

OIL SANDS PERFORMANCE REPORT 2016



Shell Canada Limited

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INTRODUCTION

This is Shell's eighth consecutive report on performance in our oil sands operations.

The annual update shares details on our efforts and progress in developing Alberta's oil sands in an economically, socially and environmentally responsible way. This report is intended for those who have interest in our performance and a desire to better understand oil sands development.

In March 2017, Shell group agreed to sell to Canadian Natural Resources Limited (Canadian Natural) its 60% interest in the Athabasca Oil Sands Project (AOSP), accounted for as a joint operation, its 100% interest in the Peace River Complex in-situ assets including Carmon Creek, and a number of undeveloped oil sands leases, all in Alberta, Canada. The consideration is approximately \$8.5 billion USD, comprising \$5.4 billion USD in cash and around 98 million Canadian Natural shares valued at \$3.1 billion USD as at 9 March 2017. The transaction is estimated to result in a post-tax impairment loss of \$1.3 billion USD to \$1.5 billion USD, subject to adjustments. In a related transaction, Shell group and Canadian Natural have agreed to jointly (50:50) acquire Marathon Oil Canada Corporation (MOCC), which has a 20% interest in the AOSP, for \$1.25 billion USD each. Following these transactions, Shell Canada Energy will continue as operator of the Scotford Upgrader and the Quest carbon capture and storage (CCS) project. Subject to regulatory approvals, the transactions are expected to close in mid 2017. Subject to closing of these transactions and additional further conditions, Shell group may swap its purchased interest in MOCC for a 20% interest in the Scotford Upgrader and Quest CCS project. If the swap were to occur, Shell group would fully exit AOSP mining operations and have a 20% interest in the Scotford Upgrader and Quest CCS project.

For more information on Shell's operations in Canada, visit www.shell.ca

ABOUT THE DATA

The data presented here covers the areas of safety, environment, reclamation and community and provides information on Shell's operating performance for 2016 for:

- Muskeg River and Jackpine Mines (referred to jointly as "Shell Albian Sands");
- Scotford Upgrader;
- Quest Carbon Capture and Storage Facility; and
- Peace River and Cliffdale In Situ operations

Unless otherwise noted, all data presented for the Muskeg River Mine, Jackpine Mine, Scotford Upgrader and Quest Facility is in reference to total Athabasca Oil Sands Project (AOSP) performance before division amongst joint venture owners. The AOSP is a joint venture operated by Shell, and owned among Shell Canada Energy (60%), Chevron Canada Limited (20%), and Marathon Oil Canada Corporation (20%). Data presented for In Situ operations is 100% Shell share. All monetary amounts referred to in the data are in Canadian dollars unless otherwise noted.

SAFETY

Safety is our top priority and a core value at Shell, and the term "Goal Zero" is used often. It means we strive for no harm to people and no leaks; and it is our primary consideration for the health and safety of people and the environment in all aspects of our operation.

We believe it is possible to operate safely and incident-free despite the often difficult conditions in which we work. In 2016, Oil Sands leaders made a renewed commitment to achieving a Goal Zero future through their care for people, employing meaningful team engagement around safety, taking accountability for training our people and providing the right resources to conduct work safely, maintaining focus on managing the inherent safety risks in our business and finally, learning from past incidents so history isn't repeated.

We continuously work to strengthen our safety culture through company-wide initiatives and site-level programs that focus on training, coaching, leadership and celebrating exemplary safety behaviours.

Shell Albion Sands

In 2016, during spring maintenance outages, Shell Albion Sands connected safety behaviours to a charitable outcome. For every incident-free "Goal Zero" day a monetary value was set aside by AOSP and pooled with contributions from some of our contractor partners. The end result was an inspired Albion workforce that only missed Goal Zero on one day, and a benefit to the local region with the purchase of much-needed neonatal warmers for the Northern Lights Regional Health Centre in Fort McMurray, Alberta.

Personal behaviours and decision-making influence safety performance which is why a Goal Zero committee was formed at the end of 2016. The committee consists of front-line workers from Shell and our contractor partners empowered to help develop programs.

Albion also employs a successful Hazard Identification program and continues to strengthen Visible Safety Leadership processes aimed at building safe behaviours and developing leadership safety engagement skills.

Scotford Upgrader

The Shell Scotford site implemented an Adopt-a-Crew program during the 2016 spring and fall turnarounds. The program focused on building relationships between Shell staff and our contractor workforce by pairing Shell and contractor leadership to positively influence safety culture. Results were encouraging with participating crews experiencing 50% fewer incidents and injuries than those not involved in the program.

Scotford's behaviour based safety program called STEP (Safety Through Employee Participation) was reformed in 2016 to better provide data specific to individual production units. The change aims to decrease risk exposures by increasing leadership action and understanding among workers of the specific behavioral hazards prevalent in their units.

In 2016, Scotford greatly improved process safety through the Flange Management Program during their spring turnaround. With over 6,000 connections to manage during the turnaround, mechanical contractors were deeply engaged and a robust program including pressure testing and surveillance was put in place. The teams involved achieved a no-leak start-up and will build on this success going forward both at Scotford and by sharing this knowledge across Shell.

SAFETY (CONTINUED)

Oil Sands 2016 Safety Performance

Total recordable case frequency (TRCF) is a key measure of safety performance and shows the rate of recordable injuries that required medical attention per one million hours worked by employees and contractors. In 2016, our oil sands operations had 34 recordable injuries for a TRCF of 2.15. This represents improved safety performance when compared to 2015 but still not the Goal Zero performance we strive for. Throughout the life of our oil sands operations our safety performance will continue to receive significant focus and attention.

A process safety event is a leak or spill of hazardous material that could cause harm to people as well as damage to the environment, or our assets. We continued our process safety improvement in 2016, extending a positive trend of process safety performance over the past five years. We measure and report in accordance with the significance of incidents, with Tier 1 as the most significant. In 2016 there were no Tier 1 American Petroleum Institute (API) significant process safety incidents and only one Tier 2 API incident – the fewest in our oil sands history.

Wildfire Response

In May 2016 a wildfire spread across approximately 590,000 hectares in northern Alberta destroying portions of the Regional Municipality of Wood Buffalo, including parts of Fort McMurray near our oil sands operations, and inciting a state of emergency.

On May 3 we temporarily suspended our mining operations to focus our resources on the safety of our people and the wider community. We provided food and shelter to displaced people and their pets at our Albion Village work camp, and safely evacuated 9,920 employees, contractors and community members from our Albion airstrip without an incident. Our emergency response teams were deployed on the ground in Fort McMurray and provided support to local and provincial fire crews. Shell also donated fuel to emergency services in the region.

In November 2016 our efforts in the response and recovery were recognized by the Alberta Premier with a "Heroes of the Wildfire" award. Shell also received the 2016 Alberta Emergency Management Agency Achievement Award in the category of Responding to a Significant Event.

SAFETY DATA

SAFETY	2012	2013	2014	2015	2016*
Exposure hours (millions)	20.1	19.5	19.2	16.7	15.8
Total recordable cases	60	49	36	37	34
Total recordable case frequency	3.00	2.51	1.87	2.21	2.15
Lost-time injuries	4	5	3	5	3
Lost-time injury frequency	0.20	0.30	0.16	0.30	0.19

*Due to changes in the methodology of collecting data, the 2016 data is not comparable to previous years.

AIR (GREENHOUSE GASES)

We strive to reduce the Greenhouse Gas (GHG) footprint of our oil sands operations. On a well-to-wheels basis, GHG emissions from oil sands crudes are greater than the average emissions of crudes refined in the United States according to research by IHS Markit. However, the GHG intensity of Shell's oil sands operations has been improving for several years due to operational enhancements, and the successful operation of Quest has improved Shell's performance even further (see Quest below).

Through operational excellence, we have improved approximately 3% each year over the past six years for a total 18% decline in GHG intensity. In 2016, we successfully completed a pilot program at Shell Albian Sands that avoids low quality, poor processing material, leading to improvements in energy efficiency and reduced emissions. The Scotford Upgrader won the Canadian Industry Program for Energy Conservation (CIPEC) leadership award for Energy Performance Management for its Quest Demineralized Water preheat project which uses waste heat from Shell's CO₂ capture unit to preheat demineralized water used as boiler feedwater. This heat integration reduces the quantity of natural gas consumed as well as Scotford's CO₂ footprint.

Quest

The Quest carbon capture and storage project in Alberta launched in 2015, and in 2016 it captured over one million tonnes of CO₂ from the Scotford Upgrader for storage deep underground – the equivalent to emissions from about 250,000 cars. Quest has a rigorous monitoring program to ensure the CO₂ remains safely and securely in place. This includes continuous pipeline monitoring and early warning systems, groundwater sampling and 3-D seismic surveying.

In its first year of operation Quest has performed better than planned, both in preventing CO₂ from entering the atmosphere and in safely storing that CO₂. Both its capture technology and storage capability have helped Quest exceed its target of capturing one million tonnes of CO₂ per year. Through careful study and monitoring, the subsurface geology is proving ideal for long-term, safe storage of CO₂. Operating costs for Quest are also 20–30% less than anticipated, mainly due to lower fixed costs and energy efficiency savings.

By capturing one-third of direct CO₂ emissions from the Scotford Upgrader, Quest helps decrease the GHG intensity of our operations and brings our oil sands products more in line with the average emissions of North American crude oil.

Quest is the oil sands first carbon capture and storage (CCS) project and serves as a model for advancing and deploying more CCS facilities in other industrial settings worldwide.

Learn more about Quest at www.shell.ca/quest

AIR (GREENHOUSE GASES) (CONTINUED)

GHG DATA

CO₂					
Oil Sands Operations – Muskeg River Mine (MRM), Jackpine Mine (JPM), Scotford Upgrader and In Situ					
	2012	2013	2014	2015***	2016
Total direct emissions (Mt CO ₂ e)	5.3	5.3	5.4	4.8	4.1
Energy Indirect Total GHG* (Mt CO ₂ e)	1.7	1.9	1.6	1.6	1.6
Total emissions (Mt CO ₂ e)	7.0	7.2	7.1	6.4	5.8
Total CO ₂ Intensity (kg CO ₂ e/bbl)	82.2	80.9	78.4	73.6	62.6
Total direct emissions (Mt CO ₂ e) In Situ	0.56	0.57	0.50	0.40	0.38
Energy Indirect Total GHG (Mt CO ₂ e) In Situ	0.15	0.13	0.10	0.08	0.08
Total direct emissions (Mt CO ₂ e) Scotford Upgrader	2.98	3.25	3.42	2.91	2.28
Energy Indirect Total GHG* (Mt CO ₂ e) Scotford Upgrader	0.38	0.39	0.20**	0.33**	0.30**
Total direct emissions (Mt CO ₂ e) JPM and MRM	1.73	1.48	1.52	1.48	1.47
Energy Indirect Total GHG (Mt CO ₂ e) JPM and MRM	1.21	1.34	1.31	1.17	1.26
Total CO ₂ Stored – Quest (Mt CO ₂)	N/A	N/A	N/A	0.37	1.11
Net CO ₂ Reduction – Quest (Mt CO ₂)	N/A	N/A	N/A	0.32	0.95

Totals may not add due to rounding.

*Energy Indirect Total GHG includes import electricity and steam/heat.

**Since 2014 Energy Indirect Total GHGs excludes indirect emissions from import hydrogen; previous years have not been recalculated.

***Reflects the oil sands CO₂ emissions and CO₂ intensity performance, including Quest operations, as per ISO 14064 standards.

WATER

Oil sands mining, in situ and upgrading operations require water for separating bitumen from sand, producing hydrogen and steam, and for cooling hydrocarbon streams. Our mining operations are located near the Athabasca River, the Scotford Upgrader operates near the North Saskatchewan River and our in situ operations are located by the Peace River.

In 2016 Shell used 1.28 barrels of water from the Athabasca River for every barrel of bitumen extracted from our mining operations and 2.36 barrels of freshwater overall (including river water – minus FAS, groundwater, precipitation and surface water run-off that is collected and retained). We use recycled water to make up the remainder of the water used for extraction. In 2016 our water recycle rate was 80%, which is a decrease compared to previous years.

In 2016, Albion withdrew 18.2 Mm³ of water from the Athabasca River, significantly below our licence limit but an increase compared with 2015. More total fresh water intake was required to make up our water inventory as a result of below average precipitation and snow melt in the region in previous years.

At the Scotford Upgrader, we draw water to cool hydrocarbon streams and produce hydrogen. Scotford uses about 0.4 barrels of water from the North Saskatchewan River for every barrel of bitumen that is upgraded and around 0.5 barrels of freshwater overall (including river water, precipitation and surface water run-off). About 90% of the wastewater from the upgrading process is reused in operations and the final wastewater effluent is disposed of via deep well injection. Effluent from the treatment of raw river water is returned to the river after testing to meet environmental standards.

WATER DATA

WATER	2012	2013	2014	2015	2016
SCOTFORD UPGRADER					
Total water use (million m ³)	7.3	7.6	7.9	7.2	8.2
Net Fresh Water Consumption (million m ³)	5.6	5.4	6.0	5.2	5.9
Total Effluent treated and returned to the river (million m ³)	1.7	2.2	1.9	2.0	2.3
Percentage net fresh water consumption	76%	71%	76%	72%	72%
Fresh water intensity (bbl water consumed/bbl MRM and JPM bitumen)	0.45	0.42	0.45	0.40	0.43
MRM AND JPM*					
Total Water Intake (million m ³) = Freshwater from the Athabasca River including FAS** + Freshwater from other sources + recycled pond water	143.1	140.6	150.4	141.7	162.3
Total Water Consumption (million m ³) = (Freshwater from the Athabasca River + Freshwater from other sources + recycled pond water) – FAS	142.6	140.2	150.0	141.3	161.9
Mine Recycle Water Use (million m ³)	117.5	105.7	117.5	119.9	128.9
Athabasca River Water Withdrawal (million m ³), includes FAS					
Flow augmentation system – augmenting the flow in Jackpine Creek is a regulatory requirement in winter months as we have mined the tributaries that feed into the creek	15.1	16.0	15.5	12.1	18.2

WATER (CONTINUED)

WATER	2012	2013	2014	2015	2016
MRM AND JPM*					
Athabasca River Water Consumption (million m ³), minus FAS	14.6	15.6	14.7	11.7	17.9
Groundwater Consumption (million m ³)	4.4	5.2	4.1	5.8	8.5
Surface Water Consumption (million m ³)	6.1	13.7	13.3	4.0	6.7
Percentage Freshwater Consumed = (River water + GW + SW runoff – FAS)/Total Water consumption	18%	25%	22%	15%	20%
Percentage Recycled Water Pond = (Mine Recycled water use/Total water consumption)	82%	75%	78%	85%	80%
Percentage Athabasca River Water Consumed = (Athabasca Riverwater Consumption/Total Water Consumption)	10%	11%	10%	8%	11%
Percentage Groundwater = (Groundwater consumption/Total Water Consumption)	3%	4%	3%	4%	5%
Percentage Surface Water = (Surface water consumption/Total Water Consumption)	4%	10%	9%	3%	4%
Athabasca River Water Intensity (bbl river water/bbl bitumen) = Athabasca Riverwater consumed/bbl bitumen)	1.19	1.21	1.14	0.90	1.28
IN SITU					
Total Freshwater Consumption (million m ³)	1.7	1.6	1.7	1.7	1.5
Freshwater Intensity (bbl water consumed/bbl in situ bitumen)	1.38	1.40	1.61	2.16	2.14

*The water data for the Muskeg River and Jackpine Mines is portrayed differently to reflect the distinction between water that we intake (which includes our FAS**) versus water we consume in our operations.

**FAS – Flow augmentation system.

LAND

Canada's oil sands lie under approximately 142,200 km² of land. Only about 3% of that area (only about 0.01% of the Canadian Boreal Forest) could potentially be impacted by mining operations as the vast majority of oil sands deposits lie too deep and can only be recovered through in situ methods, which cause less direct land disturbance.

Alberta law requires oil sands operators to reclaim all lands disturbed by oil sands operations. Before any shovel breaks ground, companies must have developed reclamation and closure plans that span the life of the project.

Oil sands mining operations have long life spans and typically produce for over 40 years. During that time access to the land is required to mine the deposits and to accommodate associated infrastructure for hauling, extraction and processing.

Before mining begins, the material overlaying oil sands deposits is removed and stored to preserve it for when it is needed again for reclamation. This represents a temporary impact to the ecological function of the land for a period of time and highlights the importance of reclamation in returning the land to productive use.

Reclamation involves refilling the mined out areas with tailings and re-establishing contours that fit within the natural landscape. Previously salvaged material including top soils are then replaced and planted with suitable vegetation. Plant seeds are harvested locally, as part of an Oil Sands Vegetation Cooperative in which Shell has taken a leadership role. These seeds are stored in a greenhouse until they are needed for reclamation.

Although it will not be exactly the same as the original landscape, the land disturbed by our oil sands operations will be reclaimed to a condition that supports a self-sustaining, locally common boreal forest, as required by law.

We are committed to starting large scale reclamation of our mining area within 20 years of our first land disturbance. Though full reclamation is a staged process which takes decades to complete, reclamation work at our sites is constantly underway and begins years before it is required.

Compensation lakes are constructed to compensate for fish habitat loss associated with mining activities, as required by the Department of Fisheries and Oceans. We have two compensation lakes – Jackpine Lake and Mrs. T's Lake – and in each we have established rat root wetland plants which hold medicinal significance to local Indigenous groups. In 2016 Shell planted 6,000 rat root plants at Mrs. T's Lake.

We reclaimed 35.4 hectares (ha) of land and planted over 190,000 native trees and shrubs at our mine site in 2016. To date, we have salvaged and stockpiled approximately 47 Mm³ of soil for future reclamation and a total of 221ha of land has been permanently reclaimed at our mine site.

One of the ways we mitigate our environmental impact is through land conservation activities which help compensate for land disturbance while mining operations are underway. We focus these activities either in the boreal region or in areas that provide significant wildlife habitat.

Over the last 10 years, Shell has conserved 3,693 acres of boreal forest, including the Shell True North Forest, through a partnership with the Alberta Conservation Association. This program includes restoration and protection of 360 acres of wetland and planting over 470,000 trees in cooperation with Tree Canada. In addition, Shell has worked with Ducks Unlimited Canada to establish a nearly 6,000-acre area that conserves important native prairie grassland and wetland habitats called the Shell Buffalo Hills Conservation Ranch.

LAND (CONTINUED)

LAND DATA

LAND	2012	2013	2014	2015	2016
MRM					
Total active footprint – mine + plant size (ha)	8,156	8,281	8,353	8,356	8,633
Permanent reclamation (ha) (cumulative)	38.7	166.1	166.1*	166.1	188.3
Temporary reclamation (ha) (cumulative)	196.0	158.0	154.2	154.2	149.0
JPM					
Total active footprint – mine + plant size (ha)	4,925	5,179	5,607	5,337	5,485
Permanent reclamation (ha) (cumulative)	0	0	0	19.7	32.9
Temporary reclamation (ha) (cumulative)	3.3	57.1	57.4	57.4	57.4

*This figure was rounded down in the 2014 Oil Sands Performance Report and has now been adjusted.

TAILINGS

Oil sands ore is processed with warm water to separate the sand from the bitumen. Tailings is a term used to refer to the remaining sand, silt, clay, water and residual hydrocarbons that remain once the bitumen is separated.

Tailings are an important part of any mining operation. Tailings ponds allow us to recycle water and reduce the amount of river water required for the production process. Around 80% of the water we use in our oil sands mining operations is recycled from the tailings facilities at our mines.

Tailings are initially stored in above ground facilities but as mining progresses, tailings are deposited into the mined out pit. This in-pit backfilling process begins about eight to 10 years after mining has started and once mining has progressed enough that containment can be built within the mined-out area. In-pit placement of tailings has begun at Muskeg River Mine where approximately 12.4 km² of the total tailings area is in-pit.

Tailings are carefully managed to minimize impact to the surrounding environment and wildlife. The separation process leaves small amounts of residual bitumen which can end up in tailings and float to the surface posing a risk to waterfowl. Tailings are monitored continuously and sophisticated bird-detering technology is used to prevent birds from landing on the water.

At the Muskeg River and Jackpine mines, tailings areas covered 45.7 km² at the end of 2016. This is in line with the planned development of the mines, as the size of the ponds has increased to both support ongoing production and accelerate the reclamation of older ponds.

While the water from tailings ponds is constantly recycled, sand particles in the mixture settle to the bottom relatively easily but the tiny clay and silt particles called fines, or fluid fine tailings (FFT), remain suspended in the fluid and can take many years to settle. This increases the time required to reclaim tailings as well as the space needed to store them.

We have invested approximately \$474 million since 2005 to develop technologies that speed up the drying or dewatering process for FFT. In 2016, we processed about 3.7 Mm³ of FFT at our mines through drying, flocculation and centrifuging.

Tailings Policy and Regulation

In March 2015, the Government of Alberta introduced the Tailings Management Framework (TMF), a policy designed to manage existing and new tailings pond accumulation and remediation. The TMF and associated regulation will manage tailings throughout a project life cycle and will include limits on tailings accumulation. The framework also ensures tailings are treated and progressively reclaimed and all fluid tailings are 'ready-to-reclaim' (as per the TMF definition) within 10 years of the end of mine life. Directive O85 came into effect in July of 2016 to align with and enable the implementation of the TMF. Shell submitted the AOSP Fluid Tailings Management Plan for approval in October of 2016. As of March 2017, our plans remain under review by the Alberta Energy Regulator.

TAILINGS (CONTINUED)

TAILINGS DATA

TAILINGS — ANNUAL FLUID FINES	2012	2013	2014	2015****	2016
MRM					
Fluid fine tailings growth (millions m ³)	8.7	8.3	N/A*	6.4	7.4
Total fluid fine tailings (millions m ³)***	N/A	N/A	N/A	94.4	101.8
Fines capture (millions m ³)	2.45	3.17	7.06**	N/A	N/A
JPM					
Fluid fine tailings growth (millions m ³)	4.14	3.59	N/A*	4.0	4.0
Total fluid fine tailings (millions m ³)***	N/A	N/A	N/A	23.6	27.6
Total fluid fine tailings not including centrifuge (millions m ³)	N/A	N/A	N/A	22.1	23.9
Total centrifuge (millions m ³)	N/A	N/A	N/A	1.5	3.7
Fines capture (millions m ³)	1.63	1.78	1.17	N/A	N/A

Fines capture figures reflect tailings fines materials that have been actively treated using a tailings technology.

**Following the release of the Tailings Management Framework and subsequent suspension of D074 by the Alberta Energy Regulator, new reporting parameters are being developed for D085. The 2014 volumes have been adjusted to establish Legacy Fluid Tailings Baseline (Jan 1, 2015). This adjustment makes 2014 annual growth figures not applicable. From 2015 total volume is reported as per D085 requirements.*

***In 2014, Shell received credit for fines capture that was achieved in a previous year, but not previously credited.*

****Volumes measured annually each June.*

*****In 2015 the total volume of centrifuge was added to the tailings inventory. This figure has been separated for clarification in 2015 and 2016.*

ENVIRONMENTAL COLLABORATION

Canada's Oil Sands Innovation Alliance (COSIA)

Shell is a founding member of COSIA, a first-of-its-kind consortium of oil sands producers that have agreed to share environmental technology in order to accelerate improvements in oil sands environmental performance with a focus on four environmental priority areas – greenhouse gases, land, water and tailings. Since the inception of COSIA in late 2012, Shell has contributed \$77 million of technology, and led 58 research initiatives within COSIA.

In an industry where the time to advance physical infrastructure and technology is often measured in decades, COSIA is harnessing the principles of collaboration to do things quicker and better.

We work to improve the environmental performance of our oil sands production through research, collaboration, innovation and technology development. Leveraging technical expertise globally within Shell and taking part in collaborative industry associations like COSIA help us identify and act on promising opportunities while reducing risk, replication of effort, cost and time.

Learn more about COSIA at www.cosia.ca

NRG COSIA Carbon XPRIZE

The NRG COSIA Carbon XPRIZE is a \$20 million global competition that challenges the world to reimagine what can be done with CO₂ emissions by incentivizing and accelerating the development of technologies that convert CO₂ into valuable products.

Of the 47 entries submitted from around the world, 27 semi-finalist teams were announced in October 2016. The proceeding teams include carbon capture technology companies, top-tier academic institutions, non-profits and new start-ups.

The competition was launched in 2015 by XPRIZE along with funding from members of Canada's Oil Sands Innovation Alliance (COSIA) and power company NRG. COSIA member funding of the competition is through a joint industry project with eight of COSIA's member companies including Shell.

Learn more about the NRG COSIA Carbon XPRIZE at <http://carbon.xprize.org>

INVESTING IN THE COMMUNITY

Fostering and maintaining a good working relationship with local communities is a core value to Shell; our stakeholders grant us our social license to operate. Active engagements and the practice of listening and responding help us learn from the ideas, experiences and concerns of those who live near our operations and those who take an interest in our business.

As the average life cycle of an oil sands project is typically 40 years, we have a long-term interest in the communities in which we operate. We are committed to working with the communities affected by our projects and operations to mitigate impacts and provide benefits to the communities.

For more information about how we work with communities, visit www.shell.ca/community.

Indigenous Communities

Shell has been working closely with Indigenous Peoples in Canada for decades. Our engagements include direct consultation on projects and operations, ongoing interaction and collaboration through industry relations committees and through formal engagement with Elders, and First Nations and Métis Leaders.

We greatly value the perspectives and input of Indigenous communities into our development and have successfully established a number of agreements with several local First Nations and Métis groups. In 2016, Shell formalized its commitment to working with Indigenous Peoples and communities. A Canadian Indigenous Peoples strategy is being implemented across four core elements: community engagement, business development, community investment, and employment.

Driving consistency in our engagements and practices helps to build our reputation as a trusted partner. The Canadian Indigenous Peoples strategy provides our assets with an aligned approach to benefitting communities and provides tools, shared practices, and learning in order to develop actions with their communities of interest, aiming to understand the uniqueness of every community.

Shell provides opportunities to qualified local businesses and residents, with emphasis on ensuring Indigenous businesses are able to participate in the contracting and employment processes. Since 2005, the Athabasca Oil Sands Project has invested nearly \$1.9 billion with more than 70 Indigenous-owned businesses and contractors that provide a broad range of products and services for our operations.

Progressive Aboriginal Relations

Shell maintains gold certification for Progressive Aboriginal Relations (PAR), a Canadian Council for Aboriginal Business-sponsored program that acknowledges leadership and corporate performance in Aboriginal relations.

The certification is recognized as an indication of a good business partner, a great place to work and the company's commitment to prosperity in Aboriginal communities. The designation is supported by an independent, third-party verification of company reports and the final certification level is determined by a jury comprised of Aboriginal business people.

Read more about Shell's PAR certification on www.shell.ca

Visit the Canadian Council for Aboriginal Business website for more on PAR certification at www.ccab.com

Social Investment

Social investment is our voluntary contribution to communities in Canada. We seek to initiate and support programs relevant to our business activities and focus our social investment around science, education, innovation and business skills.

In 2016, Shell made approximately \$2.2 million in contributions on behalf of the AOSP and our in situ operations. Figures for social investment are all representative of 100% of the AOSP contributions unless otherwise noted. The AOSP social investments represented reflect the joint venture owner proportions: Shell Canada Energy 60%, Chevron Canada Limited 20%, Marathon Oil Canada Corporation 20%.

INVESTING IN THE COMMUNITY (CONTINUED)

Inside Education

In 2016 Shell partnered with Inside Education to provide further education around climate change and carbon capture and storage technology. As part of the funding provided by Shell, a team of four students and two teachers will attend the 2017 Generate Youth Energy & Climate Leadership Summit where Shell will participate on the Emissions panel along with Alberta Innovates, Emissions Reduction Alberta and COSIA.

Urban Reforestation

Shell, in partnership with Tree Canada, has supported urban reforestation projects in Strathcona County, Alberta, for over a decade. In 2016, Scoford volunteers and community members planted over 1,000 trees in Strathcona County, Fort Saskatchewan and Bruderheim.

Preventing Alcohol Related Trauma in Youth (P.A.R.T.Y.)

Shell supports the P.A.R.T.Y. program in a number of locations in Canada. In the 2016-17 school year, the program taught students in grades 9 and 12 the risks associated with drinking and driving in four of our Oil Sands communities, including Fort McMurray, Fort Saskatchewan, Lamont County and Thorhild County. Students had the opportunity to witness emergency response during a mock accident, visit an emergency room and hear from trauma doctors and nurses and understand the effects of impaired driving through simulation.

Father Mercredi Science and Technology Centre

Father Mercredi Science and Technology Centre provides students grades 7-12 with multiple Science, Technology and Math (STEM) learning opportunities, to prepare them with the knowledge and skills needed to pursue rewarding careers. With Shell's support, the school offers a number of unique opportunities for students to pursue their interests in STEM, including participation in provincial and national level Robotics and Skills Competitions, which help engage students in ways that are normally not offered to secondary students.

Fort Chipewyan Bicentennial Museum Cultural Heritage Project

The Fort Chipewyan Bicentennial Museum Cultural Heritage Project is a partnership with AOSP that includes monthly workshops to educate and involve community members in traditional activities and storytelling practices. This program engages community members and Indigenous Elders, and over time will increase the health and wellbeing, reaffirming and building self-identity, self-awareness, confidence and positive self-esteem in Fort Chipewyan.

Sagittawa Friendship Society

Shell supports the Sagittawa Friendship Centre's Extreme Career Exploration program providing the opportunity for career exploration to Peace River area youth through experiential learning activities and events.

INVESTING IN THE COMMUNITY (CONTINUED)

Employees in the community

Alberta Wildfire Response

When wildfire destroyed parts of Fort McMurray near our oil sands operations in May 2016, we focused on caring for our community which included strong volunteer support.

During evacuations, Shell employees donated their time to meet displaced coworkers and community members at arrival centres in Calgary and Edmonton where they provided supplies and logistical support. And in the following month, when it was time to re-enter the community, Shell employees worked over 1,000 volunteer hours in less than 10 days greeting residents at the Welcome Centres and stocking shelves at the local Food Bank.

Shell employee donations to the Red Cross amounted to nearly \$500K and were matched by Shell and the Alberta and Canadian governments.

Fuelling Kindness

Scotford volunteers spent three days completing random acts of kindness in 2016. Employees visited long-term care patients at local hospitals, bought coffee for community members and thanked emergency responders for their work in our communities. Scotford also completed over 50 Days of Caring in 2016 including activities ranging from organizing a community clean up, to cooking supper at the local Ronald McDonald House.

COMMUNITY AND SOCIAL INVESTMENT

	2012	2013	2014	2015	2016
Social Investment Spend (Millions \$)	3.9	4.2	3.6	2.2	2.2
Indigenous Contracting Spend (Millions \$)	175	206	182	121	75

GLOSSARY

Athabasca Oil Sands Project (AOSP)

A joint venture among Shell Canada Energy (Operator and 60% owner), Chevron Canada Limited (20%) and Marathon Oil Canada Corporation (20%), the AOSP consists of the Muskeg River and Jackpine Mines located north of Fort McMurray, Alberta and the Scotford Upgrader and Quest carbon capture and storage project, located near Edmonton, Alberta.

Bitumen

A thick hydrocarbon, referred to as heavy oil.

Centrifugation

The use of centrifuge force to extract process water from fluid fine tailings.

CO₂e

Carbon dioxide equivalent. The 100-year time horizon global warming potential of a specified gas expressed in terms of equivalency to CO₂. (Source: Specified Gas Emitters Regulation)

Direct Emissions

The release of specified gases from sources under the direct control of the operating facility expressed in tonnes CO₂e.

Effluent

Wastewater (treated or untreated) that flows out of a treatment plant, sewer, or industrial facility. (Source: Environment Canada)

Emissions Intensity

The quantity of specified gases released by a facility per unit of production from that facility.

FAS (Flow Augmentation System)

The FAS is designed to transfer additional water from the Athabasca River to Jackpine Creek at periods of low flow to prevent negative environmental impacts to Jackpine Creek.

Flocculation

The combination of single particles, or small groups of particles, into multi particle aggregates or "flocs".

Greenhouse Gas (GHG)

Mainly, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), all of which contribute to the warming of the Earth's atmosphere. (Source: Government of Alberta, Department of Energy)

ha

Hectare. A unit of surface area equal to a square that is 100 metres on each side.

In situ

Refers to various methods used to recover deeply buried bitumen deposits, including steam injection, solvent injection, electrical heating and cold production.

JPM

Jackpine Mine.

km²

Square kilometre. A unit of surface area equal to a square that is one kilometre on each side.

Lost-Time Injury Frequency

Refers to the rate of recordable injuries requiring time off work per one million exposure hours worked.

MRM

Muskeg River Mine.

Mm³

Millions of cubic metres.

m³

Cubic metre. A unit of volume or capacity equal to 1000 litres.

Mt (Megatonne)

Megatonne. A unit of mass equal to one million tonnes.

Reclamation

Returning disturbed land to a land capability equivalent to what it was prior to disturbance. Reclaimed property is returned to the Province of Alberta at the end of operations.

Tailings

The residual by-product that remains after the bitumen is separated from the mined oil sands ore; tailings are composed of water, sand, clay, heavy metals and residual bitumen.

Total GHG Emissions

Includes GHG emissions from direct and indirect sources.

Total Recordable Case Frequency

Refers to the rate of recordable injuries that required medical attention per one million exposure hours worked.

APPENDIX

Overall

Data cited in this report has been confirmed as of April 21, 2017.

CO₂

Total CO₂e intensity is calculated on the basis of operational emissions.

Social Investment

Shell's social investment spend does not include funding provided by Shell to Aboriginal neighbours as part of sustainability agreements or the value of local contracting agreements.

CAUTIONARY NOTE

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal entities. In this report "Shell group" and "Royal Dutch Shell" are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. In this report, all references to "Shell" refer specifically to Shell's oil sands business in Canada, which is owned by Shell Canada Energy and Shell Canada Resources. Likewise, the words "we", "us" and "our" are also used to refer to Shell Canada Energy's and Shell Canada Resources' oil sands business in Canada in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this report refer to companies over which Royal Dutch Shell plc either directly or indirectly has control. 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There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this report, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Royal Dutch Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; and (m) changes in trading conditions. 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