

**2016 Annual financial  
statements and management  
discussion and analysis**

# Financial section

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## Financial information (U.S. GAAP)

millions of Canadian dollars	2016	2015	2014	2013	2012
Operating revenues	<b>25,049</b>	26,756	36,231	32,722	31,053
Net income (loss) by segment:					
Upstream	<b>(661)</b>	(704)	2,059	1,712	1,888
Downstream	<b>2,754</b>	1,586	1,594	1,052	1,772
Chemical	<b>187</b>	287	229	162	165
Corporate and Other	<b>(115)</b>	(47)	(97)	(98)	(59)
Net income (loss)	<b>2,165</b>	1,122	3,785	2,828	3,766
Cash and cash equivalents at year-end	<b>391</b>	203	215	272	482
Total assets at year-end	<b>41,654</b>	43,170	40,830	37,218	29,364
Long-term debt at year-end	<b>5,032</b>	6,564	4,913	4,444	1,175
Total debt at year-end	<b>5,234</b>	8,516	6,891	6,287	1,647
Other long-term obligations at year-end	<b>3,656</b>	3,597	3,565	3,091	3,983
Shareholders' equity at year-end	<b>25,021</b>	23,425	22,530	19,524	16,377
Cash flow from operating activities	<b>2,015</b>	2,167	4,405	3,292	4,680
Per-share information (dollars)					
Net income (loss) per share - basic	<b>2.55</b>	1.32	4.47	3.34	4.44
Net income (loss) per share - diluted	<b>2.55</b>	1.32	4.45	3.32	4.42
Dividends declared	<b>0.59</b>	0.54	0.52	0.49	0.48

## Frequently used terms

Listed below are definitions of several of Imperial's key business and financial performance measures. The definitions are provided to facilitate understanding of the terms and how they are calculated.

### Capital employed

Capital employed is a measure of net investment. When viewed from the perspective of how capital is used by the business, it includes the company's property, plant and equipment and other assets, less liabilities, excluding both short-term and long-term debt. When viewed from the perspective of the sources of capital employed in total for the company, it includes total debt and equity. Both of these views include the company's share of amounts applicable to equity companies, which the company believes should be included to provide a more comprehensive measurement of capital employed.

millions of Canadian dollars	2016	2015	2014
<b>Business uses: asset and liability perspective</b>			
Total assets	<b>41,654</b>	43,170	40,830
Less: total current liabilities excluding notes and loans payable	<b>(3,681)</b>	(3,441)	(4,003)
total long-term liabilities excluding long-term debt	<b>(7,718)</b>	(7,788)	(7,406)
Add: Imperial's share of equity company debt	<b>17</b>	18	19
Total capital employed	<b>30,272</b>	31,959	29,440
<b>Total company sources: debt and equity perspective</b>			
Notes and loans payable	<b>202</b>	1,952	1,978
Long-term debt	<b>5,032</b>	6,564	4,913
Shareholders' equity	<b>25,021</b>	23,425	22,530
Add: Imperial's share of equity company debt	<b>17</b>	18	19
Total capital employed	<b>30,272</b>	31,959	29,440

### Return on average capital employed (ROCE)

ROCE is a financial performance ratio. From the perspective of the business segments, ROCE is annual business-segment net income divided by average business-segment capital employed (an average of the beginning and end-of-year amounts). Segment net income includes Imperial's share of segment net income of equity companies, consistent with the definition used for capital employed, and excludes the cost of financing. The company's total ROCE is net income excluding the after-tax cost of financing divided by total average capital employed. The company has consistently applied its ROCE definition for many years and views it as the best measure of historical capital productivity in a capital-intensive, long-term industry to both evaluate management's performance and demonstrate to shareholders that capital has been used wisely over the long term. Additional measures, which are more cash flow based, are used to make investment decisions.

millions of Canadian dollars	2016	2015	2014
Net income	<b>2,165</b>	1,122	3,785
Financing costs (after tax), including Imperial's share of equity companies	<b>53</b>	30	1
Net income excluding financing costs	<b>2,218</b>	1,152	3,786
Average capital employed	<b>31,116</b>	30,700	27,637
Return on average capital employed (percent) – corporate total	<b>7.1</b>	3.8	13.7

### Cash flow from operating activities and asset sales

Cash flow from operating activities and asset sales is the sum of the net cash provided by operating activities and proceeds from asset sales reported in the consolidated statement of cash flows. This cash flow reflects the total sources of cash both from operating the company's assets and from the divesting of assets. The company employs a long-standing and regular disciplined review process to ensure that all assets are contributing to the company's strategic objectives. Assets are divested when they no longer meet these objectives or are worth considerably more to others. Because of the regular nature of this activity, the company believes it is useful for investors to consider sales proceeds together with cash provided by operating activities when evaluating cash available for investment in the business and financing activities, including shareholder distributions.

millions of Canadian dollars	2016	2015	2014
Cash from operating activities	2,015	2,167	4,405
Proceeds from asset sales	3,021	142	851
Total cash flow from operating activities and asset sales	5,036	2,309	5,256

### Operating costs

Operating costs are the costs during the period to produce, manufacture, and otherwise prepare the company's products for sale – including energy costs, staffing and maintenance costs. They exclude the cost of raw materials, taxes and interest expense and are on a before-tax basis. While the company is responsible for all revenue and expense elements of net income, operating costs represent the expenses most directly under the company's control and therefore, are useful in evaluating the company's performance.

### Reconciliation of operating costs

millions of Canadian dollars	2016	2015	2014
<b>From Imperial's consolidated statement of income</b>			
Total expenses	24,910	24,965	31,945
Less:			
Purchases of crude oil and products	15,120	15,284	22,479
Federal excise tax	1,650	1,568	1,562
Financing costs	65	39	4
Subtotal	16,835	16,891	24,045
Imperial's share of equity company expenses	63	40	39
Total operating costs	8,138	8,114	7,939

### Components of operating costs

millions of Canadian dollars	2016	2015	2014
<b>From Imperial's consolidated statement of income</b>			
Production and manufacturing	5,224	5,434	5,662
Selling and general	1,129	1,117	1,075
Depreciation and depletion	1,628	1,450	1,096
Exploration	94	73	67
Subtotal	8,075	8,074	7,900
Imperial's share of equity company expenses	63	40	39
Total operating costs	8,138	8,114	7,939

# Management's discussion and analysis of financial condition and results of operations

## Overview

The following discussion and analysis of Imperial's financial results, as well as the accompanying financial statements and related notes to consolidated financial statements to which they refer, are the responsibility of the management of Imperial Oil Limited.

The company's accounting and financial reporting fairly reflect its straightforward business model involving the extracting, refining and marketing of hydrocarbons and hydrocarbon-based products. The company's business involves the production (or purchase), manufacture and sale of physical products, and all commercial activities are directly in support of the underlying physical movement of goods.

Imperial, with its resource base, financial strength, disciplined investment approach and technology portfolio, is well-positioned to participate in substantial investments to develop new Canadian energy supplies. The company's integrated business model, with significant investments in Upstream, Downstream and Chemical segments, reduces the company's risk from changes in commodity prices. While commodity prices are volatile on a short-term basis depending upon supply and demand, Imperial's investment decisions are based on its long-term business outlook, using a disciplined approach in selecting and pursuing the most attractive investment opportunities. The corporate plan is a fundamental annual management process that is the basis for setting near-term operating and capital objectives, in addition to providing the longer-term economic assumptions used for investment evaluation purposes. Major investment opportunities are tested over a wide range of economic scenarios. Once major investments are made, a reappraisal process is completed to ensure relevant lessons are learned and improvements are incorporated into future projects.

The term "project" as used in this report can refer to a variety of different activities and does not necessarily have the same meaning as in any government payment transparency reports.

## Business environment and risk assessment

### Long-term business outlook

By 2040, the world's population is projected to grow to approximately nine billion people, or about 1.8 billion more people than in 2015. Coincident with this population increase, the company expects worldwide economic growth to average close to 3 percent per year. As economies and populations grow, and as living standards improve for billions of people, the need for energy will continue to rise. Even with significant efficiency gains, global energy demand is projected to rise by about 25 percent from 2015 to 2040. This demand increase is expected to be concentrated in developing countries (i.e., those that are not member nations of the Organization for Economic Cooperation and Development). Canada is expected to see flat to modest local energy demand growth through to 2040 and will continue to be a large supplier of energy exports to help meet rising global energy needs.

As expanding prosperity drives global energy demand higher, increasing use of energy-efficient technologies and practices as well as lower-emission fuels will continue to help significantly reduce energy consumption and emissions per unit of economic output over time. Substantial efficiency gains are likely in all key aspects of the world economy through 2040, affecting energy requirements for transportation, power generation, industrial applications and residential and commercial needs.

Energy for global transportation – including cars, trucks, ships, trains and airplanes – is expected to increase by about 25 percent from 2015 to 2040. The growth in transportation energy demand is likely to account for approximately 60 percent of the growth in liquid fuels demand worldwide over this period. Nearly all the world's transportation fleets will continue to run on liquid fuels, which are abundant, widely available, easy to transport and provide a large quantity of energy in small volumes.

Demand for electricity around the world is likely to increase approximately 60 percent from 2015 to 2040, led by a doubling of demand in developing countries. Consistent with this projection, power generation is expected to remain the largest and fastest-growing major segment of global energy demand. Meeting the

expected growth in power demand will require a diverse set of energy sources. In 2015 coal-fired generation provided about 40 percent of the world's electricity, however by 2040 coal-fired generation is likely to decline to less than 30 percent, in part as a result of policies to improve air quality as well as reduce greenhouse gas emissions to address the risks of climate change. From 2015 to 2040, the amount of electricity generated using natural gas, nuclear power, and renewables is likely to approximately double, and account for 90 percent of the growth in electricity supplies. By 2040, coal, natural gas and renewables are projected to each generate a similar share of electricity worldwide, although significant differences will exist across regions reflecting a wide range of factors including the cost and availability of energy types.

Liquid fuels provide the largest share of global energy supplies today due to their broad-based availability, affordability, ease of distribution and storage. By 2040, global demand for liquid fuels is expected to grow to approximately 112 million barrels of oil-equivalent per day, an increase of almost 20 percent from 2015. Globally, crude production from traditional conventional sources will likely decline slightly through 2040, with significant development activity mostly offsetting natural declines from these fields. However, this decline is expected to be more than offset by rising production from a wide variety of emerging supply sources – including tight oil, deep-water, oil sands, natural gas liquids and biofuels. The world's resource base is sufficient to meet projected demand through 2040 as technology advances continue to expand the availability of economic supply options. However, access to resources and timely investments will remain critical to meeting global needs with reliable, affordable supplies.

Natural gas is a versatile fuel, suitable for a wide variety of applications and it is expected to be the fastest-growing major fuel source from 2015 to 2040, meeting about 40 percent of energy demand growth. Global demand is expected to rise about 45 percent from 2015 to 2040, with about 45 percent of that increase in the Asia Pacific region. Helping meet these needs will lead to significant growth in supplies of unconventional gas - the natural gas found in shale and other rock formations that was once considered uneconomical to produce. In total, about 60 percent of the growth in natural gas supplies is expected to be from unconventional sources. However, it is expected conventionally-produced natural gas will remain the cornerstone of supply, meeting about two-thirds of global demand in 2040. Worldwide liquefied natural gas (LNG) trade will expand significantly, likely reaching more than 2.5 times the level of 2015 by 2040, with much of this supply expected to meet rising demand in Asia Pacific.

The world's energy mix is highly diverse and will remain so through 2040. Oil is expected to remain the largest source of energy with its share remaining close to one-third in 2040. Coal is currently the second largest source of energy, but it is likely to lose that position to natural gas in the 2025 to 2030 timeframe. The share of natural gas is expected to reach 25 percent by 2040, while the share of coal falls to about 20 percent. Nuclear power is projected to grow significantly, as many nations are likely to expand nuclear capacity to address rising electricity needs as well as energy security and environmental issues. Total renewable energy is likely to reach about 15 percent of total energy by 2040, with biomass, hydro and geothermal contributing a combined share of more than 10 percent. Total energy supplied from wind, solar and biofuels is expected to increase rapidly, growing over 200 percent from 2015 to 2040, when they will approach 4 percent of the world's energy.

The company anticipates that the world's available oil and gas resource base will grow not only from new discoveries but also from reserve increases in previously discovered fields. Technology will underpin these increases. The cost to develop and supply these resources will be significant. According to the International Energy Agency, the investment required to meet oil and natural gas supply requirements worldwide over the period 2016 to 2040 will be about US\$23 trillion (measured in 2015 dollars) or approximately US\$900 billion per year on average.

International accords and underlying regional and national regulations covering greenhouse gas emissions continue to evolve with uncertain timing and outcome, making it difficult to predict their business impact. Imperial's estimate of potential costs related to possible public policies covering energy-related greenhouse gas emissions are consistent with those outlined in ExxonMobil's long-term *Outlook for Energy*, which is used as a foundation for assessing the business environment and Imperial's investment evaluations.

The information provided in the long-term business outlook includes internal estimates and forecasts based upon internal data and analyses as well as publicly available information from external sources including the International Energy Agency.

## **Upstream**

Imperial produces crude oil and natural gas for sale predominantly into the North American markets. Imperial's Upstream business strategies guide the company's exploration, development, production, research and gas marketing activities. These strategies include capturing material and accretive opportunities to continually high-grade the resource portfolio, exercising a disciplined approach to investing and cost management, developing and applying high-impact technologies, pursuing productivity and efficiency gains, and growing profitable oil and gas production. These strategies are underpinned by a relentless focus on operational excellence, commitment to innovative technologies, development of employees and investment in the communities within which the company operates.

Imperial has a significant oil and gas resource base and a large inventory of potential projects. The company continues to evaluate opportunities to support the company's long-term growth. Actual volumes will vary from year to year due to the factors described in Item 1A. Risk factors.

Prices for most of the company's crude oil sold are referenced to West Texas Intermediate (WTI) and Western Canada Select (WCS) oil markets. In 2016, the average WTI and WCS crude oil prices, in U.S. dollars, were lower versus 2015. The upstream industry environment has been challenged in recent years with abundant crude oil supply causing crude oil prices to decrease to levels not seen since 2004. However, current market conditions are not necessarily indicative of future conditions. The markets for crude oil and natural gas have a history of significant price volatility. Imperial believes prices over the long term will continue to be driven by market supply and demand, with the demand side largely being a function of global economic growth. On the supply side, prices may be significantly impacted by political events, the actions of OPEC and other large government resource owners, and other factors. To manage the risks associated with price, Imperial evaluates annual plans and all major investments across a range of price scenarios.

## **Downstream**

Imperial's Downstream serves predominantly Canadian markets with refining, logistics and marketing assets. Imperial's Downstream business strategies guide the company's activities. These strategies include targeting best-in-class operations in all aspects of the business, maximizing value from advanced technologies, capitalizing on integration across Imperial's businesses, selectively investing for resilient and advantaged returns, operating efficiently and effectively, and providing valued products and services to customers.

Imperial owns and operates three refineries in Canada, with aggregate distillation capacity of 423,000 barrels per day. Imperial's fuels marketing business across Canada serves customers through more than 1,700 Esso-branded retail sites, as well as wholesale and industrial operations through a network of primary distribution terminals.

Refining margins are largely driven by differences in commodity prices and are a function of the difference between what a refinery pays for its raw materials (primarily crude oil) and market prices for the range of products produced (primarily gasoline, heating oil, diesel oil, jet fuel and fuel oil). Crude oil and many products are widely traded with published prices, including those quoted on the New York Mercantile Exchange. Prices for these commodities are determined by global and regional marketplaces and are influenced by many factors, including supply/demand balances, inventory levels, industry refinery operations, import / export balances, currency fluctuations, seasonal demand, weather and political climate.

While demand remained strong in 2016, margins weakened as surplus distillate and gasoline production capacity created higher inventory. North American refineries have benefitted from cost-competitive feedstock and energy supplies, but that benefit decreased in 2016.

Imperial's long-term outlook is that the North American refining industry will remain subject to intense competition. Additionally, as described in more detail in Item 1A. Risk Factors, proposed carbon policy and other climate-related regulations, as well as the continued growth in biofuels mandates, could have negative impacts on the downstream business. Imperial's integration across the value chain, from refining to marketing, enhances overall value in both fuels and lubricants businesses.

The company supplies petroleum products to the motoring public through Esso-branded retail sites and independent marketers. In 2016, the company completed the sale of its remaining company-owned Esso-branded retail sites completing the conversion to a branded wholesaler operating model. On average during the year, there were more than 1,700 retail sites, which by the end of 2016 were all operating under a

branded wholesaler model whereby Imperial supplies fuel to independent third parties who own and operate retail sites in alignment with Esso brand standards.

## Chemical

In North America, unconventional natural gas continued to provide advantaged ethane feedstock for steam crackers and a favourable margin environment for integrated chemical producers. The company's strategy for its Chemical business is to reduce costs and maximize value by continuing the integration of its chemical plant in Sarnia with the refinery. The company also benefits from its integration within ExxonMobil's North American chemical businesses, enabling Imperial to maintain a leadership position in its key market segments.

## Results of operations

### Consolidated

millions of Canadian dollars	2016	2015	2014
Net income (loss)	<b>2,165</b>	1,122	3,785

#### 2016

Net income in 2016 was \$2,165 million, or \$2.55 per-share on a diluted basis, including a gain of \$1.7 billion (\$2.01 per-share) from the sale of retail sites, versus net income of \$1,122 million or \$1.32 per-share in 2015. Downstream net income was \$2,754 million, up from \$1,586 million in 2015. Chemical net income was \$187 million. Upstream recorded a net loss of \$661 million in 2016, compared to a net loss of \$704 million in 2015.

#### 2015

Net income in 2015 was \$1,122 million, or \$1.32 per share on a diluted basis, versus \$3,785 million or \$4.45 per share in 2014. Upstream recorded a net loss of \$704 million, compared to a net income of \$2,059 million in 2014. Downstream earnings decreased by \$8 million and Chemical earnings increased by \$58 million.

### Upstream

millions of Canadian dollars	2016	2015	2014
Net income (loss)	<b>(661)</b>	(704)	2,059

#### 2016

Upstream recorded a net loss of \$661 million in 2016, compared to a net loss of \$704 million in 2015. The loss in 2016 reflected lower realizations of about \$700 million, the impact of the northern Alberta wildfires of about \$155 million and higher depreciation expense of about \$120 million. These factors were partially offset by higher volumes of about \$320 million, the impact of a weaker Canadian dollar of about \$130 million, the favorable impact of lower royalties of about \$80 million, lower field operating costs of about \$80 million and lower energy cost of about \$50 million. The loss in 2015 reflected the impact associated with the Alberta corporate income tax rate increase of \$327 million.

#### 2015

Upstream recorded a net loss of \$704 million in 2015, compared to net income of \$2,059 million in the same period of 2014. Earnings in 2015 reflected lower crude oil and gas realizations of about \$3,790 million, a net charge of \$327 million associated with increased Alberta corporate income taxes, higher depreciation expense of about \$180 million, lower liquids and gas volumes of about \$80 million reflecting the impact of divested properties in the prior year and a net charge of about \$60 million associated with the inventory carrying value. These factors were partially offset by the impact of a weaker Canadian dollar of about \$770 million, the favourable impact of lower royalties of about \$700 million, higher volumes from Kearn and Cold Lake of about \$670 million and lower energy costs of about \$140 million.

## Average realizations

Canadian dollars	2016	2015	2014
Bitumen realizations (per barrel)	26.52	32.48	67.20
Synthetic oil realizations (per barrel)	57.12	61.33	99.58
Conventional crude oil realizations (per barrel)	32.93	36.58	76.03
Natural gas liquids realizations (per barrel)	15.58	14.70	49.11
Natural gas realizations (per thousand cubic feet)	2.41	2.78	4.54

### 2016

West Texas Intermediate averaged US\$43.44 per barrel in 2016, down from US\$48.83 per barrel in 2015. Western Canada Select averaged US\$29.49 per barrel and US\$35.34 per barrel respectively for the same periods. The WTI / WCS differential widened to 32 percent in 2016, up from 28 percent in 2015. The Canadian dollar averaged US\$0.75 in 2016, a decrease of US\$0.03 from 2015.

Imperial's average Canadian dollar realizations for bitumen and synthetic crudes declined essentially in line with the North American benchmarks, adjusted for changes in the exchange rate and transportation costs. Bitumen realizations averaged \$26.52 for 2016, a decrease of \$5.96 per barrel from 2015. Synthetic crude realizations averaged \$57.12 per barrel, a decrease of \$4.21 per barrel from 2015.

### 2015

The average price for WTI, the main benchmark crude for North America, decreased by 47 percent compared to the same period in 2014. The company's average Canadian dollar realizations for synthetic crude oil and bitumen decreased about 38 and 52 percent in 2015 to \$61.33 and \$32.48 per barrel respectively, as the decline in benchmark crude and increased light-heavy differentials were partially offset by the weaker Canadian dollar. The company's average realizations on sales of natural gas of \$2.78 per thousand cubic feet in 2015 were lower by \$1.76 per thousand cubic feet, versus 2014.

## Crude oil and NGLs - production and sales (a)

thousands of barrels per day	2016		2015		2014	
	gross	net	gross	net	gross	net
Bitumen	281	256	266	245	197	161
Synthetic oil (b)	68	67	62	58	64	60
Conventional crude oil	14	12	15	14	18	14
Total crude oil production	363	335	343	317	279	235
NGLs available for sale	1	1	1	1	3	2
Total crude oil and NGL production	364	336	344	318	282	237
Bitumen sales, including diluent (c)	374		349		259	
NGL sales	5		5		8	

## Natural gas - production and production available for sale (d)

millions of cubic feet per day	2016		2015		2014	
	gross	net	gross	net	gross	net
Production (e) (f)	129	122	130	125	168	156
Production available for sale (g)		87		94		124

- (a) Barrels per day metric is calculated by dividing the volume for the period by the number of calendar days in the period. Gross production is the company's share of production (excluding purchases) before deduction of the mineral owners' or governments' share or both. Net production excludes those shares.
- (b) The company's synthetic oil production volumes were from the company's share of production volumes in the Syncrude joint venture.
- (c) Diluent is natural gas condensate or other light hydrocarbons added to crude bitumen to facilitate transportation to market by pipeline and rail.
- (d) Cubic feet per day metric is calculated by dividing the volume for the period by the number of calendar days in the period.
- (e) Gross production of natural gas includes amounts used for internal consumption with the exception of the amounts re-injected.
- (f) Net production is gross production less the mineral owners' or governments' share or both. Net production reported in the above table is consistent with production quantities in the net proved reserves disclosure.
- (g) Includes sales of the company's share of net production and excludes amounts used for internal consumption.

2016

Gross production of Cold Lake bitumen averaged 161,000 barrels per day in 2016, up from 158,000 barrels per day in 2015.

Gross production of Kearl bitumen averaged 169,000 barrels per day in 2016 (120,000 barrels Imperial's share) compared to 152,000 barrels per day (108,000 barrels Imperial's share) in 2015. The increase was the result of start-up of the expansion project.

During 2016, the company's share of gross production from Syncrude averaged 68,000 barrels per day, up from 62,000 barrels per day in 2015. Increased production reflects continued efforts to improve the reliability of operations, which more than offset the impact of the Alberta wildfires.

2015

Gross production of Cold Lake bitumen averaged 158,000 barrels per day in 2015, up from 146,000 barrels from the same period last year, with new production from Nabiye offsetting cycle timing of the base operations.

Gross production of Kearl bitumen averaged 152,000 barrels per day during 2015 (108,000 barrels Imperial's share) up from 72,000 barrels per day (51,000 barrels Imperial's share) in 2014, reflecting early start-up of the Kearl expansion project and improved reliability of the initial development.

During 2015, the company's share of gross production from Syncrude averaged 62,000 barrels per day, compared to 64,000 barrels in 2014.

Gross production of conventional crude oil averaged 15,000 barrels per day during 2015, compared to 18,000 barrels in 2014. The lower production volume was primarily due to the impact of properties divested during the first half of 2014.

Gross production of natural gas during 2015 was 130 million cubic feet per day, down from 168 million cubic feet in the same period last year, reflecting the impact of divested properties and natural reservoir decline.

## Downstream

millions of Canadian dollars	2016	2015	2014
Net income (loss)	2,754	1,586	1,594

2016

Downstream net income was \$2,754 million, up from \$1,586 million in 2015. Earnings increased mainly due to a gain of \$1,841 million from the sale of retail sites and the general aviation business, the impact of a weaker Canadian dollar of about \$130 million, higher marketing sales volumes of \$50 million, partially offset by lower downstream margins of about \$910 million.

2015

Downstream net income was \$1,586 million, compared to \$1,594 million in the same period of 2014. Earnings decreased due to the impact of lower refinery margins of about \$590 million and higher operating costs of about \$70 million mainly associated with the Edmonton rail terminal. These factors were partially offset by the favourable impact of a weaker Canadian dollar of about \$390 million, higher fuels marketing margins and volumes of about \$170 million, lower energy costs of about \$80 million and a 2015 gain of \$17 million from the sale of assets.

## Refinery utilization

thousands of barrels per day (a)	2016	2015	2014
Total refinery throughput (b)	362	386	394
Refinery capacity at December 31	423	421	421
Utilization of total refinery capacity (percent)	86	92	94

## Sales

thousands of barrels per day (a)	2016	2015	2014
Gasolines	261	247	244
Heating, diesel and jet fuels	170	170	179
Heavy fuel oils	16	16	22
Lube oils and other products	37	45	40
Net petroleum product sales	484	478	485

(a) Volumes per day are calculated by dividing total volumes for the year by the number of calendar days in the year.

(b) Crude oil and feedstocks sent directly to atmospheric distillation units.

### 2016

Refinery throughput averaged 362,000 barrels per day in 2016, compared to 386,000 barrels per day in 2015. Capacity utilization decreased to 86 percent from 92 percent in 2015, reflecting the more significant scope of turnaround maintenance activity in the current year. Petroleum product sales were 484,000 barrels per day in 2016, up from 478,000 barrels per day in 2015. Sales growth was driven by the company's focus on establishing long-term supply agreements.

### 2015

Total refinery throughput was 386,000 barrels per day. Refinery throughput was 92 percent of capacity in 2015, 2 percent lower than the previous year. The lower rate was primarily a result of planned maintenance. Total net petroleum sales decreased to 478,000 barrels per day, compared with 485,000 barrels in 2014.

## Chemical

millions of Canadian dollars	2016	2015	2014
Net income (loss)	187	287	229

## Sales

thousands of tonnes	2016	2015	2014
Polymers and basic chemicals	697	735	741
Intermediate and others	211	210	212
Total petrochemical sales	908	945	953

### 2016

Chemical net income was \$187 million, compared to \$287 million in the same period of 2015, mainly due to weaker margins across all major product lines and lower volumes.

### 2015

Chemical net income was a record \$287 million in 2015, an increase of \$58 million over the same period in 2014, primarily due to the impact of a weaker Canadian dollar, lower feedstock costs and higher sales of polyethylene.

## Corporate and Other

millions of Canadian dollars	2016	2015	2014
Net income (loss)	(115)	(47)	(97)

### 2016

In 2016, net income effects from Corporate and Other were negative \$115 million, versus negative \$47 million in 2015, primarily due to higher share-based compensation charges, the absence of the impact from the Alberta tax rate increase in 2015 and lower capitalized interest.

### 2015

In 2015, net income effects from Corporate and Other were negative \$47 million, compared to negative \$97 million in 2014, primarily due to lower share-based compensation charges and the impact of the Alberta corporate income tax rate increase.

## Liquidity and capital resources

### Sources and uses of cash

millions of Canadian dollars	2016	2015	2014
Cash provided by (used in)			
Operating activities	2,015	2,167	4,405
Investing activities	1,947	(2,884)	(4,562)
Financing activities	(3,774)	705	100
Increase (decrease) in cash and cash equivalents	188	(12)	(57)
Cash and cash equivalents at end of year	391	203	215

The company issues long-term debt from time to time and maintains a commercial paper program. However internally generated funds cover the majority of its financial requirements. Cash that may be temporarily surplus to the company's immediate needs is carefully managed through counterparty quality and investment guidelines to ensure that it is secure and readily available to meet the company's cash requirements and to optimize returns.

Cash flows from operating activities are highly dependent on crude oil and natural gas prices, as well as petroleum and chemical product margins. In addition, to provide for cash flow in future periods, the company needs to continually find and develop new resources, and continue to develop and apply new technologies to existing fields in order to maintain or increase production.

The company's financial strength enables it to make large, long-term capital expenditures. Imperial's portfolio of development opportunities and the complementary nature of its business segments help mitigate the overall risks for the company and its cash flows. Further, due to its financial strength, debt capacity and portfolio of opportunities, the risk associated with delay of any single project would not have a significant impact on the company's liquidity or ability to generate sufficient cash flows for its operations and fixed commitments.

Funding of registered retirement plans complies with federal and provincial pension regulations, and the company makes contributions to the plans based on an independent actuarial valuation completed at least once every three years, or more, depending on funding status. The most recent valuation of the company's registered retirement plans was completed as at December 31, 2013. As a result of the valuation, the company contributed \$163 million to the registered retirement plans in 2016. Future funding requirements are not expected to affect the company's existing capital investment plans or its ability to pursue new investment opportunities.

## **Cash flow from operating activities**

2016

Cash flow generated from operating activities was \$2,015 million in 2016, compared with \$2,167 million in 2015, reflecting lower earnings, excluding the gain on retail sites and the general aviation business.

2015

Cash flow generated from operating activities was \$2,167 million, compared with \$4,405 million in 2014. Lower cash flow was due to lower earnings.

## **Cash flow from investing activities**

2016

Investing activities generated net cash of \$1,947 million in 2016, compared with cash used in investing activities of \$2,884 million in 2015, reflecting proceeds from asset sales and the completion of major upstream growth projects.

2015

Cash used in investing activities of \$2,884 million, compared with \$4,562 million in 2014, mainly reflecting the decline in additions to property, plant and equipment.

## **Cash flow from financing activities**

2016

Cash used in financing activities was \$3,774 million in 2016, compared with cash provided by financing activities of \$705 million in 2015. Cash from operating activities and proceeds from the asset sales were used to reduce outstanding debt.

At the end of 2016, total debt outstanding was \$5,234 million, compared with \$8,516 million at the end of 2015.

The company repaid debt of \$1,505 million from existing long-term loan facilities and \$1,749 million from short-term loan facilities.

In October 2016, the company decreased the amount of its unused committed long-term line of credit from \$500 million to \$250 million and extended the maturity date to November 2018.

In December 2016, the company decreased the amount of its unused committed short-term line of credit from \$500 million to \$250 million and extended the maturity date to December 2017.

During 2016, the company did not make any share repurchases except those to offset the dilutive effects from the exercise of share-based awards. The company will continue to evaluate its share repurchase program in the context of its operating performance and overall capital project activities.

Dividends paid in 2016 were \$492 million. The per-share dividend paid was \$0.58, up from \$0.53 in 2015.

2015

Cash provided by financing activities was \$705 million, compared with \$100 million in 2014.

The company drew on existing loan facilities of \$1,206 million.

At the end of 2015, total debt outstanding was \$8,516 million, compared with \$6,891 million at the end of 2014.

In March 2015, the company extended the maturity date of its existing \$500 million 364-day short-term unsecured committed bank credit facility to March 2016. The company did not draw on the facility.

In July 2015, the company increased the capacity of its existing floating rate loan facility with an affiliated company of ExxonMobil from \$6.25 billion to \$7.75 billion. All terms and conditions of the agreement remained unchanged.

In August 2015, the company extended the maturity date of its existing \$500 million long-term bank credit facility to August 2017. The company did not draw on the facility.

Cash dividends of \$449 million were paid in 2015 compared with \$441 million in 2014. Per-share dividends paid in 2015 totalled \$0.53, up from \$0.52 in 2014.

Subsequent to December 31, 2015 and up to February 10, 2016, the company increased its total debt by \$328 million by drawing on an existing facility. The increased debt was used to supplement normal operations and capital projects.

### Financial percentages and ratios

	2016	2015	2014
Total debt as a percentage of capital (a)	17	27	23
Interest coverage ratio – earnings basis (b)	21	20	61

(a) Current and long-term debt (page 26) and the company's share of equity company debt, divided by debt and shareholders' equity (page 26).

(b) Net income (page 24), debt-related interest before capitalization, including the company's share of equity company interest, and income taxes (page 24), divided by debt-related interest before capitalization, including the company's share of equity company interest.

Debt represented 17 percent of the company's capital structure at the end of 2016.

Debt-related interest incurred in 2016, before capitalization of interest, was \$121 million, compared with \$102 million in 2015. The average effective interest rate on the company's debt was 1.5 percent in 2016, compared with 1.3 percent in 2015.

The company's financial strength, as evidenced by the above financial ratios, represents a competitive advantage of strategic importance. The company's sound financial position gives it the opportunity to access capital markets in the full range of market conditions and enables the company to take on large, long-term capital commitments in the pursuit of maximizing shareholder value.

The company does not currently make use of any derivative instruments to offset exposures associated with hydrocarbon prices, currency exchange rates and interest rates that arise from existing assets, liabilities and forecasted transactions. The company does not engage in speculative derivative activities nor does it use derivatives with leveraged features.

### Commitments

The following table shows the company's commitments outstanding at December 31, 2016. It combines data from the consolidated balance sheet and from individual notes to the consolidated financial statements, where appropriate.

millions of Canadian dollars	Note reference	Payment due by period				Total
		2017	2018 to 2019	2020 to 2021	2022 and beyond	
Long-term debt (a)	14	-	54	4,478	500	5,032
- Due in one year		27				27
Operating leases (b)	13	139	129	4	3	275
Firm capital commitments (c)		48	31	71	-	150
Pension and other post-retirement obligations (d)	4	277	125	131	1,170	1,703
Asset retirement obligations (e)	5	55	218	184	1,015	1,472
Other long-term purchase agreements (f)		844	1,467	1,233	4,716	8,260

(a) Long-term debt includes a long-term loan from an affiliated company of ExxonMobil of \$4,447 million and capital lease obligations of \$612 million, \$27 million of which is due in one year. The payment by period for the related party long-term loan is estimated based on the right of the related party to cancel the loan on at least 370 days advance written notice.

(b) Minimum commitments for operating leases, shown on an undiscounted basis, covers primarily storage tanks, rail cars and marine vessels.

(c) Firm capital commitments represent legally-binding payment obligations to third parties where agreements specifying all significant terms have been executed for the construction and purchase of fixed assets and other permanent investments. In certain cases where the company executes contracts requiring commitments to a work scope, those commitments have been included to the

extent that the amounts and timing of payments can be reliably estimated. Firm capital commitments related to capital projects, shown on an undiscounted basis.

- (d) The amount by which the benefit obligations exceeded the fair value of fund assets for pension and other post-retirement plans at year-end. The payments by period include expected contributions to funded pension plans in 2017 and estimated benefit payments for unfunded plans in all years.
- (e) Asset retirement obligations represent the fair value of legal obligations associated with site restoration on the retirement of assets with determinable useful lives.
- (f) Other long-term purchase agreements are non-cancelable, or cancelable only under certain conditions and long-term commitments other than unconditional purchase obligations. They include primarily raw material supply and transportation services agreements. The lower 2016 balance reflects a reduction of transportation service agreements totalling \$2.7 billion. In addition, about \$636 million of unconditional purchase obligation that existed at year-end 2015 no longer met the conditions for classification as unconditional purchase obligations and are now reported as other long-term purchase agreements.

Unrecognized tax benefits totaling \$106 million have not been included in the company's commitments table because the company does not expect there will be any cash impact from the final settlements as sufficient funds have been deposited with the Canada Revenue Agency. Further details on the unrecognized tax benefits can be found in note 3 to the financial statements on page 37.

### Litigation and other contingencies

As discussed in note 9 to the consolidated financial statements on page 46, a variety of claims have been made against Imperial and its subsidiaries. Based on a consideration of all relevant facts and circumstances, the company does not believe the ultimate outcome of any currently pending lawsuits against the company will have a material adverse effect on the company's operations, financial condition, or financial statements taken as a whole.

Additionally, as discussed in note 9, Imperial was contingently liable at December 31, 2016, for guarantees relating to performance under contracts of other third-party obligations. These guarantees do not have a material effect on the company's operations, financial condition, or financial statements taken as a whole.

There are no events or uncertainties beyond those already included in reported financial information that would indicate a material change in future operating results or financial condition.

### Capital and exploration expenditures

millions of Canadian dollars	2016	2015
Upstream (a)	896	3,135
Downstream	190	340
Chemical	26	52
Other	49	68
<b>Total</b>	<b>1,161</b>	<b>3,595</b>

(a) Exploration expenses included.

Total capital and exploration expenditures were \$1,161 million in 2016, a decrease of \$2,434 million from 2015.

For the Upstream segment, capital expenditures were \$896 million, compared with \$3,135 million in 2015. Investments were primarily in support of completion of upstream projects.

Planned capital and exploration expenditures in the Upstream segment are forecast at about \$600 million for 2017. Investments are mainly planned for sustaining activity.

For the Downstream segment, capital expenditures were \$190 million in 2016, compared with \$340 million in 2015. In 2016, investments were primarily in support of downstream sustaining activity.

Planned capital expenditures for the Downstream segment in 2017 are \$350 million and focus on improving the reliability and efficiency of Imperial's operations, as well as enhancing the company's environmental and safety performance.

Total capital and exploration expenditures for the company in 2017 are expected to be about \$1 billion. Actual spending could vary depending on the progress of individual projects.

## Market risks and other uncertainties

Crude oil, natural gas, petroleum product and chemical prices have fluctuated in response to changing market forces. The impacts of these price fluctuations on earnings from Upstream, Downstream and Chemical operations have varied. Industry crude oil and natural gas commodity prices and petroleum and chemical product prices are commonly benchmarked in U.S. dollars. The majority of Imperial's sales and purchases are related to these industry U.S. dollar benchmarks. As the company records and reports its financial results in Canadian dollars, to the extent that the Canadian / U.S. dollar exchange rate fluctuates, the company's earnings will be affected. The company's potential exposure to commodity price and margin, and Canadian / U.S. dollar exchange rate fluctuations is summarized in the earnings sensitivities table below, which shows the estimated annual effect, under current conditions, on the company's after-tax net income.

In the competitive downstream and chemical environments, earnings are primarily determined by margin capture rather than absolute price levels on products sold. Refining margins are a function of the difference between what a refiner pays for its raw materials (primarily crude oil) and the market prices for the range of products produced. These prices in turn depend on global and regional supply / demand balances, inventory levels, refinery operations, import / export balances and weather.

Imperial is exposed to changes in interest rates, primarily on its debt which carries floating interest rates. The impact of a quarter percent change in interest rates affecting Imperial's debt would not be material to earnings, cash flow or fair value. Imperial has access to significant capacity of long-term and short-term liquidity. Internally generated funds are expected to cover the majority of financial requirements, supplemented by long-term and short-term debt as needed.

At this time Imperial is a net consumer of natural gas. It is used in Imperial's Upstream operations and refineries. A decrease in the value of natural gas reduces Imperial's operating expenses, thereby increasing Imperial's earnings.

### Earnings sensitivities (a)

millions of Canadian dollars, after tax

One dollar (U.S.) per barrel change in crude oil prices (b)	+ (-)	<b>100</b>
Ten cents per thousand cubic feet decrease (increase) in natural gas prices	+ (-)	<b>5</b>
One dollar (U.S.) per barrel change in refining 2-1-1 margins (c)	+ (-)	<b>140</b>
One cent (U.S.) per pound change in sales margins for polyethylene	+ (-)	<b>8</b>
One cent decrease (increase) in the value of the Canadian dollar versus the U.S. dollar	+ (-)	<b>85</b>

(a) Each sensitivity calculation shows the impact on net income resulting from a change in one factor, after tax and royalties and holding all other factors constant. These sensitivities have been updated to reflect current conditions. They may not apply proportionately to larger fluctuations.

(b) Impact on Upstream earnings only, after tax and royalties.

(c) The 2-1-1 crack spread is an indicator of the refining margin generated by converting two barrels of crude oil into one barrel of gasoline and one barrel of diesel.

The sensitivity of net income to changes in the Canadian dollar versus the U.S. dollar increased from 2015 year-end by about \$10 million (after tax) a year for each one-cent change. The increase was primarily the result of higher production volumes.

The global energy markets can give rise to extended periods in which market conditions are adverse to one or more of the company's businesses. Such conditions, along with the capital-intensive nature of the industry and very long lead times associated with many of the company's projects, underscore the importance of maintaining a strong financial position. Management views the company's financial strength as a competitive advantage.

In general, segment results are not dependent on the ability to sell and / or purchase products to / from other segments. Instead, where such sales take place, they are the result of efficiencies and competitive advantages of integrated refinery / chemical complexes. Additionally, intersegment sales are at market-based prices. The products bought and sold between segments can also be acquired in worldwide markets that have substantial liquidity, capacity and transportation capabilities. About 65 percent of the company's intersegment sales are crude oil produced by the Upstream and sold to the Downstream. Other intersegment sales include those between refineries and the chemical plant related to raw materials, feedstocks and finished products.

The company has an active asset management program in which underperforming assets are either improved to acceptable levels or considered for divestment. The asset management program includes a disciplined, regular review to ensure that all assets are contributing to the company's strategic objectives. The result is an efficient capital base, and the company has seldom had to write-down the carrying value of assets, even during periods of low commodity prices.

Industry bitumen production may be subject to limits on transportation capacity to markets. A significant portion of the company's upstream production is bitumen. To mitigate uncertainty associated with the timing of industry pipeline projects and pipeline capacity constraints, the company has developed rail infrastructure.

The demand for crude oil, natural gas, petroleum products and petrochemical products correlates closely with general economic growth rates. The occurrence of recessions or other periods of low or negative economic growth will typically have a direct adverse impact on the company's financial results. In challenging economic times, the company follows the proven approach to continue to focus on the business elements within its control and take a long-term view. Technology improvements have played and will continue to play an important role in the economics and the environmental performance of current operations and future developments.

### **Risk management**

The company's size, strong capital structure and the complementary nature of the Upstream, Downstream and Chemical businesses reduce the company's enterprise-wide risk from changes in commodity prices and currency rates. The company's financial strength and debt capacity give it the opportunity to advance business plans in the pursuit of maximizing shareholder value in the full range of market conditions. As a result, the company does not currently make use of derivative instruments to mitigate the impact of such changes. The company does not engage in speculative derivative activities or derivative trading activities nor does it use derivatives with leveraged features. Although the company does not engage in speculative derivative activities or derivative trading activities, it maintains a system of controls that includes a policy covering the authorization, reporting and monitoring of derivative activity.

### **Critical accounting estimates**

The company's financial statements have been prepared in accordance with United States Generally Accepted Accounting Principles (GAAP). GAAP requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. The company's accounting and financial reporting fairly reflect its straightforward business model. Imperial does not use financing structures for the purpose of altering accounting outcomes or removing debt from the balance sheet. The company's significant accounting policies are summarized in note 1 to the consolidated financial statements on page 29.

### **Oil and gas reserves**

Evaluations of oil and natural gas reserves are important to the effective management of upstream assets. They are an integral part of investment decisions about oil and gas properties such as whether development should proceed.

The estimation of proved reserves, which is based on the requirement of reasonable certainty, is an ongoing process based on rigorous technical evaluations, commercial and market assessments and detailed analysis of well information such as flow rates and reservoir pressure declines. The estimation of proved reserves is controlled by the company through long-standing approval guidelines. Reserve changes are made within a well-established, disciplined process driven by senior level geoscience and engineering professionals, assisted by the reserves management group which has significant technical experience, culminating in reviews with and approval by senior management and the company's board of directors. Notably, the company does not use specific quantitative reserve targets to determine compensation. Key features of the reserve estimation process are covered in "Disclosure of reserves" in Item 1.

Oil and natural gas reserves include both proved and unproved reserves.

- Proved oil and natural gas reserves are determined in accordance with Securities and Exchange Commission requirements. Proved reserves are those quantities of oil and natural gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be

economically producible under existing economic and operating conditions and government regulations. Proved reserves are determined using the average of first-of-month oil and natural gas prices during the reporting year.

Proved reserves can be further subdivided into developed and undeveloped reserves. Proved developed reserves include amounts which are expected to be recovered through existing wells with existing equipment and operating methods. Proved undeveloped reserves include amounts expected to be recovered from new wells on undrilled proved acreage or from existing wells where a relatively major expenditure is required for completion. Proved undeveloped reserves are recognized only if a development plan has been adopted indicating that the reserves are scheduled to be drilled within five years, unless specific circumstances support a longer period of time.

The percentage of proved developed reserves was 77 percent of total proved reserves at year-end 2016, a reduction from 88 percent in 2015. Although the company is reasonably certain that proved reserves will be produced, the timing and amount recovered can be affected by a number of factors including completion of development projects, reservoir performance, regulatory approvals and significant changes in long-term oil and natural gas prices.

- Unproved reserves are quantities of oil and natural gas with less than reasonable certainty of recoverability and include probable reserves. Probable reserves are reserves that, together with proved reserves, are as likely as not to be recovered.

Revisions can include upward or downward changes in previously estimated volumes of proved reserves for existing fields due to the evaluation or re-evaluation of already available geologic, reservoir or production data; new geologic, reservoir or production data; or changes in the average of first-of-the-month prices and year-end costs that are used in the estimation of reserves. Revisions can also result from significant changes in either development strategy or production equipment / facility capacity.

As a result of low prices during 2016, under the U.S. Securities and Exchange Commission definition of proved reserves, certain quantities of bitumen that qualified as proved reserves in prior years did not qualify as proved reserves at year-end 2016. Amounts no longer qualifying as proved reserves include the entire 2.5 billion barrels of bitumen at Kearl and approximately 0.2 billion barrels of bitumen at Cold Lake. Among the factors that would result in these amounts being recognized again as proved reserves at some point in the future are a recovery in average price levels, a further decline in costs, and / or operating efficiencies. Under the terms of certain contractual arrangements or government royalty regimes, lower prices can also increase proved reserves attributable to Imperial. The company does not expect the downward revision of reported proved reserves under the U.S. Securities and Exchange Commission definitions to affect the operation of the underlying projects or to alter its outlook for future production volumes.

#### ***Unit-of-production depreciation***

The calculation of unit-of-production depreciation is a critical accounting estimate that measures the depreciation of upstream assets. Oil and natural gas reserve quantities are used as the basis to calculate unit-of-production depreciation rates for most upstream assets. Depreciation is calculated by taking the ratio of asset cost to total proved reserves or proved developed reserves applied to the actual cost of production. The volumes produced and asset cost are known, while proved reserves are based on estimates that are subject to some variability.

In the event that the unit-of-production method does not result in an equitable allocation of cost over the economic life of an upstream asset, an alternative method is used. The straight-line method is used in limited situations where the expected life of the asset does not reasonably correlate with that of the underlying reserves. For example, certain assets used in the production of oil and natural gas have a shorter life than the reserves, and as such, the company uses straight-line depreciation to ensure the asset is fully depreciated by the end of its useful life.

To the extent that proved reserves for a property are entirely de-booked and that property continues to produce, assets will be depreciated using a unit-of-production method based on reserves determined at the most recent SEC price which results in a quantity of proved reserves greater than zero, appropriately adjusted for production and technical changes. The effect of this approach on the company's 2017 depreciation expense versus 2016 is anticipated to be immaterial.

### ***Impact of oil and gas reserves and prices and margins on testing for impairment***

The company tests assets or groups of assets for recoverability whenever events or circumstances indicate that the carrying amounts may not be recoverable.

Among the events or changes in circumstances which could indicate that the carrying value of an asset or asset group may not be recoverable are the following:

- A significant decrease in the market price of a long-lived asset;
- A significant adverse change in the extent or manner in which an asset is being used or in its physical condition including a significant decrease in the company's current and projected reserve volumes;
- A significant adverse change in legal factors or in the business climate that could affect the value, including a significant adverse action or assessment by a regulator;
- An accumulation of project costs significantly in excess of the amount originally expected;
- A current-period operating loss combined with a history and forecast of operating or cash flow losses; and
- A current expectation that, more likely than not, a long-lived asset will be sold or otherwise disposed of significantly before the end of its previously estimated useful life.

The company performs asset valuation analyses on an ongoing basis as a part of its asset management program. These analyses and other profitability reviews assist the company in assessing whether the carrying amounts of any of its assets may not be recoverable.

In general, Imperial does not view temporarily low prices or margins as an indication of impairment. Management does not believe that lower prices are sustainable if energy is to be delivered with supply security to meet global demand over the long term. Although prices will occasionally drop significantly, industry prices over the long term will continue to be driven by market supply and demand. On the supply side, industry production from mature fields is declining, but this is being offset by production from new discoveries and field developments. OPEC production policies also have an impact on world oil supplies. The demand side is largely a function of global economic growth. Because the lifespans of the company's major assets are measured in decades, the value of these assets is predominantly based on long-term views of future commodity prices and production costs. During the lifespan of these major assets, the company expects that oil and gas prices will experience significant volatility, and consequently these assets will experience periods of higher earnings and periods of lower earnings, or even losses. In assessing whether the events or changes in circumstances indicate the carrying value of an asset may not be recoverable, the company considers recent periods of operating losses in the context of its longer-term view of prices. While near-term prices are subject to wide fluctuations, longer term price views are more stable and meaningful for purposes of assessing future cash flows.

When the industry experiences a prolonged and deep reduction in commodity prices, the market supply and demand conditions may result in changes to the company's long-term price or margin assumptions it uses for its capital investment decisions. To the extent those changes result in a significant reduction in the mid-point of its long-term oil and natural gas price or margin ranges, the company may consider that situation, in conjunction with other events and changes in circumstances such as a history of operating losses, as an indicator of potential impairment for certain assets.

In the upstream, the standardized measure of discounted cash flows included in the "Supplemental information on oil and gas exploration and production activities" is required to use prices based on the average of first-of-month prices. These prices represent discrete points in time and could be higher or lower than the company's long-term price assumptions which are used for impairment assessments. The company believes the standardized measure does not provide a reliable estimate of the expected future cash flows to be obtained from the development and production of its oil and gas properties or of the value of its oil and gas reserves and therefore does not consider it relevant in determining whether events or changes in circumstances indicate the need for an impairment assessment.

If events or circumstances indicate that the carrying value may not be recoverable, the company estimates the future undiscounted cash flows of the affected properties to judge the recoverability of carrying amounts. In performing this assessment, assets are grouped at the lowest level for which there are identifiable cash flows that are largely independent of the cash flows of other groups of assets. Cash flows used in recoverability assessments are based on the company's assumptions which are developed in the annual planning and budgeting process, and are consistent with the criteria management uses to evaluate investment opportunities. These evaluations make use of the company's assumption of future crude oil and

natural gas commodity prices, refining and chemical margins, volumes, costs, and foreign currency exchange rates. Volumes are based on projected field and facility production profiles, throughput, or sales. Where unproved reserves exist, an appropriately risk-adjusted amount of these reserves may be included in the evaluation.

An asset group is impaired if its undiscounted cash flows are less than the asset group's carrying value. Impairments are measured by the amount by which the carrying value exceeds fair value. Fair value is based on market prices if an active market exists for the asset group or discounted cash flows using a discount rate commensurate with the risk. Significant unproved properties are assessed for impairment individually, and valuation allowances against the capitalized costs would be recorded based on the estimated economic chance of success and the length of time that the company expects to hold the properties. Properties that are not individually significant are aggregated by groups and amortized based on development risk and average holding period.

Continued weakness in the upstream industry environment during 2016 led the company to perform an assessment of its major long-lived assets as part of Imperial's annual planning and budgeting process, similar to the exercise undertaken in late 2015. The assessment reflected long-term crude and natural gas prices which are consistent with the mid-point of the ranges that management uses to evaluate investment opportunities and which are in the range of long-term price forecasts published by third-party industry experts and government agencies. This assessment indicated that Imperial's major asset groups have future undiscounted cash flow estimates exceeding carrying values.

Supplemental information regarding oil and gas results of operations, capitalized costs and reserves is provided following the notes to consolidated financial statements.

### **Inventories**

Crude oil, products and merchandise inventories are carried at the lower of current market value or cost (generally determined under the last-in, first-out method – LIFO).

### **Pension benefits**

The company's pension plan is managed in compliance with the requirements of governmental authorities and meets funding levels as determined by independent third-party actuaries. Pension accounting requires explicit assumptions regarding, among others, the discount rate for the benefit obligations, the expected rate of return on plan assets and the long-term rate of future compensation increases. All pension assumptions are reviewed annually by senior management. These assumptions are adjusted only as appropriate to reflect long-term changes in market rates and outlook. The long-term expected rate of return on plan assets of 5.5 percent used in 2016 compares to actual returns of 5.5 percent and 7.7 percent achieved over the last 10- and 20-year periods respectively, ending December 31, 2016. If different assumptions are used, the expense and obligations could increase or decrease as a result. The company's potential exposure to changes in assumptions is summarized in note 4 to the consolidated financial statements on page 38. At Imperial, differences between actual returns on plan assets and the long-term expected returns are not recorded in pension expense in the year the differences occur. Such differences are deferred, along with other actuarial gains and losses, and are amortized into pension expense over the expected average remaining service life of employees. Employee benefit expense represented about 2 percent of total expenses in 2016.

### **Asset retirement obligations and other environmental liabilities**

Legal obligations associated with site restoration on the retirement of assets with determinable useful lives are recognized when they are incurred, which is typically at the time the assets are installed. The obligations are initially measured at fair value and discounted to present value. Over time, the discounted asset retirement obligation amount will be accreted for the change in its present value, with this effect included in production and manufacturing expenses. As payments to settle the obligations occur on an ongoing basis and will continue over the lives of the operating assets, which can exceed 25 years, the discount rate will be adjusted only as appropriate to reflect long-term changes in market rates and outlook. For 2016, the obligations were discounted at 6 percent and the accretion expense was \$97 million, before tax, which was significantly less than 1 percent of total expenses in the year. There would be no material impact on the company's reported financial results if a different discount rate had been used.

Asset retirement obligations are not recognized for assets with an indeterminate useful life. Asset retirement obligations for these facilities generally become firm at the time the facilities are permanently shut down and dismantled. These obligations may include the costs of asset disposal and additional soil remediation.

However, these sites have indeterminate lives based on plans for continued operations, and as such, the fair value of the conditional legal obligations cannot be measured, since it is impossible to estimate the future settlement dates of such obligations. For these and non-operating assets, the company accrues provisions for environmental liabilities when it is probable that obligations have been incurred and the amount can be reasonably estimated.

Asset retirement obligations and other environmental liabilities are based on engineering estimated costs, taking into account the anticipated method and extent of remediation consistent with legal requirements, current technology and the possible use of the location. Since these estimates are specific to the locations involved, there are many individual assumptions underlying the company's total asset retirement obligations and provision for other environmental liabilities. While these individual assumptions can be subject to change, none of them is individually significant to the company's reported financial results.

### **Suspended exploratory well costs**

The company continues capitalization of exploratory well costs when the well has found a sufficient quantity of reserves to justify its completion as a producing well and the company is making sufficient progress assessing the reserves and the economic and operating viability of the project. Exploratory well costs not meeting these criteria are charged to expense. The facts and circumstances that support continued capitalization of suspended wells at year-end are disclosed in note 15 to the consolidated financial statements on page 50.

### **Tax contingencies**

The operations of the company are complex, and related tax interpretations, regulations and legislation are continually changing. Significant management judgment is required in the accounting for income tax contingencies and tax disputes because the outcomes are often difficult to predict.

The benefits of uncertain tax positions that the company has taken or expects to take in its income tax returns are recognized in the financial statements if management concludes that it is more likely than not that the position will be sustained with the tax authorities. For a position that is likely to be sustained, the benefit recognized in the financial statements is measured at the largest amount that is greater than 50 percent likely of being realized. A reserve is established for the difference between a position taken or expected to be taken in an income tax return and the amount recognized in the financial statements. The company's unrecognized tax benefits and a description of open tax years are summarized in note 3 to the consolidated financial statements on page 37.

### **Recently issued accounting standards**

In May 2014, the Financial Accounting Standards Board (FASB) issued a new standard, *Revenue from Contracts with Customers*. The standard establishes a single revenue recognition model for all contracts with customers, eliminates industry specific requirements and expands disclosure requirements. The standard will be adopted beginning January 1, 2018. The company expects to adopt the standard using the modified retrospective method, under which prior years' results are not restated, but supplemental information on the impact of the new standard is provided for in the 2018 results. Imperial continues to evaluate other areas of the standard. The impact from the standard is not expected to have a material effect on the company's financial statements.

In February 2016, the FASB issued a new standard, *Leases*. The standard requires all leases with an initial term greater than one year be recorded on the balance sheet as a lease asset and lease liability, with little change to the income and cash flow statements. The standard is required to be adopted beginning January 1, 2019, with early adoption permitted. Imperial is evaluating the standard and its effect on the company's financial statements and plans to adopt it in 2019.

## Management's report on internal control over financial reporting

Management, including the company's chief executive officer and principal accounting officer and principal financial officer, is responsible for establishing and maintaining adequate internal control over the company's financial reporting. Management conducted an evaluation of the effectiveness of internal control over financial reporting based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that Imperial Oil Limited's internal control over financial reporting was effective as of December 31, 2016.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, audited the effectiveness of the company's internal control over financial reporting as of December 31, 2016, as stated in their report which is included herein.

/s/ Richard M. Kruger

R.M. Kruger  
Chairman, president and  
chief executive officer

/s/ Beverley A. Babcock

B.A. Babcock  
Senior vice-president,  
finance and administration, and controller  
(Principal accounting officer and principal financial officer)

February 22, 2017

# Report of independent registered public accounting firm

## To the Shareholders of Imperial Oil Limited

We have audited the accompanying consolidated balance sheet of Imperial Oil Limited as of December 31, 2016 and December 31, 2015 and the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the years in the three-year period ended December 31, 2016.

In addition, we audited Imperial Oil Limited's internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying management's report on internal control over financial reporting. Our responsibility is to express an opinion on these consolidated financial statements and the company's internal control over financial reporting based on our integrated audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the consolidated financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Imperial Oil Limited as of December 31, 2016 and December 31, 2015 and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, Imperial Oil Limited maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

*/s/ PricewaterhouseCoopers LLP*

Chartered Professional Accountants  
Calgary, Alberta, Canada  
February 22, 2017

## Consolidated statement of income (U.S. GAAP)

millions of Canadian dollars

For the years ended December 31

	2016	2015	2014
<b>Revenues and other income</b>			
Operating revenues (a) (b)	25,049	26,756	36,231
Investment and other income (note 8)	2,305	132	735
<b>Total revenues and other income</b>	<b>27,354</b>	<b>26,888</b>	<b>36,966</b>
<b>Expenses</b>			
Exploration (note 15)	94	73	67
Purchases of crude oil and products (c)	15,120	15,284	22,479
Production and manufacturing (d)	5,224	5,434	5,662
Selling and general (d)	1,129	1,117	1,075
Federal excise tax (a)	1,650	1,568	1,562
Depreciation and depletion	1,628	1,450	1,096
Financing costs (note 12)	65	39	4
<b>Total expenses</b>	<b>24,910</b>	<b>24,965</b>	<b>31,945</b>
<b>Income (loss) before income taxes</b>	<b>2,444</b>	<b>1,923</b>	<b>5,021</b>
<b>Income taxes</b> (note 3)	<b>279</b>	<b>801</b>	<b>1,236</b>
<b>Net income (loss)</b>	<b>2,165</b>	<b>1,122</b>	<b>3,785</b>
<b>Per-share information</b> (Canadian dollars)			
Net income (loss) per common share - basic (note 10)	2.55	1.32	4.47
Net income (loss) per common share - diluted (note 10)	2.55	1.32	4.45
Dividends per common share	0.59	0.54	0.52
(a) Federal excise tax included in operating revenues.	1,650	1,568	1,562
(b) Amounts from related parties included in operating revenues (note 16).*	2,342	3,058	3,358
(c) Amounts to related parties included in purchases of crude oil and products (note 16).*	2,224	2,684	3,262
(d) Amounts to related parties included in production and manufacturing, and selling and general expenses (note 16).	533	442	366

\*Note: Restated 2015 and 2014.

The information in the notes to consolidated financial statements is an integral part of these statements.

## Consolidated statement of comprehensive income (U.S. GAAP)

millions of Canadian dollars

For the years ended December 31

	2016	2015	2014
<b>Net income (loss)</b>	<b>2,165</b>	1,122	3,785
Other comprehensive income (loss), net of income taxes			
Post-retirement benefits liability adjustment (excluding amortization)	<b>(210)</b>	64	(483)
Amortization of post-retirement benefits liability adjustment included in net periodic benefit costs	<b>141</b>	167	145
<b>Total other comprehensive income (loss)</b>	<b>(69)</b>	231	(338)
<b>Comprehensive income (loss)</b>	<b>2,096</b>	1,353	3,447

The information in the notes to consolidated financial statements is an integral part of these statements.

## Consolidated balance sheet (U.S. GAAP)

millions of Canadian dollars  
At December 31

	2016	2015
<b>Assets</b>		
Current assets		
Cash	391	203
Accounts receivable, less estimated doubtful accounts (a)	2,023	1,581
Inventories of crude oil and products (note 11)	949	1,190
Materials, supplies and prepaid expenses	468	424
Deferred income tax assets (b) (note 3)	-	272
Total current assets	3,831	3,670
Investments and long-term receivables	1,030	1,254
Property, plant and equipment, less accumulated depreciation and depletion (note 2)	36,333	37,799
Goodwill	186	224
Other assets, including intangibles, net (b)	274	223
<b>Total assets</b> (note 2)	<b>41,654</b>	<b>43,170</b>
<b>Liabilities</b>		
Current liabilities		
Notes and loans payable (c) (note 12)	202	1,952
Accounts payable and accrued liabilities (a) (b) (note 11)	3,193	2,989
Income taxes payable	488	452
Total current liabilities	3,883	5,393
Long-term debt (d) (note 14)	5,032	6,564
Other long-term obligations (e) (note 5)	3,656	3,597
Deferred income tax liabilities (b) (note 3)	4,062	4,191
<b>Total liabilities</b>	<b>16,633</b>	<b>19,745</b>
Commitments and contingent liabilities (note 9)		
<b>Shareholders' equity</b>		
Common shares at stated value (f) (note 10)	1,566	1,566
Earnings reinvested	25,352	23,687
Accumulated other comprehensive income (loss) (note 17)	(1,897)	(1,828)
<b>Total shareholders' equity</b>	<b>25,021</b>	<b>23,425</b>
<b>Total liabilities and shareholders' equity</b>	<b>41,654</b>	<b>43,170</b>

(a) Accounts receivable, less estimated doubtful accounts included net amounts receivable from related parties of \$172 million (2015 - \$129 million), (note 16).

(b) Per ASU 2015-17, deferred tax assets and liabilities have been prospectively classified as non-current. Prior periods were not restated (note 1).

(c) Notes and loans payable included amounts to related parties of \$75 million (2015 - \$75 million), (note 16).

(d) Long-term debt included amounts to related parties of \$4,447 million (2015 - \$5,952 million), (note 16).

(e) Other long-term obligations included amounts to related parties of \$104 million (2015 - \$146 million), (note 16).

(f) Number of common shares authorized and outstanding were 1,100 million and 848 million, respectively (2015 - 1,100 million and 848 million, respectively), (note 10).

The information in the notes to consolidated financial statements is an integral part of these statements.

Approved by the directors

*/s/ Richard M. Kruger*

R.M. Kruger  
Chairman, president and  
chief executive officer

*/s/ Beverley A. Babcock*

B.A. Babcock  
Senior vice-president,  
finance and administration, and controller

## Consolidated statement of shareholders' equity (U.S. GAAP)

millions of Canadian dollars

At December 31	2016	2015	2014
<b>Common shares at stated value</b> (note 10)			
At beginning of year	1,566	1,566	1,566
Issued under the stock option plan	-	-	-
Share purchases at stated value	-	-	-
At end of year	1,566	1,566	1,566
<b>Earnings reinvested</b>			
At beginning of year	23,687	23,023	19,679
Net income (loss) for the year	2,165	1,122	3,785
Share purchases in excess of stated value	-	-	-
Dividends declared	(500)	(458)	(441)
At end of year	25,352	23,687	23,023
<b>Accumulated other comprehensive income (loss)</b> (note 17)			
At beginning of year	(1,828)	(2,059)	(1,721)
Other comprehensive income (loss)	(69)	231	(338)
At end of year	(1,897)	(1,828)	(2,059)
<b>Shareholders' equity at end of year</b>	<b>25,021</b>	<b>23,425</b>	<b>22,530</b>

The information in the notes to consolidated financial statements is an integral part of these statements.

## Consolidated statement of cash flows (U.S. GAAP)

millions of Canadian dollars

Inflow (outflow)

For the years ended December 31

	2016	2015	2014
<b>Operating activities</b>			
Net income (loss)	2,165	1,122	3,785
Adjustments for non-cash items:			
Depreciation and depletion	1,628	1,450	1,096
(Gain) loss on asset sales (note 8)	(2,244)	(97)	(696)
Inventory write-down to current market value (note 11)	-	59	-
Deferred income taxes and other	114	367	1,123
Changes in operating assets and liabilities:			
Accounts receivable	(442)	(42)	545
Inventories, materials, supplies and prepaid expenses	197	(172)	(129)
Income taxes payable	36	418	(693)
Accounts payable and accrued liabilities	237	(1,030)	(549)
All other items - net (a)	324	92	(77)
<b>Cash flows from (used in) operating activities</b>	<b>2,015</b>	<b>2,167</b>	<b>4,405</b>
<b>Investing activities</b>			
Additions to property, plant and equipment	(1,073)	(2,994)	(5,290)
Proceeds from asset sales (note 8)	3,021	142	851
Additional investments	(1)	(32)	(123)
<b>Cash flows from (used in) investing activities</b>	<b>1,947</b>	<b>(2,884)</b>	<b>(4,562)</b>
<b>Financing activities</b>			
Short-term debt - net	(1,749)	(32)	120
Long-term debt - additions (note 14)	495	1,206	430
Long-term debt - reductions (note 14)	(2,000)	-	-
Reduction in capitalized lease obligations	(28)	(20)	(9)
Dividends paid	(492)	(449)	(441)
<b>Cash flows from (used in) financing activities</b>	<b>(3,774)</b>	<b>705</b>	<b>100</b>
<b>Increase (decrease) in cash</b>	<b>188</b>	<b>(12)</b>	<b>(57)</b>
<b>Cash at beginning of year</b>	<b>203</b>	<b>215</b>	<b>272</b>
<b>Cash at end of year (b)</b>	<b>391</b>	<b>203</b>	<b>215</b>
(a) Included contribution to registered pension plans.	163	225	362
(b) Cash is composed of cash in bank and cash equivalents at cost. Cash equivalents are all highly liquid securities with maturity of three months or less when purchased.			

### Non-cash transactions

In 2015, a capital lease of approximately \$480 million was not included in "Additions to property, plant and equipment" or "Long-term debt issued" lines on the Consolidated statement of cash flows.

The information in the notes to consolidated financial statements is an integral part of these statements.

# Notes to consolidated financial statements

The accompanying consolidated financial statements and the supporting and supplemental material are the responsibility of the management of Imperial Oil Limited.

The company's principal business is energy, involving the exploration, production, transportation and sale of crude oil and natural gas and the manufacture, transportation and sale of petroleum products. The company is also a major manufacturer and marketer of petrochemicals.

The consolidated financial statements have been prepared in accordance with United States Generally Accepted Accounting Principles. GAAP requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. Actual results could differ from these estimates. Prior years' data has been reclassified in certain cases to conform to the 2016 presentation basis. All amounts are in Canadian dollars unless otherwise indicated.

## 1. Summary of significant accounting policies

### Principles of consolidation

The consolidated financial statements include the accounts of subsidiaries the company controls. Intercompany accounts and transactions are eliminated. Subsidiaries include those companies in which Imperial has both an equity interest and the continuing ability to unilaterally determine strategic, operating, investing and financing policies. Significant subsidiaries included in the consolidated financial statements include Imperial Oil Resources Limited, Imperial Oil Resources Ventures Limited and McColl-Frontenac Petroleum ULC. All of the above companies are wholly owned. The consolidated financial statements also include the company's share of the undivided interest in certain upstream assets, liabilities, revenues and expenses, including its 25 percent interest in the Syncrude joint venture and its 70.96 percent interest in the Kearn joint venture.

### Inventories

Inventories are recorded at the lower of cost or current market value. The cost of crude oil and products is determined primarily using the last-in, first-out (LIFO) method. LIFO was selected over the alternative first-in, first-out and average cost methods because it provides a better matching of current costs with the revenues generated in the period.

Inventory costs include expenditures and other charges, including depreciation, directly or indirectly incurred in bringing the inventory to its existing condition and final storage prior to delivery to a customer. Selling and general expenses are reported as period costs and excluded from inventory costs.

### Investments

The company's interests in the underlying net assets of affiliates it does not control, but over which it exercises significant influence, are accounted for using the equity method. They are recorded at the original cost of the investment plus Imperial's share of earnings since the investment was made, less dividends received. Imperial's share of the after-tax earnings of these investments is included in "investment and other income" in the consolidated statement of income. Other investments are recorded at cost. Dividends from these other investments are included in "investment and other income."

These investments represent interests in non-publicly traded pipeline companies and a rail loading joint venture that facilitate the sale and purchase of liquids in the conduct of company operations. Other parties who also have an equity interest in these investments share in the risks and rewards according to their percentage of ownership. Imperial does not invest in these investments in order to remove liabilities from its balance sheet.

### Property, plant and equipment

#### *Cost basis*

Imperial uses the "successful efforts" method to account for its exploration and production activities. Under this method, costs are accumulated on a field-by-field basis. Costs incurred to purchase, lease, or otherwise acquire a property (whether unproved or proved) are capitalized when incurred. Exploratory well costs are

carried as an asset when the well has found a sufficient quantity of reserves to justify its completion as a producing well and where the company is making sufficient progress assessing the reserves and the economic and operating viability of the project. Exploratory well costs that do not meet the criteria are charged to expense. Other exploratory expenditures, including geophysical costs and annual lease rentals, are expensed as incurred. Development costs, including costs of productive wells and development dryholes, are capitalized.

Maintenance and repair costs, including planned major maintenance, are expensed as incurred. Improvements that increase or prolong the service life or capacity of an asset are capitalized.

#### *Depreciation, depletion and amortization*

Depreciation, depletion and amortization are primarily determined under either the unit-of-production method or the straight-line method, which is based on estimated asset service life taking obsolescence into consideration. Depreciation and depletion for assets associated with producing properties begin at the time when production commences on a regular basis. Depreciation for other assets begins when the asset is in place and ready for its intended use. Assets under construction are not depreciated or depleted.

Acquisition costs of proved properties are amortized using a unit-of-production method, computed on the basis of total proved oil and gas reserves. Capitalized exploratory drilling and development costs associated with productive depletable extractive properties are amortized using the unit-of-production rates based on the amount of proved developed reserves of oil and gas that are estimated to be recoverable from existing facilities using current operating methods. Under the unit-of-production method, oil and gas volumes are considered produced once they have been measured through meters at custody transfer or sales transaction points at the outlet valve on the lease or field storage tank. In the event that the unit-of-production method does not result in an equitable allocation of cost over the economic life of an upstream asset, an alternative method is used. The straight-line method is used in limited situations where the expected life of the asset does not reasonably correlate with that of the underlying reserves. For example, certain assets used in the production of oil and natural gas have a shorter life than the reserves, and as such, the company uses straight-line depreciation to ensure the asset is fully depreciated by the end of its useful life. Investments in mining heavy equipment and certain ore processing plant assets at oil sands mining properties are depreciated on a straight-line basis over a maximum of 15 years and 50 years respectively. Depreciation of other plant and equipment is calculated using the straight-line method, based on the estimated service life of the asset.

Under the SEC definition of proved reserves, certain quantities of bitumen no longer qualified as proved reserves at year-end 2016, the substantial majority of which relates to the Kearl oil sands operation, where no proved reserves remain. To the extent that proved reserves for a property are entirely de-booked and that property continues to produce, assets will be depreciated using a unit-of-production method based on reserves determined at the most recent SEC price which results in a quantity of proved reserves greater than zero, appropriately adjusted for production and technical changes.

Investments in refinery, chemical process, and lubes basestock manufacturing equipment are generally depreciated on a straight-line basis over a 25-year life. Maintenance and repairs, including planned major maintenance, are expensed as incurred. Major renewals and improvements are capitalized and the assets replaced are retired.

#### *Impairment assessment*

The company tests assets or groups of assets for recoverability whenever events or circumstances indicate that the carrying amounts may not be recoverable.

Among the events or changes in circumstances which could indicate that the carrying value of an asset or asset group may not be recoverable are the following:

- A significant decrease in the market price of a long-lived asset;
- A significant adverse change in the extent or manner in which an asset is being used or in its physical condition including a significant decrease in the company's current and projected reserve volumes;
- A significant adverse change in legal factors or in the business climate that could affect the value, including a significant adverse action or assessment by a regulator;
- An accumulation of project costs significantly in excess of the amount originally expected;

- A current-period operating loss combined with a history and forecast of operating or cash flow losses; and
- A current expectation that, more likely than not, a long-lived asset will be sold or otherwise disposed of significantly before the end of its previously estimated useful life.

The company performs asset valuation analyses on an ongoing basis as a part of its asset management program. These analyses and other profitability reviews assist the company in assessing whether the carrying amounts of any of its assets may not be recoverable.

In general, Imperial does not view temporarily low prices or margins as an indication of impairment. Management does not believe that lower prices are sustainable if energy is to be delivered with supply security to meet global demand over the long term. Although prices will occasionally drop significantly, industry prices over the long term will continue to be driven by market supply and demand. On the supply side, industry production from mature fields is declining, but this is being offset by production from new discoveries and field developments. OPEC production policies also have an impact on world oil supplies. The demand side is largely a function of global economic growth. Because the lifespans of the company's major assets are measured in decades, the value of these assets is predominantly based on long-term views of future commodity prices and production costs. During the lifespan of these major assets, the company expects that oil and gas prices will experience significant volatility, and consequently these assets will experience periods of higher earnings and periods of lower earnings, or even losses. In assessing whether the events or changes in circumstances indicate the carrying value of an asset may not be recoverable, the company considers recent periods of operating losses in the context of its longer-term view of prices. While near-term prices are subject to wide fluctuations, longer term price views are more stable and meaningful for purposes of assessing future cash flows.

When the industry experiences a prolonged and deep reduction in commodity prices, the market supply and demand conditions may result in changes to the company's long-term price or margin assumptions it uses for its capital investment decisions. To the extent those changes result in a significant reduction in the mid-point of its long-term oil and natural gas price or margin ranges, the company may consider that situation, in conjunction with other events and changes in circumstances such as a history of operating losses, as an indicator of potential impairment for certain assets.

In the upstream, the standardized measure of discounted cash flows included in the "Supplemental information on oil and gas exploration and production activities" is required to use prices based on the average of first-of-month prices. These prices represent discrete points in time and could be higher or lower than the company's long-term price assumptions which are used for impairment assessments. The company believes the standardized measure does not provide a reliable estimate of the expected future cash flows to be obtained from the development and production of its oil and gas properties or of the value of its oil and gas reserves and therefore does not consider it relevant in determining whether events or changes in circumstances indicate the need for an impairment assessment.

If events or circumstances indicate that the carrying value may not be recoverable, the company estimates the future undiscounted cash flows of the affected properties to judge the recoverability of carrying amounts. In performing this assessment, assets are grouped at the lowest level for which there are identifiable cash flows that are largely independent of the cash flows of other groups of assets. Cash flows used in recoverability assessments are based on the company's assumptions which are developed in the annual planning and budgeting process, and are consistent with the criteria management uses to evaluate investment opportunities. These evaluations make use of the company's assumption of future crude oil and natural gas commodity prices, refining and chemical margins, volumes, costs, and foreign currency exchange rates. Volumes are based on projected field and facility production profiles, throughput, or sales. Where unproved reserves exist, an appropriately risk-adjusted amount of these reserves may be included in the evaluation.

An asset group is impaired if its undiscounted cash flows are less than the asset group's carrying value. Impairments are measured by the amount by which the carrying value exceeds fair value. Fair value is based on market prices if an active market exists for the asset group or discounted cash flows using a discount rate commensurate with the risk. Significant unproved properties are assessed for impairment individually, and valuation allowances against the capitalized costs would be recorded based on the estimated economic chance of success and the length of time that the company expects to hold the properties. Properties that are

not individually significant are aggregated by groups and amortized based on development risk and average holding period.

Gains on sales of proved and unproved properties are only recognized when there is neither uncertainty about the recovery of costs applicable to any interest retained nor any substantial obligation for future performance by the company.

Losses on properties sold are recognized when incurred or when the properties are held for sale and the fair value of the properties is less than the carrying value.

Gains or losses on assets sold are included in "investment and other income" in the consolidated statement of income.

### **Interest capitalization**

Interest costs incurred to finance expenditures during the construction phase of multiyear projects are capitalized as part of property, plant and equipment and are depreciated over the service life of the related assets. The project construction phase commences with the development of the detailed engineering design and ends when the constructed assets are ready for their intended use.

### **Goodwill and other intangible assets**

Goodwill is not subject to amortization. Goodwill is tested for impairment annually or more frequently if events or circumstances indicate it might be impaired. Impairment losses are recognized in current period earnings. The evaluation for impairment of goodwill is based on a comparison of the carrying values of goodwill and associated operating assets with the estimated present value of net cash flows from those operating assets.

Intangible assets with determinable useful lives are amortized over the estimated service lives of the assets. Computer software development costs are amortized over a maximum of 15 years and customer lists are amortized over a maximum of 10 years. The amortization is included in "depreciation and depletion" in the consolidated statement of income.

### **Asset retirement obligations and other environmental liabilities**

Legal obligations associated with site restoration on the retirement of assets with determinable useful lives are recognized when they are incurred, which is typically at the time the assets are installed. These obligations primarily relate to soil reclamation and remediation and costs of abandonment and demolition of oil and gas wells and related facilities. The company uses estimates, assumptions and judgments regarding such factors as the existence of a legal obligation for an asset retirement obligation, technical assessments of the assets, estimated amounts and timing of settlements, the credit-adjusted risk-free rate to be used, and inflation rates. The obligations are initially measured at fair value and discounted to present value. A corresponding amount equal to that of the initial obligation is added to the capitalized costs of the related asset. Over time, the discounted asset retirement obligation amount will be accreted for the change in its present value, and the initial capitalized costs will be depreciated over the useful lives of the related assets.

No asset retirement obligations are set up for those manufacturing, distribution, marketing and office facilities with an indeterminate useful life. Asset retirement obligations for these facilities generally become firm at the time the facilities are permanently shut down and dismantled. These obligations may include the costs of asset disposal and additional soil remediation. However, these sites have indeterminate lives based on plans for continued operations, and as such, the fair value of the conditional legal obligations cannot be measured, since it is impossible to estimate the future settlement dates of such obligations. Provision for environmental liabilities of these assets is made when it is probable that obligations have been incurred and the amount can be reasonably estimated. Provisions for environmental liabilities are determined based on engineering estimated costs, taking into account the anticipated method and extent of remediation consistent with legal requirements, current technology and the possible use of the location. These liabilities are not reduced by possible recoveries from third parties and projected cash expenditures are not discounted.

### **Foreign-currency translation**

Monetary assets and liabilities in foreign currencies have been translated at the rates of exchange prevailing on December 31. Any exchange gains or losses are recognized in income.

**Fair value**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Hierarchy Levels 1, 2 or 3 are terms for the priority of inputs to valuation techniques used to measure fair value. Hierarchy Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Hierarchy Level 2 inputs are inputs other than quoted prices included within Level 1 that are directly or indirectly observable for the asset or liability. Hierarchy Level 3 inputs are inputs that are not observable in the market.

**Revenues**

Revenues associated with sales of crude oil, natural gas, petroleum and chemical products and other items are recorded when the products are delivered. Delivery occurs when the customer has taken title and has assumed the risks and rewards of ownership, prices are fixed or determinable and collectability is reasonably assured. The company does not enter into ongoing arrangements whereby it is required to repurchase its products, nor does the company provide the customer with a right of return.

Revenues include amounts billed to customers for shipping and handling. Shipping and handling costs incurred up to the point of final storage prior to delivery to a customer are included in "purchases of crude oil and products" in the consolidated statement of income. Delivery costs from final storage to customer are recorded as a marketing expense in "selling and general" expenses.

Purchases and sales of inventory with the same counterparty that are entered into in contemplation of one another are combined and recorded as exchanges measured at the book value of the item sold.

**Share-based compensation**

The company awards share-based compensation to certain employees in the form of restricted stock units. Compensation expense is measured each reporting period based on the company's current stock price and is recorded as "selling and general" expenses in the consolidated statement of income over the requisite service period of each award. See note 7 to the consolidated financial statements on page 44 for further details.

**Consumer taxes**

Taxes levied on the consumer and collected by the company are excluded from the consolidated statement of income. These are primarily provincial taxes on motor fuels, the federal goods and services tax and the federal/provincial harmonized sales tax.

**Recently issued accounting standards**

In May 2014, the Financial Accounting Standards Board (FASB) issued a new standard, *Revenue from Contracts with Customers*. The standard establishes a single revenue recognition model for all contracts with customers, eliminates industry specific requirements and expands disclosure requirements. The standard will be adopted beginning January 1, 2018. The company expects to adopt the standard using the modified retrospective method, under which prior years' results are not restated, but supplemental information on the impact of the new standard is provided for in the 2018 results. Imperial continues to evaluate other areas of the standard. The impact from the standard is not expected to have a material effect on the company's financial statements.

In February 2016, the FASB issued a new standard, *Leases*. The standard requires all leases with an initial term greater than one year be recorded on the balance sheet as a lease asset and lease liability, with little change to the income and cash flow statements. The standard is required to be adopted beginning January 1, 2019, with early adoption permitted. Imperial is evaluating the standard and its effect on the company's financial statements and plans to adopt it in 2019.

Effective September 30, 2016, Imperial early adopted *Accounting Standards Update (ASU) no. 2015-17 Income Taxes (Topic 740): Balance sheet classification of deferred taxes*, on a prospective basis. This update eliminates the requirement to classify deferred tax assets and liabilities as current and non-current, and instead requires all deferred tax assets and liabilities to be classified as non-current.

The balance sheet classification of deferred income tax assets / (liabilities) are shown below.

	<b>As at Dec 31 2016</b>	As at Dec 31 2015
millions of Canadian dollars		
Deferred income tax assets	-	272
Other assets, including intangibles, net	<b>57</b>	-
Accounts payable and accrued liabilities	-	(41)
Deferred income tax liabilities	<b>(4,062)</b>	(4,191)
Net deferred tax liabilities	<b>(4,005)</b>	(3,960)

## 2. Business segments

The company operates its business in Canada. The Upstream, Downstream and Chemical functions best define the operating segments of the business that are reported separately. The factors used to identify these reportable segments are based on the nature of the operations that are undertaken by each segment and the structure of the company's internal organization. The Upstream segment is organized and operates to explore for and ultimately produce crude oil and its equivalent, and natural gas. The Downstream segment is organized and operates to refine crude oil into petroleum products and to distribute and market these products. The Chemical segment is organized and operates to manufacture and market hydrocarbon-based chemicals and chemical products. The above segmentation has been the long-standing practice of the company and is broadly understood across the petroleum and petrochemical industries.

These functions have been defined as the operating segments of the company because they are the segments (a) that engage in business activities from which revenues are earned and expenses are incurred; (b) whose operating results are regularly reviewed by the company's chief operating decision maker to make decisions about resources to be allocated to each segment and assess its performance; and (c) for which discrete financial information is available.

Corporate and Other includes assets and liabilities that do not specifically relate to business segments – primarily cash, capitalized interest costs, short-term borrowings, long-term debt and liabilities associated with incentive compensation and post-retirement benefits liability adjustment. Net earnings effects in this segment primarily include debt-related financing costs, interest income and share-based incentive compensation expenses.

Segment accounting policies are the same as those described in the summary of significant accounting policies. Upstream, Downstream and Chemical expenses include amounts allocated from the Corporate and Other segment. The allocation is based on proportional segment expenses. Transfers of assets between segments are recorded at book amounts. Intersegment sales are made essentially at prevailing market prices. Assets and liabilities that are not identifiable by segment are allocated.

millions of Canadian dollars	Upstream			Downstream			Chemical		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Revenues and other income</b>									
Operating revenues (a)	5,492	5,776	8,408	18,511	19,796	26,400	1,046	1,184	1,423
Intersegment sales	2,215	2,486	4,087	1,007	1,019	1,359	212	234	381
Investment and other income (note 8)	13	22	667	2,278	104	65	-	-	-
	<b>7,720</b>	<b>8,284</b>	<b>13,162</b>	<b>21,796</b>	<b>20,919</b>	<b>27,824</b>	<b>1,258</b>	<b>1,418</b>	<b>1,804</b>
<b>Expenses</b>									
Exploration (note 15)	94	73	67	-	-	-	-	-	-
Purchases of crude oil and products	3,666	3,768	5,628	14,178	14,526	21,476	705	725	1,196
Production and manufacturing	3,591	3,766	3,882	1,428	1,461	1,564	205	207	216
Selling and general	(5)	(2)	3	972	986	887	83	87	70
Federal excise tax	-	-	-	1,650	1,568	1,562	-	-	-
Depreciation and depletion	1,396	1,193	857	206	233	216	10	11	12
Financing costs (note 12)	(7)	5	4	-	-	-	-	-	-
<b>Total expenses</b>	<b>8,735</b>	<b>8,803</b>	<b>10,441</b>	<b>18,434</b>	<b>18,774</b>	<b>25,705</b>	<b>1,003</b>	<b>1,030</b>	<b>1,494</b>
<b>Income (loss) before income taxes</b>	<b>(1,015)</b>	<b>(519)</b>	<b>2,721</b>	<b>3,362</b>	<b>2,145</b>	<b>2,119</b>	<b>255</b>	<b>388</b>	<b>310</b>
<b>Income taxes</b> (note 3)									
Current	(491)	(77)	(219)	674	476	296	68	97	76
Deferred	137	262	881	(66)	83	229	-	4	5
<b>Total income tax expense</b>	<b>(354)</b>	<b>185</b>	<b>662</b>	<b>608</b>	<b>559</b>	<b>525</b>	<b>68</b>	<b>101</b>	<b>81</b>
<b>Net income (loss)</b>	<b>(661)</b>	<b>(704)</b>	<b>2,059</b>	<b>2,754</b>	<b>1,586</b>	<b>1,594</b>	<b>187</b>	<b>287</b>	<b>229</b>
<b>Cash flows from (used in) operating activities</b>	<b>402</b>	<b>224</b>	<b>2,519</b>	<b>1,574</b>	<b>1,686</b>	<b>1,666</b>	<b>203</b>	<b>383</b>	<b>250</b>
<b>Capital and exploration expenditures</b> (b)	<b>896</b>	<b>3,135</b>	<b>4,974</b>	<b>190</b>	<b>340</b>	<b>572</b>	<b>26</b>	<b>52</b>	<b>26</b>
<b>Property, plant and equipment</b>									
Cost	45,850	45,171	42,142	6,166	7,596	7,460	872	857	798
Accumulated depreciation and depletion	(12,312)	(11,016)	(10,103)	(4,037)	(4,584)	(4,459)	(629)	(616)	(601)
<b>Net property, plant and equipment</b> (c)	<b>33,538</b>	<b>34,155</b>	<b>32,039</b>	<b>2,129</b>	<b>3,012</b>	<b>3,001</b>	<b>243</b>	<b>241</b>	<b>197</b>
<b>Total assets</b>	<b>36,840</b>	<b>36,971</b>	<b>34,421</b>	<b>3,958</b>	<b>5,574</b>	<b>5,823</b>	<b>346</b>	<b>394</b>	<b>372</b>

millions of Canadian dollars	Corporate and Other			Eliminations			Consolidated		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Revenues and other income</b>									
Operating revenues (a)	-	-	-	-	-	-	25,049	26,756	36,231
Intersegment sales	-	-	-	(3,434)	(3,739)	(5,827)	-	-	-
Investment and other income (note 8)	14	6	3	-	-	-	2,305	132	735
	<b>14</b>	<b>6</b>	<b>3</b>	<b>(3,434)</b>	<b>(3,739)</b>	<b>(5,827)</b>	<b>27,354</b>	<b>26,888</b>	<b>36,966</b>
<b>Expenses</b>									
Exploration (note 15)	-	-	-	-	-	-	94	73	67
Purchases of crude oil and products	-	-	-	(3,429)	(3,735)	(5,821)	15,120	15,284	22,479
Production and manufacturing	-	-	-	-	-	-	5,224	5,434	5,662
Selling and general	84	50	121	(5)	(4)	(6)	1,129	1,117	1,075
Federal excise tax	-	-	-	-	-	-	1,650	1,568	1,562
Depreciation and depletion	16	13	11	-	-	-	1,628	1,450	1,096
Financing costs (note 12)	72	34	-	-	-	-	65	39	4
<b>Total expenses</b>	<b>172</b>	<b>97</b>	<b>132</b>	<b>(3,434)</b>	<b>(3,739)</b>	<b>(5,827)</b>	<b>24,910</b>	<b>24,965</b>	<b>31,945</b>
<b>Income (loss) before income taxes</b>	<b>(158)</b>	<b>(91)</b>	<b>(129)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,444</b>	<b>1,923</b>	<b>5,021</b>
<b>Income taxes</b> (note 3)									
Current	(51)	(45)	(47)	-	-	-	200	451	106
Deferred	8	1	15	-	-	-	79	350	1,130
<b>Total income tax expense</b>	<b>(43)</b>	<b>(44)</b>	<b>(32)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>279</b>	<b>801</b>	<b>1,236</b>
<b>Net income (loss)</b>	<b>(115)</b>	<b>(47)</b>	<b>(97)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,165</b>	<b>1,122</b>	<b>3,785</b>
<b>Cash flows from (used in) operating activities</b>	<b>(143)</b>	<b>(124)</b>	<b>(30)</b>	<b>(21)</b>	<b>(2)</b>	<b>-</b>	<b>2,015</b>	<b>2,167</b>	<b>4,405</b>
<b>Capital and exploration expenditures</b> (b)	<b>49</b>	<b>68</b>	<b>82</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,161</b>	<b>3,595</b>	<b>5,654</b>
<b>Property, plant and equipment</b>									
Cost	627	579	511	-	-	-	53,515	54,203	50,911
Accumulated depreciation and depletion	(204)	(188)	(174)	-	-	-	(17,182)	(16,404)	(15,337)
<b>Net property, plant and equipment</b> (c)	<b>423</b>	<b>391</b>	<b>337</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>36,333</b>	<b>37,799</b>	<b>35,574</b>
<b>Total assets</b>	<b>894</b>	<b>579</b>	<b>565</b>	<b>(384)</b>	<b>(348)</b>	<b>(351)</b>	<b>41,654</b>	<b>43,170</b>	<b>40,830</b>

- (a) Includes export sales to the United States of \$3,612 million (2015 - \$4,157 million, 2014 - \$5,940 million). Export sales to the United States were recorded in all operating segments, with the largest effects in the Upstream segment.
- (b) Capital and exploration expenditures (CAPEX) include exploration expenses, additions to property, plant and equipment, additions to capital leases, additional investments and acquisitions.
- (c) Includes property, plant and equipment under construction of \$2,705 million (2015 - \$3,719 million).

### 3. Income taxes

millions of Canadian dollars	2016	2015	2014
Current income tax expense (a)	200	451	106
Deferred income tax expense (a) (b)	79	350	1,130
Total income tax expense (a) (c)	279	801	1,236
Statutory corporate tax rate (percent)	26.8	27.2	25.5
Increase (decrease) resulting from:			
Disposals (d)	(11.6)	(0.4)	(0.1)
Enacted tax rate change (a)	-	16.1	-
Other	(3.8)	(1.2)	(0.8)
Effective income tax rate	11.4	41.7	24.6

- (a) On June 30, 2015 the Alberta government enacted a 2 percent increase in the provincial tax rate, from 10 percent to 12 percent.
- (b) There were no material net (charges) credits for the effect of changes in tax laws and rates included in the provisions for deferred income taxes in 2014 and 2016.
- (c) Cash outflow from income taxes, plus investment credits earned, was \$172 million (2015 - \$202 million, 2014 - \$811 million).
- (d) 2016 disposals are primarily associated with the sales of company-owned Esso retail sites and the general aviation business. Capital gains tax treatment was applied on the majority of disposals.

In 2016, the decrease in the statutory tax rate in the other category mainly represents prior year adjustments and re-assessments.

Deferred income taxes are based on differences between the accounting and tax values of assets and liabilities. These differences in value are re-measured at each year-end using the tax rates and tax laws expected to apply when those differences are realized or settled in the future. Components of deferred income tax liabilities and assets as at December 31 were:

millions of Canadian dollars	2016	2015	2014
Depreciation and amortization	5,361	4,677	3,777
Successful drilling and land acquisitions	891	922	827
Pension and benefits	(457)	(396)	(438)
Asset retirement obligation	(396)	(406)	(304)
Capitalized interest	114	104	82
LIFO inventory valuation (a)	(240)	-	-
Tax loss carryforwards	(1,056)	(610)	(30)
Other (a)	(212)	(100)	(73)
Net long-term deferred income tax liabilities	4,005	4,191	3,841
LIFO inventory valuation (a)	-	(112)	(201)
Other (a)	-	(160)	(113)
Net current deferred income tax assets	-	(272)	(314)
Net current deferred income tax liabilities (a)	-	41	-
Net deferred income tax liabilities	4,005	3,960	3,527

(a) Per ASU 2015-17, deferred tax assets and liabilities have been prospectively classified as non-current. Prior periods were not restated (note 1).

## Unrecognized tax benefits

Unrecognized tax benefits reflect the difference between positions taken or expected to be taken on income tax returns and the amounts recognized in the financial statements.

The following table summarizes the movement in unrecognized tax benefits:

millions of Canadian dollars	2016	2015	2014
Balance as of January 1	132	151	151
Additions based on current year's tax position	-	-	4
Additions for prior years' tax position	2	10	-
Reductions for prior years' tax positions	(23)	(29)	(4)
Reductions due to lapse of the statute of limitations	(5)	-	-
Balance as of December 31	106	132	151

The unrecognized tax benefit balances shown above are predominately related to tax positions that would reduce the company's effective tax rate if the positions are favourably resolved. Unfavourable resolution of these tax positions generally would not increase the effective tax rate. The 2016, 2015 and 2014 changes in unrecognized tax benefits did not have a material effect on the company's net income or cash flow. The company's tax filings from 2009 to 2016 are subject to examination by the tax authorities. Tax filing from 1994 to 1996, 1998 and 2000 to 2008 have open objections and therefore are also subject to examination by the tax authorities. The Canada Revenue Agency has proposed certain adjustments to the company's filings. Management is currently evaluating those proposed adjustments and believes that a number of outstanding matters are expected to be resolved in 2017. The impact on unrecognized tax benefits and the company's effective income tax rate from these matters is not expected to be material.

Resolution of the related tax positions will take many years to complete. It is difficult to predict the timing of resolution for tax positions since such timing is not entirely within the control of the company.

The company classifies interest on income tax related balances as interest expense or interest income and classifies tax related penalties as operating expense.

## 4. Employee retirement benefits

Retirement benefits, which cover almost all retired employees and their surviving spouses, include pension income and certain health care and life insurance benefits. They are met through funded registered retirement plans and through unfunded supplementary benefits that are paid directly to recipients.

Pension income benefits consist mainly of company-paid defined benefit plans that are based on years of service and final average earnings. The company shares in the cost of health care and life insurance benefits. The company's benefit obligations are based on the projected benefit method of valuation that includes employee service to date and present compensation levels as well as a projection of salaries to retirement.

The expense and obligations for both funded and unfunded benefits are determined in accordance with accepted actuarial practices and U.S. GAAP. The process for determining retirement-income expense and related obligations includes making certain long-term assumptions regarding the discount rate, rate of return on plan assets and rate of compensation increases. The obligation and pension expense can vary significantly with changes in the assumptions used to estimate the obligation and the expected return on plan assets.

The benefit obligations and plan assets associated with the company's defined benefit plans are measured on December 31.

	Pension benefits		Other post-retirement benefits	
	2016	2015	2016	2015
Assumptions used to determine benefit obligations at December 31 (percent)				
Discount rate	3.75	4.00	3.75	4.00
Long-term rate of compensation increase	4.50	4.50	4.50	4.50
millions of Canadian dollars				
<b>Change in projected benefit obligation</b>				
Projected benefit obligation at January 1	8,147	7,970	642	634
Current service cost	203	211	16	15
Interest cost	319	307	27	25
Actuarial loss (gain)	157	114	46	(2)
Benefits paid (a)	(470)	(455)	(25)	(30)
Projected benefit obligation at December 31	8,356	8,147	706	642
Accumulated benefit obligation at December 31	7,681	7,506		

The discount rate for calculating year-end post-retirement liabilities is based on the yield for high-quality, long-term Canadian corporate bonds at year-end with an average maturity (or duration) approximately that of the liabilities. The measurement of the accumulated post-retirement benefit obligation assumes a health care cost trend rate of 4.50 percent in 2017 and subsequent years.

millions of Canadian dollars	Pension benefits		Other post-retirement benefits	
	2016	2015	2016	2015
<b>Change in plan assets</b>				
Fair value at January 1	7,260	6,807		
Actual return (loss) on plan assets	316	592		
Company contributions	163	225		
Benefits paid (b)	(380)	(364)		
Fair value at December 31	7,359	7,260		
Plan assets in excess of (less than) projected benefit obligation at December 31				
Funded plans	(444)	(300)		
Unfunded plans	(553)	(587)	(706)	(642)
Total (c)	(997)	(887)	(706)	(642)

(a) Benefit payments for funded and unfunded plans.

(b) Benefit payments for funded plans only.

(c) Fair value of assets less projected benefit obligation shown above.

Funding of registered retirement plans complies with federal and provincial pension regulations, and the company makes contributions to the plans based on an independent actuarial valuation. In accordance with authoritative guidance relating to the accounting for defined pension and other post-retirement benefits plans, the underfunded status of the company's defined benefit post-retirement plans was recorded as a liability in the balance sheet, and the changes in that funded status in the year in which the changes occurred was recognized through other comprehensive income.

millions of Canadian dollars	Pension benefits		Other post-retirement benefits	
	2016	2015	2016	2015
Amounts recorded in the consolidated balance sheet consist of:				
Current liabilities	(29)	(30)	(29)	(29)
Other long-term obligations	(968)	(857)	(677)	(613)
<b>Total recorded</b>	<b>(997)</b>	<b>(887)</b>	<b>(706)</b>	<b>(642)</b>

Amounts recorded in accumulated other comprehensive income consist of:

Net actuarial loss (gain)	2,461	2,382	197	164
Prior service cost	14	23	-	-
<b>Total recorded in accumulated other comprehensive income, before tax</b>	<b>2,475</b>	<b>2,405</b>	<b>197</b>	<b>164</b>

The company establishes the long-term expected rate of return on plan assets by developing a forward-looking long-term return assumption for each asset class, taking into account factors such as the expected real return for the specific asset class and inflation. A single, long-term rate of return is then calculated as the weighted average of the target asset allocation percentages and the long-term return assumption for each asset class. The 2016 long-term expected return of 5.5 percent used in the calculations of pension expense compares to an actual rate of return of 5.5 percent and 7.7 percent over the last 10- and 20-year periods respectively, ending December 31, 2016.

millions of Canadian dollars	Pension benefits			Other post-retirement benefits		
	2016	2015	2014	2016	2015	2014
Assumptions used to determine net periodic benefit cost for years ended December 31 (percent)						
Discount rate	4.00	3.75	4.75	4.00	3.75	4.75
Long-term rate of return on funded assets	5.50	5.75	6.25	-	-	-
Long-term rate of compensation increase	4.50	4.50	4.50	4.50	4.50	4.50

millions of Canadian dollars

#### Components of net periodic benefit cost

Current service cost	203	211	152	16	15	9
Interest cost	319	307	322	27	25	26
Expected return on plan assets	(400)	(392)	(369)	-	-	-
Amortization of prior service cost	9	16	23	-	-	-
Amortization of actuarial loss (gain)	162	198	166	13	14	7
<b>Net periodic benefit cost</b>	<b>293</b>	<b>340</b>	<b>294</b>	<b>56</b>	<b>54</b>	<b>42</b>

#### Changes in amounts recorded in accumulated other comprehensive income

Net actuarial loss (gain)	241	(86)	529	46	(2)	123
Amortization of net actuarial (loss) gain included in net periodic benefit cost	(162)	(198)	(166)	(13)	(14)	(7)
Amortization of prior service cost included in net periodic benefit cost	(9)	(16)	(23)	-	-	-
<b>Total recorded in other comprehensive income</b>	<b>70</b>	<b>(300)</b>	<b>340</b>	<b>33</b>	<b>(16)</b>	<b>116</b>

Total recorded in net periodic benefit cost and other comprehensive income, before tax

	<b>363</b>	40	634	<b>89</b>	38	158
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Costs for defined contribution plans, primarily the employee savings plan, were \$44 million in 2016 (2015 - \$43 million, 2014 - \$40 million).

A summary of the change in accumulated other comprehensive income is shown in the table below:

millions of Canadian dollars	Total pension and other post-retirement benefits		
	2016	2015	2014
(Charge) credit to other comprehensive income, before tax	<b>(103)</b>	316	(456)
Deferred income tax (charge) credit (note 17)	<b>34</b>	(85)	118
(Charge) credit to other comprehensive income, after tax	<b>(69)</b>	231	(338)

The company's investment strategy for pension plan assets reflects a long-term view, a careful assessment of the risks inherent in various asset classes and broad diversification to reduce the risk of the portfolio. Consistent with the long-term nature of the liability, the plan assets are primarily invested in global, market-cap-weighted indexed equity and domestic indexed bond funds to diversify risk while minimizing costs. The equity funds hold Imperial Oil Limited stock only to the extent necessary to replicate the relevant equity index. The balance of the plan assets is largely invested in high-quality corporate and government debt securities. Studies are periodically conducted to establish the preferred target asset allocation. The target asset allocation for equity securities is 37 percent. The target allocation for debt securities is 58 percent. Plan assets for the remaining 5 percent are invested in venture capital partnerships that pursue a strategy of investment in U.S. and international early stage ventures.

The 2016 fair value of the pension plan assets, including the level within the fair value hierarchy, is shown in the table below:

millions of Canadian dollars	Fair value measurements at December 31, 2016, using:				Net Asset Value (a)
	Total	Level 1	Level 2	Level 3	
Asset class					
Equity securities	-				-
Canadian	<b>433</b>				<b>433</b>
Non-Canadian	<b>2,448</b>				<b>2,448</b>
Debt securities - Canadian					
Corporate	<b>988</b>				<b>988</b>
Government	<b>3,218</b>				<b>3,218</b>
Asset backed	-				-
Equities – Venture capital	<b>241</b>				<b>241</b>
Cash	<b>31</b>	<b>6</b>			<b>25</b>
<b>Total plan assets at fair value</b>	<b>7,359</b>	<b>6</b>	-	-	<b>7,353</b>

(a) Per ASU 2015-07, certain investments that are measured at fair value using the Net Asset Value (NAV) per share practical expedient have not been categorized in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the total value of plan assets.

The 2015 fair value of the pension plan assets, including the level within the fair value hierarchy, is shown in the table below:

millions of Canadian dollars	Fair value measurements at December 31, 2015, using:				Net Asset Value (a)
	Total	Level 1	Level 2	Level 3	
Asset class					
Equity securities					
Canadian	469				469
Non-Canadian	2,267				2,267
Debt securities - Canadian					
Corporate	984				984
Government	3,251				3,251
Asset backed	4				4
Equities – Venture capital	272				272
Cash	13	13			
<b>Total plan assets at fair value</b>	<b>7,260</b>	<b>13</b>	<b>-</b>	<b>-</b>	<b>7,247</b>

(a) Per ASU 2015-07, certain investments that are measured at fair value using the Net Asset Value (NAV) per share practical expedient have been re-categorized from the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the total value of plan assets.

A summary of pension plans with accumulated benefit obligations in excess of plan assets is shown in the table below:

millions of Canadian dollars	Pension benefits	
	2016	2015
For funded pension plans with accumulated benefit obligations in excess of plan assets:		
Projected benefit obligation	-	-
Accumulated benefit obligation	-	-
Fair value of plan assets	-	-
Accumulated benefit obligation less fair value of plan assets	-	-
For unfunded plans covered by book reserves:		
Projected benefit obligation	553	587
Accumulated benefit obligation	525	560

### Estimated 2017 amortization from accumulated other comprehensive income

millions of Canadian dollars	Pension benefits	Other post-retirement benefits
Net actuarial loss (gain) (a)	179	14
Prior service cost (b)	11	-

(a) The company amortizes the net balance of actuarial loss (gain) as a component of net periodic benefit cost over the average remaining service period of active plan participants.

(b) The company amortizes prior service cost on a straight-line basis.

## Cash flows

Benefit payments expected in:

millions of Canadian dollars	Pension benefits	Other post-retirement benefits
2017	420	30
2018	425	31
2019	435	31
2020	440	32
2021	440	33
2022 - 2026	2,201	175

In 2017, the company expects to make cash contributions of about \$217 million to its pension plans.

## Sensitivities

A one percent change in the assumptions at which retirement liabilities could be effectively settled is as follows:

Increase (decrease) millions of Canadian dollars	One percent increase	One percent decrease
Rate of return on plan assets:		
Effect on net benefit cost, before tax	(70)	70
Discount rate:		
Effect on net benefit cost, before tax	(90)	110
Effect on benefit obligation	(1,135)	1,455
Rate of pay increases:		
Effect on net benefit cost, before tax	50	(40)
Effect on benefit obligation	230	(195)

A one percent change in the assumed health-care cost trend rate would have the following effects:

Increase (decrease) millions of Canadian dollars	One percent increase	One percent decrease
Effect on service and interest cost components	7	(5)
Effect on benefit obligation	85	(70)

## 5. Other long-term obligations

millions of Canadian dollars	2016	2015
Employee retirement benefits (a) (note 4)	1,645	1,470
Asset retirement obligations and other environmental liabilities (b)	1,544	1,628
Share-based incentive compensation liabilities (note 7)	139	134
Other obligations	328	365
<b>Total other long-term obligations</b>	<b>3,656</b>	<b>3,597</b>

(a) Total recorded employee retirement benefits obligations also included \$58 million in current liabilities (2015 – \$59 million).

(b) Total asset retirement obligations and other environmental liabilities also included \$108 million in current liabilities (2015 – \$116 million).

Asset retirement obligations incurred in the current period were Level 3 fair value measurements. The following table summarizes the activity in the liability for asset retirement obligations:

millions of Canadian dollars	2016	2015
Balance as at January 1	1,571	1,292
Additions (Deductions)	(160)	250
Reductions due to property sales	-	(12)
Accretion	97	84
Settlement	(36)	(43)
<b>Balance as at December 31</b>	<b>1,472</b>	<b>1,571</b>

## 6. Derivatives and financial instruments

The company did not enter into any derivative instruments to offset exposures associated with hydrocarbon prices, foreign currency exchange rates and interest rates that arose from existing assets, liabilities and transactions in the past three years. The company did not engage in speculative derivative activities or derivative trading activities nor did it use derivatives with leveraged features. The company routinely reviews its position on derivatives and maintains a system of controls that includes a policy covering the authorization, reporting and monitoring of derivative activity.

The fair value of the company's financial instruments is determined by reference to various market data and other appropriate valuation techniques. There are no material differences between the fair values of the company's financial instruments and the recorded book value. The fair value hierarchy for long-term debt is primarily Level 2.

## 7. Share-based incentive compensation programs

Share-based incentive compensation programs are designed to retain selected employees, reward them for high performance and promote individual contribution to sustained improvement in the company's future business performance and shareholder value. The nonemployee directors also participate in share-based incentive compensation programs.

### Restricted stock units and deferred share units

Under the restricted stock unit plan, each unit entitles the recipient to the conditional right to receive from the company, upon exercise, an amount equal to the value of one common share of the company, based on the five-day average of the closing price of the company's common shares on the Toronto Stock Exchange on and immediately prior to the exercise dates. Fifty percent of the units are exercised on the third anniversary of the grant date, and the remainder is exercised on the seventh anniversary of the grant date. The company may also issue units where either 50 percent of the units are exercisable on the fifth anniversary of the grant date and the remainder is exercisable on the tenth anniversary of the grant date, or where 50 percent of the units are exercisable on the fifth anniversary of the grant date and the remainder is exercisable on the tenth anniversary of the grant date, or date of retirement of the recipient, whichever is later.

The deferred share unit plan is made available to nonemployee directors. The nonemployee directors can elect to receive all or part of their eligible directors' fees in units. The number of units granted is determined at the end of each calendar quarter by dividing the dollar amount of the nonemployee director's fees for that calendar quarter elected to be received as deferred share units by the average closing price of the company's

shares for the five consecutive trading days (“average closing price”) immediately prior to the last day of the calendar quarter. Additional units are granted based on the cash dividend payable on the company’s shares divided by the average closing price immediately prior to the payment date for that dividend and multiplying the resulting number by the number of deferred share units held by the recipient, as adjusted for any share splits. Deferred share units cannot be exercised until after termination of service as a director, including termination due to death, and must be exercised in their entirety in one election no later than December 31 of the year following the year of termination of service. On the exercise date, the cash value to be received for the units is determined based on the average closing price immediately prior to the date of exercise, as adjusted for any share splits.

All units require settlement by cash payments with the following exceptions. The restricted stock unit program provides that, for units granted to Canadian residents, the recipient may receive one common share of the company per unit or elect to receive the cash payment for the units to be exercised on the seventh year anniversary of the grant date. For units where 50 percent are exercisable the fifth anniversary of the grant date and the remainder exercisable on either the tenth anniversary of grant, or the later of ten years following the grant date or the retirement date of the recipient, the recipient may receive one common share of the company per unit or elect to receive cash payment for all units to be exercised.

The company accounts for all units by using the fair-value-based method. The fair value of awards in the form of restricted stock and deferred share units is the market price of the company's stock. Under this method, compensation expense related to the units of these programs is measured each reporting period based on the company's current stock price and is recorded in the consolidated statement of income over the requisite service period of each award.

The following table summarizes information about these units for the year ended December 31, 2016:

	Restricted stock units	Deferred share units
Outstanding at January 1, 2016	<b>7,504,493</b>	<b>121,369</b>
Granted	<b>815,870</b>	<b>14,808</b>
Exercised	<b>(1,623,337)</b>	-
Forfeited and cancelled	<b>(34,900)</b>	-
Outstanding at December 31, 2016	<b>6,662,126</b>	<b>136,177</b>

In 2016, the compensation expense charged against income for these programs was \$59 million (2015 - \$35 million, 2014 - \$90 million). Income tax benefit recognized in income related to compensation expense for the year was \$24 million (2015 - \$13 million, 2014 - \$31 million). Cash payments of \$79 million were made for these programs in 2016 (2015 - \$78 million, 2014 - \$94 million).

As of December 31, 2016, there was \$123 million of total before-tax unrecognized compensation expense related to non-vested restricted stock units based on the company's share price at the end of the current reporting period. The weighted average vesting period of non-vested restricted stock units is 3.5 years. All units under the deferred share programs have vested as of December 31, 2016.

## 8. Investment and other income

Investment and other income includes gains and losses on asset sales as follows:

millions of Canadian dollars	2016	2015	2014
Proceeds from asset sales	<b>3,021</b>	142	851
Book value of assets sold	<b>777</b>	45	155
Gain (loss) on asset sales, before tax (a) (b)	<b>2,244</b>	97	696
Gain (loss) on asset sales, after tax (a) (b)	<b>1,908</b>	79	526

(a) 2016 included a gain of \$2.0 billion (\$1.7 billion, after tax) from the sale of company-owned Esso-branded retail sites; and a gain of \$161 million (\$134 million, after tax) for the sale of Imperial's general aviation business.

(b) 2014 included a gain of \$638 million (\$478 million, after tax) for the sale of the company's interest in producing conventional assets located in Boundary Lake, Cynthia/West Pembina and Rocky Mountain House.

On December 20, 2016, the company entered into an agreement which will result in the sale and transition of the Port Credit refinery land. The sale, subject to final closing adjustments and other closing conditions, is expected to close in the first half of 2017.

## 9. Litigation and other contingencies

A variety of claims have been made against Imperial and its subsidiaries in a number of lawsuits. Management has regular litigation reviews, including updates from corporate and outside counsel, to assess the need for accounting recognition or disclosure of these contingencies. The company accrues an undiscounted liability for those contingencies where the incurrence of a loss is probable and the amount can be reasonably estimated. If a range of amounts can be reasonably estimated and no amount within the range is a better estimate than any other amount, then the minimum of the range is accrued. The company does not record liabilities when the likelihood that the liability has been incurred is probable but the amount cannot be reasonably estimated or when the liability is believed to be only reasonably possible or remote. For contingencies where an unfavourable outcome is reasonably possible and which are significant, the company discloses the nature of the contingency and, where feasible, an estimate of the possible loss. For purposes of the company's contingency disclosures, "significant" includes material matters as well as other matters which management believes should be disclosed. Based on a consideration of all relevant facts and circumstances, the company does not believe the ultimate outcome of any currently pending lawsuits against the company will have a material adverse effect on the company's operations, financial condition, or financial statements taken as a whole.

Additionally, the company has other commitments arising in the normal course of business for operating and capital needs, all of which are expected to be fulfilled with no adverse consequences material to the company's operations or financial condition. Unconditional purchase obligations, as defined by accounting standards, are those long-term commitments that are non-cancelable or cancelable only under certain conditions and that third parties have used to secure financing for the facilities that will provide the contracted goods and services. During 2016, unconditional purchase obligations that existed in prior years no longer met the conditions for classification as unconditional purchase obligations and have been classified as "Other long-term purchase agreements" under "Commitments" in the Financial section on page 14. Total payments under unconditional purchase obligations were \$125 million for 2015 and \$112 million for 2014.

As a result of the completed sale of Imperial's remaining company-owned Esso retail sites, the company was contingently liable at December 31, 2016, for guarantees relating to performance under contracts of other third-party obligations totaling \$49 million.

## 10. Common shares

thousands of shares	<b>As at Dec 31 2016</b>	As at Dec 31 2015
Authorized	<b>1,100,000</b>	1,100,000

From 1995 through 2016 the company purchased shares under twenty-one 12-month normal course issuer bid share repurchase programs, as well as an auction tender. Cumulative purchases to date under these programs totalled 906,545 thousand shares and \$15,708 million. ExxonMobil's participation in these programs maintained its ownership interest in Imperial at approximately 69.6 percent. On June 22, 2016, another 12-month normal course issuer bid program was announced with an allowable purchase of up to a maximum of one million shares.

The excess of the purchase cost over the stated value of shares purchased has been recorded as a distribution of earnings reinvested.

The company's common share activities are summarized below:

	Thousands of shares	Millions of dollars
Balance as at January 1, 2014	847,599	1,566
Issued under employee share-based awards	2	-
Purchases at stated value	(2)	-
Balance as at December 31, 2014	847,599	1,566
Issued under employee share-based awards	1	-
Purchases at stated value	(1)	-
Balance as at December 31, 2015	847,599	1,566
<b>Issued under employee share-based awards</b>	<b>1</b>	<b>-</b>
<b>Purchases at stated value</b>	<b>(1)</b>	<b>-</b>
<b>Balance as at December 31, 2016</b>	<b>847,599</b>	<b>1,566</b>

The following table provides the calculation of basic and diluted earnings per share:

	2016	2015	2014
<b>Net income (loss) per common share – basic</b>			
Net income (loss) (millions of Canadian dollars)	<b>2,165</b>	1,122	3,785
Weighted average number of common shares outstanding (millions of shares)	<b>847.6</b>	847.6	847.6
Net income (loss) per common share (dollars)	<b>2.55</b>	1.32	4.47
<b>Net income (loss) per common share - diluted</b>			
Net income (loss) (millions of Canadian dollars)	<b>2,165</b>	1,122	3,785
Weighted average number of common shares outstanding (millions of shares)	<b>847.6</b>	847.6	847.6
Effect of employee share-based awards (millions of shares)	<b>2.9</b>	3.0	3.0
Weighted average number of common shares outstanding, assuming dilution (millions of shares)	<b>850.5</b>	850.6	850.6
Net income (loss) per common share (dollars)	<b>2.55</b>	1.32	4.45

## 11. Miscellaneous financial information

In 2016, net income included an after-tax gain of \$5 million (2015 – \$39 million loss, 2014 – \$29 million gain) attributable to the effect of changes in last-in, first-out (LIFO) inventories. The replacement cost of inventories was estimated to exceed their LIFO carrying values at December 31, 2016 by about \$1 billion (2015 – \$427 million). Inventories of crude oil and products at year-end consisted of the following:

millions of Canadian dollars	2016	2015
Crude oil	558	690
Petroleum products	300	443
Chemical products	51	51
Natural gas and other	40	6
Total inventories of crude oil and products	949	1,190

Net research and development costs charged to expenses in 2016 were \$152 million (2015 – \$149 million, 2014 – \$128 million). These costs are included in expenses due to the uncertainty of future benefits.

Accounts payable and accrued liabilities included accrued taxes other than income taxes of \$396 million at December 31, 2016 (2015 – \$378 million).

## 12. Financing costs and additional notes and loans payable information

millions of Canadian dollars	2016	2015	2014
Debt-related interest	121	102	82
Capitalized interest	(49)	(68)	(82)
Net interest expense	72	34	-
Other interest	(7)	5	4
Total financing costs (a)	65	39	4

(a) Cash interest payments in 2016 were \$73 million (2015 – \$74 million, 2014 – \$82 million). The weighted average interest rate on short-term borrowings in 2016 was 0.8 percent (2015 – 0.8 percent, 2014 – 1.1 percent). Average effective rate on the long-term borrowings with ExxonMobil in 2016 was 1.0 percent (2015 - 1.0 percent, 2014 - 1.2 percent).

As at December 31, 2016, the company had borrowed \$75 million under an arrangement with an affiliated company of ExxonMobil that provides for a non-interest bearing, revolving demand loan from ExxonMobil to the company of up to \$75 million. The loan represents ExxonMobil's share of a working capital facility required to support purchasing, marketing and transportation arrangements for crude oil and diluent products undertaken by Imperial on behalf of ExxonMobil.

In October 2016, the company decreased the amount of its unused committed long-term line of credit from \$500 million to \$250 million and extended the maturity date to November 2018. In December 2016, the company decreased the amount of its unused committed short-term line of credit from \$500 million to \$250 million and extended the maturity date to December 2017.

## 13. Leased facilities

At December 31, 2016, the company held non-cancelable operating leases covering primarily storage tanks, rail cars and marine vessels, with minimum undiscounted lease commitments totaling \$275 million as indicated in the following table:

millions of Canadian dollars	Payments due by period						After 2021	Total
	2017	2018	2019	2020	2021	2021		
Lease payments under minimum commitments (a)	139	84	45	2	2	3	275	

(a) Net rental cost under cancelable and non-cancelable operating leases incurred in 2016 was \$253 million (2015 - \$311 million, 2014 - \$315 million). Related rental income was not material.

## 14. Long-term debt

	As at Dec 31 2016	As at Dec 31 2015
millions of Canadian dollars		
Long-term debt (a)	4,447	5,952
Capital leases (b)	585	612
<b>Total long-term debt</b>	<b>5,032</b>	<b>6,564</b>

- (a) Borrowed under an existing agreement with an affiliated company of ExxonMobil that provides for a long-term, variable-rate loan from ExxonMobil to the company of up to \$7.75 billion at interest equivalent to Canadian market rates. The agreement is effective until July 31, 2020, cancelable if ExxonMobil provides at least 370 days advance written notice.
- (b) Capital leases are primarily associated with transportation facilities and services agreements. The average imputed rate was 6.9 percent in 2016 (2015 – 5.8 percent). Total capitalized lease obligations also include \$27 million in current liabilities (2015 - \$28 million). Principal payments on capital leases of approximately \$25 million per year are due in each of the next four years after December 31, 2016.

During 2016, the company decreased its long-term debt by \$1,505 million by partially repaying an existing facility with an affiliated company of ExxonMobil.

## 15. Accounting for suspended exploratory well costs

The company continues capitalization of exploratory well costs when the well has found a sufficient quantity of reserves to justify its completion as a producing well and the company is making sufficient progress assessing the reserves and the economic and operating viability of the project. The term "project" as used in this report can refer to a variety of different activities and does not necessarily have the same meaning as in any government payment transparency reports.

The following two tables provide details of the changes in the balance of suspended exploratory well costs as well as an aging summary of those costs.

Change in capitalized suspended exploratory well costs:

millions of Canadian dollars	2016	2015	2014
Balance as at January 1	167	167	173
Additions pending the determination of proved reserves	-	-	5
Charged to expense	(24)	-	-
Reclassification to wells, facilities and equipment based on the determination of proved reserves	-	-	(11)
Balance as at December 31	143	167	167

Period end capitalized suspended exploratory well costs:

millions of Canadian dollars	2016	2015	2014
Capitalized for a period of one year or less	-	-	-
Capitalized for a period of between one and ten years	143	167	167
Capitalized for a period of greater than one year	143	167	167
Total	143	167	167

Exploration activity often involves drilling multiple wells, over a number of years, to fully evaluate a project. The table below provides a numerical breakdown of the number of projects with suspended exploratory well costs which had their first capitalized well drilled in the preceding 12 months and those that have had exploratory well costs capitalized for a period greater than 12 months.

	2016	2015	2014
Number of projects with first capitalized well drilled in the preceding 12 months	-	-	-
Number of projects that have exploratory well costs capitalized for a period of greater than 12 months	1	1	1
Total	1	1	1

Exploration activity on the Horn River project with suspended well costs has been completed and the company continues to evaluate development alternatives to tie into planned infrastructure.

## 16. Transactions with related parties

Revenues and expenses of the company also include the results of transactions with affiliated companies of ExxonMobil in the normal course of operations. These were conducted on terms comparable to those which would have been conducted with unrelated parties and primarily consisted of the purchase and sale of crude oil, natural gas, petroleum and chemical products, as well as technical, engineering and research and development costs. Transactions with ExxonMobil also included amounts paid and received in connection with the company's participation in a number of upstream activities conducted jointly in Canada.

In addition, the company has existing agreements with ExxonMobil to:

- a) Provide computer and customer support services to the company and to share common business and operational support services that allow the companies to consolidate duplicate work and systems;
- b) Operate certain western Canada production properties owned by ExxonMobil as well as provide for the delivery of management, business and technical services to ExxonMobil in Canada. These agreements are designed to provide organizational efficiencies and to reduce costs. No separate legal entities were created from these arrangements. Separate books of account continue to be maintained for the company and ExxonMobil. The company and ExxonMobil retain ownership of their respective assets, and there is no impact on operations or reserves;
- c) Provide for the delivery of management, business and technical services to Syncrude Canada Ltd. by ExxonMobil; and
- d) Provide for the option of equal participation in new upstream opportunities.

Certain charges from ExxonMobil have been capitalized; they are not material in the aggregate.

The amounts of purchases and sales by Imperial in 2016, with ExxonMobil, were \$2,187 million and \$2,315 million respectively.

As at December 31, 2016, the company had outstanding long-term loans of \$4,447 million (2015 – \$5,952 million) and short-term loans of \$75 million (2015 – \$75 million) from ExxonMobil (see note 14, long-term debt, on page 49 and note 12, financing costs and additional notes and loans payable information, on page 48 for further details).

Imperial has other related party transactions not detailed in note 16, as they are not significant.

## 17. Other comprehensive income (loss) information

### Changes in accumulated other comprehensive income (loss):

millions of Canadian dollars	2016	2015	2014
Balance at January 1	(1,828)	(2,059)	(1,721)
Post-retirement benefits liability adjustment:			
Current period change excluding amounts reclassified from accumulated other comprehensive income	(210)	64	(483)
Amounts reclassified from accumulated other comprehensive income	141	167	145
Balance at December 31	(1,897)	(1,828)	(2,059)

### Amounts reclassified out of accumulated other comprehensive income (loss) - before-tax income (expense):

millions of Canadian dollars	2016	2015	2014
Amortization of post-retirement benefits liability adjustment included in net periodic benefit cost (a)	(184)	(228)	(196)

(a) This accumulated other comprehensive income component is included in the computation of net periodic benefit cost (note 4).

### Income tax expense (credit) for components of other comprehensive income (loss):

millions of Canadian dollars	2016	2015	2014
Post-retirement benefits liability adjustments:			
Post-retirement benefits liability adjustment (excluding amortization)	(77)	24	(169)
Amortization of post-retirement benefits liability adjustment included in net periodic benefit cost	43	61	51
Total	(34)	85	(118)

## Supplemental information on oil and gas exploration and production activities (unaudited)

The information on pages 53 to 54 excludes items not related to oil and natural gas extraction, such as administrative and general expenses, pipeline operations, gas plant processing fees and gains or losses on asset sales. The company's 25 percent interest in proved synthetic oil reserves in the Syncrude joint-venture is included as part of the company's total proved oil and gas reserves and in the calculation of the standardized measure of discounted future cash flows, in accordance with U.S. Securities and Exchange Commission and U.S. Financial Accounting Standards Board rules. Results of operations, costs incurred in property acquisitions, exploration and development activities, and capitalized costs include the company's share of Syncrude, Kearl and other unproved mineable acreages in the following tables.

### Results of operations

millions of Canadian dollars	2016	2015	2014
Sales to customers (a)	2,210	2,483	2,921
Intersegment sales (a) (b)	1,791	1,855	3,862
	4,001	4,338	6,783
Production expenses	3,657	3,727	3,860
Exploration expenses	94	73	67
Depreciation and depletion	1,275	1,102	789
Income taxes	(366)	174	513
Results of operations	(659)	(738)	1,554

The amounts reported as costs incurred in property acquisitions, exploration and development activities include both capitalized costs and costs charged to expense during the year. Costs incurred also include new asset retirement obligations established in the current year, as well as increases or decreases to the asset retirement obligation resulting from changes in cost estimates or abandonment date.

### Costs incurred in property acquisitions, exploration and development activities

millions of Canadian dollars	2016	2015	2014
Property costs (c)			
Proved	1	-	-
Unproved	-	-	-
Exploration costs	70	76	74
Development costs	543	3,035	4,710
Total costs incurred in property acquisitions, exploration and development activities	614	3,111	4,784

- (a) Sales to customers or intersegment sales do not include the sale of natural gas and natural gas liquids purchased for resale, as well as royalty payments. These items are reported gross in note 2 in "operating revenues", "intersegment sales" and in "purchases of crude oil and products".
- (b) Sales of crude oil to consolidated affiliates are at market value, using posted field prices. Sales of natural gas liquids to consolidated affiliates are at prices estimated to be obtainable in a competitive, arm's-length transaction.
- (c) "Property costs" are payments for rights to explore for petroleum and natural gas and for purchased reserves (acquired tangible and intangible assets such as gas plants, production facilities and producing-well costs are included under "producing assets"). "Proved" represents areas where successful drilling has delineated a field capable of production. "Unproved" represents all other areas.

## Capitalized costs

millions of Canadian dollars

	2016	2015
Property costs (a)		
Proved	2,194	2,172
Unproved	2,466	2,542
Producing assets	36,827	35,769
Incomplete construction	2,287	2,862
Total capitalized cost	43,774	43,345
Accumulated depreciation and depletion	(12,243)	(10,975)
Net capitalized costs	31,531	32,370

(a) "Property costs" are payments for rights to explore for petroleum and natural gas and for purchased reserves (acquired tangible and intangible assets such as gas plants, production facilities and producing-well costs are included under "producing assets"). "Proved" represents areas where successful drilling has delineated a field capable of production. "Unproved" represents all other areas.

## Standardized measure of discounted future cash flows

As required by the U.S. Financial Accounting Standards Board, the standardized measure of discounted future net cash flows is computed by applying first-day-of-the-month average prices, year-end costs and legislated tax rates and a discount factor of 10 percent to net proved reserves. The standardized measure includes costs for future dismantlement, abandonment and remediation obligations. The company believes the standardized measure does not provide a reliable estimate of the company's expected future cash flows to be obtained from the development and production of its oil and gas properties or of the value of its proved oil and gas reserves. The standardized measure is prepared on the basis of certain prescribed assumptions, including first-day-of-the-month average prices, which represent discrete points in time and therefore may cause significant variability in cash flows from year to year as prices change.

## Standardized measure of discounted future net cash flows related to proved oil and gas reserves

millions of Canadian dollars

	2016	2015	2014
Future cash flows	53,743	168,482	292,376
Future production costs	(36,100)	(122,188)	(127,070)
Future development costs	(11,917)	(36,048)	(39,814)
Future income taxes	(1,263)	(3,333)	(27,853)
Future net cash flows	4,463	6,913	97,639
Annual discount of 10 percent for estimated timing of cash flows	(1,717)	(3,683)	(66,582)
Discounted future cash flows	2,746	3,230	31,057

## Changes in standardized measure of discounted future net cash flows related to proved oil and gas reserves

Balance at beginning of year	3,230	31,057	24,910
Changes resulting from:			
Sales and transfers of oil and gas produced, net of production costs	(718)	(1,134)	(3,282)
Net changes in prices, development costs and production costs (a)	(1,468)	(37,945)	655
Extensions, discoveries, additions and improved recovery, less related costs	14	29	(374)
Development costs incurred during the year	651	2,250	4,414
Revisions of previous quantity estimates	56	972	4,907
Accretion of discount	417	1,683	1,634
Net change in income taxes	564	6,318	(1,807)
Net change	(484)	(27,827)	6,147
Balance at end of year	2,746	3,230	31,057

(a) SEC rules require the company's reserves to be calculated on the basis of average first-of-month oil and natural gas prices during the reporting year. As a result of low prices during 2016, under the SEC definition of proved reserves, certain quantities of bitumen that qualified as proved reserves in prior years did not qualify as proved reserves at year-end 2016. Future net cash flows for these quantities are excluded from the 2016 "Standardized measure of discounted future cash flows". Substantially all of this reduction in discounted future net cash flows since December 31, 2015 is reflected in the line "Net change in prices, development costs and production costs", in the table above.

**Net proved reserves (a)**

	Liquids (b)	Natural gas	Synthetic oil	Bitumen	Total oil-equivalent basis (c)
	millions of barrels	billions of cubic feet	millions of barrels	millions of barrels	millions of barrels
Beginning of year 2014	62	678	579	2,867	3,622
Revisions	1	9	(23)	466	445
Improved recovery	-	-	-	-	-
(Sale) purchase of reserves in place	(14)	(48)	-	-	(22)
Discoveries and extensions	3	45	-	-	10
Production	(6)	(57)	(22)	(59)	(96)
End of year 2014	46	627	534	3,274	3,959
Revisions	(10)	(28)	68	331	384
Improved recovery	-	-	-	-	-
(Sale) purchase of reserves in place	1	11	-	-	3
Discoveries and extensions	2	18	-	-	5
Production	(5)	(45)	(21)	(90)	(124)
End of year 2015	34	583	581	3,515	4,227
<b>Revisions</b>	<b>3</b>	<b>(58)</b>	<b>8</b>	<b>(2,720)</b>	<b>(2,719)</b>
<b>Improved recovery</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>(Sale) purchase of reserves in place</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Discoveries and extensions</b>	<b>2</b>	<b>15</b>	<b>-</b>	<b>-</b>	<b>4</b>
<b>Production</b>	<b>(4)</b>	<b>(45)</b>	<b>(25)</b>	<b>(94)</b>	<b>(130)</b>
<b>End of year 2016</b>	<b>35</b>	<b>495</b>	<b>564</b>	<b>701</b>	<b>1,382</b>

**Net proved developed reserves included above, as of**

January 1, 2014	55	368	579	1,417	2,113
December 31, 2014	36	300	534	1,635	2,255
December 31, 2015	23	283	581	3,063	3,714
<b>December 31, 2016</b>	<b>19</b>	<b>263</b>	<b>564</b>	<b>436</b>	<b>1,063</b>

**Net proved undeveloped reserves included above, as of**

January 1, 2014	7	310	-	1,450	1,509
December 31, 2014	10	327	-	1,639	1,704
December 31, 2015	11	300	-	452	513
<b>December 31, 2016</b>	<b>16</b>	<b>232</b>	<b>-</b>	<b>265</b>	<b>319</b>

- (a) Net reserves are the company's share of reserves after deducting the shares of mineral owners or governments or both. All reported reserves are located in Canada. Reserves of natural gas are calculated at a pressure of 14.73 pounds per square inch at 60°F.
- (b) Liquids include crude, condensate and natural gas liquids (NGLs). NGL proved reserves are not material and are therefore included under liquids.
- (c) Gas converted to oil-equivalent at six million cubic feet per one thousand barrels.

The information above describes changes during the years and balances of proved oil and gas reserves at year-end 2014, 2015 and 2016. The definitions used are in accordance with the U.S. Securities and Exchange Commission's Rule 4-10 (a) of Regulation S-X.

Proved oil and natural gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible – from a given date forward, from known reservoirs, and under existing economic conditions, operating methods and government regulations – prior to the time at which contracts providing the right to operate expire. In some cases, substantial new investments in additional wells and other facilities will be required to recover these proved reserves.

In accordance with SEC rules, the year-end reserves volumes as well as the reserves change categories shown in the proved reserves tables are required to be calculated on the basis of average prices during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted

arithmetic average of the first-day-of-the-month price for each month within such period. These reserves quantities were also used in calculating unit-of-production depreciation rates and in calculating the standardized measure of discounted net cash flow.

Revisions can include upward or downward changes in previously estimated volumes of proved reserves for existing fields due to the evaluation or re-evaluation of already available geologic, reservoir or production data; new geologic, reservoir or production data; or changes in the average of first-of-month oil and natural gas prices and / or costs that are used in the estimation of reserves. Revisions can result from significant changes in either development strategy or production equipment / facility capacity.

In 2014, upward revisions of proved developed and undeveloped bitumen reserves were primarily associated with the conclusion of technical studies supporting lengthening of the expected useful life of Kearl operating assets under routine maintenance and sustaining capital conditions.

In 2015, upward revisions of proved developed bitumen reserves were associated with migration of the Kearl expansion project from proved undeveloped, and improved performance demonstrated at Kearl. As well, upward revision to bitumen and synthetic oil were associated with lower royalty obligations driven by lower pricing.

In 2016, downward revisions of proved developed and undeveloped bitumen reserves were a result of low prices.

As a result of low prices during 2016, under the U.S. Securities and Exchange Commission definition of proved reserves, certain quantities of bitumen that qualified as proved reserves in prior years did not qualify as proved reserves at year-end 2016. Amounts no longer qualifying as proved reserves include the entire 2.5 billion barrels of bitumen at Kearl and approximately 0.2 billion barrels of bitumen at Cold Lake. Among the factors that would result in these amounts being recognized again as proved reserves at some point in the future are a recovery in average price levels, a further decline in costs, and / or operating efficiencies. Under the terms of certain contractual arrangements or government royalty regimes, lower prices can also increase proved reserves attributable to Imperial. The company does not expect the downward revision of reported proved reserves under the U.S. Securities and Exchange Commission definitions to affect the operation of the underlying projects or to alter its outlook for future production volumes.

Net proved reserves are determined by deducting the estimated future share of mineral owners or governments or both. For liquids and natural gas, net proved reserves are based on estimated future royalty rates as of the date the estimate is made incorporating the applicable governments' oil and gas royalty regimes. For bitumen, net proved reserves are based on the company's best estimate of average royalty rates over the remaining life of each of the Cold Lake and Kearl fields, and they incorporate the Alberta government's revised oil sands royalty regime. For synthetic oil, net proved reserves are based on the company's best estimate of average royalty rates over the remaining life of the project, and they incorporate the Alberta government's revised oil sands royalty regime. In all cases, actual future royalty rates may vary with production, price and costs.

Net proved developed reserves are those volumes that are expected to be recovered through existing wells and facilities with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well or facility. Net proved undeveloped reserves are those volumes that are expected to be recovered as a result of future investments to drill new wells, to recomplete existing wells and/or to install facilities to collect and deliver the production from existing and future wells and facilities.

No independent qualified reserves evaluator or auditor was involved in the preparation of the reserves data.

## Quarterly financial and stock trading data <sup>(a)</sup>

	2016				2015			
	three months ended				three months ended			
	Dec. 31	Sept. 30	June 30	Mar. 31	Dec. 31	Sept. 30	June 30	Mar. 31
<b>Financial data</b> (millions of Canadian dollars)								
Total revenues and other income	8,442	7,442	6,248	5,222	6,229	7,155	7,301	6,203
Total expenses	6,779	6,260	6,500	5,371	6,100	6,518	6,705	5,642
Income (loss) before income taxes	1,663	1,182	(252)	(149)	129	637	596	561
Income taxes	219	179	(71)	(48)	27	158	476	140
Net income (loss)	1,444	1,003	(181)	(101)	102	479	120	421
<b>Segmented net income (loss)</b> (millions of Canadian dollars)								
Upstream	103	(26)	(290)	(448)	(289)	(52)	(174)	(189)
Downstream	1,361	1,002	71	320	352	454	215	565
Chemical	27	56	55	49	74	78	69	66
Corporate and Other	(47)	(29)	(17)	(22)	(35)	(1)	10	(21)
Net income (loss)	1,444	1,003	(181)	(101)	102	479	120	421
<b>Per-share information</b> (Canadian dollars)								
Net income (loss) per share - basic	1.70	1.18	(0.21)	(0.12)	0.12	0.56	0.14	0.50
Net income (loss) per share - diluted	1.70	1.18	(0.21)	(0.12)	0.12	0.56	0.14	0.50
Dividends per share - declared	0.15	0.15	0.15	0.14	0.14	0.14	0.13	0.13
<b>Share prices</b> (Canadian dollars) <sup>(b)</sup>								
Toronto Stock Exchange								
High	48.72	42.10	43.21	46.25	46.27	49.40	55.37	52.06
Low	40.76	38.41	38.71	37.25	39.30	40.55	46.51	44.08
Close	46.71	41.04	40.88	43.39	45.08	42.28	48.25	50.55
NYSE MKT (U.S. dollars) <sup>(b)</sup>								
High	36.85	32.42	34.11	35.48	35.40	38.88	45.60	43.35
Low	31.07	29.26	29.54	25.55	28.66	30.35	37.94	35.69
Close	34.76	31.32	31.56	33.40	32.52	31.61	38.62	39.88
<b>Shares traded</b> (thousands) <sup>(c)</sup>	<b>70,560</b>	<b>67,098</b>	<b>101,121</b>	<b>112,059</b>	100,077	104,678	88,186	95,600

(a) Quarterly data has not been audited by the company's independent auditors.

(b) Imperial's shares are listed on the Toronto Stock Exchange. The company's shares also trade in the United States of America on the NYSE MKT LLC. Imperial has unlisted privileges on the NYSE MKT LLC. The symbol on these exchanges for Imperial's common shares is IMO. Share prices were obtained from stock exchange records. U.S. dollar share price presented is based on consolidated U.S. market data.

(c) The number of shares traded is based on transactions on the above stock exchanges and through other designated exchanges and published markets in Canada.



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