



Imperial



Energy solutions for a better tomorrow

Corporate sustainability report

**INDEX****INTRODUCTION****CORPORATE GOVERNANCE****MANAGING THE RISKS OF CLIMATE CHANGE****ENVIRONMENTAL PERFORMANCE****SAFETY, HEALTH & THE WORKPLACE****COMMUNITY & INDIGENOUS ENGAGEMENT****ECONOMIC DEVELOPMENT****PERFORMANCE DATA**

Imperial is committed to providing our shareholders and stakeholders with disclosures that impart meaningful insights about our business. This sustainability report addresses environmental, social and governance (ESG) areas of focus for the company. Our performance table and metrics include data up to year-end 2018.

# Index

<b>Introduction</b>	
Letter to stakeholders	01
Key sustainability priorities	02
Company operations	03
Canada's oil sands	06
Global ESG ranking	07
<b>Corporate governance</b>	
Corporate governance	09
Board diversity	10
Shareholder engagement	12
Stakeholder engagement	13
Ethics and integrity	15
Transparency and disclosure	17
Executive compensation	18
Director compensation	19
Risk management	20
Facility resiliency	21
Our management systems	22
All about OIMS	23
All about CIMS	24
Audits	25
<b>Managing the risks of climate change</b>	
Energy Outlook	27
Climate strategy	31
Imperial's progress	32
Innovation	33
Our future	34
Collaboration	35
Mitigating emissions in our operations	36
Digital technology	37
Providing solutions for our customers to reduce their emissions	38
Engaging in climate policy	39
<b>Environmental performance</b>	
Environmental management	41
Air emissions	43
Water management	44
Water commitment	45
Water strategy	46
Water innovation	47
Water metrics	48
Water use and performance	49
Land use and biodiversity	51
Caribou	52
Commitment to progressive reclamation	53
Cold Lake	54
Kearl	55
Tailings ponds	57
Decommissioning and remediation	59
Preventing unplanned releases	61
Waste management	63
<b>Safety, health &amp; the workplace</b>	
Workplace safety and security	65
Safety performance	66
Process safety	67
Security is everybody's business	68
Emergency preparedness and response	69
Inclusion and diversity	71
Self identification	72
Workforce diversity	73
Employee training and development	74
Workforce health and wellness	75
<b>Community &amp; Indigenous engagement</b>	
Indigenous engagement	77
Consultation	78
Business development	80
Workforce development	81
Community relations	83
Indigenous youth programs	84
Community investment	85
<b>Economic development</b>	
Economic development	89
Taxes and royalties	90
<b>Performance data</b>	91

# Letter to stakeholders

INDEX

We are inspired and committed to provide responsible, affordable energy to improve the quality of life – for Canadians and those around the world.

Imperial has worked to understand local, regional, national and global perspectives on resource development for nearly 140 years. Canadians understand that access to reliable and affordable energy enriches well-being and prosperity, at home and across the globe. Our customers, shareholders, business and government associates, and Indigenous and community neighbours all have high expectations of us. Through robust management of our company

and responsible development of resources, our strong talent pool, and access to step change technology, we strive everyday to meet those expectations.

## People are our strength

Canada leads the world in exemplary human rights. Within that framework, Imperial's approach reflects the value we place on safety, health, inclusion, diversity and human talent. We have an unwavering commitment to, and expect every person in our company to observe the highest standards of fairness, professionalism and integrity. This commitment starts with our board of directors and corporate governance policies. We demonstrate industry-leading safety performance. From a socioeconomic standpoint, we are committed to shared prosperity and capacity-building for Indigenous peoples and our local community neighbours.

## Imperial is taking action to manage the risks of climate change

Climate change is a global issue that requires global solutions. We recognize the dual challenge of supplying responsible and affordable energy with the need to take action on climate change. Imperial supports the work of the Paris signatories and believes our company has a constructive role to play in developing and deploying meaningful solutions.



## INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH & THE WORKPLACE

COMMUNITY & INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

A handwritten signature in black ink that reads "Brad Corson".

**Brad Corson**  
Chairman, President and CEO

# Imperial's key sustainability priorities

## INTRODUCTION

### CORPORATE GOVERNANCE

### MANAGING THE RISKS OF CLIMATE CHANGE

### ENVIRONMENTAL PERFORMANCE

### SAFETY, HEALTH & THE WORKPLACE

### COMMUNITY & INDIGENOUS ENGAGEMENT

### ECONOMIC DEVELOPMENT

### PERFORMANCE DATA

Imperial provides energy solutions people and society need while reducing environmental impacts and demonstrating shared commitment to improve the quality of life in Indigenous and operating communities.

Increasingly, our shareholders, stakeholders and the public regard management of environmental and social risks as integral to running a sound, successful business. Canada and Canadian companies rank among the best in the world when environmental, social and governance (ESG) scores are aggregated.<sup>(1)</sup>

Our approach to sustainability focuses on:

- Every day, keeping the importance of safety top of mind – Nobody gets hurt
- Becoming the most valued partner for Indigenous peoples, for key stakeholders and within our industry
- Maintaining an unwavering commitment to the highest ethical standards
- Providing responsible, reliable and affordable energy to improve Canadians' quality of life
- Reducing greenhouse gas emissions intensity
- Attracting, retaining, supporting and developing an inclusive and diverse, high-performing workforce
- Delivering operationally excellent performance while continuously improving
- Providing timely disclosures that provide meaningful insights to our stakeholders



# Company operations: Imperial in Canada

INDEX

As an integrated energy company, we explore for, produce, refine and market products essential to society.

Since 1880, Imperial has consistently demonstrated unwavering high standards, pioneering Canadian spirit, innovation and leadership in the challenging energy industry. At Imperial, we believe we can have reliable and affordable energy, a strong economy and a clean environment — and we're committed to making it happen.

In our upstream business, we are contributing to reliable, affordable supplies of oil and natural gas for Canadians. From coast to coast to coast, we play a major role in developing Canada's oil and natural gas resources, investing billions of dollars to select

the highest quality resources from opportunities in diverse geological and geographical environments.

We are Canada's largest refiner of petroleum products. We refine raw hydrocarbons into about 650 petroleum products essential to consumers and businesses: gasoline, diesel, heating oil, natural gas, lubricants, and chemicals used to make plastics.

Imperial offers these products and services to consumers across Canada as well as in export markets. In total, we refine and sell about a quarter of the petroleum products used every day by

Canadians. We are a leading marketer of fuels, lubricants, asphalts and specialty products.

In addition to Imperial's industrial and wholesale businesses, our retail brands, Esso and Mobil are familiar fixtures across Canada. For more than 80 years, Imperial and the Esso brand has been closely linked to hockey. Three stars were first awarded in the 1936-37 NHL season as a means for Imperial to advertise its Three Star brand of gasoline. Today, Three Stars remains an enduring symbol for excellence in performance — both in hockey and in business.



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

# Scope of Imperial's operations in Canada

Largest refiner and a major producer<sup>(2)</sup>

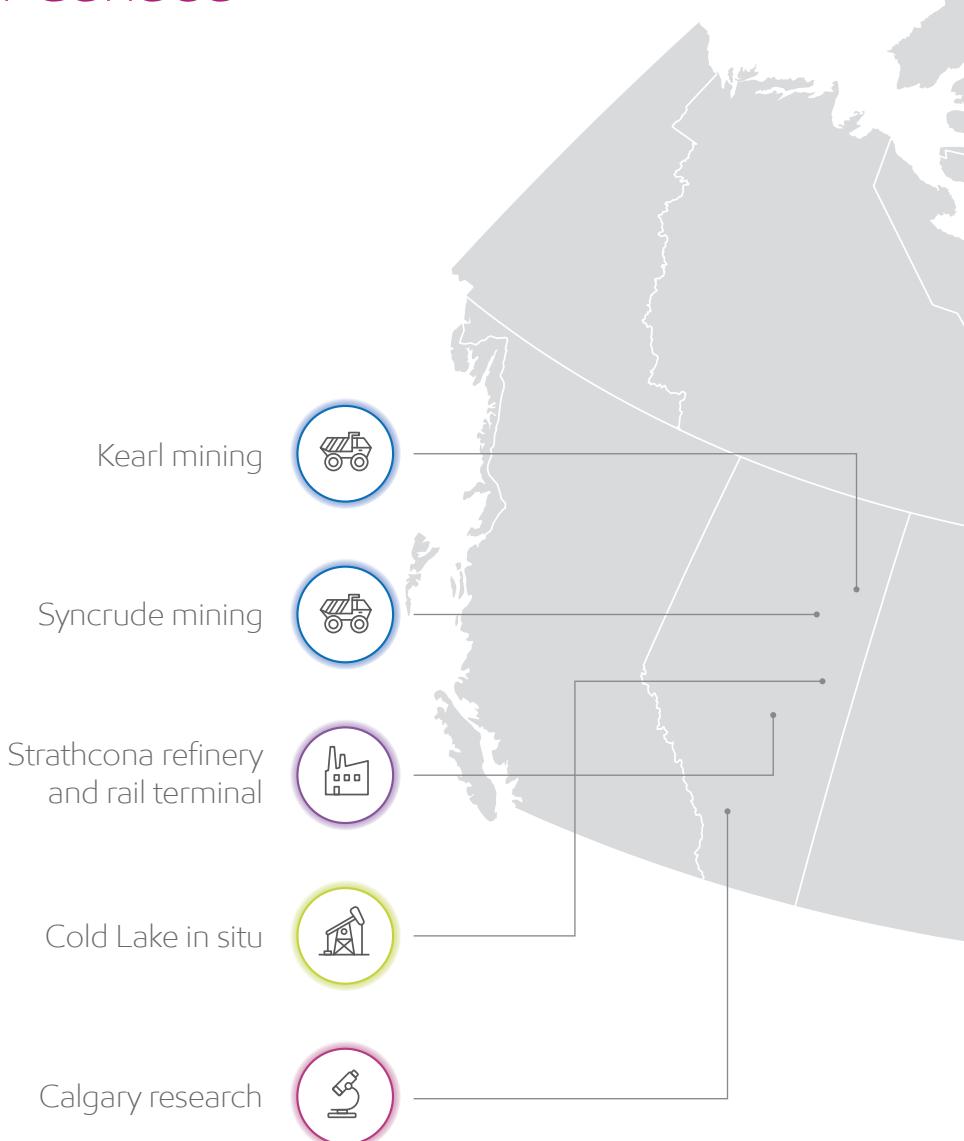
## Production



## Refining and supply



## Chemical





INDEX

## INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

 Fuels and lubricants marketing Distribution network Nanticoke refinery Sarnia refinery and chemicals Sarnia research

## INDEX

# Canada's oil sands

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

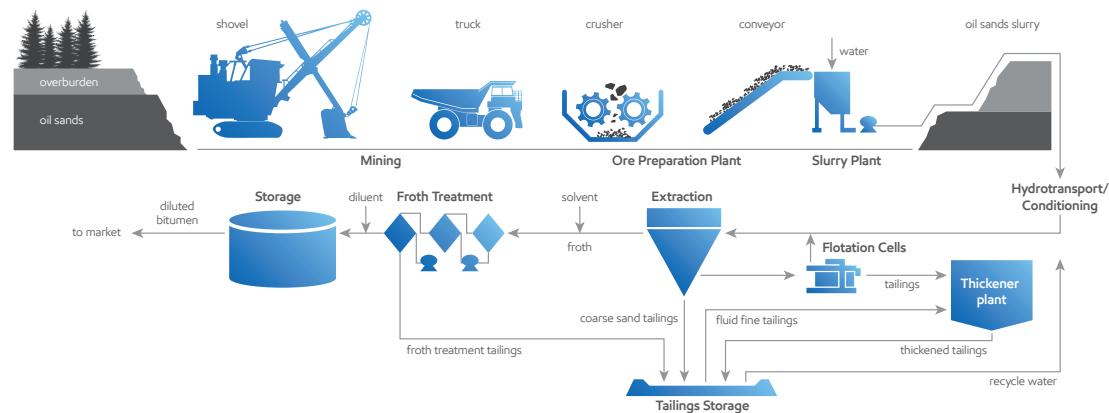
## PERFORMANCE DATA

## Canada's oil sands are a vital energy source for Canada, and the world.

Canada's oil sands contain about 164 billion barrels of oil recoverable using today's technology and are found in three main regions: the Athabasca region centred around Fort McMurray, Alberta; the Cold Lake area to the south; and the Peace River area to the west. Imperial has operations in the Athabasca and Cold Lake regions.

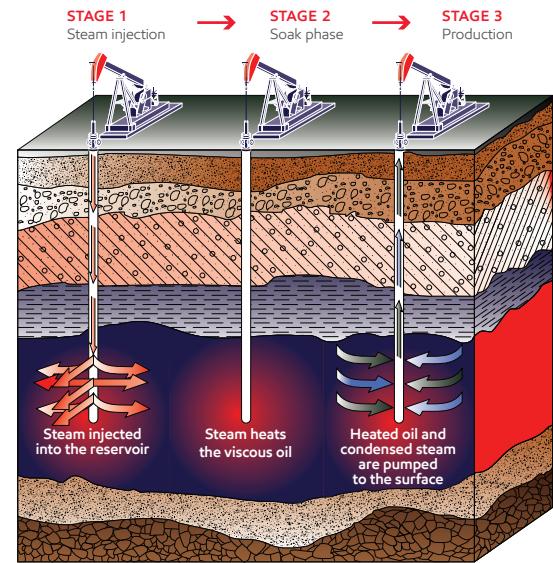
Oil sands deposits are a natural mixture of water, sand, clay and bitumen, which, itself is a large and complex mixture of hydrocarbons. In its natural state, bitumen is too heavy and thick to flow. There are two main recovery methods used today:

### Oil sands mining



**Mining** — in areas where the deposits are less than 70 metres from the surface, truck-and-shovel surface mining is used to excavate the oil sands ore. The ore is fed through crushers and then the crushed ore is mixed with hot water to begin separating the bitumen from the other components of the natural mixture. The mixture is then transported to central processing plants, where the bitumen is separated from the sand and fine materials. The separated bitumen is further processed; some oil sands operations have upgraders for this purpose, however, Imperial's Kearl mine uses a leading technology called paraffinic froth treatment (PFT) to create a product that is then diluted with lighter hydrocarbons so it can be moved through pipelines to refineries in Alberta and elsewhere.

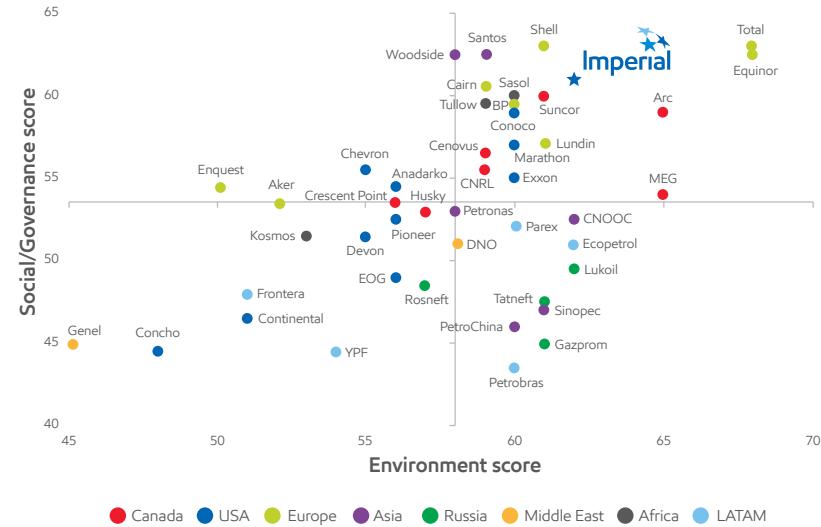
### In situ oil sands



**In situ** — about 97 percent of Alberta's entire oil sands deposits are too deeply buried to mine, so the bitumen is recovered using in situ technologies ("in situ" means "in place," because the bitumen is separated within the deposit not at the surface). There are two predominant technologies for in situ oil sands, cyclic steam simulation (CSS) and steam-assisted gravity drainage (SAGD). Pictured above is CSS that uses a single well and three stages to recover oil.

# Imperial is amongst the best globally in ESG ranking.

INDEX



## Relevant frameworks

This sustainability report is guided using the International Petroleum Industry Environmental Conservation Association (IPIECA) and the American Petroleum Institute (API) Oil and Gas Industry Guidance on Voluntary Sustainability Reporting. This report also cross-references Global Reporting Initiative (GRI) G3.1 indicators. Our Energy and Carbon Summary content is guided by the Financial Stability Board's Task Force on Climate-Related Financial Disclosures (TCFD).

In 2010, Lloyd's Register Quality Assurance, Inc. (LRQA) confirmed that our Operations Integrity

Management System meets the requirements of ISO 14001 standard for environmental management systems. LRQA also recognized that OIMS meets all requirements of the Occupational Health and Safety Assessment Series for health and safety management systems (OHSAS 18001) and certified our Global Product Quality Management System meets the ISO 9001 standard.

Business controls outlined in our Controls Integrity Management System (CIMS) meet or exceed the requirements of the Sarbanes-Oxley Act and the New York Stock Exchange (NYSE) American

listing standards. An independent assessment carried out in 2018 by registered auditors of PricewaterhouseCoopers LLP confirmed that our internal controls system is sound.

Our financial reporting is in accordance with regulatory requirements and United States Generally Accepted Accounting Principles.

Imperial contributes to the United Nations Sustainable Development Goals (SDGs) and the symbols featured in this report represent those most relevant to our focus areas.

## INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

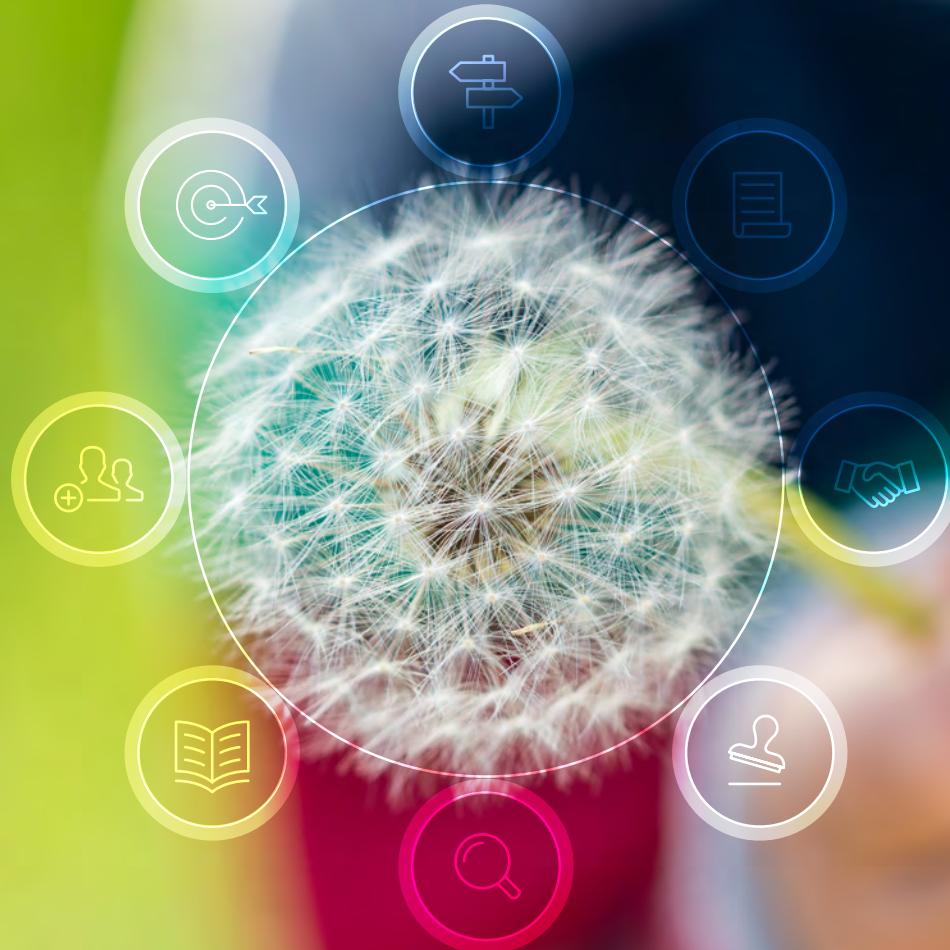
ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH & THE WORKPLACE

COMMUNITY & INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



## Corporate governance

Integrity and respect guides our actions

# Corporate governance



## Board leadership

Imperial has an unwavering commitment to high ethical standards, legal compliance and integrity, starting with our board of directors and corporate governance policies. The Nominations and Corporate Governance Committee monitors and recommends implementation of appropriate corporate governance standards and is responsible for identifying and recommending highly qualified directors.

Five of Imperial's seven board members are independent and meet the criteria for independence set by Canadian securities regulators, the U.S. Securities and Exchange Commission (SEC) and the NYSE American LLC. These directors provide thoughtful perspectives and strategic direction in support of the company's interests. The independent directors regularly meet in executive sessions without the presence of management. All board committees are chaired by an independent director. Learn more at [imperialoil.ca/en-ca/company/investors](http://imperialoil.ca/en-ca/company/investors).

## Board committees



### Community collaboration and engagement

Supports public awareness and consultation, government and Indigenous relations, community partnerships and investment programs.



### Audit

Provides oversight of disclosures, financial statements, internal accounting and financial controls, business controls, compliance with legal and regulatory requirements and performance of the audit function (including independence).



### Public policy and corporate responsibility

Assists the board by providing oversight on environmental, health and safety performance along with legislative compliance and the assessment of potential long term effects of public policy on corporate performance, including climate policy risk. Recommends desirable policies and actions.



### Executive resources

Ensures the compensation system is inherently designed to support the sustainability of the company's operations and the management of risk. Reviews and evaluates goals and objectives relative to compensation.



### Nominations and corporate governance

Monitors and recommends implementation of appropriate corporate governance standards. Responsible for identifying and recommending highly qualified directors including appointments to committees.

INDEX

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

# Board diversity

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

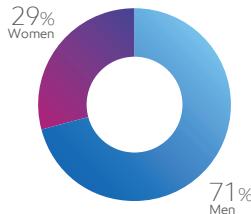


L to R: Jack Mintz, Miranda Hubbs, David Cornhill, David Sutherland, Brad Corson, Krystyna Hoeg, Dave Brownell

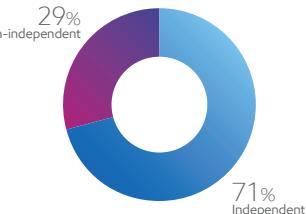
Imperial's board members have a diversity of gender, background, experience and skill. Women represent approximately 30 percent of the directors and a third of the executive officers of the company and its major subsidiary, Imperial Oil Resources Limited. Board members' differing perspectives support well-rounded decisions in pursuit of superior shareholder return.

## Board composition

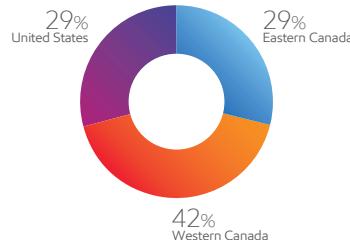
## Gender



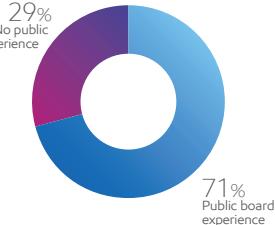
## Independence



## Regional association



## Public company board experience



## Energy industry experience



## CEO experience



### Board skills, diversity and experience<sup>(4)</sup>

	D.C. Brownell	D.W. Cornhill	K.T. Hoeg	M.C. Hubbs	B.W. Corson <sup>(5)</sup>	J.M. Mintz	D.S. Sutherland	CORPORATE GOVERNANCE
Gender	Male	Male	Female	Female	Male	Male	Male	MANAGING THE RISKS OF CLIMATE CHANGE
Age (as of February 13, 2019)	52	65	69	52	57	67	69	
Director since	November 1, 2018	November 29, 2017	May 1, 2008	July 26, 2018	September 17, 2019	April 21, 2005	April 29, 2010	
Citizenship	United States	Canadian	Canadian	Canadian	United States	Canadian	Canadian	ENVIRONMENTAL PERFORMANCE
Independent director	No	Yes	Yes	Yes	No	Yes	Yes	
Committee participation	ERC PP&CR N&CG CC&E	AC ERC PP&CR N&CG CC&E*	AC* ERC PP&CR N&CG CC&E	AC ERC PP&CR N&CG CC&E	CC&E	AC ERC* PP&CR* N&CG CC&E	AC ERC* PP&CR N&CG CC&E	SAFETY, HEALTH & THE WORKPLACE
Leadership of large organizations	•	•	•		•		•	COMMUNITY & INDIGENOUS ENGAGEMENT
Operations/technical	•	•			•		•	
Project management	•	•	•		•			
Global experience	•		•	•	•	•	•	ECONOMIC DEVELOPMENT
Strategy development	•	•	•	•	•	•	•	
Audit committee financial expert		•	•	•			•	
Financial expertise	•	•	•	•	•	•	•	PERFORMANCE DATA
Government relations	•				•	•	•	
Academic/research						•		
Information technology/ cybersecurity oversight				•				
Executive compensation	•	•	•	•	•	•	•	

AC – Audit Committee

CC&E – Community Collaboration and Engagement Committee

ERC – Executive Resources Committee

N&CG – Nominations and Corporate Governance Committee

PP&CR – Public Policy and Corporate Responsibility Committee

\* indicates chair of that committee.

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

# Shareholder engagement

We engage with our shareholders frequently to understand investors' interests and concerns, and to obtain their feedback.

Imperial has established procedures and communication avenues for interacting with shareholders, including direct interaction with senior leadership, investor relations' direct and virtual engagement, quarterly calls, investor days, the shareholder proposal process, and direct communication at the annual meeting. In addition, a wide range of information is published on Imperial's website to help shareholders manage their shares, such as annual and interim reports, filings, proxy circulars and key dates.

At the annual meeting of shareholders, the board chair and board of directors are readily accessible to investors for questions, feedback and further discussion. Similarly, our chairman, president and CEO and senior vice-presidents participate in Investor Days, providing further shareholder access to Imperial's Management Committee.

In addition to our ongoing discussion with investors and analysts, members of Imperial leadership teams regularly visit major investment markets including Toronto, New York and London, and participate

in multiple Calgary-based tours. The company's senior management regularly meets with institutional investors and shareholders through industry conferences, road shows and company-hosted investor events. Materials from these conferences and events are available on our website. In addition, the investor relations team proactively reaches out to shareholders to obtain views on matters identified by shareholders, and the team responds to shareholder and investor queries throughout the year.

The company annually solicits questions and comments from registered shareholders on the proxy form, which provides senior management with an indication of the issues that interest shareholders. Senior management reviews shareholder comments, and those requiring a response are answered individually.



 Shareholder engagement creates value both for Imperial and our investors. By proactively engaging in two-way communication, the company can put forward our corporate principles and policies, and share the advancement of our environment, social and governance (ESG) efforts. We also listen to what matters to our investors, and are very interested in understanding the priorities investors have regarding these issues.

**Jason Luinenburg** – Associate, Investor Relations

# Stakeholder engagement

INDEX

INTRODUCTION



Imperial works with a variety of internal and external stakeholders, including a broad range of individuals and organizations, Indigenous communities, operating communities, shareholders, customers, employees, suppliers and contractors, governments, regulators, and others. Our stakeholder engagement is guided by our principles of inclusion, respect, professionalism, timeliness, responsiveness and accountability.

Active engagement promotes a better understanding of peoples' concerns, contributes to good decision making, and helps us to identify mutually beneficial opportunities and resolve issues. Active listening and dialogue help us understand what matters to our neighbours and allows us to share our progress. Engagement takes many forms such as individual meetings, community presentations, open houses, community investment, newsletters and digital media. To facilitate candid feedback on our performance, Imperial regularly engages third party firms to conduct confidential, stakeholder surveys.

Effective management of stakeholder relationships is important to enhance the trust and confidence of communities with which Imperial interacts.

Emergency planning and preparedness are also essential. The company periodically conducts emergency simulations and drills to ensure our response in a crisis is effectively managed and communications are proactive, transparent and meaningful.



 *The shortest distance between two people is a conversation. Exchanging ideas, viewpoints and concerns is crucial to succeed in today's increasingly polarized communication landscape. We recognize that the most important thing we can do to engage with our diverse groups of neighbours across Canada is listen. Then, we need to, together, come up with solutions and actions that will collectively move us forward.*

**Kim Fox** – Vice President, Public and Government Affairs

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

## INTRODUCTION

**Stakeholder engagement guiding principles**

CORPORATE GOVERNANCE	Stakeholder	Guiding principle(s)	Engagement
MANAGING THE RISKS OF CLIMATE CHANGE	Indigenous communities	<ul style="list-style-type: none"> <li>▪ Conduct business in a manner that respects the land, environment, rights and cultures of Indigenous peoples, in accordance with the laws of Canada and corporate policies.</li> <li>▪ Engage Indigenous communities in open and forthright consultation, seeking to understand Indigenous perspectives on shared prosperity and sustainable economic development.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Local events (open houses, neighbour days)</li> <li>▪ Community benefit agreements and local investment</li> <li>▪ Consultation</li> <li>▪ Liaison program &amp; working meetings</li> <li>▪ Workforce and business development</li> <li>▪ Volunteering</li> <li>▪ Dedicated land agents</li> <li>▪ Website and social media</li> </ul>
ENVIRONMENTAL PERFORMANCE	Local communities/landowners	<ul style="list-style-type: none"> <li>▪ Be a good corporate citizen in all places where we operate; dedicated to running safe and environmentally responsible operations.</li> <li>▪ Maintain high ethical standards, obey all applicable laws, rules and regulations, and respect local cultures.</li> </ul>	
SAFETY, HEALTH & THE WORKPLACE	Shareholders	<ul style="list-style-type: none"> <li>▪ Enhance the long-term value of the investment dollars entrusted to us by our shareholders.</li> </ul>	<ul style="list-style-type: none"> <li>▪ See shareholder engagement section</li> <li>▪ Direct engagement and feedback</li> </ul>
COMMUNITY & INDIGENOUS ENGAGEMENT	Customers	<ul style="list-style-type: none"> <li>▪ Offer high quality products and services at competitive prices while being responsive and innovative to meet ever changing customer needs.</li> </ul>	
ECONOMIC DEVELOPMENT	Employees	<ul style="list-style-type: none"> <li>▪ Strive to hire and retain an exceptional workforce.</li> <li>▪ Support personnel growth through training and development.</li> <li>▪ Committed to 'Nobody gets hurt'; enriched by inclusion and diversity, trust, fair treatment, empowerment and open communication.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Employee forums, digital and social media platforms, training, ongoing communication including feedback</li> </ul>
PERFORMANCE DATA	Suppliers and contractors	<ul style="list-style-type: none"> <li>▪ Select quality third parties based on best total value.</li> <li>▪ Prefer to purchase from Canadian suppliers and Indigenous companies where possible.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Direct relationship including meetings, safety forums and stewardship</li> </ul>
	Regulators and government	<ul style="list-style-type: none"> <li>▪ Good corporate citizenship — regular and transparent engagement, positive relationships, provide sound input and solutions in the development of policies and regulations.</li> <li>▪ Maintain high ethical standards, obey all applicable laws, rules and regulations, environmentally responsible operations.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Direct or through trade associations</li> <li>▪ Transparent disclosure/reporting</li> </ul>
	Media	<ul style="list-style-type: none"> <li>▪ Provide timely, transparent, accurate information.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Direct, media releases, information sessions</li> </ul>
	Others (academia, industry, NGOs)	<ul style="list-style-type: none"> <li>▪ Collaborate to understand alternative perspectives, share learnings and solutions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Forums, meetings, roundtables</li> </ul>

# Ethics and integrity

INDEX

Our standards of business conduct provide the foundation for how we do business. A well-founded reputation for honest and fair dealing is a priceless corporate asset.

Imperial expects our directors, officers, employees and contractors to observe the highest standards of integrity in the conduct of the company's business. Our foundation policies collectively express and guide our behaviour. These policies are reviewed periodically by the company's directors, officers and employees to ensure full understanding and adherence. Mandatory training is delivered at a prescribed frequency. No one at Imperial has the authority to make exceptions or grant waivers with respect to our standards. Breaches of the standards are subject to disciplinary action up to and including termination for employees and denial of site access for contractors. In addition, all employees are reminded of the standards of business conduct and are expected to confirm their understanding by certifying their compliance as part of the annual ethics compliance certificate process.

## Ethics policy

We comply with all governmental laws, rules and regulations applicable to our business. Where the law is permissive, we choose the course of highest integrity. Directors, officers and employees deal fairly with each other and with the company's suppliers, customers, competitors and other stakeholders. All transactions are accurately reflected in our books and records. We make



full, fair, accurate, timely and understandable disclosure in reports and documents filed with applicable securities regulators and in other public communications. All employees are responsible for reporting material information to senior management accountable for making disclosure decisions.

## Gifts and entertainment

Gifts and entertainment provided by Imperial's directors, officers or employees to a third party must not create an improper advantage for the company. All expenditures for gifts and entertainment

provided by Imperial must be accurately recorded. Directors, officers and employees and third parties acting on behalf of Imperial who provide or receive third-party gifts and entertainment in their corporate capacities are expected to follow strict policy and limits regarding the size, nature and appropriateness of gifts and entertainment.

Learn more on Imperial's [website](#).

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

**Conflict of interest**

Directors, officers and employees are expected to avoid any actual or apparent conflict between their personal interests and the interests of the company. A conflict of interest can arise when a director, officer or employee takes actions or has personal interests that may interfere with their objective and effective work performance.

Further, Imperial restricts officers and employees from holding directorships in non-affiliated, for-profit organizations (with limited exceptions) and prohibits any officer or employee from accepting directorships that would involve a conflict of interest with, or interfere with, the discharge of the officer's or employee's duties. However, any officer or employee may hold directorships in non-affiliated, non-profit organizations, unless that would involve a conflict of interest or obligate Imperial to provide support to such organizations. Officers and employees may serve as directors of affiliated companies and such service may be part of their normal work.

**Open door communications**

Imperial has always encouraged employees to ask questions, voice concerns and make suggestions regarding the company's business practices. Employees are expected to promptly report suspected violations of the law, company policies or internal controls, so management can investigate and take appropriate action as soon as possible.

Imperial publishes an ethics and standards of business conduct booklet which provides several ways for employees to obtain information and advice. Employees wishing to make complaints without identifying themselves may telephone a dedicated "hotline" or send their complaints in writing or email to a confidential complaints mailbox.

**International business**

Where the company's international operations are subject to the laws, rules and regulations of foreign jurisdictions, Imperial and our directors, officers and employees comply with such laws, rules and regulations.

**Antitrust competition law**

Imperial's directors, officers and employees comply with the antitrust and competition laws applicable to the company's business in Canada, the United States and any other country or group of countries which are applicable to our business.

**Management and protection of information (MPI) and data privacy guidelines**

Ongoing awareness training is in place to ensure employees understand the importance of proper handling of personal and company information including vigilantly guarding against cybersecurity threats.

# Transparency and disclosure

INDEX

Imperial views transparency as a natural extension of our culture of ethical behaviour.

Imperial's commitment to sustainability is reflected in enhanced voluntary disclosures to complement our financial reporting — our sustainability report, energy and carbon summary and water management report. In addition, the *Extractive Sector Transparency Measures Act* (ESTMA) came into force June 1, 2015 to deliver on Canada's international commitments for increasing transparency and deterring corruption in the extractive sector. This Act requires businesses to publicly report certain payments made to all levels of government in Canada and abroad in relation to the commercial development of oil, natural gas and minerals. In addition, Canada's *Corruption of Foreign Public Officials Act* forbids facilitation payments.

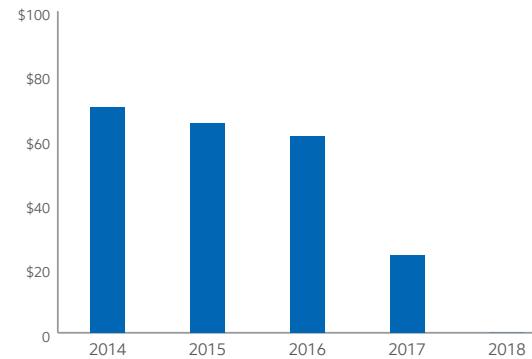
## Political contributions

Imperial's practice is to not make contributions to political candidates and political parties, unless permitted by applicable laws and authorized by the board of directors. For 2018, Imperial decided to cease all political contributions.

Directors, officers and employees engaging in political activities do so as private citizens, not as representatives of the company. Personal, lawful political contributions do not influence employees' compensation, job security or opportunities for advancement.

## Corporate political contributions

(thousands of dollars)



## Trade associations and industry collaboration

Imperial seeks out collaboration opportunities, with industry and business groups, where betterment for our shareholders and stakeholders could result. Examples include education, best practice sharing, developing environmental solutions, networking, and collecting and aggregating industry input as requested by government and regulators.

Engagement where annual fees exceed \$25K:

- Canadian Association of Petroleum Producers (CAPP)
- Canadian Fuels Association (CFA)

- Canada's Oil Sands Innovation Alliance (COSIA)
- Chemistry Industry Association of Canada
- Strathcona Industrial Association
- Canadian Plastics Industry Association
- Canadian Chamber of Commerce
- Industrial Power Consumers Association of Alberta (IPCAA)
- Canadian Propane Association
- Canadian Manufacturers and Exporters (CME)
- Petroleum Technology Alliance Canada (PTAC)

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH & THE WORKPLACE

COMMUNITY & INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

# Executive compensation

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA



The company's executive compensation program is designed to:

- Align the interests of its executives with long-term shareholder interests;
- Encourage executives to manage risk and take a long-term view when making investments and managing the company's assets;
- Reinforce the company's philosophy that executives' experience, skill and motivation significantly affects future business success; and
- Promote career orientation and strong individual performance.

The compensation program is aligned with the core elements of the majority shareholder's compensation program, including linkage to short and mid-term aspects of incentive pay, long vesting periods, risk of forfeiture and alignment with the shareholder experience. In addition, our long term incentive program has long term vesting periods to expose executives to the full impact of the commodity cycle taking into consideration the cyclical nature and long term orientation for the business.

Executive compensation is linked to overall company performance and is designed to support the sustainability of our operations and the management of risk. The Executive resources committee reviews and evaluates business performance and basis for compensation which may include:

- Safety, health and environmental performance;
- Risk management;
- Total shareholder return;
- Net income;
- Return on average capital employed;<sup>(6)</sup>
- Cash flow from operations and asset sales;<sup>(6)</sup>
- Operating performance of the upstream, downstream and chemical segments; and
- Progress on advancing government relations and long-term strategic interests.

The annual report on compensation is reviewed and approved for inclusion in the corporation's management proxy circular in accordance with applicable legal requirements.

# Director compensation

INDEX

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

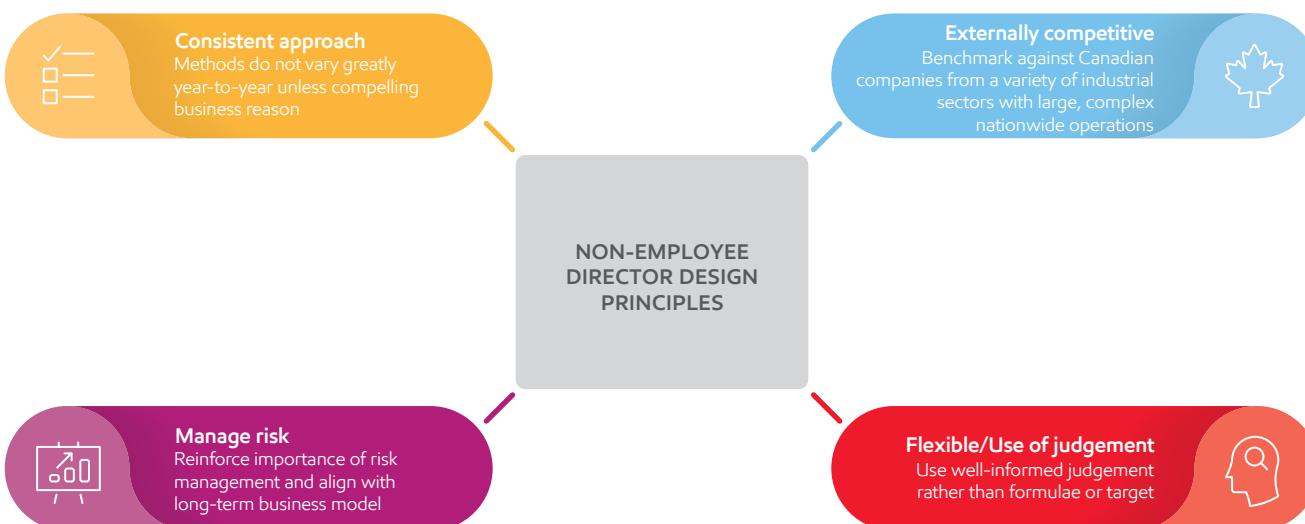
ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



Each year, the Nominations and Corporate Governance Committee reviews compensation for non-employee directors and makes recommendations to the full board for approval. Directors' compensation is intended to align the long-term financial interests of the directors with those of the shareholders and is designed to:

- ensure the company can attract and retain outstanding director candidates;
- ensure alignment with long-term shareholder interests;
- recognize the substantial time commitments necessary to oversee the affairs of the company; and
- support the independence of thought and action expected of directors.

Employees and directors are prohibited from hedging against the value of company stock.

## INDEX

# Risk management

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

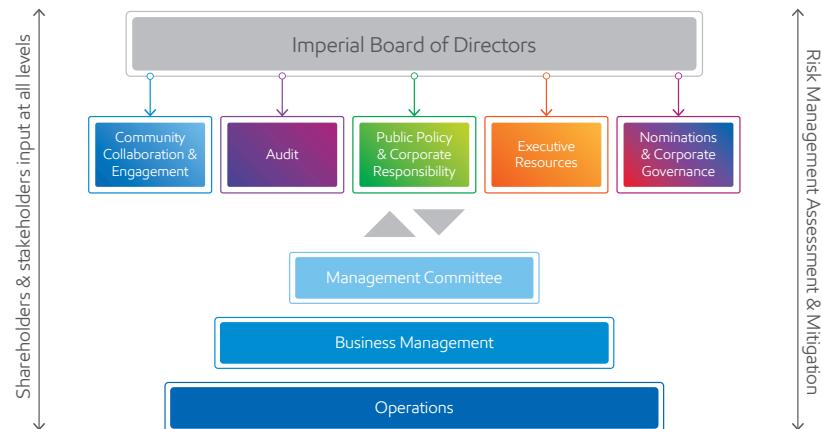
Imperial's board of directors has a fiduciary duty to manage the corporation in its best interests. Our directors act honestly and in good faith in their duty of care.

Imperial's board of directors is responsible for identifying risks and opportunities, including climate-related risks, and for overseeing the implementation of appropriate systems to manage such risks. The board evaluates and provides strategic direction on items including but not limited to; strategy, competitive positioning, safety, culture, performance, succession planning, compliance, executive compensation, environmental stewardship, research and technology, public policy, community and Indigenous engagement, stakeholder feedback and disclosure.

The board has access to relevant information to make informed decisions in representation of shareholders. The board contributes to the annual development and approval of strategic plans that consider Canadian and global economic outlooks, including consideration of management's recommendations regarding major corporate decisions and actions that may have significant societal impact.

Risk management also occurs at multiple levels of the business as part of Imperial's risk management process. The Management Committee, which includes the chairman of the board and chief executive officer, ensures all risks, including climate risks, are addressed throughout the company.

## Risk management oversight



# Facility resiliency

INDEX



Imperial's operations at Kearl

Over many decades Imperial has operated numerous facilities in Canada. Our facilities have evolved, with dramatic changes in technology. For example, today virtual technology is deployed for training, drones are used for surveying, and we are testing the use of satellites to monitor GHG emissions. The company carefully considers the potential for physical and environmental risks in the design, construction, and operation of facilities. Internal design practices utilize environmental data on extreme events such as forest fires or floods to

improve facility design. Temperature extremes – especially cold – can be challenging to all Canadian operations. In addition to design considerations, Imperial has procedures to ensure the safety of both personnel and equipment while operating under extreme conditions.

Emergency preparedness, response and business continuity plans are carefully thought out and maintained. These plans are detailed, practiced and engage external stakeholders and Indigenous

communities. In the event of an actual incident, all necessary actions are taken to protect the public, the environment, company personnel and assets. See emergency preparedness and drills section for more information.

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

INDEX

# Our management systems

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE



ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

Comprehensive systems provide the structure for managing risk and opportunity. OIMS and CIMS are the backbone of Imperial's operational excellence.



Imperial's management systems are used to identify and manage both risks and opportunities. This systemic approach is fundamental and is embedded in all aspects of our operations from facility design to daily work processes, plus project management for all types of business functions and services. The company's systems and processes ensure a fact-based, consistent, disciplined approach is taken to manage risk. The management systems complement each other to cover the breadth of the company's risk and opportunities.

# All about OIMS



**Protect Tomorrow.  
Today.**

and is used to address all aspects of the business that can impact personnel and process safety, security, health and environmental performance. To drive continuous improvement, OIMS is updated periodically.

Risks include, but are not limited to, supply and demand interruptions, extreme weather, government and political factors, and risks associated with exploration and development, operations, and cybersecurity. Imperial conducts risk assessments to identify and address potential hazards using accurate information on processes, facilities, products and regulatory requirements. Assessed risks are prioritized and managed as appropriate for the nature and magnitude of the risk. Decisions are clearly documented and followed up.

Imperial's Operations Integrity Management System (OIMS) includes 11 elements, each with an underlying principle and set of expectations.

OIMS establishes common expectations for addressing risks inherent in our business

Managers and supervisors are expected to credibly demonstrate leadership and commitment for operations integrity. Imperial also uses sound standards, procedures and management systems for facility design, construction, startup, operation



INDEX

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH & THE WORKPLACE

COMMUNITY & INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



and other activities. Facilities meet or exceed applicable regulatory requirements. Quality assurance processes are in place and verifications confirm that risk management recommendations have been addressed.

Facilities are operated within established parameters and according to regulations. Unplanned events are promptly investigated and learnings shared to prevent re-occurrence. Environmental performance, including emissions, discharges and wastes are tracked and stewarded to meet performance goals, and the company carefully selects, trains and monitors personnel. Ongoing evaluations are performed to ensure framework expectations are met.

## INDEX

# All about CIMS

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

Imperial is committed to conducting our business in a well-controlled, successful manner with proper business conduct. This includes establishing effective controls, continuously monitoring and enforcing compliance, and resolving control weaknesses quickly. The Controls Integrity Management System (CIMS) provides a structured, common process for meeting this commitment.

CIMS is a formal system of internal methods and analytic tools to:

- Provide a consistent approach for assessing and cost-effectively mitigating operating, financial and administrative control risks;
- Help implement uniform controls across the organization; and
- Provide a framework for ongoing controls integrity in our day-to-day business.



CIMS is literally the company's backbone, connecting cost-effective, built-in controls to key processes and introducing a continuous loop to assess and improve. Disciplined application of CIMS encompasses all key management elements and ensures proper oversight of all controls processes, activities and changes including documenting, testing and reporting. The CIMS framework is instrumental to ensuring and enhancing Imperial's effective business controls and sound business conduct, which is a source of pride and reputational strength.

**Gilles Lacoste** – Corporate Controls Process Manager, Controllers

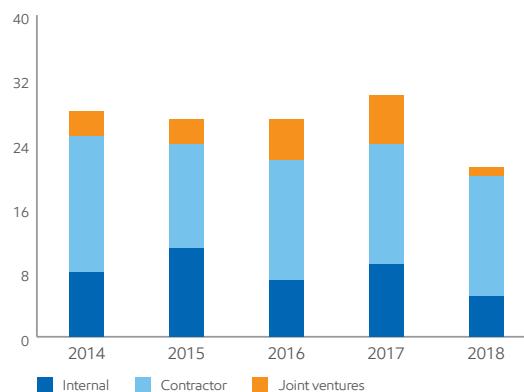
# Audits

The Board Audit Committee, made up of independent directors oversees the company's system of internal accounting and financial controls. The committee is responsible for:

- Overseeing internal and external auditors;
- Assessing the integrity of the company's financial statements, compliance with legal and regulatory requirements, and the quality and effectiveness of internal controls; and
- Reviewing results of monitoring activities under the company's business ethics compliance program.

The corporation's management is responsible for preparing the corporation's financial statements. To ensure the integrity of our accounting and

## Audits conducted on or by Imperial



financial controls, the committee recommends appointment of and oversees external auditors, independent of the company, to conduct annual audit programs, approves the scope of the audit program and assesses the results. Responsibilities include but are not limited to audit of the company's annual financial statements, internal control over financial reporting, and a review of the quarterly financial statements. The auditor's report is available on Imperial's [website](#).

Audits are also performed on:

- Internal company departments, to assess the adequacy and effectiveness of controls and to evaluate compliance with company policies, standards and procedures;
- External contractors, to assess their compliance with contract terms and conditions, and the adequacy of the responsible internal department's contract administration and oversight; and
- Joint ventures to assess compliance with applicable agreements.

In 2018, Imperial completed five internal audits, 15 contractor audits and one joint interest audit. Internal audits were performed on the downstream, corporate/global services, and chemicals operations, while contractor audits focused on Kearl, Cold Lake and refinery operations.

INDEX

INTRODUCTION

**CORPORATE GOVERNANCE**

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH & THE WORKPLACE

COMMUNITY & INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



*Imperial is committed to financial statement integrity and strong internal controls. These commitments are supported by robust processes and a culture of high ethical standards and transparency.*

**Dan Lyons** – Senior Vice President,  
Finance and Administration



## Managing the risks of climate change

Positioning for a lower-carbon energy future

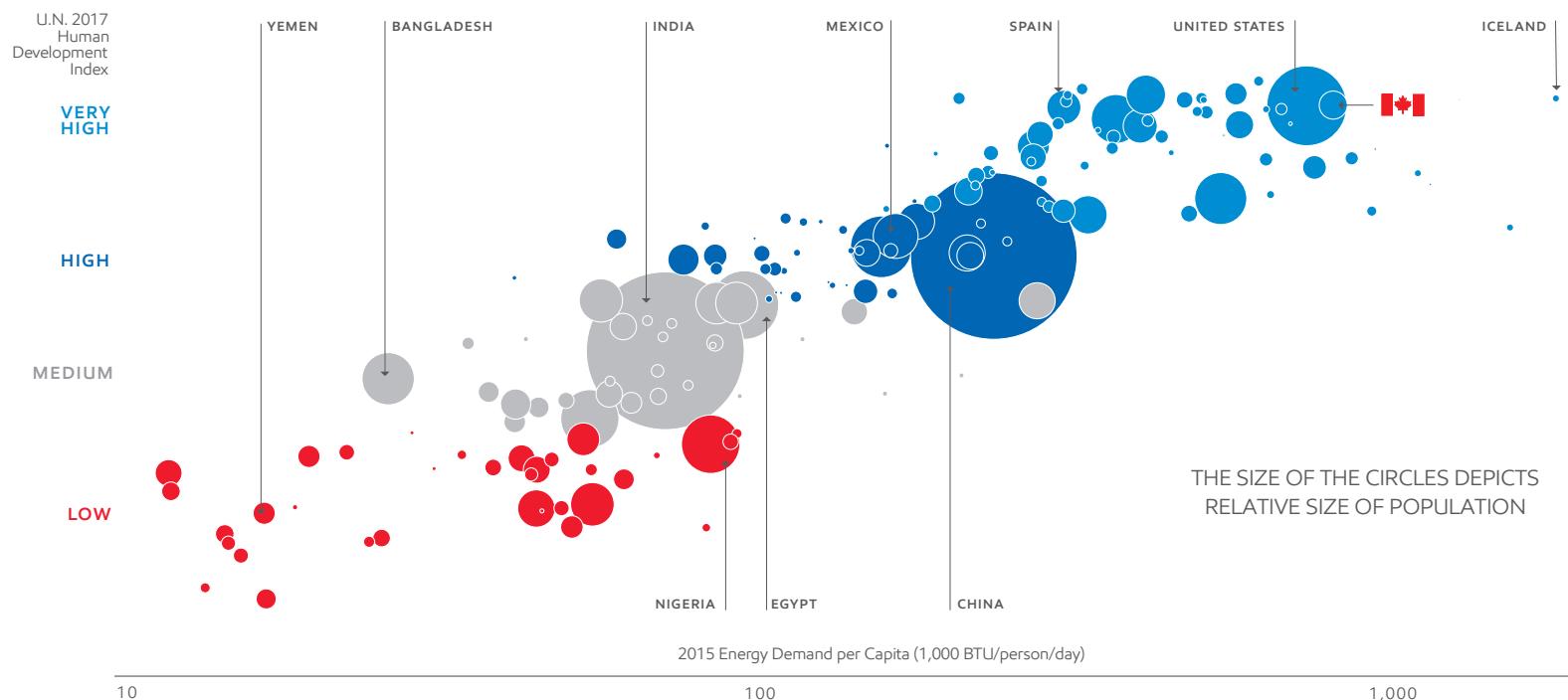
# Energy Outlook<sup>(7)</sup>

Safe, reliable and affordable energy is a critical enabler to higher living standards, including a longer and healthier life.

Energy underpins modern life and for developed nations, such as Canada, reliable and affordable energy enables the products and services that enrich and extend life. For developing (non-OECD<sup>(8)</sup>) nations, serious challenges accessing energy negatively impact health and prevents many from

realizing their full potential. By 2040 the world population is expected to reach more than 9 billion people, up from 7.5 billion today. Over the same period global GDP will likely double and billions of people will join the middle class.

A significant energy transition is underway, and many factors will shape the world's energy future. Oil and natural gas make up about 55 percent of today's global energy use with transportation, commercial and residential needs highly reliant on this energy source.



The human development index is a statistical tool used to measure a country's overall achievement in its social and economic dimensions.

INDEX

INTRODUCTION

CORPORATE GOVERNANCE

**MANAGING THE RISKS OF CLIMATE CHANGE**

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH & THE WORKPLACE

COMMUNITY & INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA



### Global energy needs rise about 20 percent, led by non-OECD nations (e.g., China, India)

Global energy consumption continues to shift proportionally to developing economies where population and economic growth are both faster than the global average.



### Global electricity demand rises 60 percent

The trend to further electrify buildings, factories, cars and buses, along with smart appliances and greater automation, spurs the need for more electricity everywhere. Solar, wind and natural gas contribute the most to meeting growth in electricity demand.



### Oil plays a leading role in mobility and modern products

Oil will continue to play a leading role in the world's energy mix, with growing demand driven by commercial transportation and the chemical industry.



### Commerce and trade drive transportation energy consumption up more than 25 percent

Increased on-road efficiency and more electric vehicles will lead to a decline in light-duty vehicle liquid fuel demand. Overall transportation fuel demand growth is driven by increased commercial activity — moving more people and products by bus, rail, plane, truck and marine vessel. Energy-dense, affordable and widely available oil will remain the predominant transportation fuel.



### Almost half of the world's energy is dedicated to industrial activity

New homes and roads will be constructed and household appliances produced as a result of rising population and urbanization. Energy intensive steel, cement and chemicals are essential materials to satisfy these needs.



Canada has the opportunity to continue being a responsible energy provider to people worldwide for the long term.

### Canada has what it takes

Our world class resources, our history in technology and innovation, our leadership in safety and environmental performance and effective regulatory processes are key enablers.

Our ability to ensure Canada's long-term success, however, lies in our collective commitment to innovation, to an open and ongoing dialogue on constructive solutions, and effective public policy.

### Canadian energy and ESG



4<sup>th</sup> largest oil producer, 3<sup>rd</sup> largest reserves<sup>(9)</sup>

4<sup>th</sup> largest gas producer, 5<sup>th</sup> largest exporter<sup>(9)</sup>



2<sup>nd</sup> largest generator of hydroelectricity<sup>(9)</sup>

2<sup>nd</sup> largest producer and exporter of uranium<sup>(9)</sup>

67 percent of Canada's electricity comes from renewables and 82 percent from non-GHG emitting sources<sup>(10)</sup>



1<sup>st</sup> in ESG amongst top global reserves holders<sup>(11)</sup>

Alberta's regulatory system best in world<sup>(12)</sup>

Oil sands GHG emissions have dropped 32 percent per barrel since 1990<sup>(13)</sup>

Oil sands GHG emissions account for 0.14 percent of global emissions<sup>(14)</sup>

10 percent of global crude volume is subject to carbon pricing – Canada represents 40 percent of the volume priced<sup>(15)</sup>

Canada has exemplary human rights



CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH & THE WORKPLACE

COMMUNITY & INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

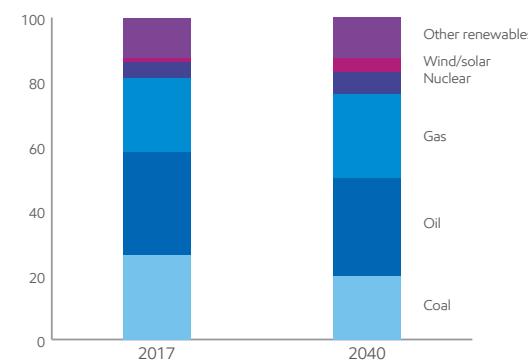
## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

## A wide range of energy sources will be needed over the period to 2040. Oil and natural gas remains key.

Technology advances and choices by consumers and businesses to use energy more efficiently will help curb the growth in global energy demand to about 20 percent over the period to 2040, much less than GDP growth. OECD demand is expected to decline about five percent from 2017 to 2040 as efficiency more than offsets the underlying growth drivers. Emerging markets in non-OECD nations will account for essentially all the energy demand growth, led by expanding economies in the Asia Pacific region such as China and India.

### Energy mix shifts globally to lower-carbon fuels (percent of primary energy)



Source: Exxon Mobil Corporation, 2019 Outlook for Energy: A perspective to 2040

Climate Change is a global issue that requires global solutions. Imperial supports the Paris Agreement as an important framework for addressing the risks of climate change. Many uncertainties exist concerning the future of energy demand and supply. Ensuring Imperial does its part is a priority and we are working hard across our businesses to find effective solutions.

Over the coming decades, oil and natural gas will continue to play a critical role in meeting the world's energy demand, even considering the 2°C global temperature increase scenarios discussed in Imperial's [Energy and Carbon Summary](#) – a 2018 report guided by the Financial Stability Board's Task Force on Climate-Related Financial Disclosures (TCFD). While energy sources are expected to shift over the coming decades toward lower-carbon intensive fuels, the world will need to pursue all sources of energy to meet growing demand. Considering the IEA's Sustainable Development Scenario (a 2°C scenario), the IEA estimates more than \$13 trillion<sup>(17)</sup> of investment will be needed for oil and natural gas supply between 2018 and 2040.<sup>(18)</sup>



*I believe Canada's energy sector is an innovation success story and one we should continue to develop. Imperial has a long history of innovation through our world class research – great ideas can come from many sources. It's why I lead the Clean Resource Innovation Network's technology subcommittee – it improves our connectivity and our knowledge sharing across the network positioning our industry for a strong carbon competitive future.*

**James Dunn Ph.D.** – Director, Sustainable Technology Integration

# Climate strategy

INDEX

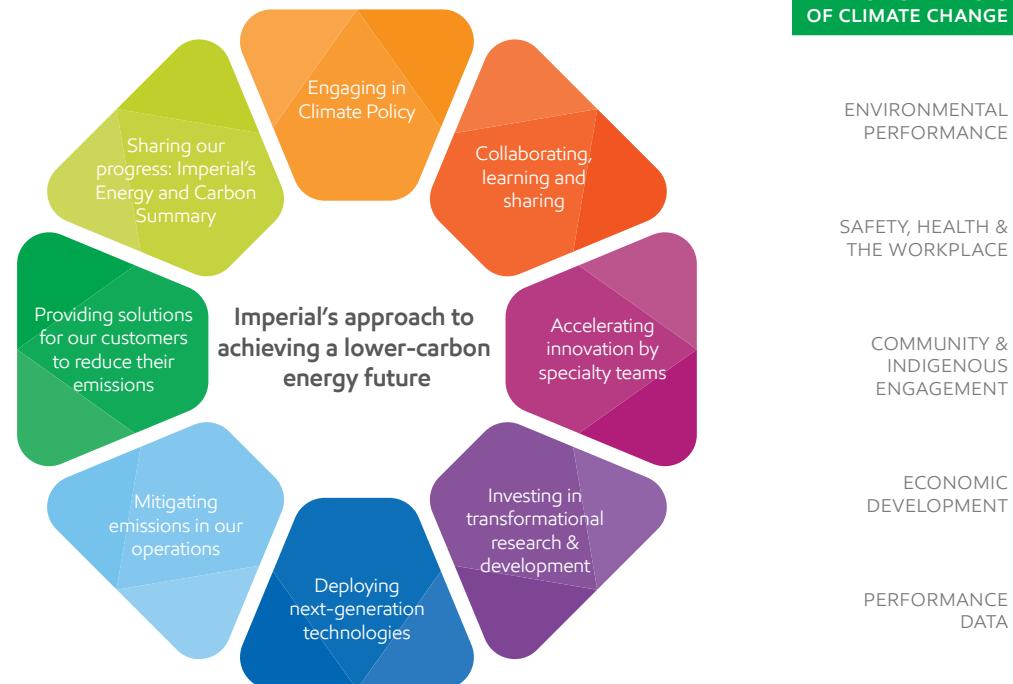
Imperial is taking action to address the risks of climate change while providing responsible energy.

At Imperial, we are taking action toward addressing the risks of climate change by reducing our greenhouse gas (GHG) emissions intensity, supporting research that leads to technology breakthroughs, providing solutions for our customers to reduce their emissions, and participating in constructive dialogue on policy options.

## Business resiliency

At the end of 2018, Imperial's proved reserves totaled about 4.1 billion oil equivalent barrels<sup>(19)</sup> predominantly consisting of oil sands resources. These proved reserves are assessed annually and reported on National Instrument 51-101. Based on currently anticipated production schedules, Imperial estimates that in 2040 more than half of our year-end 2018 proved reserves will have been produced. As Imperial continues to develop projects over time, it expects that annual production estimates will change.

Imperial believes a relentless focus on efficiency and cost reductions, plus development and deployment of pace-setting technologies that are matched to high-quality resources and operational knowledge, will help sustain the company's strong competitive status in the future — supported by growing global demand for oil and natural gas.



## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

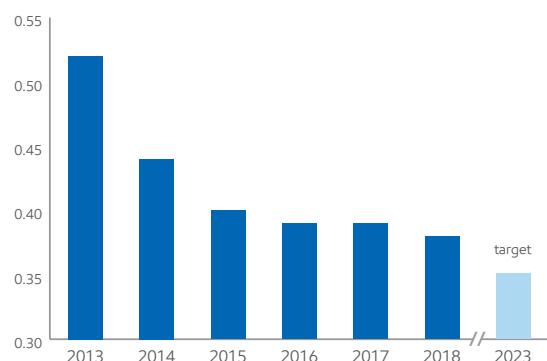
Imperial is reducing greenhouse gas emissions intensity (GHGi).

## Progress in action

↓ 20+% Since 2013      ↓ 10% By 2023<sup>(20)</sup>



**Operated oil sands GHG emissions intensity**<sup>(21)(22)</sup>  
(metric tonnes CO<sub>2</sub>e/m<sup>3</sup> upstream production)



Deploy next-generation technologies at Cold Lake



Continue to improve energy efficiency



Innovate with digital technology



Improve reliability at our Kearl oil sands mine



Share our progress



# Innovation

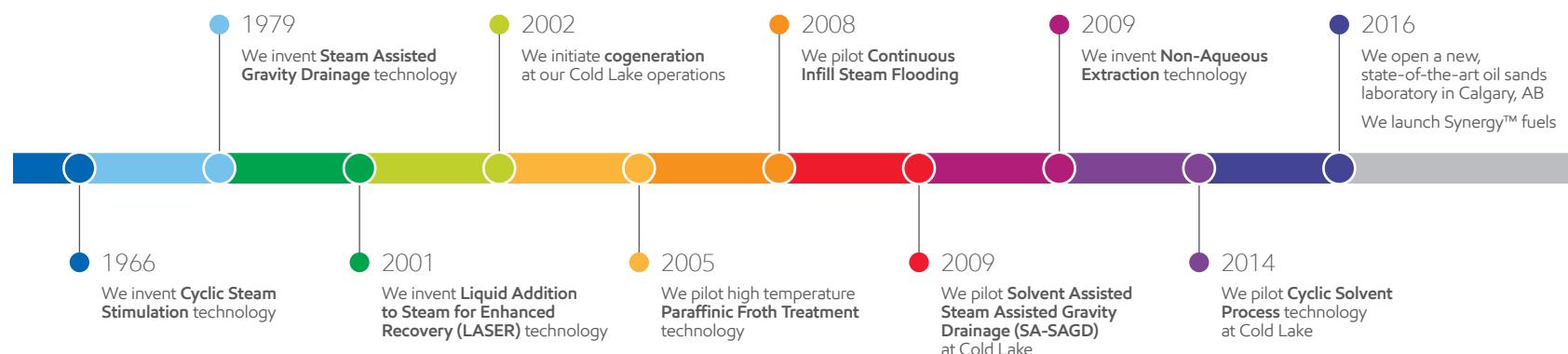
INDEX

## Imperial's inventions at work.

Imperial's future technology plans are supported by nearly a century of commitment to research and technology development (R&D). We opened Canada's first petroleum research department in 1924 and continue to be among Canada's top R&D spenders – in any industry. Imperial is committed to in-house, next-generation technology development in Canada with research centres in Calgary, Alberta and Sarnia, Ontario. Over the past 20 years, we have invested more than \$2.1 billion in R&D. Imperial has developed technology breakthroughs that could lead to step-change performance in oil sands GHG emissions intensity.



### 50 years of oil sands innovation



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

# Our future

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

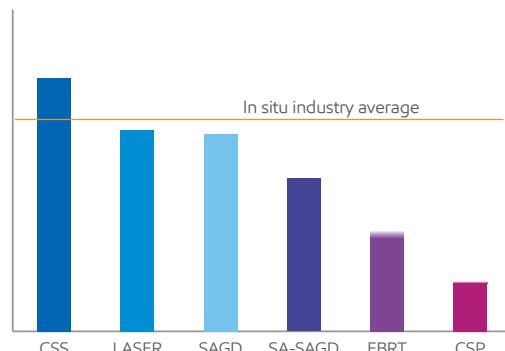
## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA



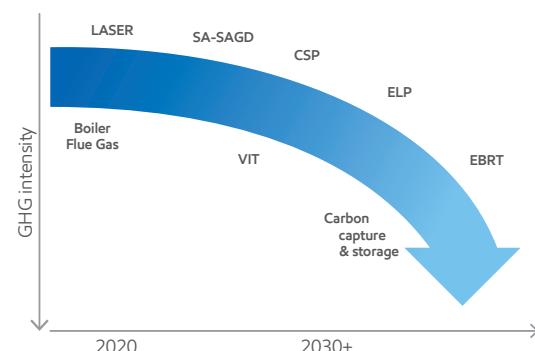
**GHG emissions intensity**  
(potential impact of next-generation technologies)



Source: Modified from Boone World Heavy Oil Conference, 2012

Building on our long-standing commitment to improve both the environmental footprint and economics associated with our operated oil sands production, Imperial plans to apply advanced technologies to reduce GHG emissions intensity. We are transitioning to next-generation technologies focused on recovering our oil sands resource with less energy, significantly reducing water and GHG emissions intensity. Light oils, can be used along with, or to replace, steam to mobilize heavy oil so it can be brought to the surface.

**Potential GHG emissions intensity reduction pathway**



**LASER** – Liquid addition to steam for enhanced recovery

**VIT** – Vacuum insulated tubing

**ELP** – Enhanced late life process



## NOTEWORTHY TECHNOLOGIES

- Solvent-assisted, steam-assisted gravity drainage (SA-SAGD) could reduce both water and GHG emissions intensity up to **25 percent** compared to traditional SAGD technology.
- Enhanced Bitumen Recovery Technology (EBRT) could reduce GHG emissions intensity of SAGD up to **60 percent**.
- In addition to reducing the need for steam, the Cyclic Solvent Process (CSP) could reduce GHG emissions and water intensity up to **90 percent** in certain areas of the company's Cold Lake field.

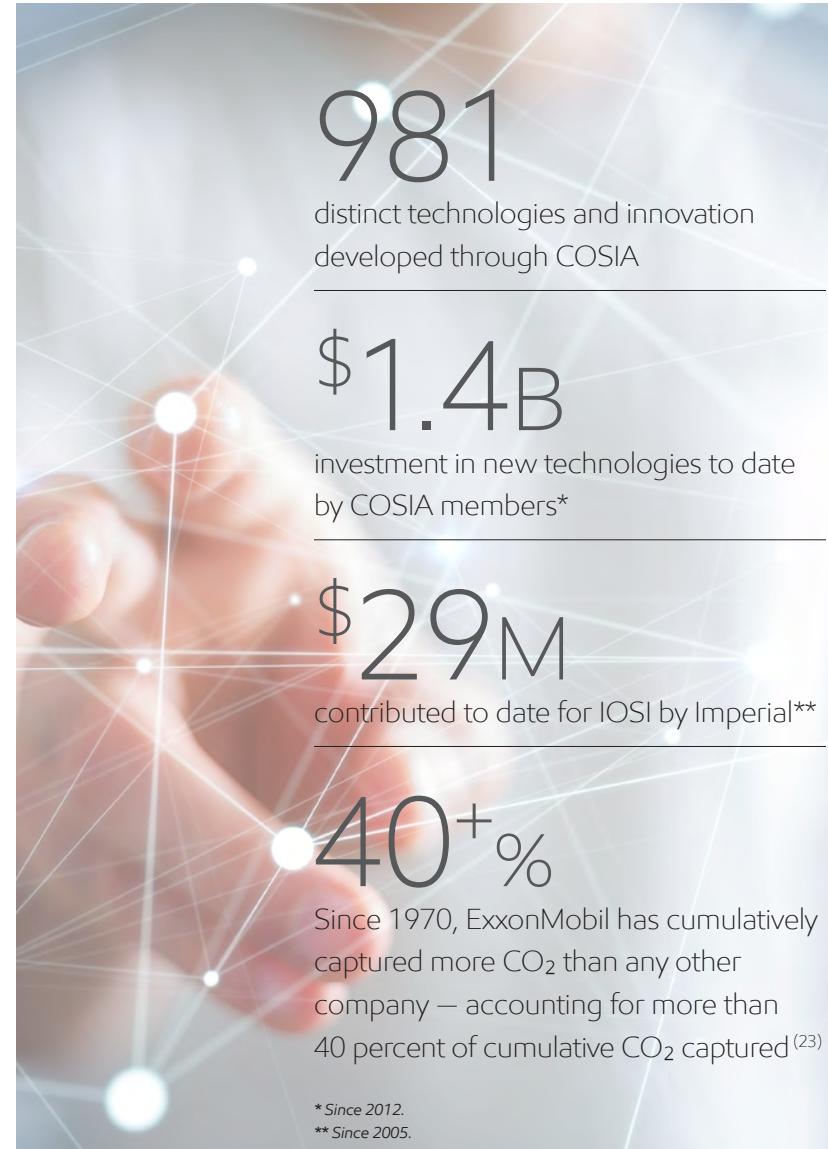
# Collaboration

INDEX



We partner with academic institutions, industry peers and other third parties to accelerate the pace of environmental performance improvement in Canada. Imperial is a charter member of Canada's Oil Sands Innovation Alliance (COSIA), we're also a founding sponsor of the Institute for Oil Sands Innovation (IOSI) at the University of Alberta, and we work with GHGSat, a global emissions-monitoring company to test satellite technology designed to capture frequent and accurate emissions data. In 2016, Imperial opened a state-of-the-art oil sands laboratory in Calgary, Alberta to test potential technologies that could reduce environmental impacts and improve oil sands efficiency, including GHG reductions.

In addition to research through COSIA and other collaborations, Imperial has access to industry-leading technologies, insights and expertise through our ExxonMobil relationship. ExxonMobil is at the forefront of developing advanced biofuels, as well as carbon capture and storage (CCS) technologies. CCS has the potential to be viable through the convergence of advanced technologies and a supportive public policy environment. These exciting technologies are among many that could play a significant role in a lower-carbon future.



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

# Mitigating emissions in our operations

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA



**Imperial is focused on improving energy efficiency and reducing environmental emissions in our operations.**

For example, cogeneration is an energy-efficient process that simultaneously generates electric power and steam, by recycling waste heat from gas turbine generators (these produce electricity). Imperial uses cogeneration in our operations to increase energy efficiency, reduce the need to purchase electricity and reduce emissions. We are increasing our cogeneration capacity by eight percent overall with the addition of a new cogeneration unit at our Strathcona refinery, expected to be operational by 2020. Imperial already uses cogeneration at our Kearl, Cold Lake, Nanticoke and Sarnia facilities.

In 2018, cogeneration at our Alberta facilities has enabled avoidance<sup>(24)</sup> of approximately 1.1 million tonnes of GHG emissions; almost equivalent to 232,000 passenger vehicles driven for one year or approximately 2,700 million miles driven by an average passenger vehicle.<sup>(25)</sup>

## Kearl boiler flue gas heat and water recovery –

Is a first in Alberta's oil sands, involving a full-scale field demonstration of the Canadian ConDex technology. This project emerges from ongoing collaboration between Foresight Cleantech Accelerator Centre, COSIA, Alberta Innovates and Emissions Reduction Alberta and has the potential to reduce GHG emissions across the industry.

Typically, oil sands mining operations burn natural gas to create steam that heats process water. ConDex technology recovers hot water from a boiler's combustion exhaust to then re-use as process water, thus reducing the steam needed to heat the process water and resulting in an overall energy efficiency increase and reduction in GHG emissions.

A detailed evaluation of this Canadian clean technology concluded that each unit using ConDex technology could save up to 30,000 tonnes/year of carbon dioxide equivalent (CO<sub>2</sub>e), recover up to 150,000 m<sup>3</sup>/year of water, and generate positive economic results.

# Digital technology

INDEX

We want to be a leader in advancing digital and artificial intelligence technology across the value chain.

Digital and artificial intelligence technology presents an unprecedented opportunity to accelerate value capture for our businesses. ‘Digital technology’ includes all types of electronic equipment and applications that use information in the form of numeric code to promote innovation and creativity, easy access to information and improved communication. ‘Artificial intelligence’ makes it possible for machines to learn from experience, adapt and perform human-like tasks.

To advance value capture, we created the digital accelerator — a collaborative team of data science experts, IT and business professionals charged with leveraging the power of digital technologies throughout our upstream business. The digital accelerator’s mission is to:



Use technology to improve our production performance, increasing cash flow



Build digital capabilities within Imperial



Accelerate technology development and applications



Lead industry in advancing digital and artificial intelligence (AI)

## Collaboration

Imperial recently announced a collaboration with the Alberta Machine Intelligence Institute (Amii), to provide business guidance and scientific mentorship to build our in-house machine intelligence capabilities and teams. Through this work, Imperial intends to develop more effective ways to recover oil and natural gas resources, reduce environmental impacts, and improve workforce safety.

In addition, we are collaborating with the Institute for Oil Sands Innovation (IOSI) and the Southern Alberta Institute of Technology (SAIT) to use unmanned aerial vehicles (drones) at our Kearl operation. High-resolution 3D imagery provided by drones allows geology to better guide engineering and operations and maximize production, while limiting personnel required in the mine.

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



*Amii is excited to be working with Imperial and their teams. Not only because of their reputation as industry leaders, but also their drive to create an AI-enabled future within the oilpatch. We’re focusing our partnership on education and training to help grow their in-house technical teams — a critical aspect for the success of their digital transformation.*

**David Chan – Director, Amii Innovates**

INDEX

INTRODUCTION

CORPORATE  
GOVERNANCEMANAGING THE RISKS  
OF CLIMATE CHANGEENVIRONMENTAL  
PERFORMANCESAFETY, HEALTH &  
THE WORKPLACECOMMUNITY &  
INDIGENOUS  
ENGAGEMENTECONOMIC  
DEVELOPMENTPERFORMANCE  
DATA

# Providing solutions for our customers to reduce their emissions

Imperial is producing advanced fuels that help our customers improve their fuel efficiency and reduce their emissions.

For passenger vehicles, Imperial's Synergy™ gasoline is designed to help provide better fuel economy, lower emissions and improve engine responsiveness.<sup>(26)</sup>

For North American trucking applications, Imperial has launched Synergy Diesel Efficient™, which improves fuel consumption (two percent on average) and lowers emissions (11 percent NOx and two percent CO<sub>2</sub>). Claims are also applicable for light-duty vehicles on average.<sup>(27)</sup>

Our lubricants help minimize operational costs through energy efficiency and extended equipment life.

Imperial's Sarnia Research Centre chiefly supports our downstream operations by developing enhancements and solutions for issues from inhibiting rust and increasing efficiency and production quantity at our refineries, to making higher quality petroleum products.



The Gateway to the Rocky Mountains now includes an Esso, opened by the Stoney Nakoda Nation, which includes the Bearspaw First Nation, Chiniki First Nation and Wesley First Nation.

# Engaging in climate policy

INDEX

Climate change is a global issue requiring collaboration to create meaningful solutions.

INTRODUCTION

Imperial is committed to taking action on climate change and encourages policymakers to focus on reducing the greatest amount of emissions at the lowest cost to society, recognizing the importance of safe, reliable, affordable and abundant energy for global economic development.

Climate change is a global issue that requires collaboration among governments, companies, consumers and other stakeholders to create meaningful solutions. Imperial engages with a broad range of stakeholders directly and through trade associations to encourage sound policy for addressing climate change risks.

The company believes effective policies are those that:

- Promote global participation;
- Allow market prices to drive the selection of solutions;
- Ensure a uniform and predictable cost of GHG emissions across the economy;
- Minimize complexity and administrative costs;
- Maximize transparency;
- Provide flexibility for future adjustments to react to developments in technology, climate science and policy.

When such principles inform public policy, they minimize overall societal costs and allow markets to determine the technologies that will be most successful. They also help long-term policies align with differing national priorities as well as adapt to new global realities.

Imperial supports an economy-wide price on carbon dioxide emissions as an efficient policy mechanism to address GHG emissions.

CORPORATE GOVERNANCE



Members of Imperial's policy and advocacy team

MANAGING THE RISKS OF CLIMATE CHANGE

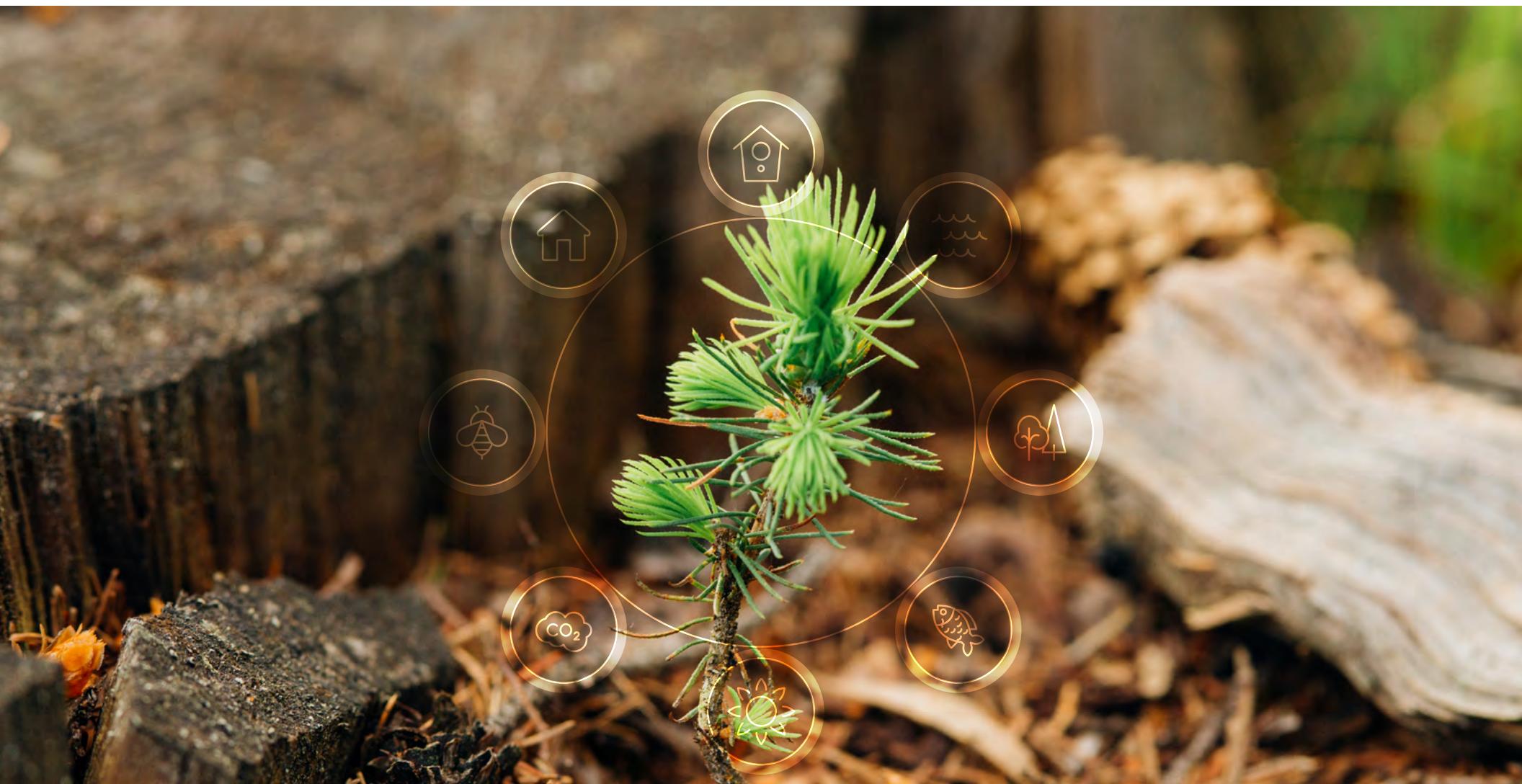
ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



## Environmental performance

Meeting the growing demand for energy in a safe and environmentally responsible manner

# Environmental management

INDEX

## Imperial's environmental policy



**Protect Tomorrow.  
Today.**

Under our credo "Protect Tomorrow. Today.", Imperial is committed to operating in an environmentally responsible manner everywhere we do business. We comply with all applicable regulatory requirements and, where there are none stated, follow relevant risk-based standards that protect the environment.



Our overall environmental policy is to:

- Comply with all applicable environmental laws and regulations and apply responsible standards where laws and regulations do not exist;
- Encourage respect for the environment, emphasize every employee's responsibility in environmental performance, and foster appropriate operating practices and training;
- Work with government and industry groups to foster timely development of effective environmental laws and regulations based on sound science and considering risks, costs and benefits, including effects on energy and product supply;
- Manage our business with the goal of preventing incidents and of controlling emissions and wastes to below harmful levels; design, operate, and maintain facilities to this end;
- Respond quickly and effectively to incidents resulting from our operations, in co-operation with industry organizations, authorized government agencies, and local communities;
- Conduct and support research to improve understanding of the impacts of our business on the environment, to improve methods of environmental protection, and to enhance our capability to make operations and products compatible with the environment;
- Communicate with the public on environmental matters and share our experience with others to facilitate improvements in industry performance; and
- Undertake appropriate reviews and evaluations of our operations to measure progress and to foster compliance with this policy.

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

OIMS, including our environmental management system (EMS), guides our approach to managing how our operations interact with the environment.

Our management approach is guided by an in-depth understanding of the environmental aspects of our operations and a commitment to develop, operate and decommission assets using appropriate standards.

Our environmental management system (EMS) provides a framework for environment and socioeconomic planning. Environmental aspects are communicated and addressed consistently with company policies and regulatory requirements. Environmental aspects are addressed as a matter of course in the annual environmental business planning (EBP) cycle.

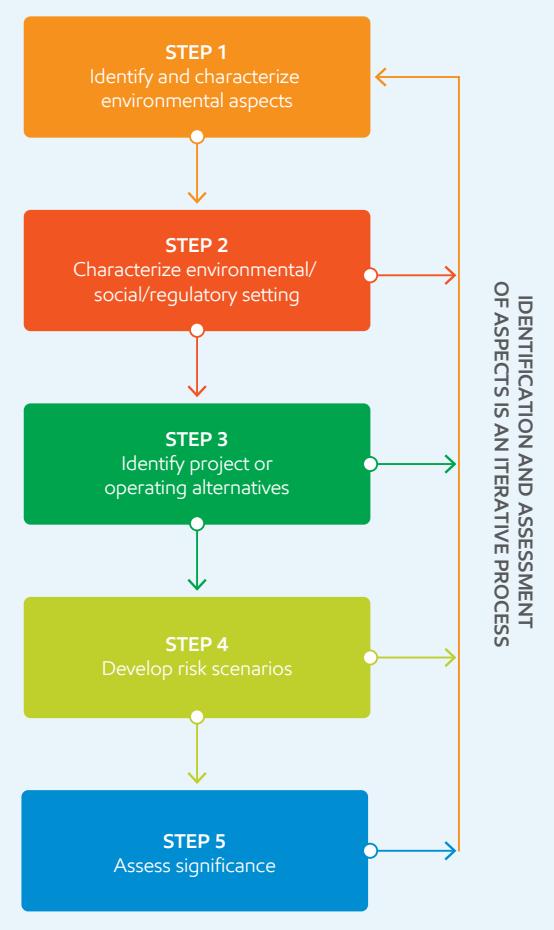
Environmental performance, including emissions, discharges and waste, is tracked and stewarded to meet performance goals.

To enable continuous improvement of our environmental management actions, Imperial leverages new and existing technologies and uses the principle of adaptive management. Under this approach, operating experience, data and knowledge are collected and plans are modified as we learn, to better align with operational realities and changing environments.

### Environmental aspect identification

We define 'environmental aspect' as an activity, product or service that interacts with the natural or human environment. An environmental aspect can be positive or negative. Once identified, significant environmental aspects are communicated to management and directed to the appropriate managing system depending on the nature of the aspect and the life stage of the facility.

Environmental aspects are routinely updated as things change.



# Air emissions

## At Imperial, we're working hard to reduce our impact on air quality.

Clean air is very important. In communities where we operate, Imperial addresses air emissions at our facilities through:

- Reducing energy use;
- Adding cost-effective emission controls;
- Improving our ability to detect and repair fugitive emissions sources;
- Applying best practices and procedures to reduce emissions; and
- Investing in fuel reformulation to produce cleaner fuels.

Across our operations, our goal is to reduce flaring through improved operating practices and – where appropriate – installing equipment to avoid operating conditions that result in the need for flaring. Reduced flaring helps prevent the loss of energy and decreases emissions including greenhouse gas emissions.

Our businesses have leak detection and repair programs to monitor and reduce emissions from leaks in equipment such as valves, connectors and pumps. We also collaborate with government, industry and other groups to maintain regional air monitoring networks that measure and track air quality trends.



INDEX

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT



### EMISSIONS REDUCTIONS

At our Sarnia refinery, Imperial has reduced sulphur dioxide emissions by 60 percent since the early 2000s, and reduced benzene emissions by 88 percent over the past 25 years.

PERFORMANCE DATA

## INDEX

# Water management

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

Water and energy are interrelated, and both are critical for society, economic development and the environment. Imperial recognizes the importance of water to local communities – to protect human health and the environment.

Imperial's operations are located in areas of ample water availability today and for the future.

Canada is among the world's water-wealthy nations,<sup>(28)</sup> with about seven percent of the world's renewable water. According to the World Wildlife Fund's Water Risk Filter, Canada is ranked 147th of 184 nations where a rank of 1 (or high) would be the most scarce. For comparison, the United States has a ranking of 88.

The World Resources Institute (WRI) maintains a publicly available global database and interactive tool, The Aqueduct,<sup>(29)</sup> which maps indicators of water-related risks. According to the WRI, most of Canada has an overall water risk of low to medium.



Examining future forecasts, the projected change in water stress by 2040 is generally expected to be near normal, except for a few isolated areas in the southern prairies where an increase of up to two times historical conditions is projected due to changes in water demand based on socioeconomic development (Luck et al, 2015). For more information, see our [Water Management Summary](#).

## Current overall water risk



# Imperial's water commitment

INDEX



Imperial is committed to responsible and sustainable water use. Fortunately, our operations are located in areas that have ample water to balance our operational needs with economic growth, social development and environmental protection, today and for the future.

By deploying technology to minimize water use intensity, considering local water needs and engaging stakeholders in sustainable water solutions, Imperial's systems focus on water conservation, efficiency and productivity. Systems are also designed to operate safely during storm events, based on purpose and risks. For operations with larger consumptive demands, mitigation measures are in place for periods of low water availability.



 Ongoing dialogue with stakeholders and Indigenous communities is a critical part of the way we do business. Understanding the local, regional and national perspectives that stakeholders have with regard to industry's interactions with water resources is important. I value these perspectives on water quantity and quality to help us understand the risk of using a particular water source, as well as the value local communities place on specific water resources.

**James Guthrie** – Water Lead, Policy and Advocacy

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

# Water strategy

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

## Our focus is on freshwater conservation and efficient use.

We take water use and conservation seriously in all aspects of our operations through our management principles to:

- Protect human health and the environment;
- Consider local water needs when addressing operational requirements;
- Continuously improve capabilities and performance; and
- Engage stakeholders in sustainable water solutions.

Imperial's OIMS framework sets the expectations for water management. For oil and natural gas development, the main interactions associated with water resources are withdrawal, storage, re-use and discharge.

In addition to following detailed managing systems, and strictly adhering to government regulations, we are dedicated to continuous improvement. We work to achieve our water management principles by:

- Considering local needs and alternatives when sourcing water for our operations, including first identifying and managing risks related to water availability and quality;
- Preventing spills and leaks;
- Minimizing the impact from water withdrawal, consumption and discharges;
- Using research and operational analyses to support the continuous improvement of water-related technologies, practices and performance in our industry; and
- Collaborating with stakeholders to promote the long-term viability of source waters, watersheds and related ecosystems in areas where we operate.



# Water innovation

We are developing innovative technologies that are more efficient and lower in water use intensity.

At every link in the energy chain, Imperial seeks to advance innovation and technology. For example, we use steam to recover bitumen at in situ oil sands operations but in recent years, we've developed advanced oil recovery technologies that are more energy efficient, use less steam and have lower water intensity. New advanced technologies under development could have significant water intensity benefits (see Managing the risks of climate change).

In addition to in-house research, Imperial collaborates with academic institutions, industry peers, and third party companies to accelerate the pace of water innovation. COSIA's Water Environment Priority Area (EPA) is developing innovative and sustainable water solutions for oil sands mining and in situ operations with more than 250 technologies contributed and active projects in 2019 valued at over \$402 million.<sup>(30)</sup>

The Water EPA has identified issues facing the industry and is working to progress opportunities in areas such as improved use and management of all water resources. Imperial, together with the other industry members of COSIA, has established industry fresh water use intensity targets using 2012 as a baseline year for oil sands water use. Targets include reduction of water intensity by 50 percent by 2022 for in situ operations, while members with mining operations are committed collectively to reduce the net water use intensity from the Athabasca River and its tributaries by 30 percent by 2022.

INDEX

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## Partnering for the future of water management

The world of water stewardship is evolving in response to economic and environmental pressures and opportunities. Recognizing that water management will continue to be a focus area in industry in the coming years, Imperial has partnered with Calgary-based SAIT to create a program that gives students the tools and expertise they need to work on solutions to global water issues. This initiative is the first integrated water program diploma in Canada. Graduates will have transferable skills for working in a multitude of industries including energy. As part of our ongoing support at SAIT, Imperial invested \$1 million toward program development and implementation, furthering our commitment to environmental stewardship.



An innovative new water program partnership between Imperial and SAIT was launched in March 2019. SAIT president and CEO Dr. David Ross is pictured with Theresa Redburn, Imperial Senior Vice President – Commercial and Corporate Development.

## INDEX

# Water metrics

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

Imperial regularly reports water use information to regulatory agencies, trade associations, COSIA and Statistics Canada. Information is made available on our website, in our [water management summary](#). In 2018, our total freshwater consumption was 45.3 million cubic metres.

## All of Imperial's sites are engaged in collecting information and understanding our water footprint.

Water data is used to facilitate benchmarking and stewardship, to prepare for risk assessment and management reviews, and to identify and evaluate continuous improvement opportunities. In addition to our water metrics, we also evaluate:

- Water treatment and distribution technologies to increase efficiency and re-use opportunities, to allow use of lower-quality (non-potable) source water;

- Seasonal adjustments in water withdrawals, discharges, distribution and/or storage;
- Alternative water sources, including lower-quality sources or sources not competing directly with local and/or regional users; and,
- Reduction of water use through technological, chemical, operational and/or other alternative methods.



	units	2014	2015	2016	2017	2018
<b>Downstream and Chemical facilities</b>						
Water withdrawn	Mm <sup>3</sup> /yr	69.4	72.5	76.1	74.9	<b>74.1</b>
Water consumed	Mm <sup>3</sup> /yr	9.6	10.5	10.4	9.9	<b>10.1</b>
Water intensity	m <sup>3</sup> /m <sup>3</sup>	0.42	0.47	0.49	0.45	<b>0.44</b>
<b>Upstream facilities</b>						
Water withdrawn	Mm <sup>3</sup> /yr	17.2	42.5	31.9	32.7	<b>35.4</b>
Water consumed	Mm <sup>3</sup> /yr	15.6	41.0	30.2	32.6	<b>35.2</b>
Water intensity	m <sup>3</sup> /m <sup>3</sup>	1.12	2.10	1.46	1.56	<b>1.63</b>
Oil sands produced/process water recycle	Mm <sup>3</sup> /yr	86.6	123.5	151.9	153.0	<b>151.2</b>
Oil sands produced/process water recycle	%	86	75	84	82	<b>81</b>

Mm<sup>3</sup>/yr = million cubic metres per year

m<sup>3</sup>/m<sup>3</sup> = cubic metre of fresh water consumed per cubic metre of refining throughput or upstream production

# Water use and performance

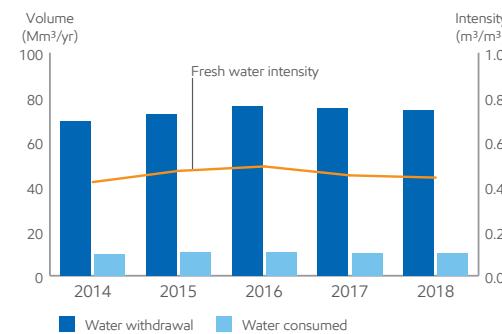
INDEX

## Downstream and chemical facilities achieved strong utilization rates over the last five years.

At Imperial's downstream facilities, water usage varies due to changes in crude quality and refinery utilization rates. Water is used for steam production, removing salt from crude oil, making hydrogen and as a fluid for cooling – the largest single use is for cooling hydrocarbon streams to safe temperatures. Only a portion of the water withdrawn is consumed as a chemical feedstock or lost to evaporation. The rest is returned safely back to the environment according to appropriate provincial approvals.

Our downstream and chemical facilities have achieved strong utilization rates over the past five years with little change in water use, resulting in a relatively flat water intensity.

### Downstream and Chemical water metrics



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

### ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

## Upstream operations are focused on minimizing the need for fresh water.

In our oil sands mining operations, water use intensity depends on factors including project age, stage, production plans, ore quality and facility processes, while water needed for in situ operations depends on extraction technology, reservoir quality, suitable and available water sources and facility age. In situ methods typically involve the injection of steam into the oil sands reservoir to heat the bitumen and reduce its viscosity, allowing recovery of the bitumen. Both in situ and mining have freshwater needs for activities such as cooling, dust suppression, fire protection, drilling through non-saline formations, potable and utility requirements.

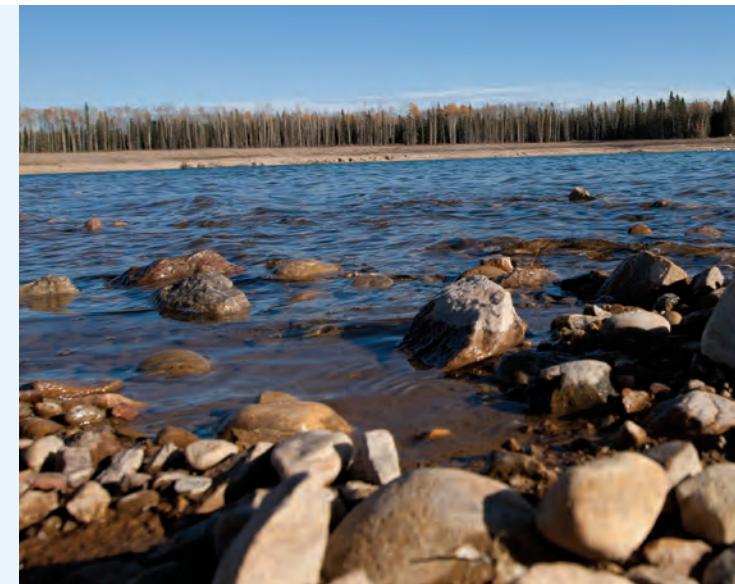
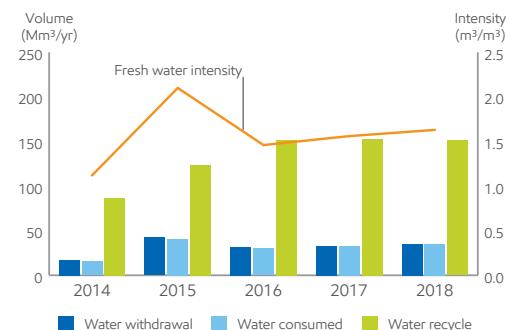
Our upstream facilities have seen a modest increase in water intensity year over year, which reflects preparation for increased production. In 2018, operations resumed at our Norman Wells facility. This operation uses water injection for enhanced recovery and a closed once-through cooling system, where water is kept completely separate from hydrocarbons. Water intensity metrics reflect start-up at this site.

### Produced water recycling at Cold Lake

Cold Lake Operations (CLO) has a track record for reducing fresh water demand. Since operation began in 1985, CLO has achieved a 90 percent reduction in fresh water use intensity and a 50 percent reduction in total fresh water use. This reduction allowed Imperial to return about one million cubic metres of annual water allocation to the Alberta government in 2017, reducing CLO's allocation to withdraw water from Cold Lake by about 20 percent.

The CLO strategy for water management includes maximizing the recycling of produced water, thus minimizing the need for fresh water by using produced water and brackish water where facility capabilities allow. Since the 1980s, the volume of recycled produced water used instead of fresh water has increased significantly, as has the ratio of produced water to the total volume of water CLO uses. In 2017, 94 percent of water used at CLO was produced water.

### Upstream water metrics



# Land use and biodiversity

INDEX

Biodiversity is a term used to describe the variety of life on earth and includes the diversity of ecosystems and living organisms. Imperial operates in a variety of ecosystems, some with sensitive characteristics. Our upstream operations in particular can affect different wildlife habitat and ecosystems. We minimize our surface footprint for new facilities through careful planning, re-use of existing disturbances such as roads, and progressive reclamation throughout the life of a project.

Imperial carefully considers land use, biodiversity and ecosystems in all aspects of our operations, from new development planning to ongoing operations and reclamation. Through our environmental assessments and business plans, we consider factors such as minimizing footprint in sensitive environments, the rarity of individual species, their roles in different ecosystems and habitats, their vulnerabilities and their cultural significance.



In addition to applying tools that improve our understanding of local biodiversity conditions and ecosystems, we support research and collaborative efforts to conserve and monitor biological resources. Some examples include:

- Imperial is a founding member of [Canada's Oil Sands Innovation Alliance \(COSIA\)](#). One key focus area for COSIA is to reduce the footprint intensity and impact of oil sands operations on the land and wildlife.
- We are also a member of the [Regional Industry Caribou Collaboration \(RICC\)](#), a group of energy and forestry companies that contribute to conserving caribou and restoring their habitat through collaborative range-based efforts. RICC is intended to co-ordinate caribou habitat restoration in priority areas and support scientific research on caribou ecology and caribou-predator-landscape relationships.
- Through the Institute for Oil Sands Innovation (IOSI) at the University of Alberta, experts and academics are applying ground-breaking research to improve all aspects of oil sands mining.

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

# Caribou

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

Boreal caribou are listed as threatened under the federal *Species at Risk Act*. Imperial believes that energy resources can be developed responsibly, in a manner that supports caribou recovery. For the past seven years, Imperial has been collaborating with the Government of Alberta to find solutions that support caribou recovery while maintaining a working landscape.

Key components of our approach to caribou recovery include:

- **Restoration** Since 2016, Imperial voluntarily contributed \$600,000 to support caribou habitat restoration projects in the Cold Lake Caribou Range.
- **Tenure flexibility** To enable orderly development and reduce overall industry footprint, Imperial deferred drilling (~3,000 ha) in 2018 until March 31, 2021.
- **Lease relinquishment** In 2018 Imperial voluntarily relinquished or surrendered our working interest in about 27,000 hectares of oil sands leases in two caribou ranges in northern Alberta.
- **Innovation** In addition to our collaborations through COSIA and RICC, Imperial is also representing the Canadian Oil & Gas sector on the National Boreal Caribou Knowledge Consortium.



Lori Neufeld, Imperial (left) and Chantelle Bambrick, Foothills Landscape Management Forum (right)

Since 2017, Imperial has supported the Caribou Patrol Program, an Indigenous-led stewardship program that promotes caribou conservation within the Aseniwuche Winewak Nation of Canada (AWN) traditional territory of west-central Alberta. The program enhances caribou awareness through education, outreach and road patrols during key migrations to respond to two main threats faced by local caribou: habitat alteration resulting from human land-use activities and vehicle collisions.

## Kitaskino Nuwenéné Wildland Park

In 2018, Imperial voluntarily relinquished our Marguerite oil sands lease to support establishing a biodiversity stewardship area in the region, an initiative led by Mikisew Cree First Nation in partnership with Teck, Imperial, Cenovus and the Government of Alberta.

On March 8, 2019 the Kitaskino Nuwenéné Wildland Park was approved by the provincial government. The 160,000 hectare park provides a buffer to Wood Buffalo National Park, a UNESCO World Heritage Site that contains the biologically diverse Peace Athabasca Delta and protects more than 80,000 hectares of caribou habitat in two of Alberta's caribou ranges. Successfully establishing this wildland area demonstrates how collaboration and connections between government, industry and Indigenous communities can lead to positive environmental outcomes.

# Imperial's commitment to progressive reclamation

INDEX

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



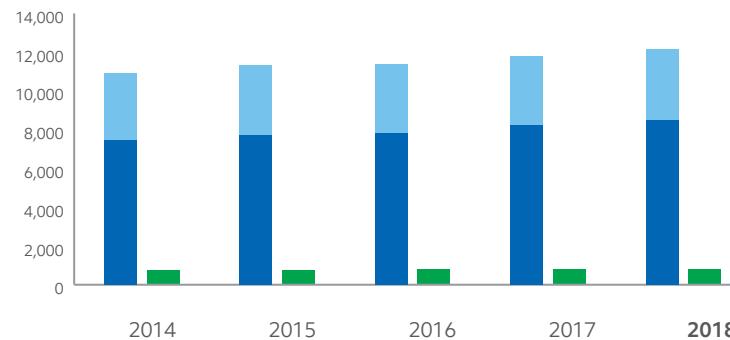
## Disturbance and reclamation in the boreal forest

Boreal forest covers some 38 million hectares in Alberta. Over the past 40 years, Imperial's operations in the oil sands region have disturbed about 12,000 hectares, or 0.032 percent of Alberta's boreal forest. This includes our in situ operation at Cold Lake (3,574 hectares), our oil sands mining operation at Kearl (8,430 hectares) and early work at our Aspen development (348 hectares). To the end of 2018, over 800 hectares has been cumulatively reclaimed at Kearl and Cold Lake.

Total disturbance from all mineable oil sands operations in the region covers about 104,000 hectares of land, or 0.3 percent of Alberta's boreal forests.<sup>(31)</sup>

By law, oil sands producers must reclaim all land after operations are complete. This includes contouring the land, replacing soil and replanting a native plant community to form natural, self-sustaining habitats. But Imperial's commitment to progressive reclamation goes beyond regulatory compliance and planning begins long before production starts. In other words, we start with the end in mind.

## Oilsands footprint



	2014	2015	2016	2017	2018
Total footprint	10,946	11,314	11,406	11,805	12,180
■ Oil sands mine – Kearl	7,441	7,733	7,802	8,207	8,479
■ In situ oil sands – Cold Lake & Aspen	3,505	3,581	3,604	3,598	3,702
■ Total land reclaimed	726	774	791	802	807

Total footprint represents the cumulative hectares (ha) for areas cleared of vegetation, soil disturbed, temporarily reclaimed, ready for reclamation, soils placed and permanently reclaimed. The area reported as land reclaimed is a sub-set of the total footprint. Total footprint does not include footprint associated with exploration activities.

## INDEX

# Cold Lake

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA



Imperial's Cold Lake in situ operation (CLO) has an overarching end land use objective to restore a mixed-wood boreal forest that provides wildlife habitat to maintain sufficient diversity in topography and ecological conditions.

Imperial recognizes the value of traditional Indigenous knowledge and we are actively working to find ways to incorporate such knowledge into reclamation approaches at Cold Lake through engagement with stakeholders on reclamation specific practices and end land use.

We are also taking steps to further reduce our surface footprint at CLO, such as:

- Implementing multi-well pad facilities, allowing greater access to bitumen deposits from fewer surface locations;
- Utilizing previously disturbed areas such as roads;
- Where possible, planning borrow pits to allow significantly more recovery of material from a smaller footprint;
- Using minimal disturbance techniques as appropriate; and
- Using multipurpose rights-of-way with minimal width designs.

In addition, mitigation measures outlined in the Environmental Business Plan will be implemented to reduce the potential for and magnitude of effects on wildlife.



## COLD LAKE

- Cold Lake and Kearl operations have Wildlife at Work certification from the Wildlife Habitat Council.
- More than 1.7 million trees and shrubs have been planted at Cold Lake since 1999.
- Approximately 17 percent of the Cold Lake footprint has been permanently reclaimed.

# Kearl

INDEX

By using local native seeds, selected through our work with Indigenous communities, we will restore an ecosystem that supports varied medicinal plants plus traditional uses such as berry picking, trapping, fishing and hunting.



Photo courtesy of Syncrude Canada Ltd.

The Beaver Creek Wood Bison Ranch, a partnership between Syncrude and the Fort McKay First Nation, was established on reclaimed land in 1983 demonstrating it can support large animals. In 2018, the Ranch celebrated 25 years of operation.

Oil sands mining is a large-scale excavation to extract bitumen. Mining requires the removal of vegetation and soil to reach the oil sands underneath, but seeds, topsoil and other materials are salvaged and saved for later use in reclamation.

Kearl is a fairly new development so reclamation of the total disturbed area to date is relatively small: 1.4 percent of the operation's total disturbance. But working within our principle of starting with the end in mind, Imperial is actively salvaging and storing soil and we've planted more than 360,000 trees across the site including 18,000 in 2018 alone.

A key component of oil sands reclamation is to revegetate the land with species characteristic of the area's boreal forest. Since 2010, we have been a member of the Oil Sands Vegetation Cooperative (OSVC), which funds the harvest and banking of native plant seed and research into seed storage and the propagation of native plant species. To supplement seed collected by the OSVC, we also have our own initiative that has collected and banked seed from some 60 species of native plants.



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

**Kearl's Muskeg Lake – incorporating Indigenous knowledge**

Muskeg Lake, attached to the original Kearl Lake, was completed in 2013 to replace fish habitat disturbed by mining operations. The lake covers approximately 30 hectares of area with an average of four metres of water depth to enable fish to over-winter. Over the last eight years, Imperial has planted 23 different species of trees, shrubs and other plants in support of diversity. Ongoing monitoring of soil, water, vegetation and fish has indicated a thriving and viable ecosystem as follows:

- Soil structure development (surface soil and upper subsoil) indicates natural soil development is occurring.
- Vegetation cover has increased steadily.
- Fish species diversity is high, with all fish species in Kearl Lake now present in Muskeg Lake.

**The Indigenous Reclamation Planning group**

This unique group, made up of elders and community members from seven Indigenous communities, was established by Imperial to obtain input from Indigenous communities on reclamation and closure plans at Kearl. The knowledge shared from this working group has been vital to improving our understanding of the Indigenous connection to the land. Input on the selection of traditional and medicinal plants and habitat features that support a variety of wildlife has helped Imperial formulate a more holistic and culturally appropriate approach to reclamation planning.



2018 COSIA tour at Muskeg Lake.



 By making the time and effort to include the Indigenous perspective into our reclamation activities, we are able to develop the oil sands responsibility, mitigate impacts to the environment and respect the rights of Indigenous peoples. It doesn't have to be either or. I'm proud that Imperial is able to take such an inclusive approach to reclamation.

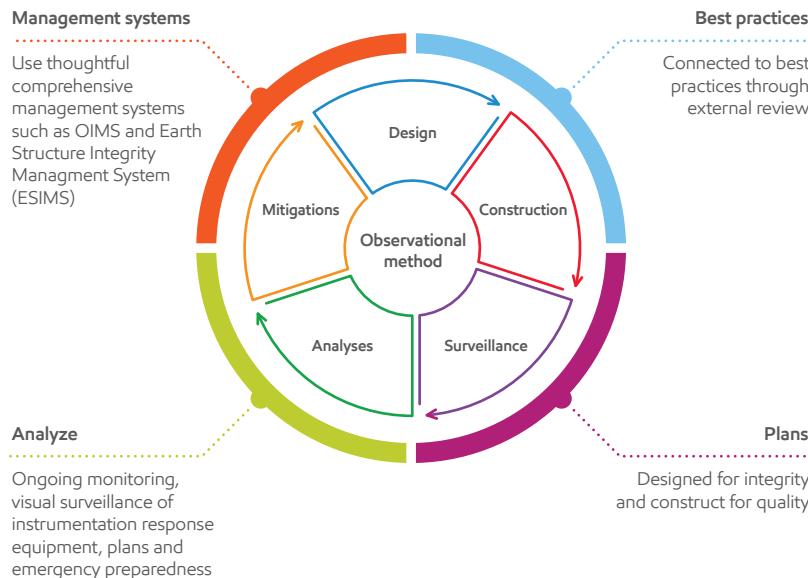
**Shelley Larose** – Socioeconomic Manager,  
Athabasca Region

# Tailings ponds

INDEX



## Observational method



Tailings are an inevitable end product of oil sands mining. Through the mining process, water is used to separate out bitumen leaving a mixture of water, sand, fine clay particles and some residual bitumen. This mixture – tailings – is piped into tailings ponds where the sand and fine particles settle to the bottom and water is removed and re-used.

Oil sands tailings ponds can be challenging to reclaim due to the length of time needed for very fine particles to settle, sometimes decades. The quicker these fine particles can settle, the faster we can reclaim tailings ponds – we want to return any disturbed lands, including tailings ponds, to productive use as soon as possible. The Alberta Energy Regulators Directive 085 requires tailings ponds to be in 'ready-to-reclaim' state within 10 years of the end of mine life.

Our management of tailings is guided by our best practices including external review, design for integrity, construct for quality, monitoring and having in place emergency response equipment, and emergency preparedness and response plans. Key objectives for managing oil sands tailings include:

- Minimize long-term environmental effects;
- Minimize the accumulation of fluid tailings to ensure timely progress to closing the tailings ponds;
- Maximize water recovery from tailings to minimize the need for fresh water;
- Minimize the land footprint required for tailings management and storage.

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

## Kearl's tailing management plans evolve with technology.

Tailings management is integral to successful development at Kearl. Our strategy to achieve timely reclamation to support a diverse and self-sustaining ecosystem is:

- Design with the end in mind, to create a sustainable landscape;
- Treat tailings, including flotation tailings (FLT) and fluid fine tailings (FFT), prior to accumulating large volumes of fluid tailings; and
- Deposit treated tailings in their final landscape position to facilitate progressive reclamation.

In 2016, our tailings management plan was revised with two significant features. First, we committed to incorporating a thickening technology into our process at a cost of \$2 billion, to help remove fine particles from the tailings. Second, in alignment with provincial regulations, our tailings management is now more focused on reclamation outcomes, which in turn informs our tailings strategies.

To more effectively manage tailings, we use a thickening technology that intercepts produced tailings and combines that mixture with recycled fine fluid tailings (FFT) from our tailings pond, turning the newly produced tailings into a paste. Thickened tailings are placed in layers where the material can dry into a solid state. Solid tailings can be covered with sand, topped with soil salvaged from our mining operation and revegetated. The process gets water out of the tailings sooner, limiting the creation of tailings from the start and increasing our ability to recycle water from the ponds. The result: the large ETA was split in half—one half is still a traditional tailings pond and the other a 'dry' side for the placement of treated tailings and course sand.

### Innovation and technology are key factors for improving tailings management

COSIA's tailings environmental priority area (EPA) is focused on improving the management of oil sands tailings. Working with universities, government and research institutes, companies and partners, the Tailings EPA brings together the shared experience, expertise and financial commitment of oil sands mining companies to find new technologies and solutions to tailings.

Our research team is looking at improving the efficiency of the thickener and quality of tailings so that treatment is less capital intensive and a better material for reclamation and closure purposes is created. In 2019 Imperial invested over \$5 million in an enhanced in-line flocculation pilot project at Kearl.



# Decommissioning and remediation

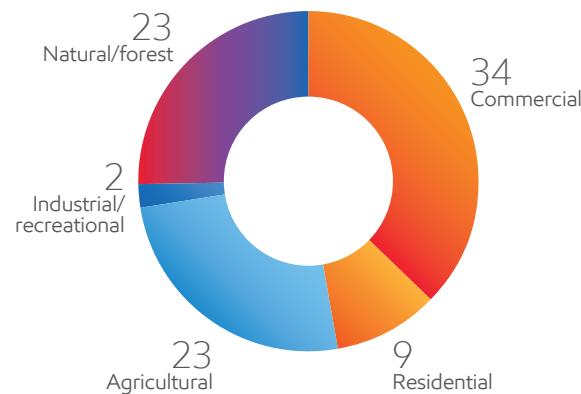
INDEX

As part of our life-cycle approach to protecting the environment, we continue to enhance the rehabilitation of our no-longer-needed properties so they can have a beneficial next use. By taking actions today, we can ensure the land we use is available for other uses in the future.

When properties are no longer required to support our operations they are decommissioned and identified as surplus. Returning surplus properties to other productive uses is a priority for Imperial – the company spends millions of dollars annually to assess, manage and remediate surplus properties. In 2018 alone, we spent approximately \$110 million on assessment, risk management, land remediation and reclamation activities resulting in 91 properties being put into productive use via sale or lease.

**2018 intended end land use of returned sites**

(number of sites)



spotlight

Solutions are never black and Whyte

The property at 105 St. and Whyte Ave. in Edmonton was home to an Esso-branded retail station since the 1920s. Today, it is home to Raymond Block – a six-storey luxury, mixed-use residential development – and the first mixed use, mid-rise LEED Platinum project in Canada.

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

## Imperial supports risk based closure and outcome based solutions.

We use a variety of means to remediate our sites, some examples include:

- Risk assessments involve a thorough investigation of sites to develop site specific closure criteria often resulting in reduced disturbance from physical remediation.
- Bioremediation treats suitable material with soil amendments to stimulate growth of microorganisms that naturally occur in soil. These microorganisms will then degrade petroleum hydrocarbons present in the soil.
- Salt washing is another treatment technique that Imperial currently uses at our Norman Wells property to treat salt-impacted soils. This technology involves irrigating the excavated salty soil with an amendment solution and collecting the leached salt. The process can be repeated until the soil meets defined criteria.
- Phytoremediation is being applied at eight of our sites to remove hydrocarbon and fertilizer impacts from soil using live plants that metabolize or facilitate degradation of impacts.

The remediation process can take time, so we have an ongoing program for monitoring sites to ensure protection of human health and the environment.



Imperial is supporting research at the University of Toronto who are testing the use of enriched microbial cultures below the ground to make environmental remediation more effective over the long term.

### Working together to address inactive wells

Imperial believes companies should manage their inactive wells and close out surplus sites as part of their license to operate.

In Alberta, Imperial is involved with the Canadian Association of Petroleum Producers (CAPP) to identify opportunities for improvements to the regulatory process, to ensure the province's end of life liabilities are appropriately managed and to highlight opportunities for more efficient and effective closure mechanisms. Through CAPP, Imperial and industry partners worked with the regulator to help develop the area based closure program, which offers incentives to companies that commit to a target spend to reduce their inactive well liability. This program also encourages collaboration and drives efficiencies for reduced closure costs.

# Preventing unplanned releases

INDEX

Imperial designs and operates facilities with the objective of preventing unplanned releases from entering the environment and causing adverse effects. We strive for zero spill incidents and take action by:

- Using Imperial's facility integrity management system (FIMS), which outlines expectations for Integrity programs including spill prevention;
- Performing preventative maintenance and testing critical equipment in accordance with regulatory requirements;
- Utilizing monitoring equipment to detect any events to mitigate the impact of incidents; and
- Building secondary containment such as ditches, ponds, sumps, sewers with pumping mechanisms, or clay pads with berms around production equipment such as wells, processing facilities, product and chemical storage areas.



COMPLIANCE	2014	2015	2016	2017	2018
Oil and chemical spills ( <i>total number</i> ) > 1 barrel	26	10	4	4	<b>13</b>
Volume of product from oil and chemical spills ( <i>barrels</i> )	496	500	62	114	<b>231</b>
Number of environmental regulatory compliance incidents	31	27	20	11	<b>9</b>
Number of environmental exceedance incidents	18	12	10	8	<b>9</b>
Environmental fines and penalties ( <i>thousands of dollars</i> ) <sup>(32)</sup>	\$6.5	\$13	\$37	\$813	<b>\$812</b>
PRODUCTION/THROUGHPUT					
Downstream and Chemical – refining throughput ( <i>barrels</i> ) <sup>(33)</sup>	144,000,000	141,000,000	132,000,000	140,000,000	<b>143,000,000</b>
Upstream – production ( <i>barrels</i> ) <sup>(34)</sup>	87,000,000	123,000,000	130,000,000	131,000,000	<b>136,000,000</b>

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

3 GOOD HEALTH AND WELL-BEING



15 LIFE ON LAND



## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

Spill trends are tracked and analyzed to identify improvement opportunities. In 2018, none of the oil and chemical spill incidents reported were deemed significant based on their volume, potential impact and time required for remediation. Focus areas for future improvement include:

- Enhance facilities/pipeline integrity and maintenance programs and system reviews, upgrading as appropriate;
- Continue to evolve pipeline integrity programs based on inspection findings and regulatory expectations;
- Evaluate lower-consequence incidents to ensure learnings are captured;
- Conduct additional training and workshops to evaluate and understand the potential for high-consequence incidents, and to ensure appropriate mitigations are in place; and
- Share industry learnings.

### Spill response plans

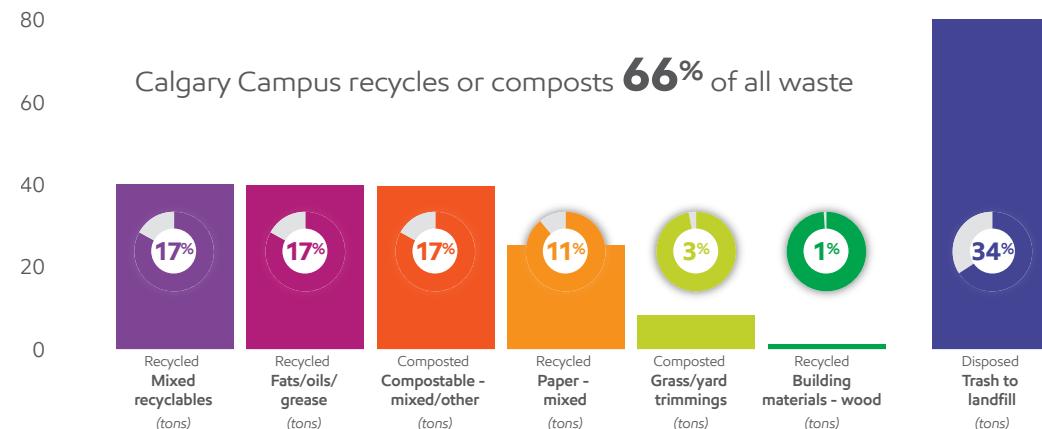
All of our sites have a spill response plan that includes stopping the spill, securing the worksite and initiating cleanup. For larger incidents, Imperial is able to leverage local and regional emergency response organizations as needed. See emergency preparedness and response for more details.



# Waste management

INDEX

Imperial recognizes the importance of properly managing waste to protect human health and the environment both for tomorrow and today. Waste management plans and processes are in place to ensure waste generated from our facilities is managed responsibly. Where practical, the company expects waste to be managed in the following hierarchy: avoid, reduce, reuse, recycle and dispose. All process waste generated by Imperial must be managed at Imperial audited facilities in order to minimize potential safety, security, health and environmental concerns associated with the disposal of such material.



In mid-2016, Imperial launched a four-stream (refundables, mixed recycling, organics, landfill) waste diversion program for its Calgary campus staff in addition to recycling grease, wood, construction waste and landscaping compost. In 2018, 66 percent of waste material was recycled or composted.

In 2018, the amount of overall site-wide waste disposed at a landfill was reduced by 50 percent per person from 2016 as a result of our four stream waste diversion program.



DID YOU KNOW?

## CALGARY CAMPUS INITIATIVES

- The Calgary campus was designed to minimize impact to the environment.
- The campus received LEED Gold certification in 2016 and the ENERGY STAR certification in 2019.
- The building is approximately 45.5 percent more energy-efficient than the national standard for building energy performance.<sup>(35)</sup>
- The 2018, Go Paperless Challenge involved 1,500 participants and resulted in reduction in printing by 45 percent during the challenge.
- The campus has more than 70 electric charging stations in the parkade.

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

3 GOOD HEALTH AND WELL-BEING



12 RESPONSIBLE CONSUMPTION AND PRODUCTION





## Safety, health & the workplace

Caring for the well-being of the people who work in or near our operations

# Workplace safety and security

INDEX

Imperial has a straightforward philosophy around workplace health and safety: Nobody gets hurt.

Protecting the safety and health of our workforce is fundamental to our business. We are relentless in our pursuit of safety so every employee and contractor goes home from work each day safe and healthy.

The company upholds a strong safety culture. Staff and contractors are expected to promote and maintain a work environment in which each person accepts personal responsibility for their own safety and actively intervenes to ensure the safety, security and wellness of others.

Many of our operations and products present potential risks to people and to the environment. Recognizing these risks is inherent in our business. We believe the best way to meet our commitment is through a capable, committed workforce, and practices designed to enable safe operations. OIMS is a cornerstone of our commitment to managing risk and achieving performance excellence.



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

★ Imperial's health and safety culture is industry-leading, in part because our culture is personally meaningful to every individual. To me, that means everyone, at every level of the company, is encouraged to make good, safe decisions that protect employees, contractors, neighbours and communities – including my own family, because safety comes home everyday.

**Chris Kett** – Loss Prevention Supervisor  
and OIMS Coordinator



## INDEX

# We are safety leaders

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

All our employees and third-party contractors have the responsibility to work safely, regardless of job function. We maintain an elevated focus on life-saving practices for work activities that have the potential for serious injuries if not performed properly. Examples include lifting heavy loads, working with electrical power and working at elevated heights.

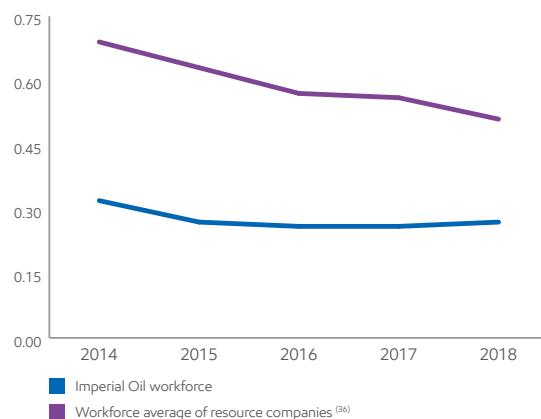
Contractors and third-party service providers execute a significant amount of work at our sites and have a critical role to ensure work is executed safely. To meet this objective we have contractor management systems in place where service providers are screened, monitored and continually assessed to ensure they are meeting our health and safety requirements.

Our combined employee and contractor total recordable incident rate (TRIR) and lost time incident rate (LTIR) are industry leading.<sup>(36)</sup> In 2018, Imperial had a TRIR of 0.27 and LTIR of 0.03. We participate in industry organizations such as the Canadian Association of Petroleum Producers (CAPP) and the Canadian Fuels Association (CFA) to share industry best practices.

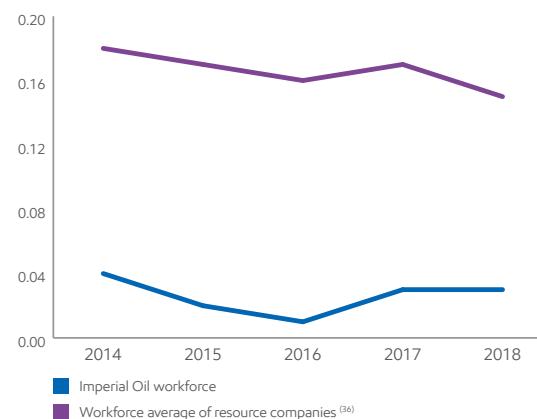
As part of our commitment to continuous improvement, we look at leading safety indicators that could help with further prevention and mitigation of incidents.

**Total recordable incident rate**

(incident per 200,000 work hours)

**Lost-time incident rate**

(incident per 200,000 work hours)



# Process safety

INDEX

Our position as a safety leader includes diligent management of process safety – managing the integrity of our facilities by applying good design principles, engineering and operating practices. Our process safety mission is to eliminate all high-consequence safety events. We incorporate rigorous safety standards and procedures in our facility design, construction and operating activities. Our processes govern equipment, procedures, maintenance and training that prevent the uncontrolled release of hydrocarbons and hazardous substances. We employ multiple layers of protection, or barriers, to help prevent a loss of containment.

Facility integrity is implemented within Imperial through our facility integrity management system (FIMS) as part of our overall OIMS process. FIMS describes the process and activities required to ensure integrity of production facilities, including equipment criticality assessment, implementation and review of equipment strategies, processes for management of change, reporting requirements and continuous improvement plans. In the spirit of continuous



improvement, we recently rolled out enhanced process safety guidelines and expectations including scenario management, human performance principles and precise execution, to help achieve a step-change in process safety performance. We are also rolling out key process safety actions to address common exposures and potentially higher-risk activities related to process safety, with particular focus on monitoring our safeguard health.



*Risk is inherent in our business and enhanced process safety management is vital to ensure we take care of our people, communities, our facilities and protect the environment. Demonstrating passionate, proactive leadership and a culture of effective execution by everyone involved in the process is key to achieve process safety excellence.*

**Rozena Dendy** – Nanticoke Refinery Manager

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



## INDEX

# Security is everybody's business

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA



To ensure the security of our people, physical assets and intellectual property is deeply embedded in our daily operations, we have developed consistent security practices and preparedness plans, and have trained site-security contractors to meet challenges in the diverse locations where we do business.

Proactive security actions are enabled by effective processes and systems that collect, monitor and evaluate potential security intelligence and threats. Facilities are designed and run in accordance with sound security practices that balance risk, cost effectiveness, and performance throughout their operational lives.

We regularly participate in government and industry forums to enhance our knowledge, skills and technical security applications, and have ongoing awareness and training programs, including cybersecurity awareness, to reinforce safe behaviours with our workforce.

## Product safety and responsibility

We provide high-quality products that meet or exceed specifications and customer needs, and provide information about our products and services so customers can make informed purchasing decisions. We actively encourage our suppliers, contractors and others within our supply and distribution chains to have comparable standards to those we have established for our own company.

We identify and evaluate risks associated with new and modified products and their manufacture, use, delivery and disposal. Product safety and health hazard information are also monitored, and any

risks requiring specific management processes are communicated to customers, third parties and the public.

Imperial participates in Responsible Care®, an initiative of the Chemistry Industry Association of Canada (CIAC) that requires CIAC members to dedicate themselves, their technology and their business practices to sustainability – the ongoing betterment of society, the environment and the economy. Many of these strict codes of practice govern the safe and environmentally responsible handling of chemicals throughout their life cycle. At Imperial, these codes are met through OIMS.



# Emergency preparedness and response

INDEX

In the event of an emergency, Imperial's priority is always on people and the environment.



Emergency response is critical to ensure that, in the event of an incident, all necessary actions are taken to protect the public, the environment, and company personnel and assets. In addition, effective management of stakeholder relationships is important to enhance community trust and confidence in Imperial's operations.

Imperial has internal emergency preparedness and response (EP+R) teams, whose role is to:

- Evaluate and ensure personnel are properly trained; and
- Ensure drills are being planned, executed and completed.

Imperial has robust emergency preparedness and response plans in place at all facilities and operations. Our OIMS framework outlines corporate expectations for emergency preparedness, response and business continuity, including documentation, resources are identified and available (including equipment facilities and trained personnel) and emergency drills are planned and executed as required.

## Within the community

Imperial is committed not only to the safety of our workers and the environment but also to communities near our operations, and the first responders and contractors who could be affected by an emergency situation. To promote public safety, Imperial engages with Transportation Community Awareness and Emergency Response Initiative (TRANSACER), led by the Chemistry Industrial Association of Canada and the Railway Association of Canada. Imperial participates in at least one TRANSACER exercise annually.

An Imperial employee chairs the Chemistry Industry Association of Canada's Transportation Emergency Assistance Program ([TEAP III](#)) which maintains a national network of organizations that can safely and efficiently mitigate impacts of a transportation incident, plus a list of approved contractors capable of responding to an emergency. Imperial represents the Canadian Fuels Association and is the vice-chair of the [Transportation of Dangerous Goods General Policy Advisory Council](#), which is focused on public and community safety to ensure first responders are well prepared to meet emergency situations.

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

**Response teams**

For any emergency that threatens to outstrip a given facility's response ability and resources to quickly and safely manage the event, the global regional response team (RRT) can be brought in for additional support and expertise. The RRT is made up of some 500 experienced responders, subject matter experts and technical experts including about 75 members from Imperial. The RRT integrates with the facility, local responders and others involved with the incident to provide process management and technical expertise.

In the event of an emergency or shutdown of a facility, we recognize the need to continue moving product to ensure minimal disruption to our customers. The emergency support group supports the RRT to manage strategic responses to an incident, mobilizing people and equipment, establishing communications and formulating strategies as needed for business continuity.

**Drills**

Drills allow facilities to test emergency preparedness plans and to build relationships with emergency agencies and first responders, who often participate in the drills. In 2018, Imperial completed 283 emergency response drills across our sites, including the large Sarnia product pipeline emergency response exercise in Mississauga, Ontario. The exercise involved about 150 people including employees, many external agencies and response organizations. The exercise simulated a product release from a pipeline into a waterway and engaged responders who would participate in a real event. Several local government representatives, including the City of Toronto, were involved in scenario planning and the drill execution.

The exercise delivered many positive outcomes, such as improved understanding of partner response capabilities, insight into potential response plan enhancements and strengthened relationships with internal and external participants.



*Working with Imperial helped us be better prepared for an emergency, and strengthened our working relationship. Imperial encouraged us to be challenging participants and we were fascinated by the technology Imperial brought to the exercise. Because the drill concluded just at the time when the spill impact on Toronto's water treatment plant intakes was being initiated, we have decided to conduct a subsequent simulation with our neighbouring municipality and Imperial. This was a rewarding experience for all involved.*

**Bill Snodgrass** – Senior Engineer, Toronto Water, City of Toronto

# Inclusion and diversity

INDEX

Our goal is to attract and retain the very best quality people and support their success for a career with Imperial.

Diversity, the differences between individuals or groups of people, is an opportunity — it's about all of us and all of the ways we are different from and similar to one another. Inclusion is about behaviours that ensure individual differences are respected and valued, fostering an environment where each person can achieve their full potential. Inclusion and diversity are key competitive strengths, critical to maintain Imperial's position as an industry leader.

Imperial's Equal Employment Opportunity policy incorporates requirements defined in Canada's Employment Equity Act. This legislation ensures employers do not discriminate on the basis of age, sex, sexual orientation, religion, national origin or any other prohibited ground of discrimination. Legislation also covers occupational health and safety, workers compensation, human rights, protection of young workers and workplace harassment.

Imperial's Harassment in the Workplace policy strictly prohibits any form of unlawful harassment including any inappropriate conduct that has the purpose or the effect of creating an intimidating, hostile or offensive work environment; unreasonably interfering with an individual's work performance, or affecting an individual's employment opportunity. Processes are in place to identify, investigate, and resolve complaints appropriately.

Imperial values external perspective and expertise and is pleased to be collaborating with the Canadian Centre for Diversity and Inclusion to stay abreast with best practices within the field to develop future inclusion and diversity plans. Our internal training programs emphasize the value of collaboration, appreciating differences and sustaining an inclusive work environment, keeping inclusion and diversity top-of-mind with all our employees. Inclusion and diversity, harassment and equal employment opportunity performance is stewarded annually to Imperial's Management Committee.

Rachel Marcel is a member of the Athabasca Chipewyan First Nation and works as a heavy equipment operator at Kearl. "Having a diverse workforce is very important," she says. "But it only works if we are all treated as equals. And that's what I like about working here — it's a very nice atmosphere. We're a team."

Rachel describes her workplace as one in which harassment is not tolerated. "I find that no one person is treated better than another due to their race, gender or age and that is very important when it comes to building a family," she explains. "That's what we are here, a family."



## HUMAN RIGHTS

The Canadian Charter of Rights and Freedoms protects every Canadian's right to be treated equally under the law including discrimination in employment related situations and freedom of association. This foundational legislation means that Canadians enjoy exceptional human rights protection — among the best in the world.

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



## INDEX

# Self identification

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

## Creating an environment where employees are comfortable self-identifying.

In an inclusive and diverse workplace, employees are comfortable to self-identify in the designated groups as defined by government, including gender, Indigenous, visible minorities, or persons with disabilities. In addition our employees may choose to self-identify as LGBTQ+ or veteran. Self-identification does not present a barrier to employment, training, advancement or other aspects of working at Imperial.

### Employee resource groups

Imperial maintains a supportive work environment though a range of development and networking programs. Employee resource groups are open to all employees and are focused on a common interest, in alignment with the company's approach to inclusion and diversity. Some employee-led resource groups include:

- Asian Connection for Excellence (ACE)
- Black Employee Success Team (B.E.S.T)
- Indigenous Network (IN)



- Global Organization for the Advancement of Latinos (GOAL)
- Women's Interest Network (WIN)
- People for Respect, Inclusion, and Diversity of Employees (PRIDE)



Calgary-based employee Mark Matlock is a member of the LGBTQ community. He was aware of the employee resource group PRIDE (People for Respect, Inclusion and Diversity of Employees) available to Imperial staff, but was reluctant to join. "I didn't know how it would be viewed," he explains. "But I soon saw the overwhelming support of managers and employees and met some great people while attending PRIDE events." Mark says the availability of this network and the support of his colleagues helps him feel comfortable in his work environment.

Mark says "A company that supports and values diversity is a place where I can bring my authentic self to work every day."

# Workforce diversity

INDEX

Imperial supports women in our industry, and is one of the leading Canadian energy companies in regard to female executive representation at 33 percent.<sup>(37)</sup> From 2017 to 2018, the number of women employees has slightly decreased due to retirements, however, women assuming leadership and supervisor roles has increased by 10 percent during the same time frame.

Women Building Futures (WBF), a leading organization in trades and industrial workforce training for women, is demonstrating success in developing and empowering women in the workplace. In 2015, Imperial announced a \$1 million commitment delivered over five years to support programs that train women as haul truck operators for our Kearl oil sands mine.

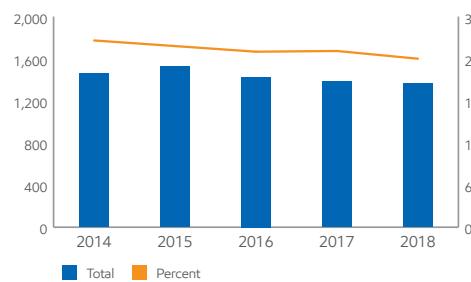
Imperial supports educational development and recruiting practices that facilitate employment of Indigenous peoples. Examples include a dedicated Indigenous recruitment advisor and Indigenous internship programs like the Norman Wells Development Program and the Cold Lake Native Internship Program.



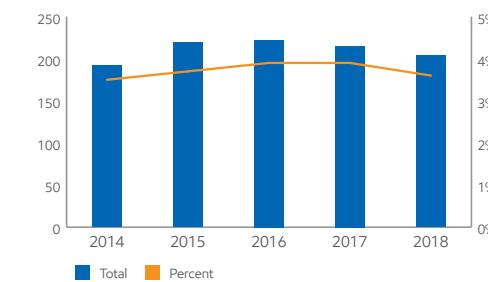
*At Imperial, we recognize the significant role women play in our company's success. We believe that when women have control over their income, they invest in the health, education and well-being of their families. They also reach out to propel other women forward, creating a powerful multiplier effect that benefits all of society.*

**Theresa Redburn** – Senior Vice President, Commercial and Corporate Development

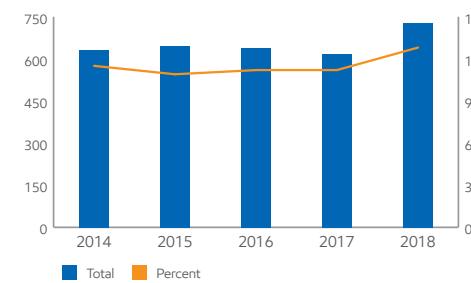
**Women employees**



**Indigenous employees**



**Visible minorities**



**Persons with disabilities**



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

# Employee training and development

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

## Learning is lifelong – growth is continuous

Continuous growth of employee capabilities and experience is key for both business and personal success. Imperial offers robust corporate and technical training programs to accompany challenging work assignments. A comprehensive, enterprise wide tool, Career Connect, supports goal and learning development, career and succession planning, employee career preference expression and performance and competency feedback.

Mentorship, both formal and informal, is invaluable in fostering employees development and career progression. Programs available include:

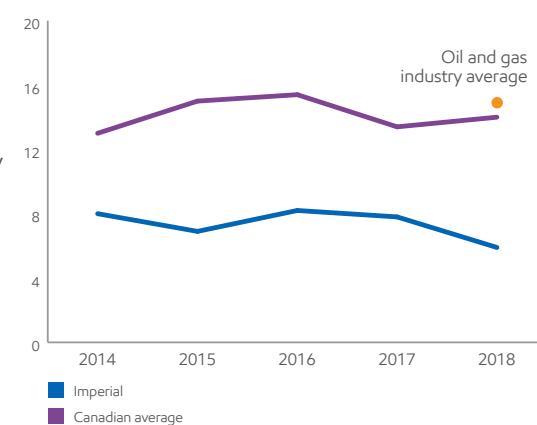
- Welcome to Imperial (WTI) to familiarize new employees with the organization, systems and structures.
- Network Advisory Program (NAP) to accelerate new hire/student integration within their first years.
- Senior Network Advisory Program (SNAP) for early to mid-career development.
- Functional mentoring programs within Imperial's businesses.

## Employee retention

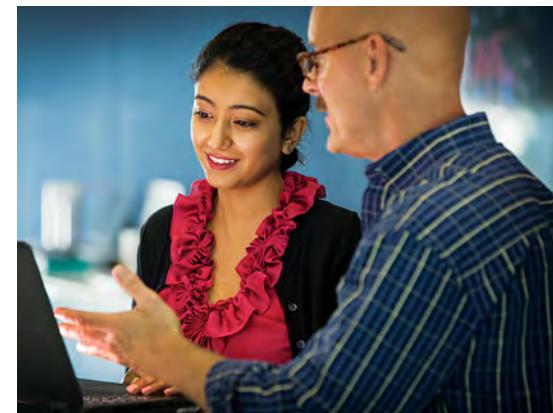
Imperial provides a foundation to a rewarding and successful career. Unexpected staff turnover is disruptive and could incur increased cost and reduce productivity and morale. On average, attrition at Imperial is half of the Canadian industry average. In 2018, Imperial's attrition rate was 5.9 percent. Retirements, at 2.8 percent, represented approximately half of Imperial's attrition.

## Turnover rates

(includes voluntary, involuntary attrition and retirements)



Compensation Planning Outlook 2019: With Winter Update. The Conference Board of Canada, March 2019.



## Career opportunities



# Workforce health and wellness

INDEX



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

Imperial cares about the health and well-being of our employees and their families. We take all health issues seriously, whether work-related or not. Our goal is for our employees to be healthy in their careers and in retirement.

At Imperial's health centres across the country, our occupational health professionals — physicians, nurses and industrial hygienists — provide advice on promoting a safe and healthy workplace and respond to individual health concerns.

The company has a comprehensive alcohol and drug policy. The purpose of the policy is to support workplace health and safety, to address and minimize the risks in the workplace associated with drugs and alcohol, to ensure fitness for duty and to provide support and resources to employees who are dealing with substance abuse or dependency problems. The policy outlines expectations based on risk assessments, encourages disclosure and supports treatment for employees.

We sincerely care about our employees and recognize the importance wellbeing plays in bringing 'our best self' to work. Programs include:

- Workplace flexibility programs in support of work-life balance.
- Comprehensive health and benefits plan.
- Wellness personal spending account (WPSA) to financially support employee focus on wellbeing as it suits their personal needs and goals.
- Employee and family assistance program (EFAP) for employees and their families with immediate and confidential support to help resolve work, health, and life challenges.

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA





## Community & Indigenous engagement

Creating lasting relationships around a common vision for progress

# Indigenous engagement

INDEX

**"As Imperial answers the Truth and Reconciliation Commission's call to action, we are committed to encouraging our employees to be collaborative agents for positive change."**

Rich Kruger – Former Imperial Chairman, President and CEO

Many of Imperial's operations and development opportunities are located within Indigenous communities or on their traditional lands. Imperial supports communities in areas where we explore, develop and operate, and we strive to establish meaningful relationships built on mutual trust, respect and shared prosperity. Our goal is to collaborate with Indigenous communities on a common vision for progress, sustainable economic development and environmental stewardship.

## Guiding principles

Reconciliation is the responsibility of all Canadians, including businesses. Imperial demonstrates our commitment to positive and progressive Indigenous relations as follows:

- We conduct business in a manner that respects the land, environment, rights and cultures of Indigenous communities, in accordance with the laws of Canada;
- We expect our contractors to conduct their business in accordance with our corporate principles, policies and guidelines;
- We engage Indigenous communities and their representatives in open and forthright consultation;

- We seek to understand Indigenous perspectives on issues of mutual interest and to deal constructively with differing views;
- We strive to provide employment opportunities to Indigenous people; and
- We foster the development of Indigenous businesses in ways that provide benefits to the company and to Indigenous communities.

In some of our operating communities, we have identified opportunities to establish community benefit and relationship agreements to help facilitate engagement in the four pillars. These agreements are primarily focused on relationship-building, the promotion of long-term community benefits, and are meant to facilitate sustainable economic development within the community.

## Imperial's commitment is supported by our four key pillars



Consultation



Workforce development



Business development



Community relations



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



3 GOOD HEALTH AND WELL-BEING



## INDEX

# Consultation

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA



Imperial maintains ongoing dialogue with Indigenous leaders, community members and their representatives by:

- Respecting the legal rights of Indigenous people and adhering to government requirements;
- Ensuring timely discussions when activities have the potential to impact the community;
- Supporting the identification of specific infringement on traditional uses and rights in order to minimize or mitigate impacts;
- Treating all parties fairly;
- Respecting traditional practices, decision-making processes, cultural activities and languages; and
- Co-ordinating with Crown consultation activities.

To increase our company understanding, Imperial provides education for management and staff on the history of Indigenous peoples in Canada, including the legacy impacts of residential schools.

Establishing mutually agreed processes and identifying areas of importance allows for early identification of concerns and opportunities to work with local communities, in order to develop meaningful accommodation and mitigation measures based on their input. We continually seek to understand communities' respective decision-making processes, traditional practices, and areas of priority through the establishment of a long-term, trustworthy, meaningful relationships. We strive to:

- Start conversations early in the project planning process, to allow sufficient time to meaningfully consider feedback and collaborate on potential mitigation measures;
- Continue dialogue through the full project/asset life cycle including reclamation planning and returning land to other productive uses;
- Seek local community involvement, i.e. field studies; and
- Carefully capture community-related information and opportunities in community benefit and relationship agreements.

## How we consult

We employ a variety of consultation methods in order to establish trust and respect, and to facilitate open and honest dialogue. In particular we try to provide meaningful opportunities for elders to share knowledge. Some of the ways include:

- Site tours
- Open houses
- Traditional land use studies
- Environment and consultation committees
- Project reviews and information sharing
- Field visits

## Indigenous communities have noted improved engagement with Imperial.



Imperial has a dedicated socioeconomic Indigenous collaboration team that has built knowledge and understanding concerning the inherent collective rights of Indigenous communities. The team supports our operations by building meaningful relationships with Indigenous communities. By engaging directly with facility teams and working to understand Indigenous priorities and goals, we can develop strategies that progress relationships, define consultation requirements and develop business contracting opportunities with Indigenous communities.

Imperial is pleased to be recognized as an “Exceptional Partner” by the Fort McKay First Nation in the oil sands region of Northern Alberta.<sup>(38)</sup>

As part of Imperial’s commitment for timely and meaningful consultation, we have designated representatives for Indigenous communities in each of the areas where we operate. Feedback sought from Indigenous communities in 2019 praised the introduction of community liaison professionals as this approach has resulted in noticeable improvements in communication, responsiveness, understanding of local issues and engagement.

### CORPORATE GOVERNANCE

### MANAGING THE RISKS OF CLIMATE CHANGE

### ENVIRONMENTAL PERFORMANCE

### SAFETY, HEALTH & THE WORKPLACE

### COMMUNITY & INDIGENOUS ENGAGEMENT

### ECONOMIC DEVELOPMENT

### PERFORMANCE DATA

1,000+

Indigenous employees and contractors have self-identified at our upstream assets

\$2.6B

Invested with Indigenous businesses over the last 10 years

\$21+M

Invested in Indigenous communities through community benefit agreements<sup>(39)</sup>

32

Esso sites across Canada owned, operated or on Indigenous land



8 DECENT WORK AND ECONOMIC GROWTH



## INDEX

# Business development

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA



When it comes to Indigenous business development opportunities, we are guided by our principle to build relationships of mutual benefit in areas where we operate. We believe that strong and responsible resource development contributes to overall reconciliation and Indigenous self-determination by supporting the growth of sustainable communities. In addition, sourcing locally for workers, suppliers and services makes good business sense.

Imperial understands the importance of long-term business growth to Indigenous communities and is very supportive of communities' efforts to increase capacity. We engage with communities to understand where they are starting from and what their objectives and aspirations are for the future. It is highly important to us that information about upcoming opportunities are shared in a timely

manner with our Indigenous neighbours so we may understand their interest. We engage in capacity building to further these shared objectives by:

- Providing training opportunities
- Helping companies navigate Imperial's procurement processes
- Sharing information on Imperial's policy expectations for contractors
- Debriefing after bid awards to promote future success

Local and Indigenous content is considered an asset in our procurement contracts. We consider the amount of work subcontracted to both local and Indigenous businesses as factors in evaluating and awarding contracts.

We actively work to engage Indigenous businesses in the areas we operate and we're proud to be a Canadian Council for Aboriginal Business (CCAB) Aboriginal procurement champion. This designation places Imperial in a group of corporations committed to increasing opportunities for Indigenous businesses to participate in companies' supply chains. In addition, Imperial is an industry member of the Northeastern Alberta Aboriginal Business Association (NAABA), a non-profit organization that aims to develop opportunities for Indigenous businesses and people in the oil sands region.

## Pimee Well Servicing, Cold Lake

Pimee Well Servicing was established in 1984 by six First Nations in the Cold Lake area of Alberta. The company is 100 percent Indigenous-owned and 98 percent of its workforce is Indigenous. Through a long-standing business relationship with Imperial and other energy industry companies, Pimee has grown from operating a single drilling rig to its current fleet of 13 rigs and the associated office and field staff. Imperial commends Pimee's commitment to safety and top quality work, and their dedication to supporting Indigenous communities and developing employment, training, investment and community initiatives.

# Workforce development

INDEX

Imperial aspires to engage and develop an Indigenous presence within our workforce in Canada. It is our goal to achieve a workforce that is representative of the populations where we operate and we are working together to greater advance participation of Indigenous peoples in energy development.

We develop and support educational programs and recruiting practices that facilitate employment and retention of qualified Indigenous people. To accomplish this goal, we employ a variety of tactics and programs:

- Routinely work with community employment coordinators to share information about Imperial's job opportunities;
- We participate in community and industry job fairs and post opportunities on Indigenous job boards;
- Because training and education are a big part of creating employment opportunities for Indigenous people – especially youth – we have supported scholarships and bursaries through Indspire since 2007, and promote employment opportunities with recipients. To date, Imperial has provided more than \$1 million to First Nation, Inuit, and Métis post-secondary students.



INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## Progressive Aboriginal RELATIONS

COMMITTED

Canadian Council for Aboriginal Business



The Canadian Council for Aboriginal Business offers a program of certification (PAR) to recognize positive relationships between businesses and Indigenous groups. There are varying levels of certification depending on the maturity of the company's Indigenous policies and outreach. Imperial is enrolled in PAR at the committed level and we are committed to continuous improvement in Indigenous relations. Imperial intends to undergo external verification of our future performance and is currently working through the phases of PAR with aspirations to receive gold level distinction.

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA



*As an Indigenous studies student and a Métis from Cold Lake, Alberta, I was fortunate to have spent the last two summer terms with Imperial Oil and the socioeconomic team working with a focus on Indigenous collaboration. The team was welcoming and approachable, which led for a very positive experience. Additionally, I was given the opportunity to utilize the knowledge and skills gained with my educational background and experience the relationship build with Indigenous communities. The balance of learning within a corporate environment as well as interacting out in the communities was both rewarding and an experience that will stay with me into my future endeavours and career path.*

**Tanisha Nuttall** – Student, University of Victoria

### Internship and training programs facilitate recruitment

In conjunction with recruitment and on-the-job training programs, scholarship programs form an important part of Imperial's strategy for increasing Indigenous employment at our operations. We have scholarship programs in Cold Lake and Norman Wells to encourage Indigenous peoples to pursue post-secondary studies in disciplines relevant to the petroleum industry.

Our internship and training programs provide opportunities for Indigenous community members to learn for themselves the benefits of joining our team. In addition to paid on-the-job training, participants gain valuable work experience. The [Cold Lake native internship program](#), for example, is an award-winning Indigenous internship program started more than 20 years ago to grow the company's Indigenous workforce at that facility. Another example is the [Norman Wells northern development program](#), a two-year program that started in 1990.

We work hard to recruit Indigenous people into Imperial and ensuring they stay is just as important to us. In 2018, we instituted an Indigenous relations advisor role to focus on recruitment and retention of Indigenous employees and to establish internal training and development programs that enhance retention of Indigenous staff. And in 2019 Imperial launched an Indigenous student employee program to attract top Indigenous talent from schools with higher Indigenous populations and provide meaningful work and opportunities to grow professional skills.

# Community relations

INDEX



Imperial builds meaningful relationships with Indigenous communities by:

- Working collaboratively to design and implement programs that build capacity through leadership development and community initiatives;
- Participating in community events;
- Supporting women and youth leadership; and
- Expanding access to traditional learning.

## Indigenous focused programs

**Indigenous Women in Community Leadership Program** — we are a founding sponsor of this internationally recognized program, the only one of its kind in Canada. This four-week intensive workshop, hosted at the Coady International Institute in Antigonish, Nova Scotia, enables Indigenous women to meaningfully connect and build leadership skills. Participants also benefit from the mentorship of Indigenous women leaders during the development of their community-driven initiatives. Many valuable projects have been implemented by program graduates, including economic development, community gardens to increase food security, and community walking tours to promote healthy living. We are proud to have supported this program since 2010, investing about \$3 million since that time.

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA

## INDEX

# Indigenous youth programs

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

**National Aboriginal Outreach Program** — Aboriginal youth are the fastest-growing population in Canada, yet they are sharply under-represented in science, technology, engineering and mathematics (STEM) education and careers. This program, developed by Actua, aims to increase the number of Indigenous youth in STEM education and careers. Actua annually engages some 30,000 young people from 200 communities across Canada in STEM workshops and camps. Imperial supports Actua in developing and delivering STEM programs to Indigenous youth across Canada.

**Bow Valley College Elders Program** — Since 2007, with investments from Imperial Oil, Bow Valley College's Inikokaan Indigenous Centre offers the services of three cultural resource elders who act as academic guides and spiritual advisors for Indigenous students. Elders lead learning circles when Indigenous students share challenges and learn about Indigenous ways of knowing. The elders also lead smudging ceremonies — many students say this connects them to their culture and helps them with learning and dealing with challenges. This innovative program has supported the success of nearly 400 Indigenous students.

### Science Education Employment Development Scholarships program (SEEDS)

(SEEDS) — SEEDS is a partnership between Imperial and the Six Nations of the Grand River Territory in Ontario, which provides scholarships for Six Nations students in pursuit of post-secondary education. This initiative designs and implements educational initiatives that focus on providing Six Nations youth with skills needed for a career with Imperial, the petroleum industry and other manufacturing industries.



Orange shirt day at Imperial

# Community investment

INDEX

Imperial's community investment principles, goals and activities are intended to improve the quality of life for Indigenous peoples and the communities where we operate. Our focus areas are: innovation and sustainability, strong operating communities, and Indigenous leadership.

## Innovation and sustainability

Uncovering the potential of Canada's energy resources will require innovation and investment in Canada's future leaders.

Imperial's community investment programs are directed at growing talent and skill through workforce development programs, and sparking creative thinking in the areas of advanced technology, environmental protection, water conservation, reducing carbon footprint, wildlife monitoring and land reclamation.

Organizations and programs we support include:

- Women Building Futures
- SAIT Integrated Water Management program
- Alberta Machine Intelligence Institute (Amii)
- Mount Royal University's Institute for Environmental Sustainability
- Alberta EcoTrust
- Aseniwuche Winewak Nation of Canada's Caribou Patrol Program



DID YOU KNOW?

## COMMUNITY INVESTMENT IN 2018

- Imperial supported more than 250 organizations across Canada
- more than \$38 million invested in Canadian communities<sup>(40)</sup>
- \$3.2 million raised for United Way organizations across Canada
- Nearly 3,600 hours of volunteer time in Canadian communities

INTRODUCTION

CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA



3 GOOD HEALTH AND WELL-BEING



## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

4 QUALITY EDUCATION

5 GENDER EQUALITY

**Strong operating communities**

## We believe in addressing local social needs to build strong, safe and prosperous communities.

Imperial supports local programs and organizations through financial contributions, in-kind donations and employee volunteering in community events, initiatives and organizations. We invest in opportunities that deliver shared value by providing innovative experiences to youth, improving access to education in science, technology, engineering and math, fostering environmental conservation and protection, and improving quality of life.

Through the Esso retail brand, Imperial is a long-time supporter of Hockey Canada and a premier sponsor of minor hockey in Canada. For more than 30 years, the Esso Medals and Certificates of Achievement program has supported minor hockey teams by offering awards for player achievement and helping coaches of young hockey players across Canada recognize dedication, effort and fair play.

More than two million Esso Medals of Achievement and almost 10 million certificates of participation have been awarded to minor hockey players across the country. In 2018, a record 20,000 minor hockey teams were registered in the program.

Organizations we support include:

- United Way
- Equal Voice
- Social Venture Partners
- Linking Generations
- Billion barrel scholarship
- Educational awards and scholarships
- Educational institutions



Imperial team at The Social Impact Lab helping to brainstorm solutions to youth mental health issues

## Indigenous leadership

Imperial is committed to creating lasting relationships around a common vision for progress in Indigenous communities. Our community investment program supports education by providing: hands-on experiences in science, technology, engineering and math; expanding access to traditional learning by supporting rituals that connect Indigenous students to their culture and; academic guides and spiritual advisors. Our investments also support women and youth leadership and workforce development through outreach programs, scholarships and internship programs.



Indigenous Women in Community Leadership Program

Organizations and programs we support include:

- Indspire Building Brighter Futures: Bursaries, Scholarships and Awards program
- Coady Institute's Indigenous Women in Community Leadership Program
- Canadian Council for Aboriginal Business
- ACTUA – STEM outreach for Indigenous youth
- Bow Valley College Elders Program
- Mount Royal University's Medicine Trail Program
- Cold Lake Native Internship Program
- Sahtu search and rescue
- Sahtu Divisional Education Council's educational programs



CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH & THE WORKPLACE

COMMUNITY & INDIGENOUS ENGAGEMENT

ECONOMIC DEVELOPMENT

PERFORMANCE DATA





## Economic development

Creating long-term economic and social benefits for our communities

# Economic development

INDEX

INTRODUCTION



CORPORATE GOVERNANCE

MANAGING THE RISKS OF CLIMATE CHANGE

ENVIRONMENTAL PERFORMANCE

SAFETY, HEALTH &amp; THE WORKPLACE

COMMUNITY &amp; INDIGENOUS ENGAGEMENT

Our goal is to create long-term economic and social benefits for communities where we operate. We provide local economic support, including workforce and supplier development and strategic community investments. Government revenues from taxes and royalties drive economic growth and a higher standard of living. Developing and using local vendors to supply of goods and services is a central component of Imperial's business strategy. In 2018, we paid a total of \$4.7 billion for goods and services.

## Supply chain management

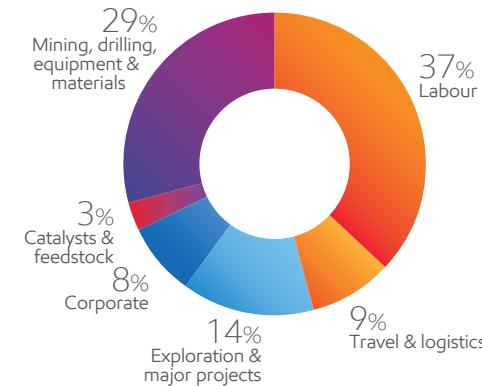
We expect suppliers and contractors to follow all applicable laws and regulations, and conduct their business in accordance with our corporate principles, policies and guidelines. Our contracts stipulate that suppliers will:

- Conduct activities in an ethical manner;
- Not engage in any activity that could create a conflict of interest;

- Have policies in place that meet the intent of Imperial's alcohol and drug, and harassment policies; and
- Adhere to our safety, health and environment management systems in performing their work.

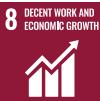
We also encourage vendors to work with local and Indigenous-owned businesses to provide additional benefit to the communities in which we work.

## Imperial spend in Canada by purchasing category



ECONOMIC DEVELOPMENT

PERFORMANCE DATA



## INDEX

# Taxes and royalties

## INTRODUCTION

## CORPORATE GOVERNANCE

For nearly 140 years, we've provided well-paying jobs to Canadians, opportunities for independent businesses and taxes to governments. In 2018, \$5.6 billion in taxes and royalties were borne and collected that in turn helps fund school systems, roads, hospitals, social programs and much more.

## MANAGING THE RISKS OF CLIMATE CHANGE

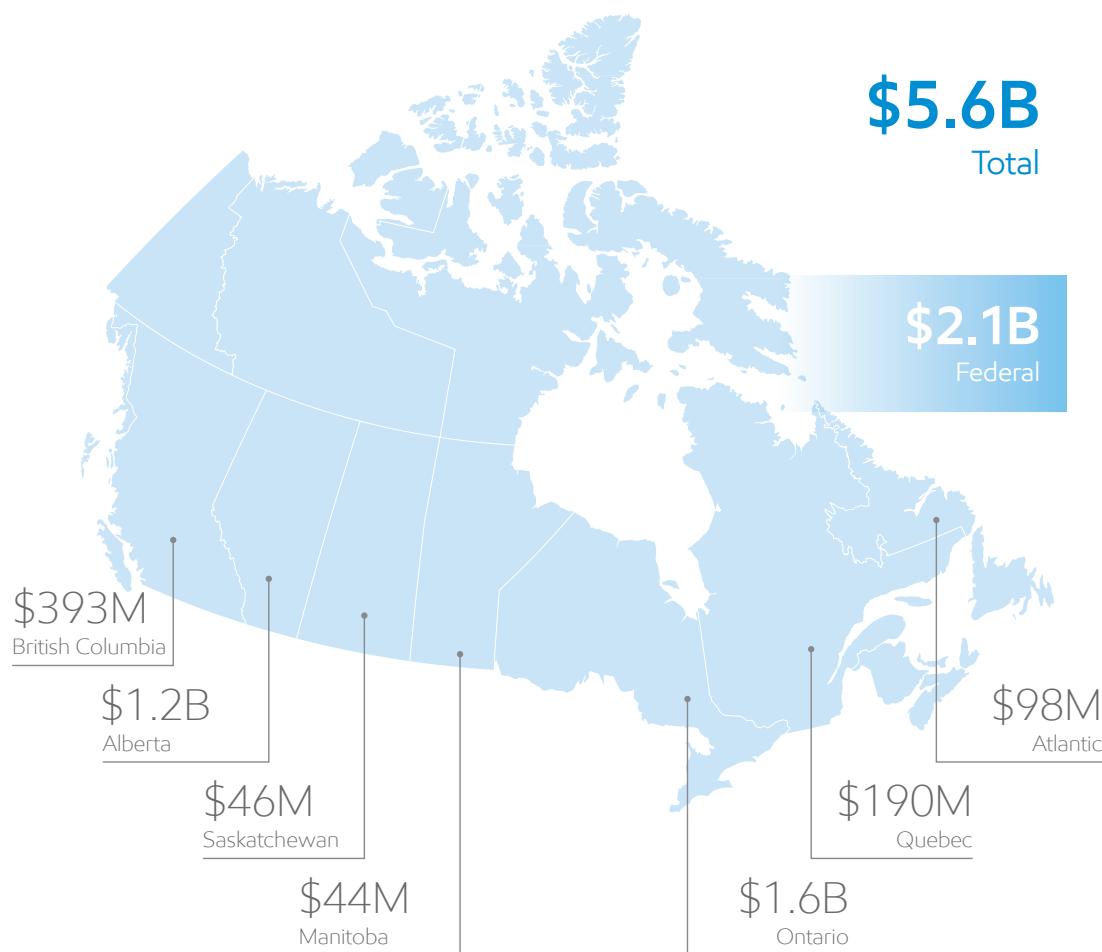
## ENVIRONMENTAL PERFORMANCE

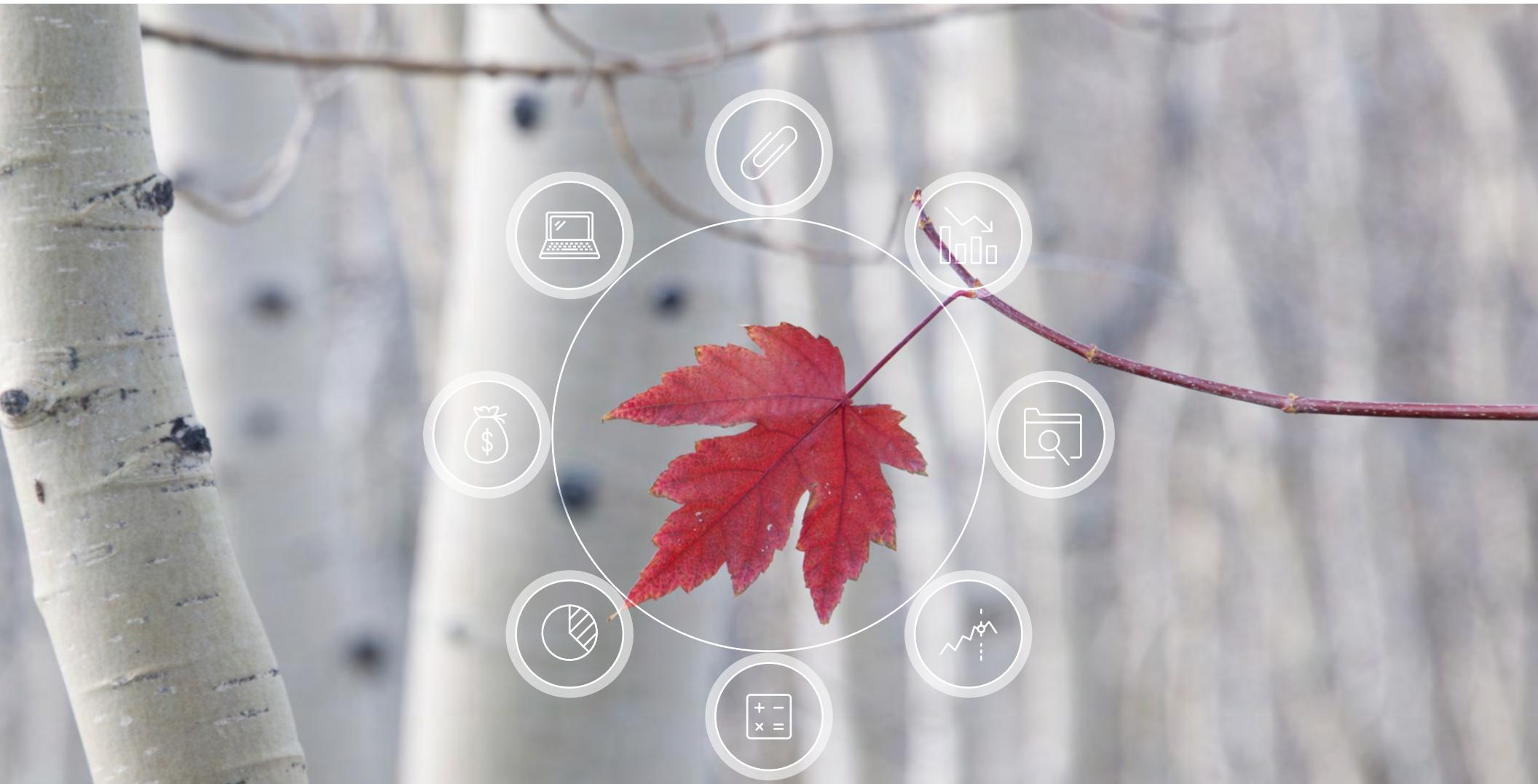
## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA





Performance data

## INDEX

# Performance data

## INTRODUCTION

	<b>ENVIRONMENT<sup>(1)</sup></b>	2014	2015	2016	2017	2018
CORPORATE GOVERNANCE	<b>Air emissions</b>					
	Sulphur oxides (expressed as SO <sub>2</sub> – thousand metric tonnes/year)	24.1	22.9	21.4	20.9	<b>24.0</b>
MANAGING THE RISKS OF CLIMATE CHANGE	Nitrogen oxides (thousand metric tonnes/year)	13.1	15.5	15.9	16.5	<b>17.7</b>
	Volatile organic compounds (thousand metric tonnes/year)	14.3	14.0	10.5	10.4	<b>10.6</b>
ENVIRONMENTAL PERFORMANCE	<b>GHG emissions and energy consumption<sup>(2)</sup></b>					
	Direct GHG emissions – including Cogen					
	Downstream & Chemical (million metric tonnes of CO <sub>2</sub> e)	4.9	4.8	4.8	4.7	<b>4.7</b>
	Carbon dioxide emissions (million metric tonnes)	4.8	4.8	4.8	4.6	<b>4.6</b>
SAFETY, HEALTH & THE WORKPLACE	Methane emissions (million metric tonnes)	0.0024	0.0011	0.0010	0.0011	<b>0.0011</b>
	Nitrous oxide emissions (million metric tonnes)	0.0001	0.0001	0.0001	0.0001	<b>0.0001</b>
	Upstream (million metric tonnes of CO <sub>2</sub> e)	5.8	8.0	8.2	8.4	<b>8.4</b>
COMMUNITY & INDIGENOUS ENGAGEMENT	Carbon dioxide emissions (million metric tonnes) <sup>(3)</sup>	5.7	7.8	8.0	8.2	<b>8.3</b>
	Methane emissions (million metric tonnes)	0.0016	0.0019	0.0023	0.0018	<b>0.0017</b>
	Nitrous oxide emissions (million metric tonnes)	0.0002	0.0003	0.0003	0.0003	<b>0.0003</b>
ECONOMIC DEVELOPMENT	Operated oil sands (million metric tonnes of CO <sub>2</sub> e)	5.7	7.9	8.1	8.3	<b>8.4</b>
	Carbon dioxide emissions (million metric tonnes) <sup>(3)</sup>	5.6	7.7	8.0	8.2	<b>8.3</b>
	Methane emissions (million metric tonnes)	0.0013	0.0016	0.0020	0.0017	<b>0.0016</b>
	Nitrous oxide emissions (million metric tonnes)	0.0002	0.0003	0.0003	0.0003	<b>0.0003</b>
PERFORMANCE DATA	Imported electricity and associated indirect GHG emissions					
	Downstream & Chemical – imported electricity (million MWhr)	1.17	1.10	1.07	1.04	<b>1.09</b>
	Downstream & Chemical – associated indirect GHG emissions (million metric tonnes of CO <sub>2</sub> e)	0.43	0.41	0.39	0.39	<b>0.40</b>
	Upstream – imported electricity (million MWhr)	0.55	0.70	0.83	0.92	<b>0.95</b>
	Upstream – associated indirect GHG emissions (million metric tonnes of CO <sub>2</sub> e)	0.20	0.26	0.31	0.34	<b>0.35</b>
	Operated oil sands – imported electricity (million MWhr)	0.55	0.70	0.83	0.92	<b>0.94</b>
	Operated oil sands – associated indirect GHG emissions (million metric tonnes of CO <sub>2</sub> e)	0.20	0.26	0.31	0.34	<b>0.35</b>

ENVIRONMENT (continued)	2014	2015	2016	2017	2018	INDEX
Exported electricity and associated GHG emissions						
Downstream & Chemical – exported electricity (million MWhr)	—	—	—	—	—	INTRODUCTION
Downstream & Chemical – associated GHG emissions (million metric tonnes of CO <sub>2</sub> e)	—	—	—	—	—	
Upstream – exported electricity (million MWhr)	0.33	1.25	1.48	1.45	<b>1.55</b>	CORPORATE GOVERNANCE
Upstream – associated GHG emissions (million metric tonnes of CO <sub>2</sub> e)	0.12	0.46	0.55	0.54	<b>0.57</b>	
Operated oil sands – exported electricity (million MWhr)	0.32	1.24	1.47	1.45	<b>1.55</b>	
Operated oil sands – associated GHG emissions (million metric tonnes of CO <sub>2</sub> e)	0.12	0.46	0.55	0.53	<b>0.57</b>	
GHG emissions <sup>(4)</sup>						MANAGING THE RISKS OF CLIMATE CHANGE
Downstream & Chemical (million metric tonnes of CO <sub>2</sub> e)	5.4	5.2	5.2	5.1	<b>5.1</b>	
Upstream (million metric tonnes of CO <sub>2</sub> e)	5.9	7.8	7.9	8.2	<b>8.2</b>	ENVIRONMENTAL PERFORMANCE
Operated oil sands (million metric tonnes of CO <sub>2</sub> e)	5.8	7.7	7.8	8.2	<b>8.2</b>	
Production/throughput						
Downstream & Chemical – refining throughput (million m <sup>3</sup> ) <sup>(5)</sup>	23	22	21	22	<b>23</b>	SAFETY, HEALTH & THE WORKPLACE
Upstream – production (million m <sup>3</sup> ) <sup>(6)</sup>	14	20	21	21	<b>22</b>	
Operated oil sands – production (million m <sup>3</sup> ) <sup>(7)</sup>	13	19	20	21	<b>21</b>	
GHG emissions intensity <sup>(8)</sup>						COMMUNITY & INDIGENOUS ENGAGEMENT
Downstream & Chemical (metric tonnes of CO <sub>2</sub> e/m <sup>3</sup> refining throughput) <sup>(5)</sup>	0.23	0.23	0.25	0.23	<b>0.22</b>	
Upstream (metric tonnes of CO <sub>2</sub> e/m <sup>3</sup> upstream production) <sup>(6)</sup>	0.42	0.40	0.38	0.39	<b>0.38</b>	
Operated oil sands (metric tonnes of CO <sub>2</sub> e/m <sup>3</sup> upstream production) <sup>(7)</sup>	0.44	0.40	0.39	0.39	<b>0.38</b>	ECONOMIC DEVELOPMENT
Total energy use (million gigajoules)	184	219	220	223	<b>227</b>	
Fuels refining energy intensity – normalized versus 1990 <sup>(9)</sup>	0.813	0.811	0.808	0.804	<b>0.789</b>	
Flaring and venting						PERFORMANCE DATA
Hydrocarbon flaring – company total (hundred tonnes)	564	696	739	705	<b>816</b>	
Gas (hydrocarbon) flaring from oil production (million cubic feet per day)	1.5	3.9	3.9	3.5	<b>3.1</b>	
Water consumption						
Freshwater consumption						
Downstream & Chemical (million m <sup>3</sup> of fresh water consumed)	9.6	10.5	10.4	9.9	<b>10.1</b>	
Upstream (million m <sup>3</sup> of fresh water consumed)	15.6	41.0	30.2	32.6	<b>35.2</b>	
Fresh water consumption intensity						
Downstream & Chemical (m <sup>3</sup> of fresh water consumed/m <sup>3</sup> refining throughput) <sup>(5)</sup>	0.42	0.47	0.49	0.45	<b>0.44</b>	
Upstream (m <sup>3</sup> of fresh water consumed/m <sup>3</sup> upstream production) <sup>(6)</sup>	1.12	2.10	1.46	1.56	<b>1.63</b>	

## INDEX

	<b>ENVIRONMENT (continued)</b>	2014	2015	2016	2017	2018
INTRODUCTION	<b>Compliance</b>					
	Oil and chemical spills ( <i>total number</i> ) > 1 barrel	26	10	4	4	<b>13</b>
	Volume of product from oil and chemical spills ( <i>barrels</i> )	496	500	62	114	<b>231</b>
CORPORATE GOVERNANCE	Number of environmental regulatory compliance incidents	31	27	20	11	<b>9</b>
	Number of environmental exceedance incidents	18	12	10	8	<b>9</b>
	Environmental fines and penalties ( <i>thousands of dollars</i> )	\$6.5	\$13	\$37	\$813	<b>\$812</b>
MANAGING THE RISKS OF CLIMATE CHANGE	<b>Waste management</b>					
	Hazardous waste disposed from operations ( <i>thousand tonnes</i> )	13.6	9.5	10.8	20.9	<b>34.0</b>
	Hazardous waste – external beneficial reuse ( <i>thousand tonnes</i> )	2.8	7.6	5.1	6.9	<b>3.3</b>
ENVIRONMENTAL PERFORMANCE	<b>INVESTMENTS</b>	2014	2015	2016	2017	2018
	Gross research expenditures, before credits ( <i>millions of dollars</i> )	\$175	\$195	\$195	\$154	<b>\$150</b>
SAFETY, HEALTH & THE WORKPLACE	Environmental expenditures ( <i>millions of dollars</i> )	\$1,700	\$1,200	\$700	\$600	<b>\$600</b>
COMMUNITY & INDIGENOUS ENGAGEMENT	<b>ECONOMIC DEVELOPMENT</b>	2014	2015	2016	2017	2018
	Capital and exploration expenditures ( <i>billions of dollars</i> )	\$5.7	\$3.6	\$1.2	\$0.7	<b>\$1.4</b>
	Payments for goods and services ( <i>billions of dollars, approximate</i> ) <sup>(10)</sup>	\$11.60	\$9.50	\$8.00	\$5.50	<b>\$4.72</b>
	Taxes and royalties to government ( <i>billions of dollars</i> )	\$6.00	\$5.40	\$5.20	\$5.10	<b>\$5.60*</b>
ECONOMIC DEVELOPMENT	<b>Employment</b>					
	Wages and benefits ( <i>billions of dollars</i> )	\$1.40	\$1.50	\$1.40	\$1.40	<b>\$1.45</b>
	Education assistance program ( <i>thousands of dollars</i> )	\$478	\$627	\$685	\$588	<b>\$588</b>
	Scholarships for employee dependents ( <i>millions of dollars</i> )	\$2.30	\$2.10	\$1.90	\$2.00	<b>\$1.88</b>
PERFORMANCE DATA	Number of regular employees at year end <sup>(11)</sup>	5,498	5,917	5,706	5,523	<b>5,687</b>
	Percentage of women at year end	26.6	25.8	25.0	25.1	<b>24.0</b>
	Percentage of visible minorities at year end <sup>(12)</sup>	11.5	10.9	11.2	11.2	<b>12.8</b>
	Percentage of persons with disabilities at year end <sup>(12)</sup>	1.5	1.2	1.0	0.9	<b>2.4</b>
	<b>Indigenous</b>					
	Spending with Indigenous businesses (direct and subcontracted) ( <i>millions of dollars</i> )	\$433	\$329	\$225	\$200	<b>\$250</b>
	Percentage of Indigenous peoples at year end <sup>(12)</sup>	3.5	3.7	3.9	3.9	<b>3.6</b>

	2014	2015	2016	2017	2018	INDEX
<b>COMMUNITY ENGAGEMENT</b>						
Community investment ( <i>millions of dollars</i> ) <sup>(13)</sup>	\$20.3	\$27.0	\$21.2	\$16.0	\$17.2	INTRODUCTION
Hours volunteered	N/A	N/A	7,927	6,765	3,598	CORPORATE GOVERNANCE
Contributions to United Way – Centraide campaigns ( <i>millions of dollars</i> ) <sup>(14)</sup>	\$4.7	\$4.8	\$4.2	\$3.6	\$3.2	MANAGING THE RISKS OF CLIMATE CHANGE
<b>SAFETY</b>	2014	2015	2016	2017	2018	ENVIRONMENTAL PERFORMANCE
Fatalities – employees and contractors	0	0	0	0	0	SAFETY, HEALTH & THE WORKPLACE
Lost-time incident frequency – employees per 200,000 hours worked	0.05	0.03	0	0.01	0.03	COMMUNITY & INDIGENOUS ENGAGEMENT
Lost-time incident frequency – contractors per 200,000 hours worked	0.04	0.01	0.01	0.04	0.03	ECONOMIC DEVELOPMENT
Total recordable incident frequency – employees per 200,000 hours worked	0.27	0.22	0.08	0.15	0.13	PERFORMANCE DATA
Total recordable incident frequency – contractors per 200,000 hours worked	0.33	0.30	0.39	0.36	0.36	
Total recordable incident frequency – workforce per 200,000 hours worked	0.32	0.27	0.26	0.26	0.27	
<b>CORPORATE GOVERNANCE</b>	2014	2015	2016	2017	2018	
Corporate political contributions ( <i>thousands of dollars</i> ) <sup>(15)</sup>	\$70	\$65	\$61	\$24	\$0	
Common shares outstanding ( <i>millions of shares</i> ) <sup>(16)</sup>	848	848	848	831	783	
Dividends paid ( <i>millions of dollars</i> ) <sup>(16)</sup>	\$441	\$449	\$492	\$524	\$572	

Note: Adjustments may have been made to some data points to reflect internal updates. All references to financial information is in Canadian dollars.

- (1) Some uncertainty exists in performance data, depending on measurement methods. Data in the report and performance data table represent the best available information at the time of publication. Data represents Imperial owned and operated assets (including 100% Kearl; excluding ExxonMobil Canada, XTO Canada and Syncrude), Dartmouth refinery (shut down in 2013), retail stations (sold in 2016) and other assets that were divested between 2014–2018 are not included.
- (2) Greenhouse Gas (GHG) Alberta Regulation is selected as the basis for this report. Please note, ExxonMobil Environmental Performance Indicator (EPI) reporting uses a different basis for GHG reporting. Imported/exported electricity GHG emission factor (0.37 tonnes CO<sub>2</sub>e/MWh) consistent with the benchmark established for electricity from 2018 CCIR (Carbon Competitiveness Incentive Regulation) and OBPS (Output Based Pricing System).
- (3) Excluding CO<sub>2</sub> emissions from biomass.
- (4) GHG emissions calculated as sum of direct emissions and emissions associated with imported electricity less (minus) emissions associated with exported electricity.
- (5) Throughput basis: Refinery throughput is the volume of crude oil and feedstocks that is processed in the refinery atmospheric distillation units.
- (6) Production basis: Represents bitumen/crude production at Kearl, Cold Lake and Norman wells; Kearl and Cold Lake production basis same as reported under Alberta greenhouse gas emissions regulation.
- (7) Production basis: Operated oil sands (Kearl and Cold Lake) production basis same as reported under Alberta greenhouse gas emissions regulation.
- (8) GHG emissions intensity is the ratio of GHG emissions to production or throughput.
- (9) The energy intensity index is a measure of energy efficiency for petroleum refineries. A lower energy intensity index number indicates a more energy-efficient facility.
- (10) 2014–2017 numbers include spending for Imperial and ExxonMobil companies in Canada. 2018 number excludes spending for ExxonMobil Canada East.
- (11) All Imperial employees as of December 31, 2018.
- (12) Statistics are collected from self-identification questionnaires.
- (13) Imperial's 2015 total value to community includes \$6.6 million in government contributions to the Institute for Oil Sands Innovation.
- (14) Represents combined donations from the company, employees and retirees.
- (15) Imperial no longer makes political contributions as of January 1, 2018.
- (16) For complete disclosure and additional information, see the 2018 Annual financial statements and management discussion and analysis.
- \* The Territories had a net refund of approximately \$0.03 billion.

## INDEX

## INTRODUCTION

## CORPORATE GOVERNANCE

## MANAGING THE RISKS OF CLIMATE CHANGE

## ENVIRONMENTAL PERFORMANCE

## SAFETY, HEALTH &amp; THE WORKPLACE

## COMMUNITY &amp; INDIGENOUS ENGAGEMENT

## ECONOMIC DEVELOPMENT

## PERFORMANCE DATA

**Cautionary statement**

*Statements of future events or conditions in this report, including projections, targets, expectations, estimates and business plans are forward-looking statements. Forward looking statements can be identified by words such as believe, anticipate, intend, propose, plan, goal, project, predict, target, estimate, expect, strategy, outlook, schedule, future, continue, likely, may, should, will and similar references to future periods. Disclosure related to the ability to achieve key sustainability priorities; the effectiveness of facility resiliency on operations and assets; the Outlook for Energy including demand, supply, mix and efficiency gains; the impact of actions to address risks of climate change; sustainment of competitive advantage through efficiency, cost reductions and deploying technologies; planned reductions in GHG intensity, including the timing, development and impact of specific technologies that could change performance in GHG intensity; the viability and impact of carbon capture and storage; the development, adoption and impact of digital technology; the expected impact of projects to mitigate emissions, such as the Strathcona cogeneration unit and Kearl boiler flue gas heat and water recovery; reduction of air emissions; achieving water management principles and reducing fresh water use and intensity; steps to reduce the surface footprint of operations; the effectiveness of spill performance and prevention, safety and emergency response; the impact of Indigenous engagement on the company and Indigenous communities; and the long term economic and social impact of operations constitute forward-looking statements.*

*Forward-looking statements are based on the company's current expectations, estimates, projections and assumptions at the time statements are made. Actual future financial and operating results, including expectations and assumptions concerning demand growth and energy source, supply and mix; amount and timing of emissions reductions; production rates, growth and mix, project plans, dates, costs, capacities and execution; applicable laws and government policies, including climate change;*

*development of new technologies; and capital and environmental expenditures could differ materially depending on a number of factors. These factors include changes in the supply of and demand for crude oil, natural gas, and petroleum and petrochemical products and resulting price and margin impacts; transportation for accessing markets; political or regulatory events, including changes in law or government policy; the receipt, in a timely manner, of regulatory and third-party approvals; third party opposition to operations and projects; environmental risks inherent in oil and gas exploration and production activities; environmental regulation, including climate change and greenhouse gas regulation and changes to such regulation; availability and allocation of capital; availability and performance of third party service providers; project management and schedules; response to technological developments; operational hazards and risks; disaster response preparedness; and other factors discussed in Item 1A risk factors and Item 7 management's discussion and analysis of Imperial's most recent annual report on Form 10-K.*

*Forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties, some that are similar to other oil and gas companies and some that are unique to Imperial Oil Limited. Imperial's actual results may differ materially from those expressed or implied by its forward-looking statements and readers are cautioned not to place undue reliance on them. Imperial undertakes no obligation to update any forward-looking statements contained in this report, except as required by applicable law.*

*References to "oil" and "gas" include crude, natural gas liquids, bitumen, synthetic oil, and natural gas. The term "project" as used in this publication can refer to a variety of different activities and does not necessarily have the same meaning as in any government payment transparency reports.*

## Footnotes

- (1) BMO February 2019 ESG ratings by major oil producing country. Canada ranks 3rd (2nd in oil producing nations) on aggregate of Yale Environmental Performance Index (EPI), Social Progress Imperative's Social Progress Index, and World Bank's Worldwide Governance Indicators Benchmark.
  - (2) Eight percent of crude produced and 24 percent of refining throughput. 2018 NEB Canadian Refinery Overview, Energy Market Assessment. 2018 Canada Energy Regulator (formerly NEB) website. Statistics Canada, Table 25-10-0041-01 Refinery Supply of crude oil and equivalent, monthly.
  - (3) Gross production is the company's share of production (excluding purchases) before deduction of the mineral owners' or governments' share or both. Natural gas converted to oil-equivalent barrels using 6 million cubic feet per 1,000 barrels.
  - (4) With the exception of B.W. Corson, the information in this table is taken from the company's 2019 management proxy circular.
  - (5) B.W. Corson was appointed president and elected as a director effective September 17, 2019, and appointed chairman and CEO effective January 1, 2020.
  - (6) For a definition of return on average capital employed and cash flow from operations and asset sales, see the "Frequently used terms" section of Imperial's most recent annual report on Form 10-K.
  - (7) Exxon Mobil Corporation, 2019 Outlook for Energy: A perspective to 2040.
  - (8) OECD – Organisation for Economic Co-operation and Development.
  - (9) NRCan Energy Fact Book 2018, 2019.
  - (10) NRCan, Electricity Facts 2017.
  - (11) Yale Environmental Performance Index (EPI), Social Progress Imperative, and World Bank Governance Indicators for Top 10 reserve countries.
  - (12) Worley Parsons, 2014 – 93 percent stringency, transparency, compliance.
  - (13) CAPP 2019 Greenhouse Gas Emissions.
  - (14) Statistics Canada, Prism Economics and CAPP 2019.
  - (15) National Bank Financial 2019F, World Bank, IEA.
  - (16) Canadian Energy Research Institute (CERI), 2019.
  - (17) IEA: World Energy Outlook 2019, U.S. dollars.
  - (18) Imperial is a 50-50 partner with ExxonMobil Canada in XTO Energy Canada. The company is continuing to evaluate, develop and produce resources in its Montney and Duvernay unconventional assets in Western Canada.
  - (19) Working interest (Imperial share before deducting the shares of mineral owners or governments or both). Alberta Securities Commission National Instrument 51-101 was selected as the basis for the report. Please note, proved reserves reported on the U.S. Securities and Exchange Commission use a different methodology, and U.S. investors are urged to consider closely the disclosures in the company's Form 10-K.
- In these materials, certain natural gas volumes have been converted to barrels of oil equivalent (BOE) on the basis of six thousand cubic feet (Mcft) to one barrel (bbl). BOE may be misleading, particularly if used in isolation. A BOE conversion ratio of 6 Mcft to one bbl is based on an energy-equivalency conversion method primarily applicable at the burner tip and does not 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 than the energy equivalency ratio of 6 Mcft to 1 bbl, using a 6:1 conversion ratio may be misleading as an indication of value.

- All reserves estimates provided in these materials are effective as of December 31, 2018, and based on definitions contained in the Canadian Oil and Gas Evaluation Handbook (COGEH) and are presented in accordance with National Instrument 51-101, as disclosed in Imperial's Form 51-101F1 for the fiscal year ending December 31, 2018.
- Except as otherwise disclosed herein, reserves information are an estimate of the company's working interest before royalties at year-end 2018, as determined by Imperial's internal qualified reserves evaluator.
- (20) Compared with 2016 operated oil sands GHG. Governmental, legal or regulatory changes could directly or indirectly delay or otherwise impact GHG emissions intensity reduction measures.
  - (21) Production basis: Operated oil sands (Kearl and Cold Lake) production basis same as reported under Alberta greenhouse gas emissions regulation.
  - (22) GHG emissions intensity is the ratio of GHG emissions to production or throughput.
  - (23) Source: Global CCS Institute. Data updated as of April 2018 and based on cumulative anthropogenic carbon dioxide capture volume. Anthropogenic CO<sub>2</sub>, for the purposes of this calculation, means CO<sub>2</sub> that without carbon capture and storage would have been emitted to the atmosphere, including, but not limited to: reservoir CO<sub>2</sub> from gas fields; CO<sub>2</sub> emitted during production and CO<sub>2</sub> emitted during combustion. It does not include natural CO<sub>2</sub> produced solely for enhanced oil recovery.
  - (24) Difference between GHG emissions from the electricity generated (& used) on-site vs. imported from the grid; GHG's from imported electricity calculated using 2016 AB GHG grid factor from 1990–2016 GHG sources and sinks in Canada, a National Inventory Report published in 2018.
  - (25) <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
  - (26) Improvements, such as fuel economy, are based on Synergy-branded gasoline, where and when available, compared to gasoline meeting minimum Canadian government detergency standards. Actual benefits will vary depending on the factors such as vehicle type, driving style and gasoline previously used. Concentration and availability of the seven key ingredients may vary based upon factors beyond our control, including supply disruptions.
  - (27) Based on internal and third-party vehicle engine testing, laboratory testing and/or industry or other scientific literature. Basis for comparison for all claims is versus diesel without detergent additive. Vehicle type, engine type, driving behaviour and other factors also impact fuel and vehicle performance, emissions and fuel economy. Synergy Diesel Efficient fuel may be used in other heavy-duty and light-duty vehicles, but results will vary.
  - (28) WWF Water Risk Filter: <http://waterriskfilter.panda.org/>
  - (29) WRI Aqueduct Water Risk Atlas: <https://www.wri.org/resources/maps/aqueduct-water-risk-atlas>
  - (30) 2018 COSIA Project Portfolio
  - (31) COSIA
  - (32) Environmental fines and penalties:
    - 2014 fine a result of a fish toxicity event in Nanticoke
    - 2015 payment for 2014 fish toxicity event in Sarnia
    - 2016 penalty for release to the St. Clair river
    - 2017 penalty for 2014 release to air from flare line in Sarnia
    - 2018 penalty for 2015 release to air incident in Sarnia

Published February 2020

## Related documents

[Energy and carbon summary](#)  
[imperialoil.ca/climatechange](http://imperialoil.ca/climatechange)

[Water management summary](#)  
[imperialoil.ca/watermanagement](http://imperialoil.ca/watermanagement)

[2018 10-K](#)  
<https://www.imperialoil.ca/en-CA/investors/investor-relations>

[2018 51-101](#)  
<https://www.sedar.com/DisplayCompanyDocuments.do?lang=EN&issuerNo=00000131>



*After more than a century, Imperial continues to be an industry leader in applying technology and innovation to responsibly develop Canada's energy resources. As Canada's largest petroleum refiner, a major producer of crude oil, a key petrochemical producer and a leading fuels marketer from coast to coast, our company remains committed to high standards across all areas of our business.*

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