ is included with Oil Sands performance data.

Expand all | Collapse all

Environment

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Production								
Net production	million barrels of oil / year	A	OG1	31	32.7	47.8	62.84	72.79
Net production	million cubic metres (m^3) of oil / year	A	OG1	4.9	5.2	7.6	9.99	11.57
Air emissions								
Greenhouse gas (GHG)	thousand tonnes carbon dioxide equivalent (CO_2e)	B	G4-EN15 G4-EN16	2,247	2,608	4,079	5,390	5,610
GHG emissions intensity	tonnes CO_2e / m^3 production	B	G4-EN15 G4-EN16	0.46	0.5	0.54	0.54	0.48
Sulphur dioxide (SO_2)	thousand tonnes	C	G4-EN21	1.19	0.47	0.53	0.5	0.52
SO_2 emissions intensity	Kilograms (kg) / m^3 production		G4-EN21	0.24	0.09	0.07	0.05	0.05

Nitrogen oxides (NO_x)	thousand tonnes	D	G4-EN21	1.03	1.91	2.03	2.5	2.66
NO_x emissions intensity	kg / m^3 production		G4-EN21	0.21	0.37	0.27	0.25	0.23
Volatile organic compounds (VOCs)	thousand tonnes	E	G4-EN21	0.2	0.21	0.23	0.3	0.36
• Benzene	tonnes		G4-EN21	11.01	13.53	16.62	26.41	27.56
• Toluene	tonnes		G4-EN21	7.26	8.33	18.03	14.99	15.52
• Ethylbenzene	tonnes		G4-EN21	0.23	0.37	0.25	0.21	0.30
• Xylene	tonnes		G4-EN21	3.55	3.74	11.46	3.46	3.45
VOC emissions intensity	kg / m^3 production		G4-EN21	0.04	0.04	0.03	0.03	0.03
National Pollutant Release Inventory (NPRI) on-site releases	thousand tonnes		G4-EN21	5.91	6.95	7.32	6.94	8.34
Flared gas	million m^3	F	OG6	1.37	1.58	1.95	3.62	1.78
Flared gas intensity	m^3 / m^3 production		G4-EN21	0.28	0.3	0.26	0.36	0.15
Energy consumption								
Total energy use	million gigajoules (GJ)	G	G4-EN3 G4-EN4	45.33	45.46	67.26	85.93	89.48
• Direct energy use	million GJ	H	G4-EN3	38.51	37.4	63.94	86.28	90.45
• Indirect energy use	million GJ	H	G4-EN4	6.82	8.06	3.32	-0.35	-0.97
Energy intensity	GJ / m^3 production		G4-EN5	9.18	8.75	8.83	8.6	7.73
Energy saved through conservation and efficiency improvements	thousand GJ		G4-EN6	644.63	513.37	0	0	0
Water use								
Total water withdrawal	million m^3	I	G4-EN8	2.09	0.27	0.83	0.88	1.57
• Surface water withdrawal	million m^3	I	G4-EN8	0	0	0	0	0.13
• Groundwater withdrawal	million m^3		G4-EN8	0.62	0.2	0.61	0.74	0.65
• Treated wastewater from external organizations	million m^3	I	G4-EN8	1.38	0	0	0	0

• Industrial run-off water	million m³	I	G4-EN8	0.09	0.06	0.23	0.14	0.79
Water withdrawal intensity	m³ / m³ production	I	G4-EN8	0.42	0.05	0.11	0.09	0.14
Water returned	million m³	I	G4-EN22	0	0.01	0.01	0.01	0.73
Water consumption	million m³	J		2.09	1.97	2.34	2.15	1.86
Water consumption intensity	m³ / m³ production			0.42	0.38	0.31	0.22	0.16
Produced water	million m³		OG5	–	–	24.86	32.59	32.86
Average annual water recycling rate	%		G4-EN2	93.1	92.48	94.5	94.6	97.6
Waste management		K						
Total hazardous waste generated	thousand tonnes	K	G4-EN23	81.6	437.2	764.9	987.3	1,209.0
• Hazardous waste incinerated	tonnes		G4-EN23	–	4.5	2.3	0.55	0
• Hazardous waste deep well injected	tonnes		G4-EN23	–	382,767.00	704,829.00	901,377	951,648
• Hazardous waste landfilled	tonnes	L	G4-EN23	–	1,764.40	877.5	7,765.90	763.40
• Hazardous waste otherwise disposed	tonnes	L	G4-EN23	–	52,623.40	59,222.90	78,190.40	103,780.19
• Hazardous waste recycled, recovered or reused	tonnes	K	G4-EN23	–	–	–	–	100.98
Total non-hazardous waste generated	thousand tonnes	K	G4-EN23	125.5	97.5	111.47	95.02	92.19
• Non-hazardous waste incinerated	tonnes		G4-EN23		–	–	–	956
• Non-hazardous waste landfilled	tonnes		G4-EN23	–	59,852	55,803.64	84,392.33	79,171.32
• Non-hazardous waste otherwise disposed	tonnes	M	G4-EN23	–	37,634	55,345.54	10,382.36	10,851.00

• Non-hazardous waste recycled, recovered or reused	tonnes	K	G4-EN23	–	–	–	–	1,209.00
Drilling waste disposed or treated	tonnes	N	OG7	–	–	62,723.95	106,225.37	124,972.00
Waste reused, recycled or recovered (off-site)	thousand tonnes		G4-EN32	2.3	6.41	2.8	2.7	–
Waste reused, recycled or recovered (on-site)	thousand tonnes	O	G4-EN32	4.95	81.6	0	0	–
Land disturbance and reclamation								
Total land lease holdings for potential development	hectares		G4-EN11	181,684	181,053	181,053	181,053	181,053
Total land holdings approved for development	hectares		G4-EN11	22,272	24,003	24,537	24,537	24,537
Firebag land approved by Energy Resources Conservation Board for development	hectares			2,880	2,880	2,880	2,880	2,880
Total land disturbed	cumulative hectares		G4-EN12	1,072	990	1,172	1,356	1,632
Land reclaimed	cumulative hectares	P	G4-EN13	0	0	0	10.2	15
Total number of producing wells	#			96	123	168	211	241
Shut-in or suspended production wells	#	Q		1	4	4	95	2
Wells undergoing reclamation	#		G4-EN13	0	0	0	0	0
Reclamation certificates received	#		G4-EN13	0	0	0	0	0
Compliance								
Regulatory contraventions	#	R	G4-EN29	74	57	91	15	12
Regulatory fines	$ thousands	S	G4-EN29	0	0	0	0	0
Reportable spills	#	T	G4-EN24	23	24	28	27	28

• Spills to natural water bodies	#		G4-EN24	0	0	0	0	0
Total volume of reportable spills	m^3	U	G4-EN24	131	111	1 081	622	239
Air quality exceedances	#		G4-EN29	5	16	16	9	15
Industrial wastewater limit exceedances	#		G4-EN29	0	0	0	0	1
Environment, Health & Safety (EH&S) management								
EH&S professionals on staff	#	V	G4-EN31	21	24	23	20	--

In Situ environment footnotes

A Beginning in 2012, production stated is net bitumen sales. Previously-stated production was gross bitumen production and associated natural gas production, internally consumed and/or lost through practices such as flaring. The net volume is used to calculate emission intensities as it represents emissions associated with total plant saleable product. In 2014, production increased mainly due to this being the first full year of operations from all four stages of Firebag's operations.

B Greenhouse gas (GHG) emissions are calculated using a facility-specific methodology which utilizes various reference methodologies that have been accepted by the relevant jurisdictions each facility is required to report its GHG emissions. Methodology has been followed where a jurisdiction has a prescribed one and if none exists then the most applicable and accurate methods available are used to quantify each emission source.
GHG emissions and emissions intensity values are consistent with Suncor's Specified Gas Emitter's Regulation (SGER) Bill 3 reported Total Annual Emission (TAE) value, with an exception. The reported TAE in the SGER Compliance report excludes CO_2 emissions from total indirect sources, such as third-party cogen from MacKay River.
Firebag data in this report includes all cogen emissions as Scope 1. MacKay River data includes all third-party cogen emissions associated with the steam and electricity we consume as Scope 2. Beginning in 2014, MacKay River implemented a new methodology for calculating these indirect emissions; therefore all reported data has been calculated using this method.
In Situ experienced a decrease in emission intensity compared to past years. Read more on our GHG performance.

C Suncor installed a sulphur recovery unit at Firebag in 2011, which led to a decrease in SO2 emissions in 2011.

D In 2012 to 2014, increase in NO_x emissions was due to the ramp-up of Firebag, which required an increase in steam generation to bring new wells online.

E In 2012 to 2014, increase in total VOCs and specified VOCs emissions were due to the increase in steam generation required to bring new wells online.

F Values include emergency and non-emergency flaring volumes.

G Total energy is the sum of direct and indirect energy. It includes combustion of natural gas and internally-produced fuels, flaring and electrical power imports. For MacKay River, the exported electricity to the grid is not claimed as an indirect; only the power consumed by Suncor Operations since the cogen is independently operated by TransCanada. For Firebag, the exported electricity to the grid is deducted from the total energy use since the cogen is operated by Suncor. Beginning in 2011, direct energy consumption was calculated using lower heating value (LHV) in order to be consistent with all other operating facilities.

H	Direct energy is primary energy consumed on-site by Suncor operated facilities; it includes combustion of natural gas and internally produced fuels. Indirect energy includes imported electricity, steam, heating and cooling duty from third parties. Beginning in 2011, the indirect energy calculation methodology was changed to credit operations for electricity exported to external users and/or other Suncor facilities. The facility that exports the electricity subtracts the value from their indirect energy use. The facility that receives the electricity counts it as a Scope 2 indirect energy use, regardless of source. As such, 2011 to 2014 Firebag indirect energy figures are negative, because the amount of electricity exported was higher in value than the amount of electricity imported. The negative Firebag indirect energy figures for 2013 and 2014 are higher than the MacKay River indirect energy figures, which is why the In Situ total indirect energy figures are negative for these years. For Firebag, the exported electricity (regardless of destination) is deducted from the indirect energy use since the cogen is operated by Suncor. For MacKay River, only the imported electricity (regardless of source) is reported as indirect energy use. Power sold to the grid by the MacKay River TransCanada cogen is not included in this number.
I	Beginning in 2014, In Situ reported new volumes of surface water withdrawn and industrial runoff water used for road dust suppression and ice road building. This water is also returned to the environment as part of these activities. In 2011, as per Global Reporting Initiative (GRI) guidance, the volume of treated wastewater that Oil Sands sent to our Firebag In Situ facility was removed from Firebag's water withdrawal volume and was accounted for in the Oil Sands' withdrawal volume. As such, there was a decrease in the 2011 value.
J	Total Firebag and MacKay River water consumption is comprised of water withdrawn from licenced groundwater wells, treated wastewater and industrial run-off water, minus the water returned.
K	Beginning in 2011, in order to better align with GRI reporting guidelines, Suncor has expanded the number of indicators for which it collects and reports data in the Waste management category. Prior to 2014, waste that was reused, recycled and recovered was not included in the totals for hazardous and non-hazardous waste generated and was reported as an aggregated total. Beginning in 2014, in order to provide a more detailed breakdown of the waste streams created due to our operations, we have included this category of waste in both hazardous and non-hazardous total waste generated.
L	Hazardous waste landfilled is primarily off-spec warm lime sludge, created by upset. The period of time dealing with upset conditions at Firebag was a matter of weeks in 2013, compared to several months in 2014. Otherwise disposed includes cavern and ecopit disposal.
M	Includes sewage sent to Fort McMurray.
N	This is hazardous and non-hazardous drilling waste.
O	Beginning in 2012, drilling waste with greater than 8% bitumen content, hauled to the mine for re-processing, is no longer reported as waste reused onsite but has been captured in the OG7 indicator.
P	Reclamation associated with the in situ footprint is tracked as the cumulative area reclaimed. As such, the total number of hectares reported from year to year may increase or decrease based on activities undertaken at the site since these activities may lead to new reclamation or re-disturbance of previously reclaimed areas.
Q	Some wells (core holes) identified as inactive operated wells in 2013 were incorrectly categorized as such.
R	A regulatory contravention is an environmental incident that breaches a regulatory limit (prescribed threshold required by legislation, approval or permit from a regulatory authority) or requirement (any law, act, regulation, licence, standard, approval, directive and/or permit applicable to Suncor's activities) and that triggers formal regulatory reporting.
S	Data includes regulatory fines related to environmental, health and safety contraventions paid during the stated year.
T	A reportable spill is an unplanned or accidental event resulting in a release of material either into the environment or into a location that does not usually contain the material, as specified by Alberta regulation.
U	97 m^3 of the total volume of spills recorded for MacKay River In Situ in 2010 was attributed to overflow of the landfill run-off control pond recorded during 5 events.
V	Professionals dedicated to environment, health or safety matters. Contractors are not included in this total. Due to business unit restructuring, In Situ EH&S professionals are now reported with Oil Sands performance data.

Social

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Health and safety								
Employee lost-time injury frequency		W	G4-LA6	0	0	0	0	0
Contractor lost-time injury frequency		W	G4-LA6	0.13	0.11	0	0.03	0
Employee recordable injury frequency		X	G4-LA6	0	0.07	0.12	0.24	0.18
Contractor recordable injury frequency		X	G4-LA6	0.83	1.37	1.04	1.04	0.40
Fatalities		Y	G4-LA6	0	1	0	0	0
Employee relations								
Employees receiving performance reviews	%		G4-LA11	98.1	99	100	100	100
Ratio of lowest wage to minimum wage		Z	G4-EC5	2.3	2.3	2.5	2.1	2.5
Ratio of average wage to minimum wage		Z	G4-EC5	5.8	5.5	5.6	5.7	5.8
Ratio of jobs offered to jobs accepted		AA		1.2	1.05	1.08	1.13	–
New employee hires	%	BB	G4-LA1					
• Male	%		G4-LA1	–	–	89	94	77.4
• Female	%		G4-LA1	–	–	11	6	22.6
• Age less than 30	%		G4-LA1	–	–	37.4	37.9	38.7
• Age 30 to 50	%		G4-LA1	–	–	50.5	46.6	56.5
• Age greater than 50	%		G4-LA1	–	–	12.1	15.5	4.8
Employee turnover	%		G4-LA1	10.5	4.2	11.3	12.6	7.3
• Male	%		G4-LA1	10.5	3.7	10.9	12.6	7.2
• Female	%		G4-LA1	10.9	6.8	13.9	12.7	8.3
• Age less than 30	%		G4-LA1	5.2	3.9	8.5	12.8	5.8
• Age 30 to 50	%		G4-LA1	13.1	5.4	14.4	13.9	7.6

• Age greater than 50	%		G4-LA1	9.4	1.1	6.8	9.6	8.1
Workforce								
Suncor employees	#		G4-10	730	889	635	566	587
• Full-time	#		G4-10	707	885	626	555	574
• Part-time	#		G4-10	7	0	6	8	12
Temporary/casual	#		G4-10	16	4	3	5	1
Long-term contractors	#		G4-10	575	140	128	22	19
Workforce unionized	%		G4-11	21.9	22.3	31.8	46.8	38.7
Equal opportunity and workforce diversity		CC						
Aboriginals	%	CC	G4-LA12	2.3	2.6	2.8	3	2.6
Visible minorities	%	CC	G4-LA12	9.5	12.4	6	6.9	6.5
Persons with disabilities	%	CC	G4-LA12	0.3	0.2	0.9	0.2	0.2
Women	%	CC	G4-LA12	17.7	16.4	12.4	12.5	12.3
Men	%	CC	G4-LA12	84.1	82.8	86.8	86.7	87.7
Age less than 30	%		G4-LA12	22.1	22.9	22.4	24.9	20.6
Age 30 to 50	%		G4-LA12	59.8	56	53.7	52.1	56.4
Age greater than 50	%		G4-LA12	18.1	20.2	23.1	22.1	23.0
Percentage of basic salary (women to men):		DD	G4-LA13					
• Management	%	DD	G4-LA13	99.7	89.8	96.9	97.3	--
• Professional	%	DD	G4-LA13	82	81	83	92	--
• Business support	%	DD	G4-LA13	94	92	109	--	--
• Operations	%	DD	G4-LA13	80	86	88	87	--
Diversity in management								
Employees in management	%		G4-LA12	24	22.3	20.3	21.2	18.4
Women in management	%		G4-LA12	6.5	12.1	10.1	11.7	10.2
Persons with disabilities in management	%		G4-LA12	0	0	0	0.8	0
Age less than 30 in management	%		G4-LA12	4.3	2.5	2.3	2.5	0.9
Age 30 to 50 in management	%		G4-LA12	69.8	63.6	60.5	54.2	57.4
Age greater than 50 in management	%		G4-LA12	25.90	28.30	37.2	43.3	41.7

In Situ social footnotes

W A lost-time injury requires medical attention and results in an employee being absent from work on the next regularly scheduled workday or any subsequent workday. Lost-time injury frequency is the number of such injuries per 200,000 hours worked.

X Recordable injuries include lost-time injuries as well as medical aid injuries. Medical aid injuries require medical attentions but do not result in an employee being absent from work. Recordable injury frequency is the sum of lost time and medical aid injuries per 200,000 hours worked.

Y In July 2011, a Flint Transfield Services employee died at the Firebag site during the removal of an end cap from piping at one of the production pads.

Z Compares In Situ full-time base wage to the province of Alberta's minimum wage ($10.20/hour in 2014).

AA Beginning in 2014, this indicator is reported Suncor-wide.

BB Any externally-hired regular full-time or regular part-time employee whose permanent start date falls within the reporting period.

CC Certain operating regions prohibit collecting information on gender, therefore data presented here may not be reflective of our entire workforce due to data availability.
Workforce diversity is calculated based on information provided voluntarily by employees. Indicators referring to ethnicity and disability reflect only those employees who consent for release of this information have been included.

DD Beginning in 2014, salary comparison data between women and men is reported on a Suncor-wide basis as position levels are corporately administered and do not differ based on operating areas.
There were no males in business support roles in 2013.

Exploration & Production

Our Exploration & Production (E&P) business segment consists of:

- offshore operations off the east coast of Canada, and in the North Sea
- onshore assets in North America, Libya and Syria (Note: Operations in Syria have been suspended indefinitely due to unrest and resulting sanctions. Production in Libya has been substantially shut-in due to political unrest, with the timing of a return to normal operations remaining uncertain).

Performance data* is reported for our operated E&P assets in the following regions:

- East Coast Canada
- North America Onshore

* Year-over-year differences in E&P regional sustainability data are affected by merger and asset divestment activities.

North America Onshore

North America Onshore performance data reports on our operated North America Onshore assets, primarily in Western Canada.

On Sept. 26, 2013, Suncor completed the divestiture of the majority of its conventional natural gas business in Western Canada. Environmental performance data for 2013 and 2014 reflects this divestiture.

A number of Suncor's natural gas assets were also divested in 2010 and 2011, which explains the downward trend in some of the indicators during these years.

Expand all | Collapse all

Filter display

Environment[1]

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Production								
Processed volume	million barrels of oil equivalent/year	A	OG1	58.3	44.8	47	33.2	1.32
Processed volume	million cubic metres (m^3)of oil equivalent/year	A	OG1	9.3	7.1	7.5	5.27	0.21
Air emissions		B						
Greenhouse gas (GHG)	thousand tonnes CO_2e	C	G4-EN15 G4-EN16	1,703	1,035	995	630	42.46
GHG emissions intensity	tonnes CO_2e /m^3 production		G4-EN18	0.18	0.15	0.13	0.12	0.20
Sulphur dioxide (SO_2)	thousand tonnes	D	G4-EN21	5.6	3.3	3.6	2.4	0
SO_2 emissions intensity	kilograms (kg) / m^3 production		G4-EN21	0.61	0.47	0.48	0.46	0
Nitrogen oxides (NO_x)	thousand tonnes	E	G4-EN21	10.9	7.6	6.9	5.2	0.39

NO_x emissions intensity	kg/m³ production		G4-EN21	1.17	1.07	0.93	0.99	1.81
Volatile organic compounds (VOCs)	thousand tonnes	F	G4-EN21	0.71	0.49	0.45	0.34	0.01
• Benzene	tonnes	G	G4-EN21	18.6	10.6	12.6	8.5	1.59
VOC emissions intensity	kg/m³ production		G4-EN21	0.08	0.07	0.06	0.06	0.05
National Pollutant Release Inventory (NPRI) on-site releases	thousand tonnes	H	G4-EN21	14.9	14	13	0.55	0.20
Total gas flaring	million m³		OG6	10.5	8.4	10.2	4.9	0.49
Solution gas flaring	million m³	I	OG6	0.7	0.3	1	–	–
Other flaring sources	million m³	I	OG6	9.8	8.02	9.23	–	–
Flared gas intensity	m³/m³ production		OG6	1.2	1.2	1.5	0.9	2.29
Energy consumption								
Total energy use	million gigajoules (GJ)	J	G4-EN3 G4-EN4	17.3	12.2	11.8	7.59	0.50
• Direct energy use	million GJ	K	G4-EN3	16.7	11.8	11.5	7.31	0.50
• Indirect energy use	million GJ	K	G4-EN4	0.6	0.4	0.3	0.28	0
Energy intensity	GJ / m³ production		G4-EN5	1.8	1.71	1.58	1.44	2.35
Energy saved through conservation and efficiency improvements	thousand GJ		G4-EN6	505	395	36	26	0
Water use								
Total water withdrawal	million m³		G4-EN8	0.65	0.55	0.54	0.66	0.06
Water withdrawal intensity	m³/m³ production		G4-EN8	0.07	0.08	0.07	0.13	0.26
Water returned	million m³		G4-EN22	0	0	0	0	0
Water consumption	million m³			0.65	0.55	0.54	0.66	0.06
Water consumption intensity	m³/m³ production			0.07	0.08	0.07	0.13	0.26
Produced water	million m³	L	OG5	2.61	2.12	1.77	1.03	0.01

Waste management		M						
Total hazardous waste generated	thousand tonnes	N	G4-EN22	3.1	5.2	4	3.5	0.06
• Hazardous waste incinerated	tonnes		G4-EN22	–	17.1	19.5	17.4	2.65
• Hazardous waste deep well injected	tonnes	O	G4-EN22	–	3,617.8	85.6	0	0
• Hazardous waste landfilled	tonnes		G4-EN22	–	75	91.5	2,313.5	5.35
• Hazardous waste otherwise disposed	tonnes		G4-EN22	–	1,492.0	3,764.7	1,182.5	51.0
• Hazardous waste recycled, recovered or reused	tonnes	N	G4-EN23	–	–	–	–	9.67
Total non-hazardous waste generated	thousand tonnes	P	G4-EN22	39.6	80.3	178.3	49.7	2.45
• Non-hazardous waste incinerated	tonnes		G4-EN22	–	2.7	0	0	0
• Non-hazardous waste deep well injected	tonnes		G4-EN22	–	922.3	549.1	512.9	0
• Non-hazardous waste landfilled	tonnes		G4-EN22	–	57,008.60	148,980.30	26,105.80	2,322.83
• Non-hazardous waste otherwise disposed	tonnes		G4-EN22	–	22,351.70	28,800.00	23,041.90	129.8
Drilling waste disposed or treated	tonnes	Q	OG7	–	–	465	9,832.30	1,974.16
Waste reused, recycled or recovered (off-site)	tonnes	N	G4-EN23	288	133.1	164.8	210.8	--

Land disturbance and reclamation								
Total number of producing wells	#	R		4,783	4,840	4,902	67	30
Suncor-operated producing wells	#	S		4,623	4,716	4,797	63	23
Shut-in or suspended production wells	#	T		1,057	1,143	1,339	27	15
Wells undergoing reclamation	#	U	G4-EN13	476	285	270	0	11
Reclamation certificates received	#		G4-EN13	2	0	2	0	0
Compliance		V						
Regulatory contraventions	#	V	G4-EN29	60	26	32	32	8
Regulatory fines	$	W	G4-EN29	0	2,120	12,080	0	0
Reportable spills	#	X	G4-EN24	20	16	15	13	2
Spills to watercourses	#		G4-EN24	0	0	0	0	0
Total volume of spills	m^3		G4-EN24	25	46	204.85	68.85	20.03
Air quality exceedances	#		G4-EN29	16	3	4	1	1
Environment, Health & Safety (EH&S) management								
Projects to reduce GHG emissions and reductions achieved	thousand tonnes CO_2e per year		G4-EN6	25,631.70	29,324.00	24,937.43	1,561.00	0
EH&S professionals on staff		Y	G4-EN31	55	38	41	43	–

North American Onshore environment footnotes

1 Reported North America Onshore data reflects assets owned throughout the reporting year, as well as divested assets up to their date of sale. In 2013 and 2014 we divested the majority of our conventional natural gas business in western Canada (including Wilson Creek in 2014), therefore performance data reflects significant decreases.

A Processed volume is the total amount of hydrocarbons processed at Suncor-operated facilities. This includes production owned by other companies and processed at Suncor-operated facilities. Processed volume is used to calculate intensities.

B 2010 air emissions data includes partial year estimates of emissions from sites operated by Suncor until divested during the 2010 reporting year.

C	Greenhouse gas (GHG) emissions are calculated using a facility-specific methodology which utilizes various reference methodologies that have been accepted by the relevant jurisdictions within which each facility is required to report its GHG emissions. Methodology has been followed where a jurisdiction has a prescribed one and if none exists then the most applicable and accurate methods available are used to quantify each emission source.
D	Total SO_2 emissions from Suncor-operated facilities. This total includes emissions from operated facilities required to report under regulatory reporting programs as well as those facilities not required to report under regulatory programs. 2013 emissions for divested properties were reported from Jan. 1 to Sep. 26, 2013.
E	Total NO_x emissions from Suncor-operated facilities. This total includes emissions from operated facilities required to report under regulatory reporting programs as well as those facilities not required to report under regulatory programs. 2013 emissions for divested properties were reported from Jan. 1 to Sep. 26, 2013.
F	Total VOCs emissions from Suncor-operated facilities. This total includes emissions from operated facilities required to report under regulatory reporting programs as well as those facilities not required to report under regulatory programs.
G	In 2011 benzene emissions decreased because many of the 2010 divested facilities had dehydrators which are a relatively large source of benzene emissions in the upstream oil and gas industry.
H	There was a decrease in NPRI releases in 2013 compared to 2012 as Suncor is not required to report facilities not operated as of Dec. 31 of the reporting year for NPRI.
I	As a result of divestment that occurred in 2013, data for solution gas flaring and other flaring sources was unobtainable.
J	Total energy is the sum of direct and indirect energy.
K	Direct energy is primary energy consumed on-site by Suncor-operated facilities. Indirect energy includes imported electricity, steam, heating and cooling duty from third parties. In 2011, energy use decreased due to divestments that occurred in late 2010 and 2011.
L	Produced water is all formation and other water brought to the surface during the normal course of our natural gas production process.
M	Beginning in 2011, in order to better align with GRI reporting guidelines, Suncor expanded the number of indicators for which it collects and reports data in the Waste Management category.
N	Prior to 2014, waste that was reused, recycled and recovered was not included in the totals for hazardous and non-hazardous waste generated and was reported separately as an aggregated total. Beginning in 2014, in order to provide more detail of the waste streams created due to our operations, we have included this category of waste in total hazardous waste generated. In 2011, North America Onshore compiled all waste data from our major receivers.
O	This is variable year-to-year, based on operations conducted.
P	An increased volume of non-hazardous waste generated in 2012 is primarily due to remediation and reclamation activities, including biopile removal.
Q	Inclusive of drilling mud waste from drilling operations. This value has not been captured in the hazardous waste generated and non-hazardous waste generated values. Value increased in 2013 reflective of drilling that halted in 2012 due to the Altares incident in B.C.
R	Both public and regulatory agency databases were mined and compared with Suncor wells with associated yearly production volumes. The number of producing wells decreased significantly in 2013 due to a large divestment of assets in late 2013.
S	The number of Suncor producing wells decreased significantly in 2013 due to the large divestment of assets in late 2013 and is reflective of ownership at Dec. 31, 2014.
T	A shut-in well is taken out of production by shutting off flow at the wellhead, often with the expectation of resuming production in the future. A suspended well is a shut-in well on which additional subsurface isolation procedures have been performed, and which is usually taken out of production due to poor economics. If a suspended well is not brought back into production, it is taken out of service as per regulatory requirements. The inactive and suspended well lists from the Western Canadian regulatory agencies (Alberta Energy Regulator, Government of Saskatchewan Energy and Resources, and British Columbia Oil and Gas Commission) were utilized in determining this total. The number of shut-in wells decreased significantly in 2013 due to the large divestment of assets in 2013.

U For the purpose of the Report on Sustainability, the number of wells undergoing reclamation include abandoned sites in the care and custody of North America Offshore Surface, Land, Logistics and Construction Liability Management group that are categorized (i.e., site status) as Phase I, Phase II, Remediation and Reclamation. Sites categorized with the status Pre-Screening were not included. Further explanation of each category is detailed in Suncor's Draft Remediation - Reclamation Framework document. These are sites we are actively working on in some form or another, with the end goal being closure/obtaining closure through a reclamation certificate or alternative certification.

V The downward trend in compliance data in 2013 and 2014 is reflective of maturing our operational discipline and the reductions of our operations in this business segment, due to divestment activity.
A regulatory contravention is an environmental incident that breaches a regulatory limit (prescribed threshold required by legislation, approval or permit from a regulatory authority) or requirement (any law, act, regulation, license, standard, approval, directive and/or permit applicable to Suncor's activities and that triggers formal regulatory reporting.

W Regulatory fines associated with late production accounting filings.

X Reportable spills are defined in accordance with federal and provincial regulations.

Y Professionals dedicated to environment, health or safety matters. Professional Services Agreements (PSA's) and non-positioned contractors are not included in this total. Beginning in 2014, this indicator is reported in our East Coast Canada performance data, and reflects our Exploration & Production business segment.

Economic

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Tax and royalty credits earned	$ millions	Z	G4-EC4	15	14.2	12.4	18.9	0.8
Investments								
Capital and exploration expenditures	$ millions		G4-EC1	178	137	154	114	62
Purchases								
Goods and services	$ millions			359	260	327	228	103
Goods and services purchased in or from:								
• Canada	$ millions			343	260	326	227	102
• Local businesses and suppliers	$ millions	AA	G4-EC9	303	237	311	214	0

North America Onshore economy footnotes

Z For 2010 to 2013, includes the Deep Gas Royalty Holiday Program and Alberta Royalty Tax Credit. For 2014, includes the Deep Gas Royalty Holiday Program only; Alberta Royalty Tax Credit is not included because the amount is not expected to be material due to minimal drilling activity.

AA Local businesses and suppliers are those established in the region of operations (2010 to 2014 data includes Alberta and British Columbia operations).

Social[2]

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Health and safety		BB						
Employee lost-time injury frequency		CC	G4-LA6	0	0.24	0.12	0.13	–
Contractor lost-time injury frequency		CC	G4-LA6	0	0.06	0	0.06	–
Employee recordable injury frequency		DD	G4-LA6	0.35	0.86	0.75	0.26	–
Contractor recordable injury frequency		DD	G4-LA6	1.75	0.71	1.1	0.64	–
Fatalities			G4-LA6	0	0	0	0	–
Employee relations								
Employees receiving performance reviews	%		G4-LA11	98.5	100	100	100	–
Training and development	$ thousands	EE	G4-LA9	464	218	147	88	–
Ratio of lowest wage to minimum wage		FF	G4-EC5	2.2	2.1	2.2	2.8	–
Ratio of average wage to minimum wage		FF	G4-EC5	5.5	5.3	4.9	5.5	–
Ratio of jobs offered to jobs accepted				1	1	1.09	1.13	–
New employee hires:		GG	G4-LA1					–
• Male	%		G4-LA1	--	--	76.2	88.9	--
• Female	%		G4-LA1	--	--	23.8	11.1	--
• Age less than 30	%		G4-LA1	--	--	14.3	27.8	--
• Age 30 to 50	%		G4-LA1	--	--	76.2	61.6	--
• Age greater than 50	%		G4-LA1	--	--	9.5	11.1	--
Employee turnover:	%	JJ	G4-LA1	66.5	3.55	5.4	6.1	--
• Male	%		G4-LA1	63.1	2.7	5.6	6.5	--
• Female	%		G4-LA1	81.8	8.1	4.2	4	--
• Age less than 30	%		G4-LA1	74.5	12	27.8	66.7	--
• Age 30 to 50	%		G4-LA1	78.2	5	6.3	6.5	--
• Age greater than 50	%		G4-LA1	44.7	0	1.4	3	--

Workforce								
Suncor employees	#		G4-10	367	235	357	164	--
• Full time	#		G4-10	359	235	350	161	--
• Part time	#		G4-10	4	0	3	2	--
• Temporary/casual	#		G4-10	4	0	4	1	--
Long-term contractors	#		G4-10	28	20	26	253	--
Workforce unionized	%		G4-11	40.6	59.6	32.5	52.9	--
Equal opportunity and workforce diversity								
Aboriginals	%		G4-LA12	4.9	6	4.5	1.8	--
Visible minorities	%		G4-LA12	5.4	5.6	1.7	3	--
Persons with disabilities	%		G4-LA12	1.6	1.3	1.4	0.6	--
Women	%		G4-LA12	18	15.7	13.4	15.2	--
Men	%		G4-LA12	82	93.2	85.4	84.1	--
Age less than 30	%		G4-LA12	13.9	10.6	5	1.8	--
Age 30 to 50	%		G4-LA12	52.6	50.6	52.9	60.7	--
Age greater than 50	%		G4-LA12	33.5	39.1	40.1	40.9	--
Percentage of basic salary (women to men):			G4-LA13					
• Management	%		G4-LA13	76.9	80.2	67.6	72.4	--
• Professional	%		G4-LA13	81.3	69.6	94.9	85.2	--
• Business support	%	KK	G4-LA13	86.9	89	--	--	--
• Operations	%		G4-LA13	110.3	89.4	86.9	82.7	--
Diversity in management								
Employees in Management	%		G4-LA12	8.7	11.1	11.5	17.1	--
Women in management	%		G4-LA12	9.4	7.7	12.2	14.3	--
Persons with disabilities in management	%		G4-LA12	3.1	0	0	0	--
Age less than 30 in management	%		G4-LA12	3.1	0	0	0	--
Age 30 to 50 in management	%		G4-LA12	53.1	53.8	51.2	60.7	--
Age greater than 50 in management	%		G4-LA12	43.8	46.2	48.8	39.3	--

North America Onshore social footnotes

2	Beginning in 2014, all social data for our NAO business is reported with East Coast Canada performance data, reflecting our entire Exploration & Production business segment.
BB	On Jan. 31, 2011, Suncor's International & Offshore (I&O) and North America Onshore (formerly Natural Gas) businesses merged into a single organization called Exploration & Production (E&P). As a result of this business unit reorganization, health and safety data reported here for North America Onshore is inclusive of all E&P operations, including our East Coast Canada operations.
CC	A lost-time injury requires medical attention and results in an employee being absent from work on the next regularly scheduled work day or any subsequent work day. Lost-time injury frequency is the number of such injuries per 200,000 hours worked.
DD	Recordable injuries include lost time injuries as well as medical aid injuries. Medical aid injuries require medical attentions but do not result in an employee being absent from work. Recordable injury frequency is the sum of lost time and medical aid injuries per 200,000 hours worked.
EE	Includes support of the Suncor educational assistance plan that reimburses tuition upon successful completion of a course or program.
FF	Compares Natural Gas full-time base wage to the state of Alberta's minimum wage ($9.95/hour in 2013).
GG	Any externally-hired regular full-time or regular part-time employee whose permanent start date falls within the reporting period.
JJ	North America Onshore experienced an increase in employee turnover as a result of the 2009 merger with Petro-Canada.
KK	In 2012 to 2013, there were no males in Business Support Roles.

East Coast Canada

East Coast Canada, a business area of our Exploration & Production (E&P) segment, focuses on offshore operations off the east coast of Canada.

Environmental data is from our operated assets and therefore the only data included is that from our Terra Nova floating production storage and offloading (FPSO) vessel.

Expand all | Collapse all

Environment[1]

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Production								
Net production	million barrels of oil equivalent (BOE) / year	A	OG1	24.92	16.85	8.47	13.77	16.73
Net production	million cubic metres (m^3) of oil equivalent / year	A	OG1	3.96	2.50	1.35	2.19	2.66
Air emissions								
Greenhouse gas (GHG)	thousand tonnes carbon dioxide equivalent (CO_2e)	B	G4-EN15 G4-EN16	604.23	601.57	391.36	521.83	642.39
GHG emissions intensity	tonnes CO_2e/m^3 production		G4-EN18	0.15	0.24	0.29	0.24	0.24
Sulphur dioxide (SO_2)	tonnes	C	G4-EN21	0.33	0.27	1.31	3.34	6.35

SO_2 emissions intensity	kilograms (kg) / m^3 production		G4-EN21	0	0	0	0	0
Nitrogen oxides (NO_x)	thousand tonnes	D	G4-EN21	2.45	2.39	1.46	2.03	2.39
NO_x emissions intensity	kg / m^3 production		G4-EN21	0.62	0.89	1.09	0.93	0.90
Volatile organic compounds (VOCs)	thousand tonnes	E	G4-EN21	4.44	2.88	1.5	1.2	0.24
• Benzene	tonnes		G4-EN21	0.28	0.23	0.15	0.18	0.62
• Toluene	tonnes		G4-EN21	0.49	0.45	0.25	0.38	1.74
• Ethylbenzene	tonnes		G4-EN21	0.11	0.1	0.05	0.08	0.48
• Xylene	tonnes		G4-EN21	0.21	0.19	0.1	0.16	1.59
VOC emissions intensity	kg / m^3 production	E	G4-EN21	1.12	1.08	1.12	0.54	0.09
National Pollutant Release Inventory (NPRI) on-site releases	tonnes	F	G4-EN21	7,466.23	5,876.83	3,551	3,903.86	3,499.53
Flared gas	million m^3		OG6	45.25	48.53	47.35	53.68	76.65
Flared gas intensity	m^3 / m^3 production	G	OG6	11.41	18.12	35.16	24.5	28.76
Energy consumption								
Total energy use	million gigajoules (GJ)	H	G4-EN3 G4-EN4	8.03	6.88	4.8	6.46	8.49
• Direct energy use	million GJ	I	G4-EN3	8.03	6.88	4.8	6.46	8.49
• Indirect energy use	million GJ	I	G4-EN4	0	0	0	0	0
Energy intensity	GJ / m^3 production		G4-EN5	2.03	2.57	3.56	2.95	3.19
Energy saved through conservation and efficiency improvements	million GJ	J	G4-EN6	0	0	0	0	0
Water use								
Total water withdrawal	million m^3	K	G4-EN8	28.81	24.68	14.07	24.14	26.20
Water withdrawal intensity	m^3/m^3 production		G4-EN8	7.27	9.21	10.44	11.02	9.83
Water returned	million m^3	L	G4-EN22	18.44	19.13	10.46	17.92	18.25
Water consumption	million m^3	M		10.37	5.55	3.61	6.22	7.95

Water consumption intensity	m^3 / m^3 production			2.62	2.07	2.68	2.84	2.98
Produced water	million m^3	N	OG5	6.02	3.82	2.24	3.84	5.02
Waste management								
Total hazardous waste generated	thousand tonnes	O	G4-EN23	0.17	0.17	0.14	0.45	2.07
• Hazardous waste incinerated	tonnes		G4-EN23	–	1.5	67.4	123	159
• Hazardous waste landfilled	tonnes		G4-EN23	–	166.2	59.3	52	42
• Hazardous waste otherwise disposed	tonnes		G4-EN23	–	6.3	14.11	278.7	89
• Hazardous waste reused, recycled and recovered	tonnes	O	G4-EN23	–	–	–	–	1,780
Total non-hazardous waste generated	thousand tonnes		G4-EN23	2.54	2.37	1.85	2.7	3.12
• Non-hazardous waste incinerated	tonnes		G4-EN23	–	0	0	0	0
• Non-hazardous waste landfilled	tonnes		G4-EN23	–	2,374.60	1,854.40	2700	3,090
• Non-hazardous waste otherwise disposed	tonnes		G4-EN23	–	0	0	0	0
• Non-hazardous waste reused, recycled and recovered	tonnes	O	G4-EN32	--	–	--	–	29
Waste reused, recycled and recovered (off-site)	tonnes	O	G4-EN23	41	38.1	22.9	1,434.30	–
Compliance								
Regulatory contraventions	#	P	G4-EN29	17	18	19	13	14
Regulatory fines	$		G4-EN29	0	0	0	0	0
Reportable spills	#	Q	G4-EN24	11	36	6	12	12
• Spills to natural water bodies	#		G4-EN24	11	36	6	12	12
Total volume of spills	m^3	R	G4-EN24	2.76	28.79	2.33	7.57	7.80
Air quality exceedances	#		G4-EN29	0	0	0	0	0

Industrial wastewater limit exceedances	#		G4-EN29	1	0	2	1	1
Environment, Health & Safety (EH&S) management								
EH&S professionals on staff	#	S	G4-EN31	–	–	–	–	33
Environmental capital expenditures	$ millions	T	G4-EN31	0	0	0	0	6.17

East Coast Canada environment footnotes

1 In 2014 Terra Nova returned to normal operations after a maintenance shut-down in 2013 which resulted in higher production in 2014. As a result, several performance indicators presented in this table show a material change from performance in 2013.

A Total amount of product sold. Net production is used to calculate intensities.

B Greenhouse gas (GHG) emissions are calculated using a facility-specific methodology which utilizes various reference methodologies that have been accepted by the relevant jurisdictions each facility is required to report its GHG emissions. Methodology has been followed where a jurisdiction has a prescribed one and if none exists, then the most applicable and accurate methods available are used to quantify each emission source.
Terra Nova production historically only included oil sales and not flaring and internally produced fuel. In 2011 these additional production volumes were included; however, to be consistent with other major facilities the production metric has been readjusted to only include oil sales which is why the 2011 production number has been updated.

C The increase in SO_2 emissions from 2012 to 2013 was due to the off-station turnaround conducted in 2012, a return to full operations in 2013, in addition to the increase in sulphur content in the reservoir.

D There was an increase in NO_x emissions in 2013 relative to 2012, due to the extended off-station turnaround during 2012. Full operations were resumed in 2013 resulting in higher production.

E In 2013, there was a decrease in total VOCs and VOC emissions intensity relative to 2012, due to the installation of the hydrocarbon blanketing system in the cargo tanks.

F The increase in overall NPRI emissions for 2013 relative to 2012 was attributable to the extended off-station turnaround that occurred in 2012.

G The decrease in flared gas intensity for 2013 relative to 2012 was due to an increase in production resulting from return to normal operations after the turnaround in 2012.

H Total energy is the sum of direct and indirect energy.

I Direct energy is primary energy consumed on-site by Suncor-operated facilities. For Suncor's East Coast operations, direct energy includes diesel and natural gas consumption for heat and power generation on the Terra Nova FPSO, as well as natural gas consumed in flaring operations. There is no electrical power imported from the local grid as our operated properties are offshore platforms; therefore, the indirect energy is 0.

J This metric reports reductions in energy consumption as a result of conservation and efficiency initiatives, if applicable. In 2011-2014, no energy savings were reported.

K For East Coast operations, water withdrawal includes freshwater bunkered to the FPSO potable water tanks for domestic use on the facility. It also includes topside seawater intake flow used for process cooling and water injection for production purposes. There was an increase in seawater withdrawal in 2013 relative to 2012 due to the extended off-station turnaround that occurred in 2012.

L Water returned includes both freshwater and seawater, and the destination of this return is the Atlantic Ocean.

M Water consumption increased in 2013 relative to 2012 due to the extended off-station turnaround that occurred in 2012.

N Produced water is all formation and other water brought to the surface during the normal course of the production process.

O Prior to 2014, waste that was reused, recycled and recovered was not included in the totals for hazardous and non-hazardous waste generated and was reported as an aggregated total. Beginning in 2014, in order to provide a more detailed depiction of the waste streams created due to our operations, we have included this category of waste in both hazardous and non-hazardous total waste generated.

P A regulatory contravention is an environmental incident that breaches a regulatory limit (prescribed threshold required by legislation, approval or permit from a regulatory authority) or requirement (any law, act, regulation, licence, standard, approval, directive and/or permit applicable to Suncor's activities) and that triggers formal regulatory reporting.

Q Reportable spills are defined in accordance with federal and provincial regulations.

R Includes both hydrocarbon and non-hydrocarbon spills.

S Professionals dedicated to environment, health or safety matters. Professional Services Agreements (PSA's) and non-positioned contractors are not included in this total. Due to data availability, this total reflects our entire Exploration & Production (E&P) business segment, including East Coast Canada operations. Previous reporting years, this indicator was reported in our North America Onshore performance data.

T The environmental expenditures consist of, but are not limited to, expenditures for environmental monitoring, environmental assessments, waste disposal, emissions treatment, external services for environmental services, research and development, produced water clarifying chemicals and emergency response services. It does not include personnel and base business costs.

Economic[2]

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Investments								
Capital and exploration expenditures	$ millions		G4-EC1	1096	737	1,107	1,369	1,243
Purchases								
Goods and services	$ millions	U		514	518	894	727	816
Goods and services purchased in or from:								
• Canada	$ millions			214	341	659	614	721
• Local businesses and suppliers	$ millions	V	G4-EC9	438	399	787	594	0

East Coast Canada economy footnotes

2 The economic data presented here is representative of all International/Offshore operations (our Exploration & Production business segment), inclusive of East Coast Canada, consistent with Suncor's Annual Report.

U Goods and services purchases exclude Syria and Libya and is most representative of our East Coast Canada operations, but due to data availability is inclusive of our other international and offshore activity, including non-operated assets.

V Local businesses/suppliers are those established in the region of operations (Newfoundland, Nova Scotia, United Kingdom and Norway).

Social[3]

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Health and safety								
Employee lost-time injury frequency		W	G4-LA6	0	--	--	--	0
Contractor lost-time injury frequency		W	G4-LA6	0.15	--	--	--	0
Employee recordable injury frequency		W	G4-LA6	0.22	--	--	--	0.18
Contractor recordable injury frequency		W	G4-LA6	0.65	--	--	--	0.40
Fatalities		W	G4-LA6	0	--	--	--	0
Employee relations								
Employees receiving performance reviews	%		G4-LA11	90.6	98	100	100	100
Training and development	$ thousands	X	G4-LA9	1017	837	435	956	2,008
Ratio of lowest wage to minimum wage	%	Y	G4-EC5	--	2	1.3	2.4	2.4
Ratio of average wage to minimum wage	%	Y	G4-EC5	--	5.2	5.6	6.6	6.4
Ratio of jobs offered to jobs accepted	%	Z		1	1.24	1.22	1.13	--
New employee hires:		AA	G4-LA1					
• Male	%		G4-LA1	--	--	73.5	66.7	80.0
• Female	%		G4-LA1	--	--	26.5	33.3	20.0
• Age less than 30	%		G4-LA1	--	--	29.4	22.2	8.6
• Age 30 to 50	%		G4-LA1	--	--	52.9	68.9	82.9
• Age greater than 50	%		G4-LA1	--	--	17.6	8.9	8.6
Employee turnover:	%		G4-LA1	32.1	1.8	17.3	4	9.2
• Male	%		G4-LA1	31.9	1	17	4.1	7.4
• Female	%		G4-LA1	32.5	4.2	6.4	3.6	15.3
• Age less than 30	%		G4-LA1	26	3	21.2	6.1	3.2
• Age 30 to 50	%		G4-LA1	34.5	2.5	19.3	3.9	12.4
• Age greater than 50	%		G4-LA1	29.3	0	12.4	2.9	4.6

Workforce								
Suncor employees			G4-10	524	551	367	317	448
• Full-time			G4-10	497	547	356	306	437
• Part-time			G4-10	8	0	10	10	10
• Temporary/casual			G4-10	19	4	1	1	1
• Long-term contractors			G4-10	1	22	30	43	56
Workforce unionized	%		G4-11	12.4	11.3	0	0	15
Equal opportunity and workforce diversity		BB						
Aboriginals	%	BB	G4-LA12	0.4	0.5	0.05	0.3	0.9
Visible minorities	%	BB	G4-LA12	2.1	3.6	6.5	7.6	4.0
Persons with disabilities	%	BB	G4-LA12	0.6	0.7	0.5	0.3	0.7
Women	%	BB	G4-LA12	23.5	21.4	25.6	26.2	21.9
Men	%	BB	G4-LA12	76.5	71.7	72.2	69.4	75.0
Age less than 30	%		G4-LA12	9.5	6	9	10.4	6.9
Age 30 to 50	%		G4-LA12	59.2	57.9	53.7	56.2	59.6
Age greater than 50	%		G4-LA12	31.3	33.6	37.3	33.1	34.2
Percentage of basic salary (women to men):			G4-LA13					
• Management	%	CC	G4-LA13	73	64	63	77	--
• Professional	%		G4-LA13	84	81	82	84	--
• Business support	%	CC	G4-LA13	257	131	--	206	--
• Operations	%	CC	G4-LA13	57	76	104	--	--
Diversity in management	% in management							
Employees in management	%		G4-LA13	14.5	14.7	19.6	29	19.6
Women in management	%		G4-LA13	23.7	14.8	12.5	14.1	17.0
Persons with disabilities in management	%		G4-LA13	0	0	0	0	0
Age less than 30 in management	%		G4-LA13	1.3	0	0	0	0
Age 30 to 50 in management	%		G4-LA13	57.9	53.1	45.8	48.9	60.2
Age greater than 50 in management	%		G4-LA13	40.8	46.9	54.2	51.1	44.3

East Coast Canada social footnotes

3 Beginning in 2014, health and safety, employee relations, and workforce data reported here includes our entire Exploration & Production business segment, including East Coast Canada, North America Onshore, and non-operated international & offshore assets.

W For 2014, health and safety data reported here represents our Exploration & Production business segment, including East Coast Canada, North America Onshore.In previous years, this had been included under North America Onshore performance data, but due to significant divestments in our conventional natural gas business in 2013 and 2014, data is now reported with East Coast Canada.

X Fees for professional development courses taken by Suncor employees.

Y Compares full-time base wage to the province of Alberta's minimum wage ($10.20/hour in 2014). Beginning in 2014, Alberta's minimum wage was used across our operations for this metric for comparison purposes due to the minimal variances of minimum wages across Canada.

Z Beginning in 2014, this indicator is reported Suncor-wide.

AA Any externally-hired regular full-time or regular part-time employee whose permanent start date falls within the reporting period. Suncor began reporting this indicator in 2012.

BB Certain operating regions prohibit collecting information on gender; therefore data presented here may not be reflective of our entire workforce due to data availability.
Workforce diversity is calculated based on information provided voluntarily by employees. Indicators referring to ethnicity and disability reflect only those employees who consent for release of this information have been included.

CC Beginning in 2014, salary comparison data between women and men is reported on a Suncor-wide basis as position levels are corporately administered and do not differ based on operating areas.
In 2012, there were no males in business support roles. In 2013 there were no females in operations roles.

Refining & Marketing

We operate facilities in the Refining & Marketing (R&M) business segment in Alberta, Ontario, Quebec and Colorado. R&M also includes emissions data from Suncor's Canadian terminals and pipelines, which account for a small percentage of the total R&M numbers and are deemed to be negligible. Suncor Montreal Sulphur Plant data is also included from the purchase date in July, 2014. Data from these R&M facilities are consolidated here for reporting purposes.

Expand all | Collapse all

Environment

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Production								
Net production	million cubic metres (m^3) saleable yield / year	A	OG1	26.3	26.32	27.21	27.09	26.91
Air emissions								
Greenhouse gas (GHG)	thousand tonnes carbon dioxide equivalent (CO_2e)	B	G4-EN15 G4-EN16	5,472	5,323	5,420	5,406	5,467
GHG emissions intensity	tonnes CO_2e / m^3 production		G4-EN18	0.21	0.2	0.2	0.2	0.2
Indirect (Scope 3) GHG emissions	thousand tonnes CO_2e	C	G4-EN17	1,378	1,360	1,473	1,523	1,369
Sulphur dioxide (SO_2)	thousand tonnes	D	G4-EN21	7.2	8.75	5.77	6.13	5.86

SO_2 emissions intensity	kilograms (kg) / m^3 production		G4-EN21	0.27	0.33	0.21	0.23	0.22
Nitrogen oxides (NO_x)	thousand tonnes		G4-EN21	4.31	4.41	4.53	4.55	4.00
NO_x emissions intensity	kg / m^3 production		G4-EN21	0.16	0.17	0.17	0.17	0.15
Volatile organic compounds (VOCs)	thousand tonnes		G4-EN21	4.5	4.36	4.25	4.68	4.38
• Benzene	tonnes		G4-EN21	37.49	48.14	46.37	46.48	40.09
• Toluene	tonnes		G4-EN21	121.09	125.93	123.86	115.85	116.91
• Ethylbenzene	tonnes		G4-EN21	11.4	11.19	10.51	10.16	9.63
• Xylene	tonnes		G4-EN21	69.72	64.57	62.27	58.91	59.42
VOC emissions intensity	kg / m^3 production		G4-EN21	0.17	0.17	0.16	0.17	0.16
National Pollutant Release Inventory (NPRI) on-site releases	thousand tonnes	E	G4-EN21	21.91	23.41	20.01	20.84	20.32
Toxins Release Inventory (TRI) on-site releases	tonnes		G4-EN21	38	56	66.9	19.22	18.63
Flared gas	million m^3		OG6	136.2	109	71.9	100.7	101.87
Flared gas intensity	m^3/m^3 production		OG6	5.19	4.14	2.64	3.72	3.79
Energy consumption								
Total energy use	million gigajoules (GJ)	F	G4-EN3 G4-EN4	83.25	84.24	83.23	84.37	86.18
• Direct energy use	million GJ	G	G4-EN3	71.7	72.9	71.5	72.5	74.03
• Indirect energy use	million GJ	G	G4-EN4	11.54	11.34	11.71	11.83	12.14
Energy intensity	GJ / m^3 production		G4-EN5	3.34	3.2	3.1	3.1	3.2
Electricity imports	million gigajoules		G4-EN3	10.24	5.96	6.08	6.25	5.97
Electricity import intensity	GJ / m^3 production		G4-EN3	0.41	0.23	0.22	0.23	0.22
Steam imports	million gigajoules		G4-EN3	5.8	5.38	5.63	5.59	6.17
Steam import intensity	GJ / m^3 production		G4-EN3	0.23	0.2	0.21	0.21	0.23

Energy saved through conservation and efficiency improvements	thousand GJ		G4-EN6	674.2	874.53	1,387.18	515.45	200.78
Water use								
Total water withdrawal	million m³		G4-EN8	69.65	79.95	82.33	77.83	83.05
• Surface water withdrawal	million m³	H	G4-EN8	64.6	68.63	70	64.72	71.33
• Groundwater withdrawal	million m³		G4-EN8	0.69	0.5	0.6	0.6	0.3
• Municipality, city or district water withdrawal	million m³	I	G4-EN8	2.71	2.91	3.07	2.95	2.44
• Treated wastewater from external organizations	million m³	J	G4-EN8	1.65	1.79	2.7	1.54	1.29
• Industrial run-off water withdrawal	million m³	K	G4-EN8	--	6.12	5.95	8.02	7.67
Total water withdrawal intensity	m³ / m³ production		G4-EN8	2.65	3.04	3.03	2.87	3.09
Water returned	million m³		G4-EN22	63.85	68.2	65.46	61.39	72.21
Water consumption	million m³	K		5.95	11.75	16.87	16.44	10.92
Water consumption intensity	m³ / m³ production	K		0.24	0.45	0.62	0.61	0.41
Water discharge quality								
Oil and grease	tonnes		G4-EN22	21.42	18.53	24.52	16.81	14.84
Total suspended sediment	tonnes		G4-EN22	160.66	153.78	360.24	116.47	118.60
Phenol	tonnes		G4-EN22	0.19	0.09	0.08	0.25	0.34
Ammonia	tonnes		G4-EN22	21.22	9.44	14.47	6.56	7.84
Waste management		L						
Total hazardous waste generated	thousand tonnes	L	G4-EN23	22.7	19.9	1,317.07	1,239.30	1,283.91
• Hazardous waste incinerated	tonnes		G4-EN23	--	2,235.00	1,977.62	1,245.08	2,940.08
• Hazardous waste deep well injected	tonnes	M	G4-EN23	--	1,082.10	1,302,958.00	1,231,221.23	1,232,852.00
• Hazardous waste landfilled	tonnes	L	G4-EN23	--	15,296.10	7,205.94	1,907.53	734.19

• Hazardous waste otherwise disposed	tonnes	L	G4-EN23	--	1,303.20	4,932.98	4,925.45	5,248.60
• Hazardous waste recycled, recovered or reused	tonnes	L	G4-EN23	--	--	--	--	42,134.50
Total non-hazardous waste generated	thousand tonnes	L	G4-EN23	50.6	60	84.7	44.7	48.70
• Non-hazardous waste incinerated	tonnes		G4-EN23	--	223	145.05	158.1	174.00
• Non-hazardous waste deep-well injected	tonnes	N	G4-EN23	--	0	460.98	2,496.24	1,210.00
• Non-hazardous waste landfilled	tonnes		G4-EN23	--	41,968.70	39,475.28	16,672.11	22,785.54
• Non-hazardous waste otherwise disposed	tonnes	O	G4-EN23	--	17,827.60	18,173.55	25,407.47	3,241.22
• Non-hazardous waste recycled, recovered or reused	tonnes	L	G4-EN23	--	--	--	--	21,287.77
Waste reused, recycled, or recovered (off-site)	thousand tonnes	L	G4-EN23	145.1	86	69.16	55.23	--
Waste reused, recycled, or recovered (on-site)	thousand tonnes	L	G4-EN23	1,048.10	40.4	21.48	9.49	--
Products and services								
Ethanol blended into gasoline	thousand m^3	P	G4-EN27	521.3	927.9	979	828	1,000
Sulphur content of gasoline	parts per million (ppm)	Q	OG8	18.5	24.9	25.8	25.3	18.7
Compliance								
Regulatory contraventions	#	R	G4-EN29	28	32	18	23	13
Regulatory fines	$ thousands	S	G4-EN29	810	245	2,354	130	2,257
Reportable spills	#		G4-EN24	55	91	99	103	107
Total volume of reportable spills	m^3		G4-EN24	791	1,217	71.78	2,082.02	124

Air quality exceedances	#		G4-EN29	41	74	81	43	46
Water effluent exceedances	#		G4-EN29	2	0	0	0	2
Leaks from underground storage systems	#		G4-EN24	0	1	0	0	0
Environment, Health & Safety (EH&S) management								
EH&S professionals on staff	#	T	G4-EN31	59	81	85	92	94
Environmental capital expenditures	$ millions		G4-EN31	37.3	56.1	59.24	68.45	32.7

Refining & Marketing environment footnotes

A On a business unit level, net production is reported where interplant transfers have been identified and removed from the facility production total. This value is calculated by adding each of the Refining & Marketing (R&M) production volumes, which include saleable yield including fuels and co-products, minus the transfers between R&M facilities.

B Greenhouse gas (GHG) emissions are calculated using a facility-specific methodology which utilizes various reference methodologies that have been accepted by the relevant jurisdictions within which each facility is required to report its GHG emissions. Methodology has been followed where a jurisdiction has a prescribed one and if none exists, then the most applicable and accurate methods available are used to quantify each emission source.
R&M emissions are inclusive of emissions from the pipeline from Oil Sands to the Edmonton Refinery, as well as other terminal stations. The emission total for these sources for 2014 was 63,468 tonnes CO_2e (2013 was 51,304 tonnes). Previously these emissions had not been included within a Business Unit (BU), although they were included at the Suncor wide level.
For the Edmonton refinery, GHG emissions and emission intensity values are consistent with Suncor's Specified Gas Emitters Regulation (SGER) Bill 3 reported Total Annual Emission (TAE) values, with the exception that total indirect emissions have been included here. The production metric used for the SGER emissions intensity is different than what is used here. SGER production is a Refinery Activity Index based value and the production used for our Report on Sustainability is saleable yield. For our operations in Quebec and Ontario, the data is consistent with the guidelines for those provinces which are aligned with Western Climate Initiative. The only exception applies to provincial reports for our facilities in Ontario and Quebec which use the Intergovernmental Panel on Climate Change's (IPCC's) third assessment global warming potentials (GWPs). Our 2013 and 2014 Reports on Sustainability use IPCC's fourth assessment GWPs. For our Commerce City refinery, the data is consistent with the guidelines for the EPA's Mandatory Reporting Rule, with the exception of the emissions reported in Sub-part MM.
Scope 2 indirect emissions include those associated with the purchases of electricity, steam, heat, and cooling. Emissions are calculated based on actual supplier data where possible and published literature where supplier data is unavailable. Prior to 2014, emissions associated with the purchase of hydrogen had been included as an indirect Scope 2 source; however, it was brought to our attention that industry best practice is to include these emissions as an indirect Scope 3 source and therefore they have been removed from all reported data points and included in the indirect Scope 3 GHG category.
Carbon dioxide sold by the facilities is reported under indirect Scope 3 to be consistent with Ontario and Quebec regulatory guidance. Hydrogen purchased from third parties is also included in this category. These values are reported under indirect Scope 3 emissions in this table and in our Suncor-wide performance data.

C Indirect Scope 3 GHG emissions reported here include emissions related to purchased hydrogen and CO_2 streams that are sold to third parties. In 2013 it was brought to our attention that industry best practice for disclosing emissions associated with the purchasing of hydrogen should be classified as a Scope 3 indirect source as they do not fall under the Scope 2 indirect emission categories of purchased electricity, purchased steam, purchased heating or purchased cooling. Therefore purchased hydrogen emissions are reported as a Scope 3 source and have been removed from the Scope 2 indirect emissions category.

D The SO_2 emissions calculation methodology underwent a number of data and process improvements in 2012, which improved the understanding of site conditions for specific facilities.

E Data includes terminal emissions.

F	Total energy is the sum of direct and indirect energy. Data includes terminal and pipeline emissions.
G	Direct energy is primary energy consumed on-site by Suncor-operated facilities; consumption includes refinery fuel gas, purchased natural gas and other internally produced fuels. Indirect energy includes imported electricity, steam, heating, and cooling duty.
H	Surface water: • Sarnia: Estimated water withdrawal from the St. Clair River • Edmonton: North Saskatchewan River • Montreal: Beginning in 2010, water withdrawal from the St. Lawrence River is metered. • Mississauga: Estimated water withdrawal from Lake Ontario
I	Water purchased from municipality for domestic use with the exception of Commerce City where it is used for both domestic and process.
J	Edmonton: Wastewater from Goldbar municipal treatment plant.
K	In 2011, a change in methodology occurred to capture industrial run-off as water withdrawn. This run-off volume is included as water returned or water consumed, as applicable to each facility. Water return destination for Refining & Marketing operations varies by facility (North Saskatchewan River, St. Lawrence River, Lake Ontario, St. Clair River and Sand Creek).
L	Beginning in 2011, in order to better align with the Global Reporting Initiative guidelines, Suncor expanded the number of indicators for which it collects and reports data in the Waste management category. Volume of waste varies from year to year due to periodic equipment maintenance including: • changing catalyst in reactors and waste water treatment tank • lagoon cleanouts • operation shutdowns • location-specific recycling programs Prior to 2014, waste that was reused, recycled and recovered was not included in the totals for hazardous and non-hazardous waste generated and was reported as an aggregated total. Beginning in 2014, in order to provide a more detailed breakdown of the waste streams created due to our operations, we have included this category of waste in both hazardous and non-hazardous total waste generated.
M	Hazardous waste to deep well injection is dependent on throughput volume, which influences water use.
N	Beginning in 2012, experimentation of sending downhole water to external wastewater treatment plant required injection of non-compatible water downhole.
O	Changes in water management strategy were made in 2012 that resulted in the creation of a waste stream that had not previously required active management. These changes were in place for all of the 2013 reporting year and thus contributed to a higher value for this metric in comparison to the previous year. Beginning in 2014, waste water is no longer reported in waste disposal but is captured under the water return category of this report.
P	Refineries that blend ethanol into gasoline are Sarnia, Montreal, Commerce City and Edmonton. The Edmonton refinery began blending ethanol into gasoline in April 2011.
Q	The volume is an annual average for Sarnia, Commerce City, Montreal and Edmonton refineries. Historically, data was calculated as the weighted average.
R	A regulatory contravention is an environmental incident that breaches a regulatory limit (prescribed threshold required by legislation, approval or permit from a regulatory authority) or requirement (any law, act, regulation, licence, standard, approval, directive and/or permit applicable to Suncor's activities) and that triggers formal regulatory reporting.
S	Data includes regulatory fines paid during the stated year: 2014: On February 27, 2014, a Consent Decree entered into by Suncor Energy (U.S.A.) Inc. ("SEUSA"), was approved by the U.S. District Court for the District of Colorado. The Consent Decree related to alleged natural resource damages (NRD), including to groundwater, caused by a release of hydrocarbons from SEUSA's Commerce City Refinery into and around Sand Creek. SEUSA paid $1,887,000 ($US) to compensate for these alleged damages in exchange for a release from liability. In 2014, SEUSA also paid certain penalties to settle alleged violations resulting from an annual air audit of the Commerce City Refinery by the Colorado Department of Health & Environment (CDPHE), an Environmental Protection Agency (EPA) inspection, and under existing Clean Air Act Consent Decrees. 2013: In 2013, SEUSA paid certain penalties to settle alleged violations resulting from an annual air audit of the Commerce City Refinery by the Colorado Department of Health & Environment (CDPHE). Our Sarnia refinery was also ordered to pay an environmental penalty of $10,950 for a test failure in process effluent water. The test from the combined stream that enters the river passed, but the test of effluent water did not. In response to this, the refinery has established performance monitoring metrics for various waste water treatment parameters to allow for early indication of potential issues in the waste water treatment facility.

T Professionals dedicated to environment, health or safety matters. Professional Services Agreements (PSAs) and non-positioned contractors are not included in this total.

Economic[1]

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Tax and royalty credits earned	$ millions		G4-EC4	1.3	1.6	4.7	1.9	3.3
Investments								
Capital and exploration expenditures	$ millions		G4-EC1	667	633	644	890	1,021
Purchases								
Goods and services	$ millions			1,900	1,790	1,715	2,309	2,815
Goods and services purchased in or from:								
• Canada	$ millions			1,533	1,355	1,302	1,845	2,356
• Local businesses and suppliers	$ millions	U	G4-EC9	1,464	1,178	1,354	1,821	2,290

Refining & Marketing economy footnotes

1 For complete disclosure of financial information, see our 2014 Annual Report (PDF, 138 pp. 2.54MB)

U Local is defined as spend with businesses/suppliers based in Ontario, Quebec, Alberta and Colorado. Data includes all local spend from Suncor's Refining & Marketing operations.

Social

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Health and safety		V						
Employee lost-time injury frequency		W	G4-LA6	0.06	0.09	0	0.15	0.05
Contractor lost-time injury frequency		W	G4-LA6	0.13	0.03	0.09	0.19	0.09
Employee recordable injury frequency		X	G4-LA6	0.39	0.41	0.15	0.36	0.25
Contractor recordable injury frequency		X	G4-LA6	0.8	0.61	0.42	0.67	0.50
Fatalities			G4-LA6	0	0	0	0	0
Employee relations								
Employees receiving performance reviews	%		G4-LA11	88.4	96	100	100	100
Training and development	$ thousands	Y	G4-LA9	3,060	3,889	4,943	3,833	3,745

Ratio of lowest wage to minimum wage		Z	G4-EC5	1.1	1	1.2	2.1	1.19
Ratio of average wage to minimum wage		Z	G4-EC5	4.2	4.3	4.6	4.8	5.0
Ratio of jobs offered to jobs accepted		AA		1	1.02	1.01	1.02	--
New employee hires:	%	BB	G4-LA1					
• Male	%		G4-LA1	--	--	70.5	81.6	79.8
• Female	%		G4-LA1	--	--	29.5	18.4	20.2
• Age less than 30	%		G4-LA1	--	--	41	40.2	34.8
• Age 30 to 50	%		G4-LA1	--	--	52.1	54	55.3
• Age greater than 50	%		G4-LA1	--	--	6.9	5.4	9.9
Employee turnover:	%		G4-LA1	2.5	2	3.6	1.3	1.7
• Male	%		G4-LA1	2.1	1.9	3.9	1.2	1.7
• Female	%		G4-LA1	3.8	2.7	0.6	1.8	1.5
• Age less than 30	%		G4-LA1	3.6	5.9	4.6	3.2	2.2
• Age 30 to 50	%		G4-LA1	3.3	2.5	4.1	1.7	4.3
• Age greater than 50	%		G4-LA1	1	0.2	2.6	0.3	1.7
Workforce								
Suncor employees	#	CC	G4-10	3,311	3,332	3,145	3,255	3,567
• Full-time	#		G4-10	3,186	3,248	3,083	3,178	3,492
• Part-time	#		G4-10	9	0	9	10	58
• Temporary/casual	#		G4-10	116	84	53	67	138
Long-term contractors	#	CC	G4-10	632	624	407	399	354
Workforce unionized	%		G4-11	43.7	33.2	40.3	35.4	37.3
Equal opportunity and workforce diversity		DD						
Aboriginals	%	DD	G4-LA12	1.1	1.3	1.3	1.1	0.9
Visible minorities	%	DD	G4-LA12	10.4	7.9	8.3	11.3	10.9
Persons with disabilities	%	DD	G4-LA12	1.4	1.3	1.2	1.1	0.9
Women	%	DD	G4-LA12	19.7	18.9	19.2	18.8	20.7
Men	%	DD	G4-LA12	80.3	79.8	79.8	79.1	80.0
Age less than 30	%		G4-LA12	10.9	10.2	9.7	10.4	11.0
Age 30 to 50	%		G4-LA12	52.6	52	53.3	52.6	55.2
Age greater than 50	%		G4-LA12	36.5	36.5	36	34.8	34.2

Ratio of basic salary of men to women:								
• Management female	%	EE	G4-LA13	92.7	92.5	93.6	91.1	--
• Professional female	%	EE	G4-LA13	85.4	76.5	83.9	83.9	--
• Business support female	%	EE	G4-LA13	97.9	94.3	78.5	84.7	--
• Operations female	%	EE	G4-LA13	84.6	80.9	101.5	101.1	--
Diversity in management								
Employees in management	%		G4-LA12	14	14	15.2	15.5	15.9
Women in management	%		G4-LA12	16.2	18	18.4	19.4	20.0
Persons with disabilities in management	%		G4-LA12	1.9	1.9	1.5	1.4	1.1
Age less than 30 in management	%		G4-LA12	0.4	1.9	1.7	2	1.6
Age 30 to 50 in management	%		G4-LA12	60	58	58.5	58.2	58.3
Age greater than 50 in management	%		G4-LA12	39.5	39.6	39.8	39.6	40.1

Refining & Marketing social footnotes

V Our U.S. operations use the Occupational Health and Safety Administration (OSHA) definitions to classify their injuries, which differ slightly from Canadian standards. For the most part, OSHA is a more rigorous classification standard than current Canadian standards. Beginning in 2014, R&M health and safety data reported here includes our St. Clair ethanol plant.

W A lost-time injury requires medical attention and results in an employee being absent from work on the next regularly scheduled work day or any subsequent work day. Lost-time injury frequency is the number of such injuries per 200,000 hours worked.

X Recordable injuries include lost time injuries as well as medical aid injuries. Medical aid injuries require medical attentions but do not result in an employee being absent from work. Recordable injury frequency is the sum of lost time and medical aid injuries per 200,000 hours worked.

Y Fees for professional development courses taken by Suncor employees.

Z Minimum wage values used for this metric are updated annually. In 2014, we used $10.20 for minimum wage in Ontario that compares lowest full-time base wage to Ontario.
Historical U.S. data compares lowest full-time base wage to Colorado minimum wage.

AA Beginning in 2014, this indicator is reported Suncor-wide.

BB Any externally-hired regular full-time or regular part-time employee whose permanent start date falls within the reporting period.

CC Employee is defined as regular full-time, regular part-time, students, casuals or temporary employees. Leaves, other than long-term disability, such as maternity, paternity, personal leave, as well as short-term disabilities, are considered active and are included.
Historical U.S.A. data long-term contractors include contractors at the refinery, based on full-time equivalent staff in the Denver office.

DD Certain operating regions prohibit collecting information on gender, therefore data presented here may not be reflective of our entire workforce due to data availability.
Workforce diversity is calculated based on information provided voluntarily by employees. Indicators referring to ethnicity and disability reflect only those employees who consent for release of this information have been included.

EE Beginning in 2014, salary comparison data between women and men is reported on a Suncor-wide basis as position levels are corporately administered and do not differ based on operating areas.

Renewable energy

Our renewable energy interests include:

- 7 operating wind power projects across Canada
- 1 wind power project under development in Ontario
- the St. Clair ethanol plant in Ontario

Performance data is reported for renewable energy assets we operate*, including:

- St. Clair ethanol plant
- Wind energy (consolidated data for 2 wind projects operated by Suncor)

* For the purposes of this report, data for the St. Clair ethanol plant and wind energy has been reported separately from Refining & Marketing Canadian operations.

St. Clair ethanol plant

We operate the St. Clair ethanol plant, Canada's largest ethanol facility, which opened in 2006 in the Sarnia-Lambton region of Ontario.

Expand all | Collapse all

Environment

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Production								
Net ethanol production	million cubic metres (m^3) of oil equivalent / year	A	OG1	0.12	0.23	0.25	0.25	0.25
Net ethanol production	million litres of ethanol product / year		OG1	203.90	379.10	412.51	414.98	412.45
Air emissions								
Greenhouse gas (GHG)	thousand tonnes carbon dioxide equivalent (CO_2e)	B	G4-EN15 G4-EN16	88.21	158.71	167.12	169.52	164.76
GHG emissions intensity	tonnes CO_2e / m^3 production		G4-EN18	0.71	0.68	0.66	0.67	0.65
Indirect (Scope 3) GHG emissions	thousand tonnes CO_2e	C	G4-EN17	38.2	34.3	36.3	22.2	13.27
Biomass GHG emissions	thousand tonnes CO_2e / m^3 production		G4-EN15 G4-EN16	180.93	303.54	331.17	347.57	354.20

Biomass GHG emissions intensity	tonnes CO_2e / m^3 production		G4-EN17	1.45	1.31	1.31	1.37	1.40
Sulphur dioxide (SO_2)	tonnes		G4-EN21	32.44	57.26	63.15	61.77	61.90
SO_2 emissions intensity	kilograms (kg) / m^3 production		G4-EN21	0.26	0.25	0.25	0.24	0.25
Nitrogen oxides (NO_x)	tonnes		G4-EN21	61.39	109.35	115.38	117.06	117.49
NO_x emissions intensity	kg / m^3 production		G4-EN21	0.49	0.47	0.46	0.46	0.47
Volatile Organic Compounds (VOCs)	tonnes		G4-EN21	81.11	165.80	180.93	184.21	185.86
• Benzene	tonnes		G4-EN21	0	0.03	0.03	0.03	0.03
• Toluene	tonnes		G4-EN21	0.02	0.05	0.05	0.06	0.06
• Xylene	tonnes		G4-EN21	0.01	0.02	0.02	0.02	0.02
VOC emissions intensity	kg / m^3 production		G4-EN21	0.65	0.71	0.72	0.72	0.74
NPRI on-site releases	tonnes		G4-EN21	329.69	533.35	574.93	574.8	576.95
Energy consumption								
Total energy use	million gigajoules (GJ)	D	G4-EN3 G4-EN4	1.8	3.22	3.39	3.44	3.45
• Direct energy use	million GJ	D	G4-EN3	1.66	2.99	3.15	3.2	3.21
• Indirect energy use	million GJ	D	G4-EN4	0.14	0.24	0.24	0.24	0.24
Energy intensity	GJ / m^3 production		G4-EN5	13.33	13.89	13.42	13.55	13.67
Water use								
Total water withdrawal	million m^3		G4-EN8	0.44	0.94	1.06	1.05	1.04
• Water withdrawal (water purchased from municipality)	million m^3		G4-EN8	0.44	0.94	1.06	1.05	1.04
Water withdrawal intensity	m^3 / m^3 production		G4-EN8	3.53	4.03	4.18	4.12	4.10
Water returned	million m^3		G4-EN22	0.05	0.09	0.12	0.09	0.11
Water consumption	million m^3			0.44	0.85	0.94	0.96	0.93
Water consumption intensity	m^3 / m^3 production			3.17	3.65	3.71	3.77	3.66

Water discharge quality								
Oil and grease	tonnes		G4-EN22	0.17	0.35	0.36	0.29	0.31
Waste management		E						
Total hazardous waste generated	thousand tonnes	E	G4-EN23	0.004	0.008	0.004	0.03	0.06
• Hazardous waste incinerated	tonnes	F	G4-EN23	--	8.44	3.66	29.91	5.32
• Hazardous waste otherwise disposed or treated	tonnes	F	G4-EN23	--	--	--	--	50.87
• Hazardous waste reused, recycled or recovered	tonnes	E	G4-EN23	--	--	--	--	5.52
Total non-hazardous waste generated	thousand tonnes	E	G4-EN23	0.36	0.40	0.32	0.46	0.89
• Non-hazardous waste landfilled	tonnes	F	G4-EN23	--	395.98	316.11	459.94	871.97
• Non-hazardous waste reused, recycled or recovered	tonnes	E	G4-EN23	--	--	--	--	18.39
Waste reused, recycled and recovered (off-site)	tonnes	E	G4-EN23	9.13	8.67	14.01	18.38	--
Compliance								
Regulatory contraventions	#	G	G4-EN29	0	0	0	0	10
Regulatory fines	$ thousands		G4-EN29	0	0	0	0	0
Reportable spills	#		G4-EN24	0	0	0	0	0
• Spills to natural water bodies	#	H	G4-EN24	0	0	0	0	0
Total volume of reportable spills	m^3		G4-EN24	0	0	0	0	0
Air quality exceedances	#		G4-EN29	0	0	0	0	0
Industrial wastewater limit exceedances	#	I	G4-EN29	0	0	0	0	1

Environment, Health & Safety (EH&S) management								
EH&S professionals on staff	#	J	G4-EN31	2	2	2	1	—

St. Clair ethanol plant environment footnotes

A Total net production refers to ethanol production from the St. Clair ethanol plant, converted to cubic metres of oil equivalent, on an energy basis. In 2011, the ethanol plant was twinned and production therefore increased.

B Greenhouse gas (GHG) emissions are calculated using a facility-specific methodology which utilizes various reference methodologies that have been accepted by the relevant jurisdictions each facility is required to report its GHG emissions. Methodology has been followed where a jurisdiction has a prescribed one and if none exists, then the most applicable and accurate methods available are used to quantify each emission source. GHG emissions are consistent what is reported to the Ontario government. The only exception is the use of the Intergovernmental Panel on Climate Change's (IPCC's) third assessment global warming potentials (GWPs). Our 2013 and 2014 Reports on Sustainability use IPCC's fourth assessment GWPs.

C Indirect Scope 3 GHG emissions reported here include emissions related to CO_2 streams that are sold to third parties.

D Total energy is the sum of direct and indirect energy.
Direct energy is energy consumed on-site by Suncor-operated facilities.
Indirect energy includes imported electricity, steam, heating and cooling duty from third parties.

E Beginning in 2011, in order to better align with the Global Reporting Initiative reporting guidelines, Suncor expanded the number of indicators for which it collects and reports data in the waste management category. Prior to 2014, waste that was reused, recycled and recovered was not included in the totals for hazardous and non-hazardous waste generated and was reported as an aggregated total. Beginning in 2014, in order to provide a more detailed breakdown of the waste streams created due to our operations, we have included this category of waste in both hazardous and non-hazardous total waste generated.

F In general, waste volumes are dependent on activities conducted at site and can vary from year to year. Hazardous waste is primarily generated from clean-out of trucks arriving at the ethanol plant. Volume is dependent on the condition of these trucks.
Reductions in 2012 were a result of process improvement with a contracted trucking company. In 2013, two spills of ethanol mixed with rainwater to the tank farm containment area contributed to a larger amount of hazardous waste generated. In 2014, hazardous waste volumes were influenced by the cleanup and disposal of a sulfuric acid tank leak into its containment area.

G In 2014, there were 10 contraventions related to the site's thermal oxidizer and minimum operating temperature limit prescribed in the site's Environmental Compliance Approval. Corrective actions were instituted on site including additional administrative and equipment controls, and scheduled system upgrades planned for implementation in 2017.

H Spills that enter the St. Clair River directly, or spills into collection systems that exceed downstream treatment capabilities and result in the release of substances into the St. Clair River.

I In 2014, there was a monthly exceedance of the Table 1 Effluent Limit for total phosphorous limit of 1.0 mg/L as outlined in the site's Environmental Compliance Approval. Corrective actions were instituted which led to site improvements, more effective responses to changes in parameters, and a decrease in the average phosphorous levels in the stormwater management pond.

J Professionals dedicated to environment, health or safety matters. Professional Services Agreements (PSAs) and non-positioned contractors are not included in this total. Beginning in 2014, the number of EH&S professionals on staff for the St. Clair ethanol plant is reported with Refining & Marketing performance data.

Economic

Filter display

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Investments								
Capital and exploration expenditures	$ millions		G4-EC1	54	6	1	1	3

Social

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Health and safety								
Employee lost time injury frequency		K	G4-LA6	--	0	0	0	--
Contractor lost time injury frequency		K	G4-LA6	--	0	0	0	--
Employee recordable injury frequency		K	G4-LA6	--	0	0	0	--
Contractor recordable injury frequency		K	G4-LA6	--	0	0	0	--
Fatalities			G4-LA6	--	0	0	0	--
Employee relations								
Training and development	$ thousands	L	G4-LA9	39	33	42	65	0

St. Clair ethanol plant social footnotes

K Beginning in 2014, health and safety data for the St. Clair ethanol facility is included in our Refining & Marketing performance data.
A lost time injury requires medical attention and results in an employee being absent from work on the next regularly scheduled work day or any subsequent work day. Lost time injury frequency is the number of such injuries per 200,000 hours worked.
Recordable injuries include lost time injuries as well as medical aid injuries. Medical aid injuries require medical attentions but do not result in an employee being absent from work. Recordable injury frequency is the sum of lost time and medical aid injuries per 200,000 hours worked.

L Includes the educational assistance plan that reimburses tuition upon successful completion of a course or program.

Wind energy

Suncor is involved in 7 operating wind farm projects, with 1 under construction and others planned. Suncor is the operator of 3 of these developments – Kent Breeze and Adelaide in Ontario and Wintering Hills in Alberta.

Expand all | Collapse all

Environment[1]

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2012	2013	2014
Production						
Net production	MWh	A	OG3	335,145	326,953	320,720
Air emissions						
Greenhouse gas (GHG)	thousands tonnes CO_2e	B	G4-EN15 G4-EN16	0.10	0.16	0.48
Sulphur dioxide (SO_2)	tonnes		G4-EN21	0	0	0
Nitrogen oxides (NO_x)	tonnes		G4-EN21	0.07	0.11	0.12
Volatile organic compounds (VOCs)	tonnes		G4-EN21	0	0.01	0.01
Energy consumption						
Total energy use	million GJ	C	G4-EN3 G4-EN4	-0.89	-1.17	-1.15
• Direct energy use	million GJ	C	G4-EN3	0	0	0
• Indirect energy use	million GJ	C	G4-EN4	-0.89	-1.18	-1.15
Water use						
Total water withdrawal	m^3	D	G4-EN8	78	128	260

Waste management						
Non-hazardous waste generated	tonnes	E	G4-EN23	<1	<1	0
Compliance						
Regulatory contraventions	#		G4-EN29	0	0	0
Regulatory fines	$ thousands		G4-EN29	0	0	0
Reportable spills	#		G4-EN24	0	0	0
Total volume of spills	m^3		G4-EN24	0	0	0
EH&S management						
EH&S professionals on staff	#		G4-EN31	0	0	0
Environmental capital expenditures	$ millions		G4-EN31	0	0	0

Wind environment footnotes

1 For the purposes of this report, only environmental performance data from Suncor operated facilities has been included. In 2014, this was Kent Breeze and Wintering Hills for full year operation.

A Total net production refers to electrical production, in megawatt hours, from the following Suncor wind facilities
- Kent Breeze (commissioned in 2011 with a total capacity of 20MW)
- Wintering Hills (commissioned 2011 with a total capacity of 88MW) in partnership with Teck

Total net production from these two facilities is not adjusted for ownership.

B Greenhouse gas (GHG) emissions are calculated using a facility-specific methodology which utilizes various reference methodologies that have been accepted by the relevant jurisdictions each facility is required to report its GHG emissions. Methodology has been followed where a jurisdiction has a prescribed one and if none exists, then the most applicable and accurate methods available are used to quantify each emission source. Beginning in 2014: electricity use for the Wintering Hills facility has been accounted for. 2012 and 2013 emissions are slightly lower as only Kent Breeze electricity use was included.

C Total energy is the sum of direct and indirect energy.
Direct energy is primary energy consumed on-site by Suncor-operated facilities, which includes natural gas consumed in backup generators.
Indirect energy includes electricity consumed for field offices, which includes natural gas consumed in backup generators.

D Water withdrawal for our operated wind facilities is comprised of water purchases from municipality for domestic purposes, and is subject to variability.

E Non-hazardous waste for our operated wind facilities is primarily composed of domestic landfill waste.

Major Projects

The Major Projects business area is responsible for providing project management, procurement and construction expertise for large growth projects across the company. Performance data for Major Projects is limited to selected indicators.

Expand all | Collapse all

Environment

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Compliance								
Regulatory contraventions	#	A	G4-EN29	8	3	2	13	0
Regulatory fines	$		G4-EN29	0	0	0	0	0
Volume of spills	cubic metres (m^3)		G4-EN24	0	0	0.63	1.06	0
Environment, Health & Safety (EH&S) management								
EH&S professionals on staff	#	B	G4-EN31	15	27	36	51	51

Major Projects environmental footnotes

A Data includes regulatory fines related to environmental, health and safety contraventions paid during the stated year.

B Professionals dedicated to environment, health or safety matters. Professional Service Agreements (PSAs) and non-positioned contractors are not included in this total.

Economic

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Purchases								
Goods and services	$ millions	C		1,752	2,422	2,755	2,098	2,236
Goods and services purchased in or from:								
• Canada	$ millions	C	G4-EC9	1,585	2,247	2,632	1,972	2,010

Major Projects economic footnotes

C Goods and services purchased from local and Aboriginal businesses are reported in Suncor-wide performance data. Purchases in Canada represent a sub-set of the total goods and services purchased.

Social

Filter display

In the "Footnote" column, click on the down-arrow symbol to display the footnote.

Indicator	Unit	Footnote	GRI Disclosures	2010	2011	2012	2013	2014
Health and safety								
Employee lost-time injury frequency		D	G4-LA6	0.21	0	0	0	0
Contractor lost-time injury frequency		D	G4-LA6	0.16	0.03	0.09	0	0.64
Employee recordable injury frequency		E	G4-LA6	0.21	0.17	0	0	0
Contractor recordable injury frequency		E	G4-LA6	1.05	0.83	0.83	1.07	0.61
Fatalities			G4-LA6	0	0	0	0	0

Major Projects social footnotes

D A lost time injury requires medical attention and results in an employee being absent from work on the next regularly-scheduled workday or any subsequent workday. Lost time injury frequency is the number of such injuries per 200,000 hours worked.

E Recordable injuries include lost time injuries as well as medical aid injuries. Medical aid injuries require medical attention but do not result in an employee being absent from work. Recordable injury frequency is the sum of lost time and medical aid injuries per 200,000 hours worked.

GRI content index

This Report on Sustainability has been prepared in accordance with the Global Reporting Initiative (GRI) G4 guidelines and Oil and Gas Sector Disclosures to the 'Core' option.

Additionally, our 2015 Communication on Progress, detailing our commitment and implementation of the United Nations Global Compact (UNGC) principles has been integrated throughout this report.

The tables below provide information about:

- G4 standard disclosures and material issues (aspects) covered in this report
- UNGC principles addressed
- where to find additional information, either within this report, or other public disclosures, and
- G4 standard disclosures that have been externally assured

Read more about:

- GRI
- UNGC

General standard disclosures

These general standard disclosures describe our organization and sustainability reporting processes.

Expand all | Collapse all

Strategy and analysis

General Standard Disclosures	Link or direct answer	External Assurance	UNGC
G4-1	• CEO message • Vision and strategy	-	

G4-2	• Climate change • Economic (All sections) • Enterprise risk • Environment (All sections) • Leading change: challenges and opportunities • Goals and progress • Social (All sections)		

Organizational profile

	Link or direct answer	External Assurance	UNGC
G4-3	Suncor Energy Inc.	-	
	Our operations		
G4-5	Calgary, Alberta Canada	-	
	Our operations		
G4-7	Our operations	-	
G4-9	Our operations [Performance data > Economic > Revenues, market capitalization]: • Suncor-wide [Performance data > Social > Suncor employees and contractors]: • Suncor-wide	-	
	Total workforce by employment type, contract, and region, and gender by total workforce, by location are reported in the following pages in this report: [Performance data > Social > Suncor employees and contractors]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing No data management system is currently in place to report all employment types by gender (contractors). We anticipate fully reporting this indicator in 2016.		
G4-11	[Performance data > Social > Workforce unionized]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing For additional information related to our employees and collective agreements, see our Annual Information Form dated February 26, 2015, p. 24 (PDF, 98 pp., 357 KB)	-	3
G4-13	Performance data	-	
G4-15	• Biodiversity • Partnerships and collaboration • Public policy participation	-	

Identified material aspects and boundaries

General	Link or direct answer	External	UNGC

Standard Disclosures		Assurance	
G4-17	Suncor Energy Inc. Annual Report 2014, pp. 24-25 (PDF, 138 pp. 2.54 MB) For more information about the entities not covered in this report, refer to the performance data page(s).	-	
G4-18	• Materiality review • Our stakeholders	-	
G4-19	Materiality review	-	
G4-20	• Materiality review • Performance data	-	
G4-21	• Materiality review • Performance data	-	
G4-22	Any re-statements of information provided in earlier reports and reasons for re-statements can be found throughout the performance data pages and accompanying footnotes for specific indicators that have been restated.	-	
G4-23	Significant changes from previous reporting periods in scope, boundary or measurement methods can be found on the performance data page as well as introductory statements for specific business unit performance data pages.	-	

Stakeholder engagement

General Standard Disclosures	Link or direct answer	External Assurance	UNGC
G4-24	Our stakeholders	-	
G4-25	Our stakeholders	-	
G4-26	• Our stakeholders • Materiality review • Social responsibility	-	
G4-27	• Air • Climate change • Land • Materiality review • Oil sands tailings • Water	-	

Report profile

General Standard Disclosures	Link or direct answer	External Assurance	UNGC
G4-28	January 1 – December 31, 2014	-	
G4-29	July, 2014	-	
G4-30	Annual	-	
G4-31	1-800-558-9071 or email us	-	
G4-32	'In accordance' – Core • GRI content index • Performance data	-	
G4-33	An independent third-party has provided assurance on selected key performance indicators for our Report on sustainability. The assurance report and indicators that were reviewed can be found on the performance data page.	-	

General Standard Disclosures	Link or direct answer	External Assurance	UNGC
G4-34	Corporate governance For additional information about our corporate governance structure, and committees of the Board, refer to Schedule E (Corporate governance summary) of our 2015 Management Proxy Circular (PDF, 111 pp., 888 KB).	-	
G4-35	Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule E: Corporate Governance Summary - Risk Oversight, pp. E3 to E4) Additionally, a Strategic Issues Management Process is being refined to effectively manage our strategic issues. Issues are delegated with appropriate management and governance within our organization to identify, monitor and manage key environmental, economic and social issues most critical to our business and our external stakeholders.	-	
G4-36	We have several senior leadership positions whose roles include sustainability oversight in the organization, including: • Executive Vice President, Business Services (directly reports to the CEO) • Sub-committee of the Executive Leadership Team (provides strategic oversight ensuring we have robust sustainability strategies and goals) • Vice President, Sustainability & Communications • General Manager, Sustainability	-	
G4-37	Social responsibility For additional information about stakeholder feedback with our Board of Directors, refer to our 2015 Management Proxy Circular (PDF, 111 pp., 888 KB) (Schedule E - Stakeholder feedback, pp. E-5 to E-6)	-	
G4-38	Suncor Energy Inc. Annual Information Form dated February 26, 2015 (PDF, 98 pp., 357 KB) (Directors and executive officers, pp. 72-77)	-	
G4-39	Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule F: Position description for independent board chair, pp. F-1 to F-2)	-	
G4-40	Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule E: Corporate Governance Summary, pp. E-13 to E-16)	-	
G4-41	Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule E: Corporate Governance Summary, p. E-10)	-	
G4-42	Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule H: Board Terms of Reference, pp. H-4 to H-5)	-	
G4-43	Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule E: Corporate Governance Summary, pp. E-8 to E-9) Additionally, our Board of Directors receive periodic reports from our Vice President, Sustainability & Communications. The Environment, Health, Safety & Sustainability Committee of the Board also receives quarterly updates and stewardship on our priority sustainability issues.	-	
G4-44	The Board completes an annual self-evaluation. For details, see the Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule E: Corporate Governance Summary, pp. E-14 to E-15) Specific information about topics reviewed and action plans that are developed are confidential and not reported.	-	
G4-45	The Board oversees Suncor's Enterprise Risk Management Program. For details, see the Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule E: Corporate Governance Summary, pp. E-3 to E-5)	-	
G4-46	The Board oversees Suncor's Enterprise Risk Management Program. For details, see the Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule E: Corporate Governance Summary, pp. E-3 to E-5)	-	
G4-47	The Board oversees Suncor's Enterprise Risk Management Program. For details, see the Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Schedule E: Corporate Governance Summary, pp. E-3 to E-5)	-	
G4-48	Our Executive Leadership Team, including the CEO, review and approve this report prior to publication.	-	
G4-49	Issues of concern can be reviewed by our Executive Leadership Team Sustainability Sub-Committee (our CEO sits on this committee). The Environment, Health, Safety & Sustainable Development committee of the Board also reviews the effectiveness to which we achieve objectives pertaining to the environment, health, safety and sustainable development.	-	
G4-50	Throughout 2014, key issues focused on climate change, water and First Nations issues. In depth discussions, goal setting and initiatives to address these issues have been ongoing and will continue to	-	

	evolve.		
G4-51	Executive pay For more information, see the Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Board of Directors and Executive compensation, pp. 18-39)	-	
G4-52	Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Board of Directors and Executive compensation, pp. 18-39)	-	
G4-53	Suncor Energy Inc. Management Proxy Circular 2015 (PDF, 111 pp., 888 KB) (Advisory vote on approach to executive compensation, p. 17)	-	

Ethics and integrity

General Standard Disclosures	Link or direct answer	External Assurance	UNGC
G4-56	Ethical business conduct	-	10
G4-57	Ethical business conduct	-	10
G4-58	Ethical business conduct	-	10

Specific standard disclosures

These specific standard disclosures provide context for our management of and performance related to issues identified through our materiality review process.

Expand all | Collapse all

Category: Economic

DMA and Indicators	Link or direct answer	Omissions	External Assurance	UNGC
	Aspect: Economic performance			
G4-DMA	Economic		-	
G4-EC1	[Performance Data > Economic > Economic value generated and distributed]: • Suncor-wide • Oil Sands • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant [Performance Data > Social > Community Investment]: • Suncor-wide		-	
G4-EC2	• CEO message • Climate change action plan • Leading change: challenges and opportunities • Social responsibility • Suncor's 2015 CDP Climate Change submission, 5&6 (p. 25-42)		-	
G4-EC3	Suncor Energy Inc. Annual Report 2014, (pp. 102-105) (PDF, 138 pp., 2.54 MB)		-	
G4-EC4	[Performance Data > Economic > tax and royalty credits earned]: • Suncor-wide		-	

	Aspect: Market Presence			
G4-DMA	Economic		-	
G4-EC5	[Performance Data > Social > Ratios of lowest and average wage to minimum wage]: • Oil Sands • North America Onshore • East Coast Canada • Refining & Marketing		-	
G4-EC6	Our employees		-	
	Aspect: Indirect Economic Impacts			
G4-DMA	Economic		-	
G4-EC7	• Community investment • Contribution to economy		-	
G4-EC8	• Contribution to economy • Partnering with Aboriginal businesses		-	
	Aspect: Procurement Practices			
G4-DMA	Economic		-	
G4-EC9	[Performance Data > Economic > Purchases]: • Suncor-wide • Oil Sands • North America Onshore • Refining & Marketing • East Coast Canada • Major Projects For more information regarding spending on locally based suppliers, view our Economic page.		-	
OG1	[Performance Data > Environment > Production]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant		Yes Performance Data	

Category: Environmental

DMA and Indicators	Link or direct answer	Omissions	External Assurance	UNGC
	Aspect: Energy			
G4-DMA	Environment		-	
G4-EN3	[Performance Data > Environment > Energy use]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant • Wind energy Suncor's 2015 CDP Climate Change Response, 11 (pp. 55-57)		-	7, 8
G4-EN4	[Performance Data > Environment > Energy use]: • Suncor-wide • Oil Sands • In Situ • North America Onshore		-	8

	• East Coast Canada • Refining & Marketing • St. Clair ethanol plant • Wind energy Suncor's 2015 CDP Climate Change Response, 11 (p.55-57)			
G4-EN5	[Performance Data > Environment > Energy use]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant • Wind energy		-	8
G4-EN6	[Performance Data > Environment > Reduction in energy consumption]: • In Situ • North America Onshore • East Coast Canada • Refining & Marketing		-	8,9
G4-EN7	• Renewables • Technology development		-	8,9
OG2	Suncor's 2015 CDP Climate Change Response, OG 6.1, & 6.2 (p.77)		-	8,9
OG3	[Performance Data > Environment > Production]: • Wind energy		-	8,9
	Aspect: Water			
G4-DMA	Environment		-	
G4-EN8	[Performance Data > Environment > Water withdrawal]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant • Wind energy		Yes Performance Data	7, 8
G4-EN9	Water withdrawal in low flow conditions Suncor's 2015 CDP Water response, 1.2a (p. 5), 5.1 (pp. 28-29) and 5.1a (pp. 30-33)		-	8
G4-EN10	Water [Performance Data > Environment > Average annual water recycling rate]: • In Situ		-	8
	Aspect: Biodiversity			
G4-DMA	Environment		-	
G4-EN11	[Performance Data > Environment > Land holdings for potential and approved development]: • Oil Sands • In Situ Additional information: • Biodiversity		-	8
G4-EN12	[Performance Data > Environment > Total land disturbed]: • Oil Sands • In Situ Additional information: • Biodiversity • Land		Yes Performance Data	8

G4-EN13	[Performance Data > Environment > Land reclaimed]: • Oil Sands • North America Onshore • In Situ Additional information: • Reclamation		Yes Performance Data	8
	• ____			
	Aspect: Emissions			
G4-DMA	Environment		-	
G4-EN15	[Performance Data > Environment > GHG emissions]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant • Wind energy Additional information: • 2014 GHG performance • 2014 Emission factors • Suncor's 2015 CDP Climate Change Response, 8-10 (pp.45-55)		Yes Performance Data	7, 8
G4-EN16	[Performance Data > Environment > GHG emissions]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant • Wind energy Additional information: • 2014 GHG performance • 2014 Emission factors • Suncor's 2015 CDP Climate Change Response, 8-10 (pp.47-55)		Yes Performance Data	7, 8
G4-EN17	[Performance Data > Environment > GHG emissions]: • Suncor-wide		-	7, 8
G4-EN18	[Performance Data > Environment > GHG emissions]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant • Wind energy		Yes Performance Data	8
G4-EN19	• Climate change action plan • Suncor's 2015 CDP Climate Change Response, 3.2 & 3.3 (pp. 20-24)		-	8, 9
G4-EN20	[Performance Data > Environment > Ozone depleting substances]: • Oil Sands		-	7, 8
G4-EN21	[Performance Data > Environment > SO_2,NO_x and VOC emissions]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant		-	7, 8

	Aspect: Effluents and waste			
G4-DMA	Environment		-	
G4-EN22	[Performance Data > Environment > Water discharge quality]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant These reported water effluent discharges are planned and the water quality parameters must be analyzed and reported as per regulatory requirements. Unplanned water discharges are rare in normal operating conditions. We currently report the number of unplanned water discharge events as well as the number of effluent/wastewater limit exceedances for applicable business units (reported to regulators).	This information is currently unavailable. We are looking into collecting data to report the quantity and quality of unplanned water discharge events and whether water discharges are reused by another organization and expect to fully report on this indicator by 2016-2017.	-	8
G4-EN23	[Performance Data > Environment > Hazardous and non-hazardous waste generated]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant Additional information: • Oil sands tailings		-	8
G4-EN24	[Performance Data > Environment > Spills]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant		-	8
G4-EN26	• Biodiversity • Oil Sands Tailings • Water • Water management strategies • Water withdrawal in low flow conditions		-	8
OG5	[Performance Data > Environment > Produced water]: • In Situ • North America Onshore • East Coast Canada		-	
OG6	Flared volumes are reported on the following pages: [Performance Data > Environment > Flared gas]: • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing	We do not report vented gas as it is not material due to the operational practices we have in place to limit venting, such as vapour recovery units that are used on storage tanks.	-	
OG7	[Performance Data > Environment > Drilling waste]: • In Situ • North America Onshore		-	
	Aspect: Products and services			
G4-DMA	Environment		-	
G4-EN27	[Performance Data > Environment > Ethanol blended into gasoline]: • Refining & Marketing Petro-Canada retail stations sell gasoline containing up to 10% ethanol in most markets. In addition, Petro-Canada fuels are Top		-	7-9

	Tier certified. Use of Top Tier qualified gasolines promotes cleaner engines, reduced emissions and optimal fuel economy. At our upgrader and all of our refining facilities, we have introduced ultra-low sulphur diesel (15 parts per million (ppm) sulphur or less) production to meet Canadian legislative requirements. Suncor supplies renewable content in diesel fuel, meeting a 2% federal mandate, a 4% mandate in British Columbia, 2% mandate in Ontario, and 2% mandates in Alberta, Saskatchewan and Manitoba. Renewable diesel fuel reduces carbon monoxide as well as particulate emissions, which contribute to smog. We also have a biodiesel mixing facility at our Fort McMurray facility (ATT Terminal), seasonally supplying the mine and the local market with up to 5% biodiesel. Note that the mine operates on ultra-low sulphur diesel with sulphur content of less than 15 ppm.			
OG8	[Performance Data > Environment > Sulphur content in fuels]: • Refining & Marketing			
	Aspect: Compliance			
G4-DMA	Environment		-	
G4-EN29	[Performance Data > Environment > Regulatory contraventions and fines]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant • Major Projects		-	8
	Aspect: Overall			
G4-DMA	Environment		-	
G4-EN31	[Performance Data > Environment > EH&S management]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing • St. Clair ethanol plant • Major Projects		-	7-9
	Aspect: Environmental grievance mechanisms			
G4-DMA	Environment		-	
G4-EN34	There were no grievances related to environmental impacts filed through our grievance management process in 2014.		-	8

Category: Social

Expand all | Collapse all

Sub-category: Labour practices and decent work

DMA and Indicators	Link or direct answer	Omissions	External Assurance	UNGC
	Aspect: Employment			
G4-DMA	Our employees		-	
G4-LA1	[Performance Data > Social > New employee hires and employee		-	6

	turnover]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing			
G4-LA3	[Performance Data > Social > Return to work and retention rates]: • Suncor-wide		-	6
	Aspect: Labour/management relations			
G4-DMA	Our employees		-	
G4-LA4	Skilled Labour			3
	Aspect: Occupational health and safety			
G4-DMA	Our employees		-	
G4-LA5	Suncor's workforce at Oil Sands, In Situ, Exploration & Production and Refining & Marketing that include operations are represented in formal joint management-worker health and safety committees. These committees address health and safety concerns and provide guidance on required next steps.		-	
G4-LA6	[Performance Data > Social > Injury frequencies and fatalities]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing Occupational disease claims are also reported internally as well as to the regulators for the applicable jurisdiction. Suncor also reports internally on incidence rates for non-occupational illnesses through our Integrated Disability Management program on an enterprise-wide level as well as by business unit.		Yes Performance Data	
G4-LA7	Our operations are not in regions where our employees might inherently be at high risk to communicable diseases such as HIV/AIDS, malaria or tuberculosis, or other serious diseases. Read more about our approach to occupational health and wellness.		-	
G4-LA8	Skilled Labour		-	
	Aspect: Training and education			
G4-LA9	[Performance Data > Social > Training and development]: • Suncor-wide • Oil Sands • North America Onshore • Refining & Marketing • East Coast Canada • St. Clair Ethanol plant Average hours of training per employee per year is tracked individually by business unit.	Data for the average hours of training per employee per year is currently unavailable. We recently transitioned to a new learning management system (LMS), allowing us to design, plan, deliver and track employee learning activities across the organization. This solution will allow us to report on this indicator fully by 2017.	-	6
G4-LA11	[Performance Data > Social > Employees receiving performance reviews]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing		-	6

	Aspect: Diversity and equal opportunity			
G4-DMA	Our employees		-	
G4-LA12	Directors and executive officers can be found in our Annual Information Form dated February 26, 2015 (PDF, 98 pp., 357 KB) (pp. 72-77) Employees by employee category are reported in the following performance data pages of this report: [Performance Data > Social > Minority group, gender and age indicators]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing		-	6
	Aspect: Equal remuneration for women and men			
G4-DMA	Our employees		-	
G4-LA13	[Performance Data > Social > Percentage of basic salary (women to men)]: • Suncor-wide • Oil Sands • In Situ • North America Onshore • East Coast Canada • Refining & Marketing		-	6

Sub-category: Human rights

DMA and Indicators	Link or direct answer	Omissions	External Assurance	UNGC
	Aspect: Investment			
G4-DMA	Operating internationally and human rights		-	
G4-HR1	Suncor does not specifically conduct screening of contractors and suppliers on human rights clauses.		-	1, 2
G4-HR2	Operating internationally and human rights		-	1
	Aspect: Non-discrimination			
G4-DMA	Our employees		-	
G4-HR3	In 2014, there were two formal complaints of discrimination made through the Alberta Human Rights Commission. One of these new complaints is currently awaiting investigation; we are in settlement discussions on the other, although we have denied liability. A previous complaint filed in 2013 was withdrawn by the complainant in 2014. More information is available as part of our Standards of Business Conduct (Harassment and Violence Free Working Environment PG&S)		-	6
	Aspect: Freedom of association and collective bargaining			
G4-DMA	Our employees		-	
G4-HR4	Suncor's employment policies adhere to all applicable domestic laws and honour internationally accepted labour standards, including those concerning freedom of association and collective bargaining, non-discrimination, forced labour, and underage workers in the workplace. In addition to our employment policies, these standards are also espoused in Suncor's Human Rights policy.		-	3

	Due to the political unrest and conflict in Syria and Libya, our operations in those countries underwent separate and specific risk assessments in 2011. In 2014, a corporate social responsibility assessment was conducted in our offices in Libya which examined and confirmed Suncor's Human Resourcing practices, among other areas.			
	Aspect: Child labour			
G4-DMA	Our employees		-	
G4-HR5	Suncor's employment policies adhere to all applicable domestic laws and honour internationally accepted labour standards, including those concerning freedom of association and collective bargaining, non-discrimination, forced labour, and underage workers in the workplace. In addition to our employment policies, these standards are also espoused in Suncor's Human Rights policy. Due to the political unrest and conflict in Syria and Libya, our operations in those countries underwent separate and specific risk assessments in 2011. In 2014, a corporate social responsibility assessment was conducted in our offices in Libya which examined and confirmed Suncor's Human Resourcing practices, among other areas.		-	3
	Aspect: Forced or compulsory labour			
G4-DMA	Our employees		-	
G4-HR6	Suncor's employment policies adhere to all applicable domestic laws and honour internationally accepted labour standards, including those concerning freedom of association and collective bargaining, non-discrimination, forced labour, and underage workers in the workplace. In addition to our employment policies, these standards are also espoused in Suncor's Human Rights policy. Due to the political unrest and conflict in Syria and Libya, our operations in those countries underwent separate and specific risk assessments in 2011. In 2014, a corporate social responsibility assessment was conducted in our offices in Libya which examined and confirmed Suncor's Human Resourcing practices, among other areas.		-	3
	Aspect: Security practices			
G4-DMA	Operating internationally and human rights		-	
G4-HR7	Operating internationally and human rights		-	1
	Aspect: Indigenous rights			
G4-DMA	Social responsibility		-	
G4-HR8	Social responsibility Our Human Rights policy commits to respecting the rights of indigenous peoples in all countries where we operate. Our Canadian Aboriginal Relations policy commits to respecting the cultures, customs and values of the communities in which we operate.		-	1
OG9	• Aboriginal Relations • Social responsibility		-	1,2
	Aspect: Assessment			
G4-DMA	Operating internationally and human rights		-	
G4-HR9	Operating internationally and human rights		-	
	Aspect: Human rights grievance mechanisms			
G4-DMA	Social responsibility		-	
G4-HR12	Social responsibility More information about our human rights and social risk issues management can be found on the operating internationally and human rights page of this report.		-	1

Sub-category: Society

	Aspect: Local communities			
	Social responsibility		-	
G4-SO1	Our stakeholders Partnering with Aboriginal businesses		-	1
	Social responsibility		-	
OG10	Social responsibility		-	
	[Performance Data > Environment > Land disturbance & reclamation]: • In Situ • North America Onshore Additional information: • Reclamation		-	
	Aspect: Anti-corruption			
G4-DMA	Economic		-	
G4-SO3	Ethical business conduct Risks around bribery and corruption related to our foreign operations can be found in our Annual Information Form dated February 26, 2015 (PDF, 111 pp., 888 KB) (pp. 65-66)		-	10
G4-SO4	• Economic • Ethical business conduct Training specific to the prevention of improper payments is provided on a targeted basis to certain individuals in high-risk jobs and jurisdictions. Certain third party business associates are also provided with anti-corruption training, based on assessed risk.		-	10
G4-SO5	No unlawful bribery or corruption incidents were recorded in the 2010-2014 reporting periods, no were any such actions brought against Suncor.		-	10
	Aspect: Public policy			
G4-DMA	Public policy participation		-	
G4-SO6	[Performance Data > Economic > Political donations]: • Suncor-wide We make political contributions to support the democratic process in Canada. Our Political Communications standard governs these contributions. All political contributions, including political fundraising events, are authorized and recorded by the Vice President, Government Relations, within a pre-allocated budget approved by the Executive Vice President, Business Services. Contributions are reviewed annually by our executive leadership team. We do not make political contributions outside of Canada.		-	
	Aspect: Anti-competitive behaviour			
G4-DMA	Economic		-	
G4-SO7	Ethical business conduct No regulatory enforcement actions were initiated for anti-competitive conduct against Suncor in 2014. Suncor's business code of conduct provides that Suncor shall in the conduct of its business (a) avoid all practices and activities that are a violation of any provision of competition law, and (b) support and encourage the maintenance of a competitive economy.		-	
	Aspect: Compliance			

G4-DMA	Economic		-	
G4-SO8	There were no material fines or non-monetary sanctions levied on Suncor in 2014 for non-compliance with laws and regulations.		-	
	Aspect: Asset integrity and process safety			
OG13		This information is currently unavailable. Significant gains were made in 2014 for internal tracking and monitoring process safety events company-wide. Our next steps will be to evaluate this information, and ultimately disclose process safety events fully, according to GRI G4-OG13 guidelines.	-	

Sub-category: Product responsibility

DMA and Indicators	Link or direct answer	Omissions	External Assurance	UNGC
OG14	[Performance Data > Environment > Net production] • St. Clair Ethanol plant [Performance Data > Environment > Ethanol blended into gasoline] • Refining & Marketing	We currently do not have formal processes in place that establish sustainability criteria for the biofuels we produce or purchase. Sustainability criteria for our produced/purchased biofuels aren't material for Suncor and therefore are not reported.	-	8,9

Advisories

Forward-looking statements

Suncor's 2015 Report on Sustainability contains certain forward-looking statements and forward-looking information (collectively, "forward-looking statements") within the meaning of applicable Canadian and U.S. securities laws and other information 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; commodity prices and interest and foreign exchange rates; capital efficiencies and cost-savings; applicable royalty rates and tax laws; future production rates; the sufficiency of budgeted capital expenditures in carrying out planned activities; the availability and cost of labour and services; and the receipt, in a timely manner, of regulatory and third-party approvals. In addition, all other statements and other information that address expectations or projections about the future, and other statements and information about Suncor's strategy for growth, expected and future expenditures or investment decisions, commodity prices, costs, schedules, production volumes, operating and financial results, future financing and capital activities, and the expected impact of future commitments are forward-looking statements. Some of the forward-looking statements and information may be identified by words like "expects", "anticipates", "will", "estimates", "plans", "scheduled", "intends", "believes", "projects", "indicates", "could", "focus", "vision", "goal", "outlook", "proposed", "target", "objective", "continue", "should", "may", "aims", "strives" and similar expressions.

Forward-looking statements in Suncor's 2015 Report on Sustainability include references to: Suncor's mission, vision and strategies, including to achieve the highest returns possible from our operations, to keep costs down and to increase reliability; Suncor's environmental goals to be achieved by 2015 (as compared to a baseline year of 2007), including improving energy efficiency by 10 per cent, achieving reductions in fresh water consumption by 12 per cent and air emissions (nitrogen oxides, sulphur oxides and volatile organic compounds) by 10 per cent and increasing land reclaimed by 100 per cent, and that Suncor will continue to identify capital projects and initiatives that will help it move towards the successful achievement of these goals; Suncor's expectations

(including anticipated results and advantages) and plans around technologies being introduced or that may be introduced across Suncor, including those related to produced water treatment, surfactants, solvents, direct contact steam generation, autonomous haulage systems, lubricants, carbon capture, the sharing of waste heat, waterless extraction, electromagnetically assisted solvent extraction, land reclamation, flaring and tailings management; Suncor's intention to continue to invest in technology development; the intention that going forward, new project execution options will be evaluated based on impacts to Suncor's sustainability goals; expectations regarding GRI indicators that Suncor anticipates reporting on in the future; plans to be undertaken by organizations Suncor is involved with, including COSIA; Suncor striving to continuously raise the bar on environmental performance and the expectation that Suncor can improve performance as it grows; the expectation that by investing in technology and innovation, Suncor will continue to lower the carbon footprint of the oil sands and that it will continue to invest in renewable sources of energy; Suncor's goals and expectations around EMS, including the expectation that its implementation will be complete by the end of 2016; the commission date of the Cedar Point II wind farm planned for December 2015 and the expectation that this will add another 100 MW to Suncor's installed wind capacity; the carbon price assumptions used when Suncor models the emissions associated with its future operated production; Suncor's goal for oil sands to provide one of the lower carbon sources of refined products; the potential productive life of Suncor's assets; the expectation that the Fort Hills project will have a production capacity of 180,000 bbls/day of bitumen and the expectation that this will add over 3 megatonnes of CO_2e to Suncor's operated GHG emission profile; the expectation that production at Fort Hills will start in late 2017; Suncor's goals and initiatives around safety; expected benefits of initiatives to treat and reuse water; expectations for the Water Technology Development Centre, which is expected to begin construction in 2015 and open in 2017; the expectation that the first commercial-scale biodiesel plant in which Suncor is participating will be operational by the end of 2015; Suncor's stakeholder relations policies and practices; the expectation that construction of the Rocky Mountain Pipeline expansion will be completed in 2015; the expectation that additional First Nation advisory committees could be up and running in 2015; the expectation that the Energy Futures Lab will launch in the fall of 2015; first oil from Hebron is expected in 2017; and estimates of future GHG emissions and emissions intensity.

Forward-looking statements and information 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, interest rates and currency exchange rates; fluctuations in supply and demand for Suncor's products; the successful and timely implementation of capital projects, including growth projects and regulatory projects; 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 taxes or changes to fees and royalties, such as the notices of reassessment ("NORs") received by Suncor from the Canada Revenue Agency, Ontario, Alberta and Quebec, relating to the settlement of certain derivative contracts, including the risk that: (i) Suncor may not be able to successfully defend its original filing position and ultimately be required to pay increased taxes, interest and penalty as a result; or (ii) Suncor may be required to post cash instead of security in relation to the NORs; changes in environmental and other regulations; the ability and willingness of parties with whom we have material relationships to perform their obligations to us; outages to third-party infrastructure that could cause disruptions to production; the occurrence of unexpected events such as 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 systems by computer hackers or cyberterrorists, and the unavailability or failure of such systems to perform as anticipated as a result of such breaches; 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; maintaining an optimal debt to cash flow ratio; the success of the company's risk management activities using derivatives and other financial instruments; the cost of compliance with current and future environmental laws; risks and uncertainties associated with closing a transaction for the purchase or sale of an 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 and the receipt of any required regulatory or other third-party approvals outside of Suncor's control that are customary to transactions of this nature; 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 2015 dated April 29, 2015 and its Annual Information Form, Form 40-F and Annual Report to Shareholders, each dated February 26, 2015, 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.

Non-GAAP measures

Certain financial measures in Suncor's 2015 Report on Sustainability – namely cash flow from operations, operating earnings and oil sands cash operating costs per barrel – are not prescribed by Canadian generally accepted accounting principles ("GAAP"). These non-GAAP measures are defined and reconciled in Suncor's Management's Discussion and Analysis for the year ended December 31, 2014.

These non-GAAP financial measures do not have any standardized meaning and therefore are unlikely to be comparable to similar measures presented by other companies. These non-GAAP financial measures are included because management uses the information to analyze operating performance, leverage and liquidity, and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP.

Reclamation

Reclamation at Suncor is a carefully monitored process with two distinct components: (i) transformation of the area, including tailings ponds, into a solid material that can support vegetation, wildlife and landscape restoration, which includes landform design and soil placement; and (ii) re-vegetation in a way that the reclaimed landscape can support vegetation and wildlife as a self-sustaining ecosystem. When Suncor claims that it has reclaimed land or plans to reclaim land, the reclaimed land will have met or is intended to meet the two distinct components identified in this paragraph.

BOEs

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 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.

Suncor

References to “Suncor”, “we”, “our” and “the company” in Suncor’s 2015 Report on Sustainability mean Suncor Energy Inc., its subsidiaries, partnerships and joint arrangements, unless the context requires otherwise.

Partnerships

The use of “partnership” throughout Suncor’s 2015 Report on Sustainability does not necessarily mean a partnership in the legal context.