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76

.83

107

barrel /d· per day /y: €: per year euro \$ and/or U.S. dollar dollar: metric ton barrel of oil equivalent boe: kboe/d: thousand boe/d thousand barrel/d kb/d: Btu: British thermal unit M: million

MW: megawatt

MWp: megawatt peak (direct current) TWh: terawatt hour

French Financial Markets Authority American Petroleum Institute European Refining Margin Indicator.
ERMI is an indicator intended to represent the

margin after variable costs for a hypothetical complex refinery located around Rotterdam in Northern Europe. The indicator margin may not be representative of the actual margins achieved by TOTAL in any period because of TOTAL's particular refinery configurations, product mix effects or other company-specific operating

conditions.

Front-End Engineering and Design Floating Production Storage and Offloading International Financial Reporting Standards FEED: FPSO: IFRS:

LNG: liquefied natural gas liquefied petroleum gas ROE Return on Equity

ROACE: Return on Average Capital Employed SAGD: Steam Assisted Gravity Drainage United States Securities and Exchange Commission

1 boe = 1 barrel of crude oil = approx. 5,387 cf of gas(1) in 2018 1 b/d = approx. 50 t/y 1 t = approx. 7.5 b (for a gravity of  $37^{\circ}$  API)

1 E approx. 7.3 b (for a gravity of 3 1 Bm<sup>3</sup>/y = approx. 0.1 Bcf/d 1 m<sup>3</sup> = approx. 35.3 cf 1 t of LNG = approx. 48 kcf of gas 1 Mt/y of LNG = approx. 131 Mcf/d

(1) This ratio is calculated based on the actual average equivalent energy content of TOTAL's proved developed and undeveloped natural gas reserves and is subject to change.

#### AND GAS PRODUCING ACTIVITIES ..... COST INCURRED .....

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#### **GROUP OVERVIEW**

TOTAL, which has produced oil and gas for almost a century, is one of the world's largest energy companies, with a presence in more than 130 countries on five continents.

The Group's activities include the exploration and production of oil and gas, refining, petrochemicals, and the distribution of energy in various forms to the end customer. More than 104,000 employees around the world help TOTAL provide more affordable, cleaner energy to as many people as possible.

# A CLEAR STRATEGY FOR SUSTAINABLE GROWTH

TOTAL is one of the largest integrated energy groups in the world. Through its international presence and its activities, TOTAL's goal is to ensure its own development is a vehicle of progress that benefits as many people as possible.

Meeting the energy needs of a growing global population, providing tangible solutions to limit global warming, adjusting to new patterns of energy production and consumption, and adapting to changes in the expectations of customers and stakeholders are some of the challenges that a major energy player like TOTAL must tackle.

In rising to these challenges, TOTAL's ambition is to become the responsible energy major by contributing to supply as many people as possible with more affordable, more available, cleaner energy. To achieve this, the Group has formulated a clear strategy, based on four main priorities, that integrates the challenges of climate change:

— drive profitable and sustainable growth in Exploration & Production activities, with priority given to low cost oil and to the production of gas and liquefied natural gas (the fossil fuel that emits the least amount of carbon dioxide), with a constant focus on producing at a competitive cost by enforcing strict investment discipline;

- further develop the competitiveness of its large integrated refining and petrochemical platform and expand its sustainable biofuels and recycling activities;
- increase the distribution of petroleum products, particularly in high growth regions, and offer innovative solutions and services that meet the needs of customers above and beyond the supply of petroleum products; and
- grow its presence along the full gas value chain by unlocking access to new markets, including profitable growth in low carbon electricity, produced from natural gas and renewable energy, to electricity supply to end customers.

#### FIVE STRONG VALUES AT THE HEART OF THE GROUP

Safety, Respect for Each Other, Pioneer Spirit, Stand Together and Performance-Minded represent, just as its history, part of TOTAL's identity that is shared by all employees. These values guide the daily actions and relations of the Group with its stakeholders.

"These values describe and unite us. They are the levers on which we rely to achieve our ambition of becoming the responsible energy major." Patrick Pouyanné, Chairman and Chief Executive Officer.

These five strong values require all of TOTAL's employees to act in an exemplary manner in the following areas: safety, security, health, environment, integrity in all of its forms (particularly, the prevention of corruption, fraud and anti-competitive practices) and human rights. It is through strict adherence to these values and to this strategy that the Group intends to build strong and sustainable growth for itself and for all of its stakeholders, and thereby deliver on its commitment to better energy.

KEY FIGURES FOR 2018

+8%

E&P Production Growth

12%
Group ROACE

13.6 B\$

Adjusted Net Income

26.1 B\$

Operating Cash Flow excl. WC changes and financial charges (DACF)

12.4 B\$

Organic investments

15%

**Gearing Ratio** 













# 2018 HIGHLIGHTS

#### **JANUARY**

#### Brazil - E&P 1

Completion of the transfer of rights from Petrobras in the Lapa and Lara concessions, as part of the strategic alliance.

#### USA - E&P

Acquisition of Samson Offshore Anchor, which holds a 12.5% interest in four blocks covering the Anchor discovery, one of the most significant recent discoveries in the Gulf of Mexico.

#### USA - E&P

Major oil discovery on the Ballymore prospect, located deep offshore in the Gulf of Mexico.

#### **FEBRUARY**

#### Guyana - E&P

Entry into exploration offshore Guyana with three exploration licenses.

#### USA – R&C 2

Definitive agreement with Borealis AG and NOVA Chemicals to form a joint venture in petrochemicals on the U.S. Gulf Coast, including the under-construction 1 Mt/y ethane steam cracker in Port Arthur, TOTAL's existing polyethylene 400,000 t/y facility in Bayport and a new 625,000 t/y Borstar polyethylene unit in Bayport.

#### **MARCH**

#### Libya - E&P

Acquisition of Marathon Oil Libya Limited which holds a 16.33% stake in the Waha Concessions in Libya for a consideration of \$450 million, giving Total access to reserves and resources in excess of 500 Mboe.

#### Corporate

Closing of the Mærsk Oil acquisition signed in August 2017.

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#### UAE - E&P

Signature of two new 40-year concession agreements in the UAE covering Umm Shaif & Nasr (20%) and Lower Zakum (5%) for \$1.45 billion, which represents an access cost of around \$1 per barrel of reserves. These interests bring production of 80 kboe/d in 2018 to TOTAL.

#### GRP

Total Energy Ventures (TEV) signed a heads of agreement to launch the Cathay Smart Energy Fund, an investment fund dedicated to the energy sector in China.

#### Algeria - E&P

First gas from the Timimoun field in southwestern Algeria. The production complex with a capacity of around 5 million cubic meters of natural gas per day at plateau (around 30 kboe/d), is jointly operated by Sonatrach (51%), TOTAL (37.775%) and Cepsa (11.25%).

#### **APRIL**

#### Saudi Arabia - R&C 3

Agreement with Saudi Aramco to build a giant petrochemical complex in Jubail, Saudi Arabia. The complex will be integrated with the SATORP refinery and will comprise a world-class mixed-feed steam cracker, with a capacity of 1.5 Mt/y of ethylene and related high added-value petrochemical units. The project will represent an investment of around \$5 billion.

#### USA - E&P

Acquisition of several assets located in the Gulf of Mexico for approximately \$300 million, as part of the Cobalt International Energy's bankruptcy. The acquired assets include a 20% operated interest in North Platte discovery, a 20% interest in the Anchor discovery and 13 offshore exploration blocks.

#### Corporate 4

Acquisition of Direct Énergie for €1.4 billion to enhance the Group's position in low carbon energy by boosting its presence along the gaselectricity value chain. The deal combines TOTAL's 1.5 million customer base in alternative energy with Direct Énergie's 2.6 million customers, and is a significant step towards the target to reach 6 million customers in France and 1 million in Belgium by 2022.

#### MAY

#### US - M&S

Sale to Bandari Corporation of its retail business in Haiti, which consists of a network of 92 service stations and general trade fuel sales operations.

#### US - GRP

Strategic agreement with Clean Energy Fuels Corp. to launch an innovative leasing program for natural gas heavyduty trucks. As part of the deal, TOTAL becomes Clean Energy's largest shareholder (25%) for an amount of \$83.4 million.

#### Oman - E&P

Agreement with the Government of Oman to develop the onshore gas resources of the Greater Barik area (Block 6) with an objective to deliver initial gas production of around 500 Mcf/d and potential to reach 1 Bcf/d. Shell will operate the upstream in partnership with TOTAL (25%) while TOTAL will build and operate a small-scale, 1Mt/y liquefaction plant.

#### Russia - E&P

Agreement with Novatek to acquire a direct working interest of 10% in Arctic LNG 2. The Group's overall economic interest in this new LNG project will be approximately 21.5%. With a production capacity of approximately 19.8 Mt/y, or 535 kboe/d, Arctic LNG 2 will unlock more than 7 billion boe of hydrocarbon resources in the onshore Utrenneye gas and condensate field.

#### Angola - E&P 5

Final investment decision to launch the Zinia 2 deep offshore development in Block 17 offshore Angola. The Zinia 2 project will have a production capacity of 40 kboe/d, helping to sustain production from the Pazflor hub.













#### JUNE

#### Algeria - E&P

Signature of a new concession contract with Sonatrach, Repsol and Alnaft for a period of 25 years to extend the exploitation of the Tin Fouyé Tabankort (TFT) gas and condensate field (26.4%).

# Singapore - GRP

Heads of agreement with Pavilion Energy to jointly develop an LNG bunker supply chain in the port of Singapore, to be commissioned by Pavilion Gas by 2020. It also includes an LNG supply arrangement between the two companies enabling TOTAL to deliver LNG bunker to its customers.

#### France - GRP

Agreement to sell its 9.99% stake in the Dunkirk LNG terminal, as part of a broader sale process initiated by EDF (65.01%). The Group will retain regasification rights of around 1.5 Mt/y.

#### JULY

#### Corporate

Acquisition of Engie's portfolio of upstream liquefied natural gas assets for an overall enterprise value of \$1.5 billion. With this acquisition, TOTAL becomes the second largest LNG player in the world with a portfolio of 40 Mt/y by 2020.

#### France - GRP

Agreement with KKR-Energas to acquire its two gas-fired combined cycle power plants in the North and East of France equating to electricity generation capacity of approximately 825 MW.

#### Angola - E&P 6

Start up production of Kaombo, currently the biggest deep offshore development in Angola, located on Block 32, 260 kilometers off the coast of Luanda. At plateau it will produce an estimated 115k boe/d from this first phase alone.

#### Australia - E&P 7

Start up of offshore production at the Ichthys LNG Project in Australia, marking the beginning of 40 years of operations of this gas and condensate field. At full capacity, the offshore facilities are expected to produce 1,600 Mscf/d of gas (285 kboe/d) and 85 kb/d condensate.

#### **AUGUST**

#### Russia - GRP 1

First shipment of LNG from the second train of the Yamal LNG project in Russia. This train adds an additional 5.5 Mt/y of LNG capacity to the facility, bringing the total capacity in operation to 11 Mt/y.

#### China - R&C

Sale of the Group's polystyrene business in China to INEOS Styrolution, including two facilities each with a production capacity of 200,000 t/y.

#### Canada - E&P

Sale of Joslyn oil sands project in Canada to Canadian Natural Resources Limited for C\$225 million.

#### **SEPTEMBER**

#### Corporate

Acquisition of G2mobility, a French leading provider of electric vehicle charging solutions.

#### North Sea - E&P

Major gas discovery on the Glendronach prospect (TOTAL 60%, operator), located offshore U.K. West of Shetland. Preliminary tests confirmed good reservoir quality, permeability and well production deliverability, with recoverable resources estimated at about 1 Tcf.

#### USA - R&C

Final investment decision, with partners Borealis and NOVA Chemicals, to build a 625,000 t/y polyethylene unit at TOTAL's site in Bayport, Texas.

#### Corporate 10

Acquisition of Chevron Denmark Inc. which holds a 12% interest in the Danish **Underground Consortium** (DUC), a 12% interest in License 8/06, and a 7.5% interest in the Tyra West pipeline. The acquisition increases TOTAL's operated share of DUC to 43.2% from 31.2%.

#### **OCTOBER**

#### Algeria

Two agreements that strengthen TOTAL's relationships with Sonatrach. First, a new contract to jointly develop the Erg Issouane gas field located on the TFT Sud permit, and second, the creation of a joint venture known as STEP (Sonatrach TOTAL Entreprise Polymères) to build a propane dehydration unit and a polypropylene production unit at Arzew.

#### India

Agreement with Adani to develop multi energy offers to the Indian energy market, including LNG and a fuel retail network of 1,500 service stations

#### **NOVEMBER**

# North America - GRP 111

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A memorandum of understanding with Sempra Energy for the development of North American LNG export projects, covering the continued development of the Cameron LNG liquefactionexport project in Louisiana and Energia Costa Azul (ECA) liquefaction export project in Baja California, Mexico.

#### Papua New Guinea - E&P 12 A memorandum of understanding with Papua

New Guinea for the key terms of the Gas Agreement for the Papua LNG Project and launch of engineering studies.

#### Brazil - M&S

Entry into the retail fuel sector in Brazil with the acquisition of the Grupo Zema distribution business. Zema Petróleo manages a network of 280 service stations and several oil products and ethanol storage facilities.

#### **DECEMBER**

### Australia - E&P

Reduction of TOTAL's stake in the Ichthys LNG Project in Australia by 4% to 26% for an overall consideration of \$1.6 billion.

#### Angola - M&S

Launching of a fuel retail network with Sonangol in Angola.









# 2019 HIGHLIGHTS

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#### **JANUARY**

#### Nigeria - E&P

Start-up of the production from the Egina field. At Plateau, it will produce 200 kboe/d, which represents around 10% of Nigeria's production.

#### North Sea - E&P

New discovery on the Glengorm prospect (25%) located in the Central Graben with recoverable resources estimated close to 250 Mboe.

### **FEBRUARY**

### South Africa - E&P

Significant gas condensate discovery on the Brulpadda prospects in a challenging deepwater environment (45%, operator).

#### Saudi Arabia - M&S

A 50:50 joint venture agreement with Saudi Aramco to develop high quality fuels and retail network in Saudi Arabia.
The JV plans to invest around \$1 billion over the next six years.

#### France - GRP

Creation of an industrial consortium with Ørsted and Elicio to submit a joint bid for the Dunkirk offshore wind farm project for a power capacity of up to 600 MW.

#### **MARCH**

#### Russia - E&P

Agreement with Novatek for the acquisition of a direct 10% interest in Arctic LNG 2, a major liquefied natural gas development led by Novatek that will have a production capacity of 19.8 Mt/y.

#### **APRIL**

#### Angola - E&P

Started up production of Kaombo Sul, the second FPSO unit of the Kaombo project, located on Block 32, adding 115 kb/d and bringing the overall production capacity to 230 kb/d.

#### United States - GRP

Agreement with Tellurian for a \$500 million investment in the Driftwood LNG project and the purchase of 1 Mt/y of LNG, with a sales and purchase agreement for a further 1.5 Mt/y of LNG from Tellurian Marketing's LNG offtake. TOTAL also has the option to acquire 19.87 million shares in Tellurian for \$200 million in the event of FID.

#### China - GRP

Saft joins forces with the Chinese Group Tianneng to grow in China and scale up its e-mobility and energy storage businesses.

#### Oman - E&P

A heads of agreement with the Ministry of Oil and Gas of the Sultanate of Oman for the award of an exploration license on Block 12 with significant prospective gas resources.

#### MAY

#### Africa - E&P

Agreement with Occidental to buy Anadarko's assets in Africa for \$8.8 billion in the event of a successful completion of Occidental's bid for Anadarko. The assets represent around 1.2 billion boe of 2P reserves plus 2 billion boe long term resources.





(1) The Board of Directors has decided not to propose to the Shareholder's Meeting of May 29, 2019 the renewal of the scrip dividend option beginning with the payment of the final 2018 dividend.

#### NOTE ON FINANCIAL STATEMENTS

Since January, 1, 2017, Total has been structured around four business segments: Exploration & Production; Gas, Renewables & Power; Refining & Chemicals and Marketing & Services. In addition, the Corporate segment includes operating and financial activities.

Certain figures for the years 2015 and 2016 have been restated in order to reflect this organization. 2014 business segments data have not been restated therefore the Exploration & Production segment includes Gas businesses and the Marketing & Services segment includes New Energies and Biofuels businesses for the year 2014.

#### FINANCIAL HIGHLIGHTS

(in million dollars, except percent and per share amounts)	2018	2017	2016	2015	2014
Sales	209,363	171,493	149,743	165,357	236,122
Adjusted net operating income from business segments <sup>(1)</sup>	15,997	11,936	9,410	11,327	14,247
Net income (Group share)	11,446	8,631	6,196	5,087	4,244
Adjusted net income (Group share) (1)	13,559	10,578	8,287	10,518	12,837
Adjusted fully-diluted earnings per share (\$)(1)(2)	5.05	4.12	3.38	4.51	5.63
Dividend per share $(\epsilon)^{(2)}$	2.56(3)	2.48	2.45	2.44	2.44
Dividend per ADR (\$) <sup>(2)</sup>	2.94 (3) (4)	2.96	2.61	2.67	2.93
Net-debt-to-equity ratio (as of December 31)	15.5%	11.9%	21.1%	21.8%	23.5%
Return on average capital employed (ROACE) (5)	11.8%	9.4%	7.5%	9.4%	11.1%
Return on equity (ROE)	12.2%	10.1%	8.7%	11.5%	13.5%
Cash flow from operating activities	24,703	22,319	16,521	19,946	25,608
Operating cash flow before working capital changes (6)	24,529	21,135	16,988	19,376	24,597
Operating cash flow before working capital changes w/o financial charges (DACF) (7)	26,067	22,183	17,581	19,839	24,944
Gross investments (8)	22,185	16,896	20,530	28,033	30,509
Organic investments (9)	12,426	14,395	17,484	22,976	26,430
Divestments	7,239	5,264	2,877	7,584	6,190

- (1) Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.
- (2) Based on the fully-diluted weighted-average number of common shares outstanding during the period.
  (3) 2018 dividend subject to approval at the May 29, 2019 Annual Shareholders' Meeting.
  (4) 2018 estimated dividend in dollars includes the first quarterly interim ADR dividend of \$0.74 paid in October 2018 and the second quarterly interim ADR dividend of \$0.74 paid in January 2019, as well as the third quarterly interim ADR dividend of \$0.73 payable in April 2019 and the proposed final interim ADR dividend of \$0.73 payable in June 2019, both converted at a rate of \$1.15/€.
- (6) Operating cash flow before working capital changes, previously referred to as adjusted cash flow from operations, is defined as cash flow from operating activities before changes in working capital at replacement cost.

  (7) DACF = debt adjusted cash flow. Cash flow from operating activities before changes in working capital at replacement cost, without financial charges.
- (8) Including acquisitions and increases in non-current loans.
- (9) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

#### MARKET ENVIRONMENT

	2018	2017	2016	2015	2014
Year-end euro/dollar (€/\$)	1.15	1.20	1.05	1.09	1.21
Average euro/dollar (€/\$)	1.18	1.13	1.11	1.11	1.33
Year-end Brent price (\$/b)	54.1	66.6	56.8	37.3	57.3
Average Brent price (\$/b)	71.3	54.2	43.7	52.4	99.0
Average refining margins (\$/t) – ERMI(1)	32.3	40.9	34.1	48.5	18.7

<sup>(1)</sup> Total's European Refining Margin Indicator (ERMI); published quarterly by the Group.

#### **OPERATIONAL HIGHLIGHTS BY QUARTER**

(in million dollars)	2018		Quarte	rs		
	Full Year	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
Adjusted operating income from business segments (1)	19,599	4,217	5,151	5,808	4,423	
Exploration & Production	14,025	3,049	3,870	4,114	2,992	
Gas, Renewables & Power	557	88	73	206	190	
Refining & Chemicals	3,131	694	680	966	791	
Marketing & Services	1,886	386	528	522	450	
Adjusted net operating income from business segments <sup>(1)</sup>	15,997	3,385	4,179	4,548	3,885	
Exploration & Production	10,210	2,183	2,687	2,864	2,476	
Gas, Renewables & Power	756	115	193	272	176	
Refining & Chemicals	3,379	720	821	938	900	
Marketing & Services	1,652	367	478	474	333	

<sup>(1)</sup> Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.

#### FINANCIAL HIGHLIGHTS BY QUARTER

(in million dollars, except percent, per share amounts and share buybacks)	2018		Quarters							
per stare amounts and stare buybacks)	Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>					
Adjusted net income (Group share) (1)	13,559	2,884	3,553	3,958	3,164					
Adjusted fully diluted earnings per share (\$)(1)	5.05	1.09	1.31	1.47	1.17					
Net income (Group share)	11,446	2,636	3,721	3,957	1,132					
Net-debt-to-equity ratio (as of end of period)	15.5%	15.1%	16.5%	18.3%	15.5%					
Shares outstanding (as of end of period)	2,640,602,007	2,633,820,167	2,665,877,332	2,666,383,509	2,640,602,007					
Fully-diluted weighted-average number of shares	2,623,716,444	2,568,034,720	2,646,317,904	2,636,751,321	2,637,489,286					
Number of shares bought back during the period	72,766,481	12,471,369	20,585,145	11,990,658	27,719,309					
Share buybacks (B\$)	4.3	0.7	1.3	0.7	1.6					

2015	Quarters								
Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	<b>4</b> <sup>th</sup>					
10,518	2,602	3,085	2,756	2,075					
4.51	1.13	1.34	1.17	0.88					
5,087	2,663	2,971	1,079	(1,626)					
21.8%	21.5%	20.3%	20.7%	21.8%					
2,440,057,883	2,385,555,781	2,396,360,090	2,415,089,789	2,440,057,883					
2,304,435,542	2,285,344,747	2,292,139,361	2,311,978,156	2,328,765,893					
4,711,935	-	-	4,711,935	-					
0.2	-	-	0.2	-					
	Full Year 10,518 4.51 5,087 21.8% 2,440,057,883 2,304,435,542 4,711,935	Full Year         1st           10,518         2,602           4.51         1.13           5,087         2,663           21.8%         21.5%           2,440,057,883         2,385,555,781           2,304,435,542         2,285,344,747           4,711,935         -	Full Year         1st         2nd           10,518         2,602         3,085           4.51         1.13         1.34           5,087         2,663         2,971           21.8%         21.5%         20.3%           2,440,057,883         2,385,555,781         2,396,360,090           2,304,435,542         2,285,344,747         2,292,139,361           4,711,935         -         -	Full Year         1st         2nd         3rd           10,518         2,602         3,085         2,756           4.51         1.13         1.34         1.17           5,087         2,663         2,971         1,079           21.8%         21.5%         20.3%         20.7%           2,440,057,883         2,385,555,781         2,396,360,090         2,415,089,789           2,304,435,542         2,285,344,747         2,292,139,361         2,311,978,156           4,711,935         -         -         4,711,935					

<sup>(1)</sup> Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.

#### MARKET ENVIRONMENT AND PRICE REALIZATIONS

	2018		Quar	ters		2017		Quart	ers		
	Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
Market environment											
Average euro-dollar (\$/€)	1.18	1.23	1.19	1.16	1.14	1.13	1.06	1.10	1.17	1.18	
Brent price (\$/b)	71.3	66.8	74.4	75.2	68.8	54.2	53.7	49.6	52.1	61.3	
Average refining margins (\$/t) – ERMI (1)	32.3	25.6	34.7	39.9	29.1	40.9	38.9	41.0	48.2	35.5	
Price realizations (2)											
TOTAL average liquids price (\$/b) <sup>(3)</sup>	64.2	60.4	69.5	69.5	57.2	50.2	49.2	45.1	48.9	57.6	
TOTAL average gas price (\$/MBtu)	4.78	4.73	4.49	4.96	4.94	4.08	4.10	3.93	4.05	4.23	

<sup>(1)</sup> Total's European Refining Margin Indicator (ERMI); published quarterly by the Group.
(2) Consolidated subsidiaries excluding fixed margin and buy-back contracts and including hydrocarbon production overlifting / underlifting position valued at market price.
(3) Crude oil and natural gas liquids.

2017		Quarter	s		2016		Quarter	S	
Full Year	<b>1</b> <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Full Year	<b>1</b> <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
13,539	3,266	2,897	3,437	3,939	8,929	1,771	1,978	2,235	2,945
7,219	1,750	1,427	1,665	2,377	2,349	47	499	714	1,089
424	80	99	67	178	288	35	2	124	127
4,056	1,047	931	1,182	896	4,366	1,297	965	890	1,214
1,840	389	440	523	488	1,926	392	512	507	515
11,936	2,767	2,748	3,062	3,359	9,410	1,878	2,524	2,332	2,676
5,985	1,382	1,359	1,439	1,805	3,217	386	1,043	781	1,007
485	61	95	97	232	439	73	43	191	132
3,790	1,023	861	1,020	886	4,195	1,130	1,018	916	1,131
1,676	301	433	506	436	1,559	289	420	444	406

2017		Quar	ters		2016		Quar	rters	
Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	<b>4</b> <sup>th</sup>
10,578	2,558	2,474	2,674	2,872	8,287	1,636	2,174	2,070	2,407
4.12	1.01	0.97	1.04	1.10	3.38	0.68	0.9	0.84	0.96
8,631	2,849	2,037	2,724	1,021	6,196	1,606	2,088	1,954	548
11.9%	18.1%	16.6%	15.0%	11.9%	21.1%	22.6%	22.8%	23.2%	21.1%
2,528,989,616	2,453,937,714	2,501,535,888	2,502,754,234	2,528,989,616	2,430,365,862	2,454,029,976	2,503,262,274	2,504,029,528	2,430,365,862
2,494,756,413	2,457,491,053	2,484,608,123	2,504,878,256	2,535,959,002	2,389,713,936	2,350,462,067	2,378,565,375	2,403,550,668	2,433,165,882
						-	-	-	-
					_	-	-	-	-

2014		Quar	ters	
Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
12,837	3,327	3,151	3,558	2,801
5.63	1.46	1.38	1.56	1.22
4,244	3,335	3,104	3,463	(5,658)
23.5%	18.5%	21.0%	21.5%	23.5%
2,385,267,525	2,378,259,685	2,382,870,577	2,384,527,055	2,385,267,525
2,281,004,151	2,276,773,146	2,281,218,870	2,284,596,468	2,286,737,894
4,386,300	-	-	4,386,300	-
0.3	-	-	0.3	-

2016		Quart	ers		2015		Quart	ers		2014		Quart	ers	
Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Full Year	<b>1</b> st	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
1.11	1.10	1.13	1.12	1.08	1.11	1.13	1.11	1.11	1.10	1.33	1.37	1.37	1.33	1.25
43.7	33.9	45.6	45.9	49.3	52.4	53.9	61.9	50.5	43.8	99.0	108.2	109.7	101.9	76.6
34.1	35.1	35	25.5	41	48.5	47.1	54.1	54.8	38.1	18.7	6.6	10.9	29.9	27.6
40.3	31	43	41.4	46.1	47.4	49.5	58.2	44.0	38.1	89.4	102.1	103.0	94.0	61.7
3.56	3.46	3.43	3.45	3.89	4.75	5.38	4.67	4.47	4.45	6.57	7.06	6.52	6.40	6.29

# CONSOLIDATED STATEMENT OF INCOME

For the year ended D	ecember 31,
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(in million dollars, except per share amounts)	2018	2017	2016	2015	2014
Sales	209,363	171,493	149,743	165,357	236,122
Excise taxes	(25,257)	(22,394)	(21,818)	(21,936)	(24,104)
Revenues from sales	184,106	149,099	127,925	143,421	212,018
Purchases, net of inventory variation	(125,816)	(99,411)	(83,377)	(96,671)	(152,975)
Other operating expenses	(27,484)	(24,966)	(24,302)	(24,345)	(28,349)
Exploration costs	(797)	(864)	(1,264)	(1,991)	(1,964)
Depreciation, depletion and impairment of tangible assets and mineral interests	(13,992)	(16,103)	(13,523)	(17,720)	(19,656)
Other income	1,838	3,811	1,299	3,606	2,577
Other expense	(1,273)	(1,034)	(1,027)	(1,577)	(954)
Financial interest on debt	(1,933)	(1,396)	(1,108)	(967)	(748)
Financial income and expense from cash and cash equivalents	(188)	(138)	4	94	108
Cost of net debt	(2,121)	(1,534)	(1,104)	(873)	(640)
Other financial income	1,120	957	971	882	821
Other financial expense	(685)	(642)	(636)	(654)	(676)
Equity in income (loss) of affiliates	3,170	2,015	2,214	2,361	2,662
Income taxes	(6,516)	(3,029)	(970)	(1,653)	(8,614)
Consolidated net income	11,550	8,299	6,206	4,786	4,250
Group share	11,446	8,631	6,196	5,087	4,244
Minority interests	104	(332)	10	(301)	6
Earnings per share (\$)	4.27	3.36	2.52	2.17	1.87
Fully-diluted earnings per share (\$)	4.24	3.34	2.51	2.16	1.86
Adjusted net income Group share	13,559	10,578	8,287	10,518	12,837
Adjusted fully-diluted earnings per share (\$)	5.05	4.12	3.38	4.51	5.63

#### **SALES**

(in million dollars)	2018	2017	2016	2015	2014
By business segment excluding inter-segment sales					
Exploration & Production	10,989	8,477	7,629	10,297	23,484
Gas, Renewables & Power	16,136	12,854	10,124	9,149	
Refining & Chemicals	92,025	75,505	65,632	70,623	106,124
Marketing & Services	90,206	74,634	66,351	75,282	106,509
Corporate	7	23	7	6	5
TOTAL	209,363	171,493	149,743	165,357	236,122
By business segment including inter-segment sales					
Exploration & Production	42,162	31,314	25,388	28,716	52,667
Gas, Renewables & Power	18,025	14,034	11,133	10,395	
Refining & Chemicals	127,487	102,349	87,099	97,417	151,074
Marketing & Services	91,185	75,491	67,095	76,193	108,124
Corporate	71	397	314	224	241
Inter-segment sales	(69,567)	(52,092)	(41,286)	(47,588)	(75,984)
TOTAL	209,363	171,493	149,743	165,357	236,122
By geographic area excluding inter-segment sales					
France	47,716	39,032	33,472	36,536	51,471
Rest of Europe	99,465	83,255	71,551	79,463	114,747
North America	22,243	16,889	15,383	14,857	23,766
Africa	22,263	17,581	15,294	17,612	23,281
Rest of world	17,676	14,736	14,043	16,889	22,857
TOTAL	209,363	171,493	149,743	165,357	236,122

# DEPRECIATION, DEPLETION & IMPAIRMENT OF TANGIBLE ASSETS AND MINERAL INTERESTS BY BUSINESS SEGMENT

### As of December 31,

(in million dollars)	2018	2017	2016	2015	2014
Exploration & Production	(11,288)	(13,850)	(11,583)	(15,660)	(15,938)
Gas, Renewables & Power	(731)	(482)	(301)	(307)	
Refining & Chemicals	(1,222)	(1,074)	(1,002)	(1,092)	(2,901)
Marketing & Services	(709)	(657)	(600)	(634)	(781)
Corporate	(42)	(40)	(37)	(27)	(36)
TOTAL	(13,992)	(16,103)	(13,523)	(17,720)	(19,656)

# EQUITY IN INCOME/(LOSS) OF AFFILIATES BY BUSINESS SEGMENT

#### As of December 31,

(in million dollars)	2018	2017	2016	2015	2014
Exploration & Production	2,380	1,067	1,030	1,658	2,509
Gas, Renewables & Power	48	13	125	113	
Refining & Chemicals	682	778	933	550	315
Marketing & Services	60	157	126	39	(162)
Corporate	-	-	-	1	-
TOTAL	3,170	2,015	2,214	2,361	2,662

### **INCOME TAXES**

(in million dollars)	2018	2017	2016	2015	2014
Current income taxes	(6,971)	(3,416)	(2,911)	(4,552)	(10,904)
Deferred income taxes	455	387	1,941	2,899	2,290
Income taxes	(6,516)	(3,029)	(970)	(1,653)	(8,614)

# ADJUSTMENT ITEMS TO OPERATING INCOME BY BUSINESS SEGMENT

(in million dollars)	Exploration	Gas, Renewables	Refining	Marketing		
	& Production	& Power	& Chemicals	& Services	Corporate	Total
Year 2018			<b>/</b>	(-)		<b>,</b>
Inventory valuation effect	-	-	(589)	(6)	-	(595)
Effect of changes in fair value	-	48	-	-	-	48
Restructuring charges	(67)	-	(3)	-	-	(70)
Asset impairment of charges	(1,256)	(516)	(2)	-	-	(1,774)
Other	(132)	(229)	(24)	(39)	(9)	(433)
TOTAL	(1,455)	(697)	(618)	(45)	(9)	(2,824)
Year 2017						
Inventory valuation effect	-	-	344	13	-	357
Effect of changes in fair value	-	(20)	-	-	-	(20)
Restructuring charges	(42)	-	(4)	(3)	-	(49)
Asset impairment of charges	(4,308)	(291)	(53)	(10)	-	(4,662)
Other	(77)	(389)	(173)	(21)	(64)	(724)
TOTAL	(4,427)	(700)	114	(21)	(64)	(5,098)
Year 2016						
Inventory valuation effect	-	-	695	(43)	-	652
Effect of changes in fair value	-	(4)	-	-	-	(4)
Restructuring charges	(19)	(18)	-	-	-	(37)
Asset impairment of charges	(2,089)	(139)	-	(1)	-	(2,229)
Other	(672)	(288)	(70)	(93)	-	(1,123)
TOTAL	(2,780)	(449)	625	(137)	-	(2,741)
Year 2015						
Inventory valuation effect	-	-	(859)	(254)	-	(1,113)
Effect of changes in fair value	-	(16)	-	-	-	(16)
Restructuring charges	(43)	-	-	(5)	-	(48)
Asset impairment of charges	(6,591)	(192)	(70)	(24)	-	(6,877)
Other	(516)	(541)	(176)	(24)	-	(1,257)
TOTAL	(7,150)	(749)	(1,105)	(307)	-	(9,311)
Year 2014						
Inventory valuation effect	-	-	(2,944)	(525)	-	(3,469)
Effect of changes in fair value	31	-	-	-	-	31
Restructuring charges	-	-	-	-	-	-
Asset impairment of charges	(6,529)	-	(1,450)	-	-	(7,979)
Other	(164)	-	(36)	(26)	-	(226)
TOTAL	(6,662)	-	(4,430)	(551)	-	(11,643)

### ADJUSTMENT ITEMS TO NET INCOME, GROUP SHARE BY BUSINESS SEGMENT

(in million dollars)	Exploration & Production	Gas, Renewables & Power	Refining & Chemicals	Marketing & Services	Corporate	Total
Year 2018						
Inventory valuation effect	-	-	(414)	(6)	-	(420)
Effect of changes in fair value	-	38	-	-	-	38
Restructuring charges	(94)	(10)	(34)	-	-	(138)
Asset impairment of charges	(1,259)	(288)	(48)	-	-	(1,595)
Gains (losses) on asset sales	(14)	(2)	-	-	-	(16)
Other	288	(148)	(34)	(47)	(41)	18
TOTAL	(1,079)	(410)	(530)	(53)	(41)	(2,113)
Year 2017						
Inventory valuation effect	-	-	295	(13)	-	282
Effect of changes in fair value	-	(16)	-	-	-	(16)
Restructuring charges	(11)	(11)	(42)	(2)	-	(66)
Asset impairment of charges	(3,583)	(238)	(53)	(10)	-	(3,884)
Gains (losses) on asset sales	188	-	2,139	125	-	2,452
Other	(287)	(293)	73	(30)	(178)	(715)
TOTAL	(3,693)	(558)	2,412	70	(178)	(1,947)
Year 2016						
Inventory valuation effect	-	-	498	(19)	-	479
Effect of changes in fair value	-	(3)	-	-	-	(3)
Restructuring charges	(4)	(28)	-	-	-	(32)
Asset impairment of charges	(1,867)	(131)	(78)	(18)	(3)	(2,097)
Gains (losses) on asset sales	287	5	-	(25)	-	267
Other	(293)	(237)	(91)	(84)	-	(705)
TOTAL	(1,877)	(394)	329	(146)	(3)	(2,091)
Year 2015						
Inventory valuation effect	-	-	(590)	(157)	-	(747)
Effect of changes in fair value	-	(9)	-	-	-	(9)
Restructuring charges	(10)	(5)	(52)	(5)	-	(72)
Asset impairment of charges	(5,057)	(270)	(59)	(49)	(12)	(5,447)
Gains (losses) on asset sales	162	-	1,288	360	-	1,810
Other	(148)	(421)	(264)	(133)	-	(966)
TOTAL	(5,053)	(705)	323	16	(12)	(5,431)
Year 2014						
Inventory valuation effect	-	-	(2,114)	(339)	-	(2,453)
Effect of changes in fair value	25	-	-	-	-	25
Restructuring charges	-	-	(13)	(7)	-	(20)
Asset impairment of charges	(5,514)	-	(1,409)	(140)	-	(7,063)
Gains (losses) on asset sales	1,314	-	(105)	-	-	1,209
Other	(193)	-	(58)	(40)	-	(291)
TOTAL	(4,368)	-	(3,699)	(526)	-	(8,593)

#### CONSOLIDATED BALANCE SHEET

As of December 31, (in million dollars)	2018	2017	2016	2015	2014
ASSETS					
Non-current assets					
Intangible assets, net	28,922	14,587	15,362	14,549	14,682
Property, plant and equipment, net	113,324	109,397	111,971	109,518	106,876
Equity affiliates: investments and loans	23,444	22,103	20,576	19,384	19,274
Other investments	1,421	1,727	1,133	1,241	1,399
Non-current financial assets	680	679	908	1,219	1,319
Deferred income taxes	6,663	5,206	4,368	3,982	4,079
Other non-current assets	2,509	3,984	4,143	4,355	4,192
TOTAL NON-CURRENT ASSETS	176,963	157,683	158,461	154,248	151,821
Current assets					
Inventories, net	14,880	16,520	15,247	13,116	15,196
Accounts receivable, net	17,270	14,893	12,213	10,629	15,704
Other current assets	14,724	14,210	14,835	15,843	15,702
Current financial instruments	3,654	3,393	4,548	6,190	1,293
Cash and cash equivalents	27,907	33,185	24,597	23,269	25,181
Assets classified as held for sale	1,364 (1)	2,747 (3)	1,077 (5)	1,189 <sup>(7)</sup>	4,901 <sup>(9)</sup>
TOTAL CURRENT ASSETS	79,799	84,948	72,517	70,236	77,977
TOTAL ASSETS	256,762	242,631	230,978	224,484	229,798
LIABILITIES AND SHAREHOLDERS' EQUITY					
Shareholders' equity					
Common shares	8,227	7,882	7,604	7,670	7,518
Paid-in surplus and retained earnings	120,569	112,040	105,547	101,528	94,646
Currency translation adjustment	(11,313)	(7,908)	(13,871)	(12,119)	(7,480)
Treasury shares	(1,843)	(458)	(600)	(4,585)	(4,354)
TOTAL SHAREHOLDERS' EQUITY - GROUP SHARE	115,640	111,556	98,680	92,494	90,330
Non-controlling interests	2,474	2,481	2,894	2,915	3,201
TOTAL SHAREHOLDERS' EQUITY	118,114	114,037	101,574	95,409	93,531
Non-current liabilities					
Deferred income taxes	11,490	10,828	11,060	12,360	14,810
Employee benefits	3,363	3,735	3,746	3,774	4,758
Provisions and other non-current liabilities	21,432	15,986	16,846	17,502	17,545
Non-current financial debt	40,129	41,340	43,067	44,464	45,481
TOTAL NON-CURRENT LIABILITIES	76,414	71,889	74,719	78,100	82,594
Current liabilities					
Accounts payable	26,134	26,479	23,227	20,928	24,150
Other creditors and accrued liabilities	22,246	17,779	16,720	16,884	16,641
Current borrowings	13,306	11,096	13,920	12,488	10,942
Other current financial liabilities	478	245	327	171	180
Liabilities directly associated with the assets classified as held for sale	70 (2)	1,106(4)	491 <sup>(6)</sup>	504 <sup>(8)</sup>	1,760 (10)
TOTAL CURRENT LIABILITIES	62,234	56,705	54,685	50,975	53,673
TOTAL LIABILITIES	256,762	242,631	230,978	224,484	229,798
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<sup>(1) \$1,077</sup> million of Ichthys in Australia have been classified as "Assets classified as held for sale". \$116 million of Total Petrochemicals (Ningbo) Ltd and \$79 million of Total Petrochemicals Foshan in China have been classified as "Assets classified as held for sale". \$61 million of Hazira LNG Private Ltd and \$31 million of Hazira Port Private Ltd in India have been classified

as "Assets classified as held for sale".

(2) \$41 million of Total E&P Ichthys BV in Netherlands has been classified as "Liabilities directly associated with the assets classified as held for sale". \$16 million of Total Petrochemicals Foshan and \$13 million of Total Petrochemicals (Ningbo) Ltd in China have been classified as "Liabilities directly associated with the assets classified as held for sale".

<sup>(3) \$2,581</sup> million of Nartin Linge in Norway has been classified as "Assets classified as held for sale".

(4) \$1,106 million of Martin Linge in Norway has been classified as "Liabilities directly associated with the assets classified as held for sale".

(5) \$1,077 million of Atotech has been classified as "Liabilities directly associated with the assets classified as held for sale".

(6) \$491 million of Atotech has been classified as "Liabilities directly associated with the assets classified as held for sale".

(7) \$497 million of Futka in United Kingdom has been classified as "Assets classified as held for sale".

\$234 million of Futka in United Kingdom has been classified as "Assets classified as held for sale".

<sup>\$234</sup> million of Kharyaga in Russia has been classified as "Assets held for sale". (\$) \$82 million of Fuka in United Kingdom has been classified as "Liabilities directly associated with the assets classified as held for sale". \$258 million of Total Turkyie has been classified as "Liabilities directly associated with the assets classified as held for sale". \$164 million of Kharyaga in Russia has been classified as "Liabilities directly associated with the assets classified as held for sale". \$469 million of Dottl 138 in Nigeria has been classified as "Assets classified as held for sale". \$469 million of TCSA has been classified as "Assets held for sale". \$367 million of Totalgaz has been classified as "Assets held for sale". \$10,\$831 million of Dottl 138 in Nigeria has been classified as "Liabilities directly associated with the assets classified as Held for sale". \$606 million of Bostik has been classified as "Liabilities directly associated with the assets classified as "Liabilities directly associated with the assets classified as "Liabilities directly associated with the assets classified as held for sale". \$606 million of Bostik has been classified as held for sale". \$606 million of Bostik has been classified as held for sale". \$606 million of Bostik has been classified as held for sale".

<sup>\$265</sup> million of Totalgaz has been classified as "Liabilities directly associated with the assets classified as held for sale".

#### NET TANGIBLE & INTANGIBLE ASSETS BY BUSINESS SEGMENT

#### As of December 31,

(in million dollars)	2018	2017	2016	2015	2014
Exploration & Production	116,518	103,639	109,617	108,204	105,273
Tangibles	94,783	91,800	96,682	95,072	92,262
Intangibles	21,735	11,839	12,935	13,132	13,011
Gas, Renewables & Power	8,502	2,873	2,834	1,248	
Tangibles	2,941	1,661	1,707	1,103	
Intangibles	5,561	1,212	1,127	145	
Refining & Chemicals	10,493	10,820	9,293	9,317	9,512
Tangibles	9,869	10,150	8,661	8,631	8,798
Intangibles	624	670	632	686	714
Marketing & Services	6,343	6,253	5,225	4,989	6,443
Tangibles	5,463	5,519	4,661	4,506	5,580
Intangibles	880	734	564	483	863
Corporate	390	399	364	309	330
Tangibles	268	267	260	206	236
Intangibles	122	132	104	103	94
TOTAL	142,246	123,984	127,333	124,067	121,558

### PROPERTY, PLANT & EQUIPMENT

#### As of December 31,

(in million dollars)	2018	2017	2016	2015	2014
Proved properties	71,837	62,223	62,901	58,687	52,968
Unproved properties	1,521	1,828	1,996	2,423	2,153
Work in progress	21,425	27,749	31,785	33,962	37,124
TOTAL EXPLORATION & PRODUCTION PROPERTIES	94,783	91,800	96,682	95,072	92,245
Land	1,127	1,157	1,011	970	1,070
Machinery plant and equipment (including transportation equipment)	9,171	7,780	5,680	5,748	6,092
Buildings	3,224	3,344	2,998	2,637	2,850
Construction in progress	2,538	2,309	2,770	2,577	2,043
Other	2,481	3,007	2,830	2,514	2,576
OTHER	18,541	17,597	15,289	14,446	14,631
TOTAL <sup>(1)</sup>	113,324	109,397	111,971	109,518	106,876

 $<sup>(1) \ \ \</sup>text{As of December 31,2018 accumulated depreciation, depletion and amortization amounted to 160,088 \ M\$. }$ 

# NON-CURRENT ASSETS BY BUSINESS SEGMENT (1)

#### As of December 31,

(in million dollars)	2018	2017	2016	2015	2014
Exploration & Production	139,977	127,434	132,309	130,145	126,904
Gas, Renewables & Power	12,041	5,417	4,935	3,619	
Refining & Chemicals	15,067	15,506	13,165	13,032	13,987
Marketing & Services	7,929	7,751	6,723	6,426	9,129
Corporate	1,269	896	421	(193)	482
TOTAL	176,283	157,004	157,553	153,029	150,502

<sup>(1)</sup> Non-current financial assets are not included here.

# NON-CURRENT DEBT ANALYSIS

As of December 31, (in million dollars, except percent)	2018	%	2017	%	2016	%	2015	%	2014	%
Loan repayment schedule <sup>(1)</sup>										
2014					-	-	-	-	-	-
2015					-	-	-	-	-	-
2016					-	-	-	-	4,793	11%
2017					-	-	4,602	11%	4,547	10%
2018					4,320	10%	4,420	10%	4,451	10%
2019			5,930	15%	5,702	14%	5,542	13%	4,765	11%
2020	5,432	14%	5,117	13%	4,952	12%	4,965	11%	25,606 (2)	58%
2021	3,966	10%	3,795	9%	3,578	8%	23,716(3)	55%	-	-
2022	5,158	13%	4,959	12%	23,607 (4)	56%	-	-	-	-
2023	4,983	13%	20,860(5)	51%	-	-	-	-	-	-
2024 and beyond	19,910	50%								
TOTAL	39,449	100%	40,661	100%	42,159	100%	43,245	100%	44,162	100%
(in million dollars, except percent)	2018	%	2017	%	2016	%	2015	%	2014	%
Analysis by currency <sup>(1)</sup>										
U.S. dollar	38,120	97%	38,703	95%	39,963	95%	40,337	93%	41,369	94%
Euro	1,103	3%	724	2%	977	2%	1,681	4%	2,428	5%
Norwegian Krones	27	0%	975	2%	928	2%	907	2%	-	-
Other currencies	199	0%	259	1%	291	1%	320	1%	365	1%
TOTAL	39,449	100%	40,661	100%	42,159	100%	43,245	100%	44,162	100%
(in million dollars, except percent)	2018	%	2017	%	2016	%	2015	%	2014	%
Analysis by interest rate (1)										
Fixed rate	18,139	46%	18,332	45%	11,703	28%	7,666	18%	6,944	16%
Floating rates	21,310	54%	22,329	55%	30,456	72%	35,579	82%	37,218	84%

These analyses are presented after the impact of interest rate and currency swaps.
 2020 and after.
 2021 and after.
 2022 and after.
 2023 and after.

39,449

100%

40,661

100%

42,159

100%

43,245

100%

44,162

100%

**TOTAL** 

# CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY – GROUP SHARE

(in million dollars)	Common s	hares issued	Paid-in surplus and retained	Cumulative translation			Treasury shares		Shareholders
	Number	Amount	earnings	adjustments	Number	Amount	equity		
AS OF JANUARY 1, 2014	2,377,678,160	7,493	98,254	(1,203)	(109,214,448)	(4,303)	100,241		
Dividend	-	-	(7,378)				(7,378)		
Net income 2014	-	-	4,244				4,244		
Other comprehensive income	-	-	(907)	(6,275)	-	-	(7,182)		
Issuance of common shares	7,589,365	25	395	-	-	-	420		
Purchase of treasury shares	-	-	-	-	(4,386,300)	(283)	(283)		
Sales of treasury shares (1)	-	-	(232)	-	4,239,335	232	-		
Share-based payments	-	-	114	-	-	-	114		
Share cancellation	-	-	-	-	-	-	-		
Translation adjustments	-	-	-	-	-	-	-		
Other operations with minority interests	-	-	148	(2)	-	-	146		
Other items	-	-	8	-	-	-	8		
AS OF DECEMBER 31, 2014	2,385,267,525	7,518	94,646	(7,480)	(109,361,413)	(4,354)	90,330		
Dividend	-	-	(6,303)	_	_	_	(6,303)		
Net income 2015	-	-	5,087	_	-		5,087		
Other comprehensive income	-	-	185	(4,639)	-	-	(4,454)		
Issuance of common shares	54,790,358	152	2,159	_			2,311		
Purchase of treasury shares	-	-	-		(4,711,935)	(237)	(237)		
Sales of treasury shares <sup>(1)</sup>	-	-	(6)		105,590				
Share-based payments			101				101		
Share cancellation		_	-				-		
Issuance of perpetual subordinated notes	-	_	5,616				5,616		
Payments on perpetual subordinated notes	-	-	(114)				(114)		
Other operations with minority interests	_	-	23		_		23		
Other items	_	-	134		_		134		
AS OF DECEMBER 31, 2015	2,440,057,883	7,670	101,528	(12.119)	(113,967,758)	(4,585)	92,494		
Dividend	-	-	(6,512)	-	-	-	(6,512)		
Net income 2016	-	-	6,196	_	_		6,196		
Other comprehensive income	-	-	(108)	(1,752)			(1,860)		
Issuance of common shares	90,639,247	251	3,553		-		3,804		
Purchase of treasury shares	-	-	-	_	-		-		
Sales of treasury shares <sup>(1)</sup>	-	-	(163)		3,048,668	163	-		
Share-based payments	-	-	112				112		
Share cancellation	(100,331,268)	(317)	(3,505)		100,331,268	3,822	-		
Issuance of perpetual subordinated notes	-	-	4,711				4,711		
Payments on perpetual subordinated notes	-	-	(203)	_		_	(203)		
Other operations with minority interests	-	-	(98)				(98)		
Other items	-	-	36	_			36		
AS OF DECEMBER 31, 2016	2,430,365,862	7,604	105,547	(13,871)	(10,587,822)	(600)	98,680		
Dividend	-	-	(6,992)	-			(6,992)		
Net income 2017	-	-	8,631			_	8,631		
Other comprehensive income	-	_	718	5,963			6,681		
Issuance of common shares	98,623,754	278	4,431				4,709		
Purchase of treasury shares	-	-	-						
Sales of treasury shares <sup>(1)</sup>	-	_	(142)		2,211,066	142			
Share-based payments	-	-	151	_		_	151		
Share cancellation	-	-	-	_			-		
Issuance of perpetual subordinated notes	-	-	-						
							(302)		
	-	-	(302)	-	-	-	(002)		
Payments on perpetual subordinated notes Other operations with minority interests	-	-	(302)				(8)		

(in million dollars)	Common	shares issued	Paid-in surplus	Cumulative	Treasury shares		Shareholders'
	Number	Amount	and retained earnings	translation adjustments	Number	Amount	equity
AS OF DECEMBER 31, 2017	2,528,989,616	7,882	112,040	(7,908)	(8,376,756)	(458)	111,556
Dividend	-	-	(7,881)	-	-	-	(7,881)
Net income 2018	-	-	11,446	-	-	_	11,446
Other comprehensive income	-	-	(20)	(3,405)	-	-	(3,425)
Issuance of common shares	156,203,090	476	8,366	_	-	_	8,842
Purchase of treasury shares	-	-	-	_	(72,766,481)	(4,328)	(4,328)
Sales of treasury shares (1)	-	-	(240)	-	4,079,257	240	-
Share-based payments	-	-	294	-	-	-	294
Share cancellation	(44,590,699)	(131)	(2,572)	-	44,590,699	2,703	-
Issuance of perpetual subordinated notes	-	-	-	-	-	-	-
Payments on perpetual subordinated notes	-	-	(315)	-	-	-	(315)
Other operations with minority interests	-	-	(517)	-	-	-	(517)
Other items	-	-	(32)	-	-	-	(32)
AS OF DECEMBER 31, 2018	2,640,602,007	8,227	120,569	(11,313)	(32,473,281)	(1,843)	115,640

<sup>(1)</sup> Treasury shares related to the restricted stock grants.

#### NET-DEBT-TO-EQUITY RATIO

Ας	of	Dec	emi	her	31

(in million dollars, except percent)	2018	2017	2016	2015	2014
Net financial debt	21,657	15,424	27,121	26,586	28,754
Shareholder's equity	118,114	114,037	101,574	95,409	93,531
NET-DEBT-TO-EQUITY RATIO	15.5%	11.9%	21.1%	21.8%	23.5%

# CAPITAL EMPLOYED BASED ON REPLACEMENT COST BY BUSINESS SEGMENT

#### As of December 31,

(in million dollars)	2018	2017	2016	2015	2014
Exploration & Production	114,885	107,921	107,617	103,791	100,497
Gas, Renewables & Power	9,261	4,692	4,975	4,340	-
Refining & Chemicals	10,599	11,045	11,618	10,454	13,451
Marketing & Services	6,442	6,929	5,884	5,875	8,825
Corporate	(2,668)	(2,860)	(2,671)	(3,317)	(2,247)
TOTAL	138,519	127,727	127,423	121,143	120,526

#### **CAPITAL EMPLOYED**

# As of December 31,

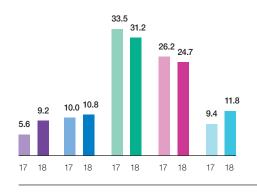
(in million dollars)	2018	2017	2016	2015	2014
Non-current assets	176 283	157,005	157,553	153,029	150,502
Assets and liabilities classified as held for sale	1,279	1,641	446	826	3,085
Working capital	(1,507)	1,365	2,348	1,776	5,811
Long-term liabilities	(36,285)	(30,549)	(31,652)	(33,636)	(37,113)
CAPITAL EMPLOYED	139,770	129,462	128,695	121,995	122,285

#### **ROACE BY BUSINESS SEGMENT**

(in million dollars, except percent)	2018	2017	2016	2015	2014
Exploration & Production					
Adjusted net operating income	10,210	5,985	3,217	4,330	10,504
Average capital employed <sup>(1)</sup>	111,403	107,769	105,704	101,134	98,013
ROACE	9.2%	5.6%	3.0%	4.3%	10.7%
Gas, Renewables & Power					
Adjusted net operating income	756	485	439	567	
Average capital employed <sup>(1)</sup>	6,977	4,834	4,658	4,260	
ROACE	10.8%	10.0%	9.4%	13.3%	
Refining & Chemicals					
Adjusted net operating income	3,379	3,790	4,195	4,839	2,489
Average capital employed (1)	10,822	11,332	11,036	11,995	16,602
ROACE	31.2%	33.5%	38.0%	40.3%	15.0%
Marketing & Services					
Adjusted net operating income	1,652	1,676	1,559	1,591	1,254
Average capital employed (1)	6,686	6,407	5,880	6,272	9,438
ROACE	24.7%	26.2%	26.5%	25.4%	13.3%
Corporate					
Adjusted net operating income	(306)	22	(136)	73	(717)
Average capital employed <sup>(1)</sup>	(2,765)	(2,767)	(2,995)	(2,826)	(2,564)
Group					
Adjusted net operating income	15,691	11,958	9,274	11,400	13,530
Average capital employed (1)	133,123	127,575	124,283	120,835	121,489
ROACE	11.8%	9.4%	7.5%	9.4%	11.1%

<sup>(1)</sup> At replacement cost (excluding after-tax inventory effect). Average Capital Employed = (Capital Employed beginning of the year + Capital Employed end of the year)/2.

# **ROACE BY BUSINESS SEGMENT (%)**



# CONSOLIDATED STATEMENT OF CASH FLOW

(in million dollars)	2018	2017	2016	2015	2014
Cash flow from operating activities					
Consolidated net income	11,550	8,299	6,206	4,786	4,250
Depreciation, depletion, amortization and impairment	14,584	16,611	14,423	19,334	20,859
Non-current liabilities, valuation allowances,					
and deferred taxes	(887)	(384)	(1,559)	(2,563)	(1,980)
(Gains) losses on sales of assets	(930)	(2,598)	(263)	(2,459)	(1,979)
Undistributed affiliates' equity earnings	(826)	42	(643)	(311)	29
(Increase) decrease in working capital	769	827	(1,119)	1,683	4,480
Other changes, net	443	(478)	(524)	(524)	(51)
CASH FLOW FROM OPERATING ACTIVITIES	24,703	22,319	16,521	19,946	25,608
Cash flow used in investing activities					
Intangible assets and property, plant,	(17.000)	(4.0. = 0.=)	(10.100)	(0.5. 4.0.0)	(00.000)
and equipment additions	(17,080)	(13,767)	(18,106)	(25,132)	(26,320)
Acquisition of subsidiaries, net of cash acquired	(3,379)	(800)	(1,123)	(128)	(471)
Investments in equity affiliates and other securities	(1,108)	(1,368)	(180)	(513)	(949)
Increase in non-current loans	(618)	(961)	(1,121)	(2,260)	(2,769)
TOTAL EXPENDITURES	(22,185)	(16,896)	(20,530)	(28,033)	(30,509)
Proceeds from disposal of intangible assets,					
and property, plant and equipment	3,716	1,036	1,462	2,623	3,442
Proceeds from disposal of subsidiaries, net of cash sold	12	2,909	270	2,508	136
Proceeds from disposal of non-current investments	1,444	294	132	837	1,072
Repayment of non-current loans	2,067	1,025	1,013	1,616	1,540
TOTAL DIVESTMENTS	7,239	5,264	2,877	7,584	6,190
CASH FLOW USED IN INVESTING ACTIVITIES	(14,946)	(11,632)	(17,653)	(20,449)	(24,319)
Cash flow (from)/used financing activities					
Issuance (repayment) of shares:					
- parent company shareholders	498	519	100	485	420
- treasury shares	(4,328)	-	-	(237)	(289)
Cash dividend paid:					
- parent company's shareholders	(4,913)	(2,643)	(2,661)	(2,845)	(7,308)
- minority shareholders	(97)	(141)	(93)	(100)	(154)
Issuance of perpetual subordinated notes	-	-	4,711	5,616	-
Payments on perpetual subordinated notes	(325)	(276)	(133)	-	-
Other transactions with non controlling interest	(622)	(4)	(104)	89	179
Net issuance (repayment) of non-current debt	649	2,277	3,576	4,166	15,786
(Increase) decrease in current borrowings	(3,990)	(7,175)	(3,260)	(597)	(2,374)
(Increase) decrease in current financial assets and liabilities	(797)	1,903	1,396	(5,517)	(351)
CASH FLOW USED IN FINANCING ACTIVITIES	(13,925)	(5,540)	3,532	1,060	5,909
NET INCREASE (DECREASE) IN CASH AND CASH		-			
EQUIVALENTS	(4,168)	5,147	2,400	557	7,198
Effect of exchange rates	(1,110)	3,441	(1,072)	(2,469)	(2,217)
Cash and cash equivalents at the beginning of the period	33,185	24,597	23,269	25,181	20,200
CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD	27,907	33,185	24,597	23,269	25,181
CASH FLOW FROM OPERATING ACTIVITIES					
(in million dollars)	2018	2017	2016	2015	2014 (1)
By business segment					
Exploration & Production	19.803	12.821	9.866	12.165	16.666

(in million dollars)	2018	2017	2016	2015	2014(1)
By business segment					
Exploration & Production	19,803	12,821	9,866	12,165	16,666
Gas, Renewables & Power	(670)	1,055	589	(360)	
Refining & Chemicals	4,308	7,411	4,584	6,435	6,302
Marketing & Services	2,759	2,221	1,833	2,440	2,721
Corporate	(1,497)	(1,189)	(351)	(734)	(81)
TOTAL	24,703	22,319	16,521	19,946	25,608

<sup>(1) 2014</sup> data are not restated to reflect the new organization with four business segments therefore the data shown for 2014 include Gas businesses.

#### GROSS INVESTMENTS (1)

(in million dollars)	2018	2017	2016	2015	2014
By business segment					
Exploration & Production	15,282	12,802	16,085	24,233	26,520
Gas, Renewables & Power	3,539	797	1,221	588	
Refining & Chemicals	1,781	1,734	1,861	1,875	2,022
Marketing & Services	1,458	1,457	1,245	1,267	1,818
Corporate	125	106	118	70	149
TOTAL	22,185	16,896	20,530	28,033	30,509
By geographic area					
France	4,502	1,193	1,835	980	1,266
Rest of Europe	2,609	2,805	3,842	4,783	5,880
North America	2,014	2,916	2,825	3,493	3,658
Africa	4,838	5,030	6,859	9,154	9,798
Rest of world	8,222	4,952	5,169	9,623	9,907
TOTAL	22,185	16,896	20,530	28,033	30,509

<sup>(1)</sup> Including acquisitions and increases in non-current loans.

### ORGANIC INVESTMENTS (2) BY BUSINESS SEGMENT

(in million dollars)	2018	2017	2016	2015	2014
Exploration & Production	9,186	11,310	14,464	20,536	22,959
Gas, Renewables & Power	511	353	270	397	
Refining & Chemicals	1,604	1,625	1,642	850	1,944
Marketing & Services	1,010	1,019	1,003	1,130	1,424
Corporate	115	88	105	63	104
TOTAL	12,426	14,395	17,484	22,976	26,430

<sup>(2)</sup> Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

#### DIVESTMENTS BY BUSINESS SEGMENT

(in million dollars)	2018	2017	2016	2015	2014
Exploration & Production	4,952	1,918	2,187	2,880	5,764
Gas, Renewables & Power	931	73	166	418	
Refining & Chemicals	919	2,820	88	3,494	192
Marketing & Services	428	413	424	767	163
Corporate	9	40	12	25	71
TOTAL	7,239	5,264	2,877	7,584	6,190

#### 2018 ORGANIC INVESTMENTS BY BUSINESS SEGMENT





#### 2018 GROSS INVESTMENTS BY GEOGRAPHIC AREA

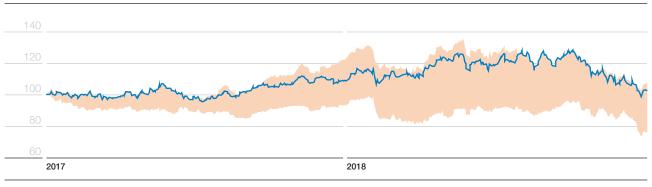


France———	<b>—20.3</b> %
Rest of Europe —	<del>11.7</del> %
North America —	<b>9.1</b> %
Africa———	<b>—21.8</b> %
Rest of world——	<del>37.1</del> %

#### SHARE PERFORMANCE

# Total ADR price in New York versus peers (1)

(in dollars)



TOTAL — Peer range —

Source: Bloomberg. Rebased to 100, in 2017. (1) BP, Chevron, ExxonMobil, Shell.

#### SHAREHOLDING STRUCTURE ESTIMATE AS OF DECEMBER 31, 2018

# Distribution by shareholders by type (excluding treasury shares)



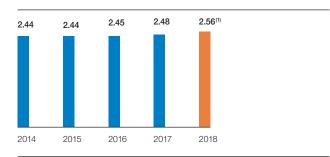
(1) Based on the definition of employees shareholding persuant to Article L. 225-102 of the French Commercial Code, treasury shares excluded.

# Distribution by shareholders by geographic area (excluding treasury shares)



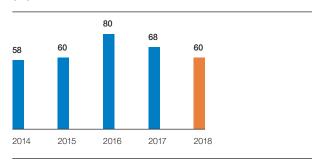
#### **DIVIDEND**

# Dividend per share (in euros)



(1) The 2018 dividend is subject to approval at the May 1, 2019 Annual Shareholders' meeting.

# Pay-out ratio (%)



#### SHARE INFORMATION

	2018	2017	2016	2015	2014
Shares outstanding (as of December 31)	2,640,602,007	2,528,989,616	2,430,365,862	2,440,057,883	2,385,267,525
Fully-diluted weighted-average number of shares (1)	2,623,716,444	2,494,756,413	2,389,713,936	2,304,435,542	2,281,004,151
Shares on a fully-diluted basis (as of December 31)(1)	2,623,358,837	2,535,742,821	2,435,713,864	2,336,295,758	2,285,476,721
Treasury Shares	32,473,281	8,376,756	10,587,822	113,967,758	109,361,413
Price per share <sup>(€)</sup>					
High	56.82	49.50	48.89	50.30	54.71
Low	43.09	42.23	35.21	36.92	38.25
Year-end Year-end	46.18	46.05	48.72	41.27	42.52
Price per ADR (\$)					
High	65.69	57.07	51.36	55.86	74.22
Low	49.70	48.15	39.05	40.93	48.43
Year-end	52.18	55.28	50.97	44.95	51.20
Market capitalization at year-end, computed on shares outstanding					
Billion €	121.9	116.4	118.4	100.7	101.4
Billion \$	137.8	139.8	123.8	109.7	122.1
Trading volume (daily average)					
Euronext Paris	6,199,835	5,380,909	6,508,817	7,412,179	5,519,597
New York Stock Exchange (number of ADRs)	1,855,274	1,667,928	2,109,802	1,853,669	1,277,433
Adjusted fully-diluted earnings per share $(\$)^{(2)}$	5.05	4.12	3.38	4.51	5.63
Dividend per share (€)	2.56(3)	2.48	2.45	2.44	2.44
Dividend per ADR (\$)	2.94 (3) (4)	2.96	2.61	2.67	2.93
Pay-out (5)	60%	68%	80%	60%	58%
Price-to-earning ratio (6)	10.8	12.6	15.9	10.1	10.1
Yield <sup>(7)</sup>	5.54%	5.39%	5.03%	5.91%	5.74%

 <sup>(1)</sup> Excluding treasury shares, cancelled in the consolidated equity pursuant to IFRS rules.
 (2) Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.
 (3) Subject to approval of the Annual General Meeting on May 29, 2019.
 (4) 2018 estimated dividend in dollars includes the first quarterly interim ADR dividend of \$0.74 paid in October 2018 and the second quarterly interim ADR dividend of \$0.74 paid in January 2019, as well as the third quarterly interim ADR dividend of \$0.73 payable in April 2019 and the proposed final interim ADR dividend of \$0.73 payable in June 2019, both converted at a rate of \$1.15/€.
 (5) Dividend (€)/adjusted fully-diluted earnings per share (€).
 (6) Share price at year-end (€)/adjusted fully-diluted earnings per share (€).
 (7) Dividend (€)/share price at year-end (€).

### PAYROLL (1)

#### For the year ended December 31,

(in million dollars)	2018	2017	2016	2015	2014
Wages and salaries (including social charges)	9,099	7,985	8,238	8,088	9,690

<sup>(1)</sup> Personnel expenses and number of employees of fully-consolidated subsidiaries.

### NUMBER OF EMPLOYEES

As of December 31,	2018	2017	2016	2015	2014
Number of employees by region <sup>(1)</sup>					
France	34.5%	32.1%	31.1%	31.5%	32.5%
Rest of Europe	28.3%	26.1%	25.2%	24.5%	23.9%
Rest of world	37.2%	41.8%	43.7%	44.0%	43.6%
TOTAL	104,460	98,277	102,168	96,019	100,307

As of December 31,	2018	2017	2016	2015
Number of employees by business segment <sup>(1)</sup>				
Exploration & Production	13.2%	14.3%	14.6%	17.1%
Gas, Renewables & Power	11.6%	11.8%	12.7%	9.8%
Refining & Chemicals	48.7%	49.8%	50.4%	50.2%
Marketing & Services	24.0%	21.6%	20.4%	21.3%
Corporate	2.5%	2.5%	1.9%	1.6%
TOTAL	104,460	98,277	102,168	96,019

 $<sup>(1) \ {\</sup>hbox{Personnel expenses and number of employees of fully-consolidated subsidiaries}. }$ 

#### As of December 31, 2018

Number of employees by business segment (2)	
Exploration & Production	12,801
Gas, Renewables & Power	12,011
Refining & Chemicals	49,883
Refining & Chemicals	49,231
Trading & Shipping	652
Marketing & Services	24,630
Corporate	2,512

<sup>(2)</sup> Employees present: employees present are employees on the payroll of the consolidated scope, less employees who are not present, i.e., persons who are under suspended contract (sabbatical, business development leave, etc.), absent on long-term sick leave (more than six months), assigned to a company outside the Group, etc.



# Integrating climate into our strategy

TOTAL's ambition is to become the responsible energy major. Climate is therefore at the heart of the Company's strategic vision and the Group relies on five major levers to structure its approach:

#### Improving energy efficiency

Optimizing the energy consumption of its facilities is TOTAL's first lever to reduce emissions. The Group has improved its energy efficiency by more than 10% between 2010 and 2018 and reduced its routine flaring by more than 80% despite the growing complexity of its operations. The Group aims to reduce the GHG emission (Scope 1 & 2) on operated oil & gas facilities from 46 Mt  $\rm CO_2e$  in 2015 to less than 40 Mt  $\rm CO_2e$  in 2025.

#### Growing in natural gas

To respond responsibly to the strong rise in demand for electricity, TOTAL is committed to natural gas, which emits half as much  $\mathrm{CO}_2\mathrm{e}$  as coal, when used for power generation. The Group is investing along the entire gas value chain, and 2018 saw significant operations both upstream and downstream.

In the Upstream business, TOTAL invested in the giant Yamal LNG project in Russia and acquired Engie's LNG assets, which will help propel TOTAL's LNG volumes to nearly 40Mt by 2020. Naturally, this goes hand in hand with the Group's continued programme to reduce methane emissions associated with the production and transportation of gas. In 2018, TOTAL's methane emissions were kept below 0.25% of the commercial gas produced and the Group's target is to sustainably reduce this to less than 0.20% by 2025.

In the Downstream business, TOTAL's main investment in 2018 was the acquisition of Direct Énergie, a leading gas and electricity supplier in France and Belgium.

#### Developing a profitable low carbon electricity business

TOTAL is investing along the whole of the low-carbon electricity value chain, from gas and renewables based electricity generation, storage, and sale to the end customer. The Group plans to invest \$1.5 to \$2.0 billion per year to establish itself as a major player, with an ambition to generate 10 GW of low carbon electricity in the five coming years. As well as acquiring Direct Energie, in 2018 TOTAL invested in four combined-cycle natural gas power plants in France with a global capacity of 1.6 GW.

### Developing sustainable biofuels

A pioneer in biofuels for more than 20 years, TOTAL is one of Europe's major players with 2.4 Mt blended sustainable biofuels in 2018 for a worldwide distribution of 3.2 Mt. The Group's R&D teams continue to develop technologies that broaden the range of usable resources, while also meeting the need for sustainability.

#### Investing in carbon sink businesses

Carbon storage is key to achieving carbon neutrality and TOTAL is focused on developing CCUS as well as preserving and restoring the capacity of natural ecosystems to act as carbon sinks. The Group dedicates up to 10% of its R&D budget to CCUS projects, vital for several industries that emit large amount of  $\mathrm{CO}_2$  (cement, steel, etc) and is involved in several CCS projects, such as Northern Light (Norway) and the Clean Gas Project (UK). In February 2019, TOTAL announced the creation of an entity dedicated to investments in natural carbon sinks, with an investment budget of \$100m per year from 2020 onwards.



<sup>(1)</sup> Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

<sup>(2)</sup> DACF = debt adjusted cash flow, is defined as cash flow from operating activities before changes in working capital at replacement cost, without financial charges.

(3) Based on a Brent crude price of 71.43 \$/b (reference price in 2018), according to rules established by the Securities and Exchange Commission.



#### FINANCIAL HIGHLIGHTS (1)

(in million dollars)	2018	2017	2016	2015	2014
Adjusted net operating income (2)	10,210	5,985	3,217	4,330	10,504
Gross investments (3)	15,282	12,802	16,085	24,233	26,520
Organic investments (4)	9,186	11,310	14,464	20,536	22,959
Divestments	4,952	1,918	2,187	2,880	5,764
Cash flow from operations (5)	19,803	12,821	9,866	12,165	16,666
Cash flow from operations before working capital changes w/o financial charges (DACF) (6)	19,374	14,753	10,592	11,920	19,077

 <sup>(1) 2014</sup> data are not restated to reflect the new organization with four business segments therefore the data shown for 2014 include Gas businesses.
 (2) Adjusted results are defined as income at replacement cost, adjusted for special items, and excluding the impact of fair value changes.
 (3) Including acquisitions and increases in non current-loans.
 (4) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.
 (5) Excluding financial charges.
 (6) DACF = debt adjusted cash flow. Cash flow from operating activities before changes in working capital at replacement cost, without financial charges.

#### **PRODUCTION**

	2018	2017	2016	2015	2014
Oil (including bitumen) (kb/d)	1,378	1,167	1,088	1,022	853
Gas (including Condensates and associated NGL) (kboe/d)	1,397	1,399	1,364	1,325	1,293
COMBINED PRODUCTION (kboe/d)	2,775	2,566	2,452	2,347	2,146
	2018	2017	2016	2015	2014
Liquids (kb/d) <sup>(1)</sup>	1,566	1,346	1,271	1,237	1,034
Gas (Mcf/d)	6,599	6,662	6,447	6,054	6,063
COMBINED PRODUCTION (kboe/d)	2,775	2,566	2,452	2,347	2,146

<sup>(1)</sup> Including bitumen.

#### PROVED RESERVES (1)

	2018	2017	2016	2015	2014
Oil (including bitumen) (Mb)	5,203	4,615	4,543	4,688	4,354
Gas (including Condensates and associated NGL) (Mboe)	6,847	6,860	6,975	6,892	7,169
TOTAL (MBOE)	12,050	11,475	11,518	11,580	11,523
	2018	2017	2016	2015	2014
Liquids (Mb) <sup>(2)</sup>	6,049	5,450	5,414	5,605	5,303
Gas (Bcf)	32,325	32,506	32,984	32,206	33,590
TOTAL (MBOE)	12,050	11,475	11,518	11,580	11,523

<sup>(1)</sup> Proved reserves are calculated in accordance with the United States Securities and Exchange Commission regulations. (2) Including bitumen.

#### 2018 PROVED RESERVES BY GEOGRAPHICAL AREA: 12,050 MBOE



<sup>(1)</sup> Excluding North Africa.

#### KEY OPERATING RATIOS ON PROVED RESERVES - GROUP

2016-2018	2015-2017	2014-2016	2013-2015	2012-2014
3.0	2.6	3.2	4.2	5.5
13.8	16.6	20.6	23.2	24.8
117	98	100	109	104
98	100	106	121	107
2018	2017	2016	2015	2014
11.9	12.3	12.8	13.5	14.7
	3.0 13.8 117 98 2018	3.0 2.6 13.8 16.6 117 98 98 100 2018 2017	3.0     2.6     3.2       13.8     16.6     20.6       117     98     100       98     100     106       2018     2017     2016	3.0     2.6     3.2     4.2       13.8     16.6     20.6     23.2       117     98     100     109       98     100     106     121       2018     2017     2016     2015

#### KEY OPERATING RATIOS ON PROVED RESERVES - CONSOLIDATED SUBSIDIARIES

(in dollars per barrel of oil equivalent)	2016-2018	2015-2017	2014-2016	2013-2015	2012-2014
Finding costs <sup>(1)</sup>	4.2	3.4	4.9	6.5	10.3
Reserve replacement costs (2)	18.5	22.1	33.3	36.5	47.4
(in dollars per barrel of oil equivalent)	2018	2017	2016	2015	2014
Operating costs	5.7	5.4	5.9	7.4	9.9
Exploration costs	1.0	1.2	1.4	2.4	3.4
DD&A	12.2	12.8	13.1	13.2	15.0
Technical costs (3) (4)	18.9	19.4	20.4	23.0	28.3

 <sup>(1) (</sup>Exploration costs + unproved property acquisition)/(revisions + extensions, discoveries).
 (2) Total costs incurred/(revisions + extensions, discoveries + acquisitions).
 (3) Excluding non-recurring items.

#### TOTAL PRODUCTION FOR 2018: 2,775 KBOE/D



(1) Excluding North Africa.

<sup>(1) (</sup>Exploration costs + unproved property acquisition)/(revisions + extensions and discoveries).
(2) Total costs incurred/(revisions + extensions, discoveries + acquisitions).
(3) (Revisions + extensions, discoveries + acquisitions – sales of reserves)/production for the period.
(4) Including the mechanical effect of changes in oil prices at year-end.
(5) (Revisions + extensions, discoveries)/production for the period; excluding acquisitions and sales of reserves.
(6) Reserves at year-end/production of the year.

<sup>(4) (</sup>Production costs + exploration expenses + DD&A)/production of the year.

### COMBINED LIQUIDS AND GAS PRODUCTION (1) (2)

(in thousands of barrels of oil equivalent per day)	2018	2017	2016	2015	2014
EUROPE AND CENTRAL ASIA	909	761	757	664	613
Azerbaijan	-	-	-	-	14
Denmark	42		-		
France	-	-	-	-	2
Italy	< 1	-	-	-	
Kazakhstan	70	42	4	-	-
Norway	211	239	235	239	242
Netherlands	18	20	25	28	31
United Kingdom	179	142	158	107	89
Russia	389	318	335	290	235
AFRICA (EXCL. NORTH AFRICA)	670	654	634	639	610
	211	229	243	248	200
The Congo, Republic of	136	104	90	87	95
Gabon	39	54	58	59	58
Nigeria	284	267	243	245	257
MIDDLE EAST AND NORTH AFRICA	666	559	517	531	438
	47	15	23	25	20
United Arab Emirates	288	290	291	287	127
Iraq	19	16	18	18	12
Libya	63	31	14	14	27
Oman	38	37	37	36	36
Qatar	211	170	134	134	132
Yemen	-	-	_	17	84
AMERICAS	389	348	279	255	247
Argentina	79	76	78	72	75
Bolivia	42	46	34	28	30
Brazil	19	< 1	_		
Canada <sup>(3)</sup>	95	59	34	14	12
Colombia	1	<1	_		
United States	119	123	86	89	78
Venezuela	34	44	47	52	52
ASIA PACIFIC	141	244	265	258	238
Australia	34	19	16	4	4
Brunei	19	21	18	15	15
China	16	15	10	11	12
Indonesia	3	112	140	147	130
Myanmar	17	19	21	19	17
Thailand	52	58	60	62	60
TOTAL PRODUCTION	2,775	2,566	2,452	2,347	2,146
Including share of equity affiliates	671	639	600	559	571
		20		339	
Angola	20		5	110	110
United Arab Emirates		125	123	116	118
Oman	37	35	36	34	34
Qatar	157	114	76	77	77
	005	040	007		
Russia Venezuela	385 23	313	327	280	227

The geographical zones are as follows: Europe and Central Asia; Africa (excluding North Africa); Middle East and North Africa; Americas; and Asia-Pacific. 2014-2015 data have been restated accordingly.
 Including fuel gas (454 Mcf/d in 2018, 473 Mcf/d in 2017, 448 Mcf/d in 2016, 435 Mcf/d in 2015, 426 Mcf/d in 2014).
 The Group's production in Canada consists of bitumen only. All of the Group's bitumen production is in Canada.

### LIQUIDS PRODUCTION (1)

<b>334</b> - 25	265	249	215 -	<b>201</b>
			-	3
25				
	-	-	-	-
-	-	-	-	-
<1	-	-	-	-
56	31	3	-	-
104	121	121	125	135
-	-	-	1	1
75	42	49	35	29
74	71	76	54	33
513	502	509	521	490
186	204	230	238	191
130	98	84	81	88
36	51	55	55	55
161	149	140	147	156
520	419	373	372	224
30	4	6	7	5
276	278	279	274	115
18	15	17	18	12
62	31	14	14	27
26	25	26	25	24
108	66	31	32	32
-	-	-	2	9
183	132	109	95	89
7	6	8	8	9
5	5	4	3	4
18	< 1	-		
95	59	34	14	12
1	< 1	-	-	-
35	31	31	34	27
22	31	32	36	37
16	28	31	34	30
3	-	-	-	-
5	3	3	3	2
-	<1	-	-	-
-	16	19	22	18
-	-	-	-	-
8	9	9	9	10
1,566	1,346	1,271	1,237	1,034
247	284	247	219	200
4	5	1	-	
41	115	114	107	109
24	23	24	24	23
85	43	7	7	7
	43 67	7 69	7 45	7 24
	<1 56 104 - 75 74 513 186 130 36 161 520 30 276 18 62 26 108 - 183 7 5 18 95 1 35 22 16 3 5 8 1,566 247 4 41	<1	<1	<1

<sup>(1)</sup> Liquids consist of crude oil, bitumen, condensates and natural gas liquids (NGL). With respect to bitumen, the Group's production in Canada consists of bitumen only, and all of the Group's bitumen production is in Canada. With respect to NGL, the table above does not set forth separate figures for NGL because they represented less than 7.5% of the Group's total liquids production in each of the years 2014, 2015, 2016, 2017 and 2018.

# GAS PRODUCTION (1)

(in millions of cubic feet per day)	2018	2017	2016	2015	2014
EUROPE AND CENTRAL ASIA	3,099	2,674	2,737	2,413	2,224
	-	-	-	-	59
Denmark	99	-	-	-	-
France	-	-	-	-	9
Italy	-	-	-	-	-
Kazakhstan	70	53	6	-	-
Norway	577	640	618	614	576
Netherlands	98	112	141	158	171
United Kingdom	566	551	595	389	333
Russia	1,689	1,318	1,377	1,252	1,076
AFRICA (EXCL. NORTH AFRICA)	786	759	621	581	614
Angola	132	130	68	49	54
The Congo, Republic of	32	32	29	30	35
Gabon	12	14	15	15	14
Nigeria	610	583	509	487	511
MIDDLE EAST AND NORTH AFRICA	805	771	795	874	1,163
Algeria	94	58	90	96	79
United Arab Emirates	57	63	67	66	61
Iraq	1	1	1	1	1
Libya	9	-	-	-	-
Oman	67	64	62	58	61
Qatar	577	585	575	573	555
Yemen	-	-	-	80	406
AMERICAS	1,161	1,212	944	896	884
Argentina	402	388	391	354	367
Bolivia	204	216	160	133	139
Brazil	1	-	-		
Colombia	-	-	-	-	_
United States	483	527	304	308	285
Venezuela	71	81	89	101	93
ASIA PACIFIC	748	1,247	1,350	1,290	1,178
Australia	181	114	91	28	23
Brunei	72	87	78	62	66
China	88	80	53	59	63
Indonesia	14	519	657	676	594
Myanmar	133	151	165	153	135
Thailand	260	296	306	312	297
TOTAL PRODUCTION	6,599	6,663	6,447	6,054	6,063
Including share of equity affiliates	2,281	1,914	1,894	1,828	1,988
Angola	81	80	20	-	10
United Arab Emirates	45	53	51	50	51
Oman	67	64	62	58	61
Qatar	395	395	379	383	381
Russia	1,689	1,317	1,375	1,250	1,075
Venezuela	4	5	7	7	6
Yemen	-	-	-	80	404

 $<sup>(1) \ \ \</sup>text{Including fuel gas (454 Mcf/d in 2018, 473 Mcf/d in 2017, 448 Mcf/d in 2016, 435 Mcf/d in 2015, 426 Mcf/d in 2014)}.$ 

#### CHANGES IN OIL, BITUMEN AND GAS RESERVES

The following tables present an estimate of the Group's oil, bitumen and gas quantities by geographic areas as of December 31, 2018, 2017 and 2016.

Quantities shown correspond to proved developed and undeveloped reserves together with changes in quantities for 2018, 2017 and 2016.

The definitions used for proved, proved developed and proved undeveloped oil and gas reserves are in accordance with the revised Rule 4-10 of SEC Regulation S-X.

All references in the following tables to reserves or production are to the Group's entire share of such reserves or production. TOTAL's worldwide proved reserves include the proved reserves of its consolidated subsidiaries as well as its proportionate share of the proved reserves of equity affiliates.

Significant changes in proved reserves between 2017 and 2018 are discussed below.

For consolidated subsidiaries, the revisions of +450 Mboe for the year 2018 were due to:

- +438 Mboe due to new information obtained from drilling and production history mainly in the United Arab Emirates, the United Kingdom and Angola;
- +29 Mboe due to economic factors as a result of higher yearly average hydrocarbon prices, including a delayed economic limit on a number of assets, partly compensated by lower entitlement share from production sharing and risked service contracts; and
- -17 Mboe due to other revisions.

The acquisitions in Europe and Central Asia, and in Middle East and North Africa, correspond mainly to the acquired Maersk Oil assets in the United Kingdom, Norway, Denmark and Algeria.

The acquisitions in the Americas correspond mainly to new assets in Brazil.

The sales in Europe and Central Asia correspond mainly to the sale in Norway.

The sales in Asia-Pacific correspond to decrease in interest in Australia

The extensions in Europe and Central Asia correspond mainly to recognition of reserves in Denmark, following the acquisition of Maersk Oil.

The extensions in Middle East and North Africa correspond mainly to recognition of reserves in the United Arab Emirates and Algeria.

For equity affiliates, the revisions of +187 Mboe for the year 2018 were mainly due to new information obtained from drilling and production history in Russia.

The acquisitions in Russia correspond to the acquisition by Novatek of GeoTransGas and the increased interest in Novatek's share capital.

#### CHANGES IN OIL. BITUMEN AND GAS RESERVES

DECEMBER 31, 2018 - BRENT AT 71.43 \$/B

(in million barrels of oil equivalent) —						- Consolidated	
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Tota
BALANCE AS OF DECEMBER 31, 2013 BRENT AT 108.02 \$/B	- 2,287	28	2,414	590	1,824	1,082	8,225
Revisions of previous estimates	26	4	42	13	(11)	26	100
Extensions, discoveries and other	21	_	111	3	151	29	315
Acquisitions of reserves in place	1	-	_	_	-	-	1
Sales of reserves in place	(232)	-	(21)	_	-	-	(253)
Production for the year	(138)	(3)	(222)	(49)	(76)	(87)	(575)
BALANCE AS OF DECEMBER 31, 2014 BRENT AT 101.27 \$/B	- 1,965	29	2,324	557	1,888	1,050	7,813
Revisions of previous estimates	1	_	(4)	(7)	144	62	196
Extensions, discoveries and other	11	_	9	864	6	7	897
Acquisitions of reserves in place		_	_		-	-	-
Sales of reserves in place	(28)	_	(76)		(160)	_	(264)
Production for the year	(137)	(4)	(233)	(105)	(79)	(94)	(652)
BALANCE AS OF DECEMBER 31, 2015			. ,		. ,		
BRENT AT 54.17 \$/B	1,812	25	2,020	1,309	1,799	1,025	7,990
Revisions of previous estimates	49	1	1	232	(234)	39	88
Extensions, discoveries and other	47	-	11	5	33	15	111
Acquisitions of reserves in place	- (0.7)	- (10)	-	-	152	-	152
Sales of reserves in place	(27)	(13)			(21)	-	(61)
Production for the year	(155)	(2)	(230)	(104)	(90)	(97)	(678)
BALANCE AS OF DECEMBER 31, 2016 BRENT AT 42.82 \$/B	1,726	11	1,802	1,442	1,639	982	7,602
Revisions of previous estimates	122	2	106	50	195	44	519
Extensions, discoveries and other	-	-	29	62	149	6	246
Acquisitions of reserves in place	9	-	2	-	-	-	11
Sales of reserves in place	(17)	-	(28)	-	(52)	-	(97)
Production for the year	(162)	(2)	(232)	(104)	(115)	(89)	(704)
BALANCE AS OF DECEMBER 31, 2017 BRENT AT 54.36 \$/B	7 – 1,678	11	1,679	1,450	1,816	943	7,577
Revisions of previous estimates	126	-	132	137	28	27	450
Extensions, discoveries and other	69	-	45	444	27	13	598
Acquisitions of reserves in place	316	-	-	85	86		487
Sales of reserves in place	(103)	-	(5)	-	(24)	(89)	(221)
Production for the year	(190)	(1)	(238)	(154)	(134)	(51)	(768)
BALANCE AS OF DECEMBER 31, 2018 BRENT AT 71.43 \$/B	3 – 1,896	10	1,613	1,962	1,799	843	8,123
Minority interest in proved developed and undevel	eloped reserves as o	of					
December 31, 2014 – Brent at 101.27 \$/	b -	-	146	-	-	-	146
December 31, 2015 - Brent at 54.17 \$/b	-	-	128	-	-	-	128
December 31, 2016 - Brent at 42.82 \$/b	-	-	105	-	-	-	105
December 31, 2017 – Brent at 54.36 \$/b	-	-	102	-	-	-	102
DECEMBER 04 0040 PRENT AT 74 A	10 A /D						

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98

(in million parreis of oil equivalent)				Oll, bi	itumen and gas r	eserves – Equ	ity amiliates
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total
BALANCE AS OF DECEMBER 31, 20 BRENT AT 108.02 \$/B	13 –	1,642	76	1,335	248	-	3,301
Revisions of previous estimates	-	6	(2)	(8)	2	-	(2)
Extensions, discoveries and other	-	516	-	2	-	-	518
Acquisitions of reserves in place	-	107	-	-	-	-	107
Sales of reserves in place	-	(6)	-	-	-	-	(6)
Production for the year	-	(83)	(1)	(110)	(14)	-	(208)
BALANCE AS OF DECEMBER 31, 20 BRENT AT 101.27 \$/B	14 –	2,182	73	1,219	236	-	3,710
Revisions of previous estimates	-	96	(2)	(10)	(44)	-	40
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	56	-	-	-	-	56
Sales of reserves in place	-	(12)	-	-	-	-	(12)
Production for the year	-	(102)	-	(88)	(14)	-	(204)
BALANCE AS OF DECEMBER 31, 20 BRENT AT 54.17 \$/B	15 –	2,220	71	1,121	178	-	3,590
Revisions of previous estimates	-	16	-	68	(1)	-	83
Extensions, discoveries and other	-	331	-	-	-	-	331
Acquisitions of reserves in place	-	-	-	190	-	-	190
Sales of reserves in place	-	(59)	-	-	-	-	(59)
Production for the year	-	(119)	(1)	(87)	(12)	-	(219)
BALANCE AS OF DECEMBER 31, 20 BRENT AT 42.82 \$/B	16 –	2,389	70	1,292	165	-	3,916
Revisions of previous estimates	-	17	-	45	(6)	-	56
Extensions, discoveries and other	-	124	-	-	-	-	124
Acquisitions of reserves in place	-	35	-	-	-	-	35
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	(114)	(7)	(100)	(12)	-	(233)
BALANCE AS OF DECEMBER 31, 20 BRENT AT 54.36 \$/B	17 –	2,451	63	1,237	147	-	3,898
Revisions of previous estimates	-	128	(1)	61	(1)	-	187
Extensions, discoveries and other	-	11	-	-	-	-	11
Acquisitions of reserves in place	-	102	-	-	-	-	102
Sales of reserves in place	-	(26)	-	-	-	-	(26)
Production for the year	-	(141)	(7)	(89)	(8)	-	(245)
BALANCE AS OF DECEMBER 31, 20 BRENT AT 71.43 \$/B	18 –	2,525	55	1,209	138	-	3,927

(in million barrels of oil equivalent)		Oil, b	itumen and gas	s reserves – Con	solidated subsid	iaries and equ	ity affiliates
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total
AS OF DECEMBER 31, 2014 – BRENT AT 101.27 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	1,965	2,211	2,397	1,776	2,124	1,050	11,523
Consolidated subsidiaries	1,965	29	2,324	557	1,888	1,050	7,813
Equity affiliates	-	2,182	73	1,219	236	-	3,710
PROVED DEVELOPED RESERVES	991	1,067	1,321	1,593	535	199	5,706
Consolidated subsidiaries	991	18	1,304	467	450	199	3,429
Equity affiliates	-	1,049	17	1,126	85	-	2,277
PROVED UNDEVELOPED RESERVES	974	1,144	1,076	183	1,589	851	5,817
Consolidated subsidiaries	974	11	1,020	90	1,438	851	4,384
Equity affiliates	-	1,133	56	93	151	-	1,433
AS OF DECEMBER 31, 2015 – BRENT AT 54.17 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	1,812	2,245	2,091	2,430	1,977	1,025	11,580
Consolidated subsidiaries	1,812	25	2,020	1,309	1,799	1,025	7,990
Equity affiliates	-	2,220	71	1,121	178	-	3,590
PROVED DEVELOPED RESERVES	1,009	1,070	1,173	2,062	626	246	6,186
Consolidated subsidiaries	1,009	16	1,161	1,070	549	246	4,051
Equity affiliates	-	1,054	12	992	77	-	2,135
PROVED UNDEVELOPED RESERVES	803	1,175	918	368	1,351	779	5,394
Consolidated subsidiaries	803	9	859	239	1,250	779	3,939
Equity affiliates	-	1,166	59	129	101	-	1,455
AS OF DECEMBER 31, 2016 – BRENT AT 42.82 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	1,726	2,400	1,872	2,734	1,804	982	11,518
Consolidated subsidiaries	1,726	11	1,802	1,442	1,639	982	7,602
Equity affiliates	-	2,389	70	1,292	165	-	3,916
PROVED DEVELOPED RESERVES	1,025	1,017	1,141	2,281	979	224	6,667
Consolidated subsidiaries	1,025	7	1,132	1,158	897	224	4,443
Equity affiliates	-	1,010	9	1,123	82	-	2,224
PROVED UNDEVELOPED RESERVES	701	1,383	731	453	825	758	4,851
Consolidated subsidiaries	701	4	670	284	742	758	3,159
Equity affiliates	-	1,379	61	169	83	-	1,692

(in million barrels of oil equivalent)	Oil, bitumen and gas reserves – Consolidated subsidiaries and equity affiliates									
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total			
AS OF DECEMBER 31, 2017 – BRENT AT 54.36 \$/B										
PROVED DEVELOPED AND UNDEVELOPED RESERVES	1,678	2,462	1,742	2,687	1,963	943	11,475			
Consolidated subsidiaries	1,678	11	1,679	1,450	1,816	943	7,577			
Equity affiliates	-	2,451	63	1,237	147	-	3,898			
PROVED DEVELOPED RESERVES	1,100	1,344	1,206	2,256	907	197	7,010			
Consolidated subsidiaries	1,100	8	1,192	1,177	836	197	4,510			
Equity affiliates	-	1,336	14	1,079	71	-	2,500			
PROVED UNDEVELOPED RESERVES	578	1,118	536	431	1,056	746	4,465			
Consolidated subsidiaries	578	3	487	273	979	746	3,066			
Equity affiliates	-	1,115	49	158	77	-	1,399			
AS OF DECEMBER 31, 2018 – BRENT AT 71.43 \$/B										
PROVED DEVELOPED AND UNDEVELOPED RESERVES	1,896	2,535	1,668	3,171	1,937	843	12,050			
Consolidated subsidiaries	1,896	10	1,613	1,962	1,799	843	8,123			
Equity affiliates	-	2,525	55	1,209	138	-	3,927			
PROVED DEVELOPED RESERVES	1,275	1,395	1,266	2,702	1,245	517	8,400			
Consolidated subsidiaries	1,275	8	1,257	1,649	1,182	517	5,888			
Equity affiliates	-	1,387	9	1,053	63	-	2,512			
PROVED UNDEVELOPED RESERVES	621	1,140	402	469	692	326	3,650			
Consolidated subsidiaries	621	2	356	313	617	326	2,235			
Equity affiliates	-	1,138	46	156	75	-	1,415			

# **CHANGES IN OIL RESERVES**

Oil reserves include crude oil, condensates and natural gas liquids reserves.

(in millions of barrels)	Oil reserves – Consolidated sul									
	Europe & Central Asia excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total			
BALANCE AS OF DECEMBER 31, 2013 - BRENT AT 108.02 \$/B	1,131	25	1,758	345	86	211	3,556			
Revisions of previous estimates	13	4	27	11	3	5	63			
Extensions, discoveries and other	3	-	101	3	14	2	123			
Acquisitions of reserves in place	-	-	-	-	-	-	-			
Sales of reserves in place	(43)	-	(20)	-	-	-	(63)			
Production for the year	(61)	(3)	(178)	(32)	(15)	(11)	(300)			
BALANCE AS OF DECEMBER 31, 2014 - BRENT AT 101.27 \$/B	1,043	26	1,688	327	88	207	3,379			
Revisions of previous estimates	(9)	-	3	(46)	27	10	(15)			
Extensions, discoveries and other	4	-	8	856	2	-	870			
Acquisitions of reserves in place	-	-	-	-	-	-	-			
Sales of reserves in place	(3)	-	(58)	-	-	-	(61)			
Production for the year	(59)	(3)	(191)	(86)	(16)	(12)	(367)			
BALANCE AS OF DECEMBER 31, 2015 - BRENT AT 54.17 \$/B	976	23	1,450	1,051	101	205	3,806			
Revisions of previous estimates	22	1	6	239	(9)	6	265			
Extensions, discoveries and other	14	-	11	4	11	-	40			
Acquisitions of reserves in place	-	-	-	-	-	-	-			
Sales of reserves in place	(13)	(11)	-	-	(2)	-	(26)			
Production for the year	(63)	(3)	(185)	(84)	(16)	(11)	(362)			
BALANCE AS OF DECEMBER 31, 2016 - BRENT AT 42.82 \$/B	936	10	1,282	1,210	85	200	3,723			
Revisions of previous estimates	42	-	94	57	7	2	202			
Extensions, discoveries and other	-	-	18	38	91	-	147			
Acquisitions of reserves in place	3	-	2	-	-	-	5			
Sales of reserves in place	(8)	-	(26)	-	-	-	(34)			
Production for the year	(71)	(1)	(182)	(87)	(15)	(10)	(366)			
BALANCE AS OF DECEMBER 31, 2017 - BRENT AT 54.36 \$/B	902	9	1,188	1,218	168	192	3,677			
Revisions of previous estimates	34	-	122	141	51	3	351			
Extensions, discoveries and other	34	-	7	404	2	8	455			
Acquisitions of reserves in place	221	-	-	60	83	-	364			
Sales of reserves in place	(36)	-	(3)	-	-	(23)	(62)			
Production for the year	(95)	(1)	(185)	(136)	(24)	(6)	(447)			
BALANCE AS OF DECEMBER 31, 2018 - BRENT AT 71.43 \$/B	1,060	8	1,129	1,687	280	174	4,338			
Minority interest in proved developed and undevelo	ped reserves as o	f								
December 31, 2014 – Brent at 101.27 \$/b	-	-	128	-	-	-	128			
December 31, 2015 - Brent at 54.17 \$/b	-	-	115	-	-	-	115			
December 31, 2016 - Brent at 42.82 \$/b	-	-	95	-	-	-	95			
December 31, 2017 - Brent at 54.36 \$/b	-	-	93	-	-	-	93			
DECEMBER 31, 2018 - BRENT AT 71.43	\$/B -	-	90				90			

(in millions of barrels)	Oil reserves – Equity a									
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total			
BALANCE AS OF DECEMBER 31, 20 BRENT AT 108.02 \$/B	13 –	148	12	372	237	-	769			
Revisions of previous estimates	-	(3)	(5)	(3)	2	-	(9)			
Extensions, discoveries and other	-	81	-	3	-	-	84			
Acquisitions of reserves in place	-	9	-	-	-	-	9			
Sales of reserves in place	-	(1)	-	-	-	-	(1)			
Production for the year	-	(9)	-	(51)	(13)	-	(73)			
BALANCE AS OF DECEMBER 31, 20 BRENT AT 101.27 \$/B	014 –	225	7	321	226	-	779			
Revisions of previous estimates	-	34	6	(11)	(42)	-	(13)			
Extensions, discoveries and other	-	-	-	-	-	-	-			
Acquisitions of reserves in place	-	6	-	-	-	-	6			
Sales of reserves in place	-	(2)	-	-	-	-	(2)			
Production for the year	-	(17)	-	(50)	(14)	-	(81)			
BALANCE AS OF DECEMBER 31, 20 BRENT AT 54.17 \$/B	015 –	246	13	260	170	-	689			
Revisions of previous estimates	-	42	-	58	(1)	-	99			
Extensions, discoveries and other	-	15	-	-	-	-	15			
Acquisitions of reserves in place	-	-	-	167	-	-	167			
Sales of reserves in place	-	(2)	-	-	-	-	(2)			
Production for the year	-	(25)	-	(53)	(12)	-	(90)			
BALANCE AS OF DECEMBER 31, 20 BRENT AT 42.82 \$/B	016 –	276	13	432	157	-	878			
Revisions of previous estimates	-	16	-	44	(6)	-	54			
Extensions, discoveries and other	-	12	-	-	-	-	12			
Acquisitions of reserves in place	-	4	-	-	-	-	4			
Sales of reserves in place	-	-	-	-	-	-	-			
Production for the year	-	(24)	(2)	(66)	(11)	-	(103)			
BALANCE AS OF DECEMBER 31, 20 BRENT AT 54.36 \$/B	017 –	284	11	410	140	-	845			
Revisions of previous estimates	-	54		57	(3)		108			
Extensions, discoveries and other	-	-	-	-	-	-	-			
Acquisitions of reserves in place	-	10	-	-	-	-	10			
Sales of reserves in place	-	(5)	-	-	-	-	(5)			
Production for the year	-	(26)	(2)	(54)	(8)	-	(90)			
BALANCE AS OF DECEMBER 31, 20 BRENT AT 71.43 \$/B	018 –	317	9	413	129	-	868			

(in millions of barrels)	Oil reserves – Consolidated subsidiaries and equity affiliates

Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Tota
AS OF DECEMBER 31, 2014 – BRENT AT 101.27 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	1,043	251	1,695	648	314	207	4,158
Consolidated subsidiaries	1,043	26	1,688	327	88	207	3,379
Equity affiliates	-	225	7	321	226	-	779
Proved developed reserves	446	136	934	512	136	17	2,181
Consolidated subsidiaries	446	16	930	252	54	17	1,715
Equity affiliates	-	120	4	260	82	-	466
PROVED UNDEVELOPED RESERVES	597	115	761	136	178	190	1,977
Consolidated subsidiaries	597	10	758	75	34	190	1,664
Equity affiliates	-	105	3	61	144	-	313
AS OF DECEMBER 31, 2015 – BRENT AT 54.17 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	976	269	1,463	1,311	271	205	4,495
Consolidated subsidiaries	976	23	1	1	101	205	3,806
Equity affiliates	-	246	13	260	170	-	689
PROVED DEVELOPED RESERVES	445	151	836	1,061	145	17	2,655
Consolidated subsidiaries	445	15	833	846	71	17	2,227
Equity affiliates	-	136	3	215	74	-	428
PROVED UNDEVELOPED RESERVES	531	118	627	250	126	188	2
Consolidated subsidiaries	531	8	617	205	30	188	2
Equity affiliates	-	110	10	45	96	-	261
AS OF DECEMBER 31, 2016 – BRENT AT 42.82 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	936	286	1,295	1,642	242	200	4,601
Consolidated subsidiaries	936	10	1,282	1,210	85	200	3,723
Equity affiliates	-	276	13	432	157	-	878
PROVED DEVELOPED RESERVES	476	152	819	1,309	151	14	2,921
Consolidated subsidiaries	476	7	816	955	73	14	2,341
Equity affiliates	-	145	3	354	78	-	580
PROVED UNDEVELOPED RESERVES	460	134	476	333	91	186	1,680
Consolidated subsidiaries	460	3	466	255	12	186	1,382
Equity affiliates	-	131	10	78	79	-	298

(III TTIIIIOTIS OF DATTEIS)	Oil reserves — Consolidated substitutines and equity annual									
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total			
AS OF DECEMBER 31, 2017 – BRENT AT 54.36 \$/B										
PROVED DEVELOPED AND UNDEVELOPED RESERVES	902	293	1,199	1,628	308	192	4,522			
Consolidated subsidiaries	902	9	1,188	1,218	168	192	3,677			
Equity affiliates	-	284	11	410	140	-	845			
PROVED DEVELOPED RESERVES	541	176	853	1,321	145	10	3,046			
Consolidated subsidiaries	541	8	849	1,000	77	10	2,485			
Equity affiliates	-	168	4	321	68	-	561			
PROVED UNDEVELOPED RESERVES	361	117	346	307	163	182	1,476			
Consolidated subsidiaries	361	2	338	217	91	182	1,191			
Equity affiliates	-	115	8	90	72	-	285			
AS OF DECEMBER 31, 2018 – BRENT AT 71.43 \$/B										
PROVED DEVELOPED AND UNDEVELOPED RESERVES	1,060	325	1,138	2,100	409	174	5,206			
Consolidated subsidiaries	1,060	8	1,129	1,687	280	174	4,338			
Equity affiliates	-	317	9	413	129	-	868			
PROVED DEVELOPED RESERVES	698	196	928	1,750	164	118	3,854			
Consolidated subsidiaries	698	6	927	1,430	106	118	3,285			
Equity affiliates	-	190	1	320	58	-	569			
PROVED UNDEVELOPED RESERVES	362	129	210	350	245	56	1,352			
Consolidated subsidiaries	362	2	202	257	174	56	1,053			
Equity affiliates	-	127	8	93	71	-	299			

#### CHANGES IN BITUMEN RESERVES

CHANGES IN BITUMEN RESERVES							
(in millions of barrels)				Bitu	men reserves – (	Consolidated s	ubsidiaries
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Tota
BALANCE AS OF DECEMBER 31, 2013 BRENT AT 108.02 \$/B		-	-	-	1,088	-	1,088
Revisions of previous estimates	-	-	-	-	(25)	-	(25)
Extensions, discoveries and other	-	-	-	-	87	-	87
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	-	-	-	(5)	-	(5)
BALANCE AS OF DECEMBER 31, 2014 BRENT AT 101.27 \$/B	-	_	-	-	1,145	-	1,145
Revisions of previous estimates	-	-	-	-	130	-	130
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	-	-	-	-	(160)	-	(160)
Production for the year	-	-	-	-	(5)	-	(5)
BALANCE AS OF DECEMBER 31, 2015 BRENT AT 54.17 \$/B	i –	-	-	-	1,110	-	1,110
Revisions of previous estimates	-	-	-	-	(284)	-	(284)
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	-	-	-	(13)	-	(13)
BALANCE AS OF DECEMBER 31, 2016 BRENT AT 42.82 \$/B	i –	_	-	-	813	-	813
Revisions of previous estimates	-	-	-	-	189	-	189
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	-	-	-	-	(52)	-	(52)
Production for the year	-	-	-	-	(22)	-	(22)
BALANCE AS OF DECEMBER 31, 2017 BRENT AT 54.36 \$/B	' _ -	-	-	-	928	-	928
Revisions of previous estimates	-	-	-	-	(26)	-	(26)
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	-	-	-	-	(24)	-	(24)
Production for the year	-	-	-	-	(35)	-	(35)
BALANCE AS OF DECEMBER 31, 2018 BRENT AT 71.43 \$/B	3 -	_	_	-	843	_	843

December 31, 2017 - Brent at 54.36 \$/b	-	-	-	-	142	-	142
DECEMBER 31, 2018 - BRENT AT 71.43 \$/B	-	-	-	-	512	-	512
Proved undeveloped reserves as of							
December 31, 2014 – Brent at 101.27 \$/b	-	-	-	-	1,128	-	1,128
December 31, 2015 - Brent at 54.17 \$/b	-	-	-	-	1,010	-	1,010
December 31, 2016 - Brent at 42.82 \$/b	-	-	-	-	653	-	653
December 31, 2017 – Brent at 54.36 \$/b	-	-	-	-	786	-	786
DECEMBER 31, 2018 – BRENT AT 71.43 \$/B	-	-	-	-	331	-	331

Proved developed reserves as of

December 31, 2014 - Brent at 101.27 \$/b

December 31, 2015 - Brent at 54.17 \$/b

December 31, 2016 - Brent at 42.82 \$/b

17

100

160

17

100

160

#### CHANGES IN GAS RESERVES

CHANGES IN GAS RESERVES							
(in billion cubic feet)					Gas reserves -	Consolidated	subsidiaries
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total
BALANCE AS OF DECEMBER 31, 2013 BRENT AT 108.02 \$/B	3 – 6,205	16	3,291	1,385	3,663	4,782	19,342
Revisions of previous estimates	81	-	82	11	54	117	345
Extensions, discoveries and other	99	-	56	1	296	154	606
Acquisitions of reserves in place	6	-	-	-	-	-	6
Sales of reserves in place	(1,038)	-	(6)	-	-	-	(1,044)
Production for the year	(419)	(1)	(220)	(97)	(320)	(431)	(1,488)
BALANCE AS OF DECEMBER 31, 2014 BRENT AT 101.27 \$/B	1 – 4,934	15	3,203	1,300	3,693	4,622	17,767
Revisions of previous estimates	55	1	(57)	197	(92)	296	400
Extensions, discoveries and other	40	-	7	42	24	38	151
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	(135)	-	(93)	-	-	-	(228)
Production for the year	(424)	(1)	(212)	(110)	(324)	(471)	(1,542)
BALANCE AS OF DECEMBER 31, 2015 BRENT AT 54.17 \$/B	5 – 4,470	15	2,848	1,429	3,301	4,485	16,548
Revisions of previous estimates	143	(2)	(44)	(28)	347	189	605
Extensions, discoveries and other	173	-	-	7	126	85	391
Acquisitions of reserves in place	-	-	-	-	874	-	874
Sales of reserves in place	(80)	(7)	-	-	(101)	-	(188)
Production for the year	(498)	(1)	(220)	(111)	(343)	(494)	(1,667)
BALANCE AS OF DECEMBER 31, 2016 BRENT AT 42.82 \$/B	6 – 4,208	5	2,584	1,297	4,204	4,265	16,563
Revisions of previous estimates	434	2	52	(44)	(21)	233	656
Extensions, discoveries and other	-	-	53	131	323	35	542
Acquisitions of reserves in place	34	-	-	-	-	-	34
Sales of reserves in place	(49)	-	(10)	-	-	-	(59)
Production for the year	(495)	-	(248)	(94)	(440)	(455)	(1,732)
BALANCE AS OF DECEMBER 31, 2017 BRENT AT 54.36 \$/B	7 – 4,132	7	2,431	1,290	4,066	4,078	16,004
Revisions of previous estimates	481	1	39	(21)	24	141	665
Extensions, discoveries and other	176	-	191	214	141	29	751
Acquisitions of reserves in place	516	-	-	130	14	-	660
Sales of reserves in place	(362)	-	(5)	-	-	(343)	(710)
Production for the year	(515)	-	(257)	(110)	(421)	(273)	(1,576)
BALANCE AS OF DECEMBER 31, 2018 BRENT AT 71.43 \$/B	3 – 4,428	8	2,399	1,503	3,824	3,632	15,794
Minority interest in proved developed and undeve	eloped reserves as	of					
December 31, 2014 – Brent at 101.27 \$/	b -	-	91	-	-	-	91
December 31, 2015 - Brent at 54.17 \$/b	-	-	64	-	-	-	64
December 31, 2016 - Brent at 42.82 \$/b	-	-	48	-	-	-	48
December 31, 2017 - Brent at 54.36 \$/b	-	-	44	-	-	-	44

43

43

DECEMBER 31, 2018 - BRENT AT 71.43 \$/B

						serves – Lqui	.,
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Tota
BALANCE AS OF DECEMBER 31, 2013 BRENT AT 108.02 \$/B		8,029	343	5,250	62	-	13,684
Revisions of previous estimates	-	50	17	(25)	2	-	44
Extensions, discoveries and other	-	2,328	-	-	-	-	2,328
Acquisitions of reserves in place	-	521	-	-	-	-	521
Sales of reserves in place	-	(28)	-	-	-	-	(28)
Production for the year	-	(392)	(4)	(328)	(2)	-	(726)
BALANCE AS OF DECEMBER 31, 2014 BRENT AT 101.27 \$/B		10,508	356	4,897	62	-	15,823
Revisions of previous estimates	-	337	(45)	6	(11)	-	287
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	267	-	-	-	-	267
Sales of reserves in place	-	(52)	-	-	-	-	(52)
Production for the year	-	(456)	-	(208)	(3)	-	(667)
BALANCE AS OF DECEMBER 31, 2015 BRENT AT 54.17 \$/B		10,604	311	4,695	48	-	15,658
Revisions of previous estimates	-	(132)	(3)	51	(1)	-	(85)
Extensions, discoveries and other	-	1,717	-	-	-	-	1,717
Acquisitions of reserves in place	-	-	-	132	-	-	132
Sales of reserves in place	-	(308)	-	-	-	-	(308)
Production for the year	-	(503)	(7)	(181)	(2)	-	(693)
BALANCE AS OF DECEMBER 31, 2016 BRENT AT 42.82 \$/B		11,378	301	4,697	45	-	16,421
Revisions of previous estimates	-	3	4	3	(1)	-	9
Extensions, discoveries and other	-	607	-	-	-	-	607
Acquisitions of reserves in place	-	164	-	-	-	-	164
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	(481)	(29)	(187)	(2)	-	(699)
BALANCE AS OF DECEMBER 31, 2017 BRENT AT 54.36 \$/B		11,671	276	4,513	42	-	16,502
Revisions of previous estimates	-	394	(9)	28	11	-	424
Extensions, discoveries and other	-	60	-	-	-	-	60
Acquisitions of reserves in place	-	489	-	-	-	-	489
Sales of reserves in place	-	(112)	-	-	-	-	(112)
Production for the year	-	(616)	(30)	(184)	(2)	-	(832)
BALANCE AS OF DECEMBER 31, 2018 BRENT AT 71.43 \$/B		11,886	237	4,357	51	-	16,531

(in billion cubic feet)			Gas	s reserves – Con:	solidated subsid	iaries and egu	itv affiliates
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total
AS OF DECEMBER 31, 2014 – BRENT AT 101.27 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	4,934	10,523	3,559	6,197	3,755	4,622	33,590
Consolidated subsidiaries	4,934	15	3,203	1,300	3,693	4,622	17,767
Equity affiliates	-	10,508	356	4,897	62	-	15,823
PROVED DEVELOPED RESERVES	2,914	4,958	1,939	5,946	2,167	1,109	19,033
Consolidated subsidiaries	2,914	9	1,871	1,224	2,145	1,109	9,272
Equity affiliates	-	4,949	68	4,722	22	-	9,761
PROVED UNDEVELOPED RESERVES	2,020	5,565	1,620	251	1,588	3,513	14,557
Consolidated subsidiaries	2,020	6	1,332	76	1,548	3,513	8,495
Equity affiliates	-	5,559	288	175	40	-	6,062
AS OF DECEMBER 31, 2015 – BRENT AT 54.17 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	4,470	10,619	3,159	6,124	3,349	4,485	32,206
Consolidated subsidiaries	4,470	15	2,848	1,429	3,301	4,485	16,548
Equity affiliates	-	10,604	311	4,695	48	-	15,658
PROVED DEVELOPED RESERVES	3,021	4,890	1,657	5,511	2,153	1,378	18,610
Consolidated subsidiaries	3,021	6	1,610	1,277	2,133	1,378	9,425
Equity affiliates	-	4,884	47	4,234	20	-	9,185
PROVED UNDEVELOPED RESERVES	1,449	5,729	1,502	613	1,196	3,107	13,596
Consolidated subsidiaries	1,449	9	1,238	152	1,168	3,107	7,123
Equity affiliates	-	5,720	264	461	28	-	6,473
AS OF DECEMBER 31, 2016 - BRENT AT 42.82 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	4,208	11,383	2,885	5,994	4,249	4,265	32,984
Consolidated subsidiaries	4,208	5	2,584	1,297	4,204	4,265	16,563
Equity affiliates	-	11,378	301	4,697	45	-	16,421
PROVED DEVELOPED RESERVES	2,912	4,606	1,582	5,356	3,774	1,260	19,490
Consolidated subsidiaries	2,912	3	1,545	1,157	3,751	1,260	10,628
Equity affiliates	-	4,603	37	4,199	23	-	8,862

3,005

3,005

475

453

22

13,494

5,935

7,559

PROVED UNDEVELOPED RESERVES

Consolidated subsidiaries

Equity affiliates

1,296

1,296

6,777

6,775

2

1,303

1,039

264

638

140

498

(in billion cubic feet)			Gas	s reserves – Cons	solidated subsid	iaries and eq	uity amiliates
Proved developed and undeveloped reserves	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total
AS OF DECEMBER 31, 2017 – BRENT AT 54.36 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	4,132	11,678	2,707	5,803	4,108	4,078	32,506
Consolidated subsidiaries	4,132	7	2,431	1,289	4,066	4,078	16,004
Equity affiliates	-	11,671	276	4,514	42	-	16,502
PROVED DEVELOPED RESERVES	2,964	6,262	1,749	5,151	3,493	1,127	20,746
Consolidated subsidiaries	2,964	4	1,692	1,013	3,476	1,127	10,276
Equity affiliates	-	6,258	57	4,138	17	-	10,470
PROVED UNDEVELOPED RESERVES	1,168	5,416	958	652	615	2,951	11,760
Consolidated subsidiaries	1,168	3	739	276	590	2,951	5,727
Equity affiliates	-	5,413	219	376	25	-	6,033
AS OF DECEMBER 31, 2018 – BRENT AT 71.43 \$/B							
PROVED DEVELOPED AND UNDEVELOPED RESERVES	4,428	11,894	2,636	5,860	3,875	3,632	32,325
Consolidated subsidiaries	4,428	8	2,399	1,503	3,824	3,632	15,794
Equity affiliates	-	11,886	237	4,357	51	-	16,531
PROVED DEVELOPED RESERVES	3,050	6,426	1,658	5,233	3,213	2,219	21,799
Consolidated subsidiaries	3,050	4	1,625	1,224	3,188	2,219	11,310
Equity affiliates	-	6,422	33	4,009	25	-	10,489
PROVED UNDEVELOPED RESERVES	1,378	5,468	978	627	662	1,413	10,526
Consolidated subsidiaries	1,378	4	774	279	636	1,413	4,484
Equity affiliates	-	5,464	204	348	26	-	6,042

#### RESULTS OF OPERATIONS FOR OIL AND GAS PRODUCING ACTIVITIES

The following tables do not include revenues and expenses related to oil and gas transportation activities and LNG liquefaction and transportation.

(in million dollars) ——						Consolidated	
	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total
2014							
Revenues Non-Group sales	2,200	-	2,885	1,480	1,195	4,296	12,056
Revenues Group sales	6,064	236	13,010	1,348	971	644	22,273
TOTAL REVENUES	8,264	236	15,895	2,828	2,166	4,940	34,329
Production costs	(1,800)	(44)	(2,166)	(559)	(466)	(666)	(5,701)
Exploration expenses	(636)	(9)	(520)	(255)	(183)	(362)	(1,965)
Depreciation, depletion and amortization and valuation allowances	(2,170)	(97)	(4,570)	(724)	(5,717)	(1,877)	(15,155)
Other expenses <sup>(1)</sup>	(419)	(29)	(1,172)	(317)	(402)	(167)	(2,506)
PRE-TAX INCOME FROM							
PRODUCING ACTIVITIES (2)	3,239	57	7,467	973	(4,602)	1,868	9,002
Income tax	(1,693)	(32)	(5,513)	(887)	882	(1,149)	(8,392)
RESULTS OF OIL AND GAS PRODUCING ACTIVITIES (2)	1,546	25	1,954	86	(3,720)	719	610
2015							
Revenues Non-Group sales	1,345	-	989	2,340	970	3,013	8,657
Revenues Group sales	3,816	129	7,816	1,858	271	356	14,246
TOTAL REVENUES	5,161	129	8,805	4,198	1,241	3,369	22,903
Production costs	(1,521)	(34)	(1,779)	(659)	(497)	(456)	(4,946)
Exploration expenses	(661)	(3)	(615)	(226)	(114)	(372)	(1,991)
Depreciation, depletion and amortization and valuation allowances	s (2,415)	(203)	(6,155)	(1,344)	(1,548)	(3,483)	(15,148)
Other expenses (1)	(350)	(16)	(722)	(2,756)	(280)	(121)	(4,245)
PRE-TAX INCOME FROM PRODUCING ACTIVITIES <sup>(3)</sup>	214	(127)	(466)	(787)	(1,198)	(1,063)	(3,427)
Income tax	458	(4)	(220)	(123)	210	(173)	148
RESULTS OF OIL AND GAS PRODUCING ACTIVITIES <sup>(3)</sup>	672	(131)	(686)	(910)	(988)	(1,236)	(3,279)
2016							
Revenues Non-Group sales	1,075	-	507	613	963	2,113	5,271
Revenues Group sales	3,046	72	6,826	3,033	494	444	13,915
TOTAL REVENUES	4,121	72	7,333	3,646	1,457	2,557	19,186
Production costs	(1,083)	(30)	(1,601)	(478)	(488)	(351)	(4,031)
Exploration expenses	(512)	(3)	(108)	(368)	(196)	(77)	(1,264)
Depreciation, depletion and amortization and valuation allowances	(3,421)	(89)	(4,566)	(599)	(603)	(1,191)	(10,469)
Other expenses (1)	(339)	(8)	(615)	(2,328)	(224)	(97)	(3,611)
PRE-TAX INCOME FROM PRODUCING ACTIVITIES <sup>(4)</sup>	(1,234)	(58)	443	(127)	(54)	841	(189)
Income tax	818	14	(143)	(205)	(27)	(184)	273
RESULTS OF OIL AND GAS PRODUCING ACTIVITIES <sup>(4)</sup>	(416)	(44)	300	(332)	(81)	657	84

<sup>(1)</sup> Included production taxes and accretion expense as provided by IAS 37 (\$526 million in 2014, \$497 million in 2015, \$507 million in 2016, \$525 million in 2017 and \$515 million in 2018).
(2) Including adjustment items applicable to ASC 932 perimeter, amounting to a net charge of \$6,532 million before tax and \$5,364 million after tax, mainly related to asset impairments.
(3) Including adjustment items applicable to ASC 932 perimeter, amounting to a net charge of \$7,104 million before tax and \$5,039 million after tax, mainly related to asset impairments.
(4) Including adjustment items applicable to ASC 932 perimeter, amounting to a net charge of \$1,943 million before tax and \$1,198 million after tax, mainly related to asset impairments.

(in million dollars) Consolidated subsidiaries

(in million dollars)						Consolidated	d subsidiaries	
_	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total	
2017								
Revenues Non-Group sales	1,454	0	975	934	1,335	2,160	6,858	
Revenues Group sales	3,932	41	8,486	3,706	821	453	17,439	
TOTAL REVENUES	5,386	41	9,461	4,640	2,156	2,613	24,297	
Production costs	(1,072)	(14)	(1,350)	(434)	(601)	(318)	(3,789)	
Exploration expenses	(419)	(2)	(164)	(10)	(193)	(76)	(864)	
Depreciation, depletion and amortization and valuation allowances	(2,928)	(36)	(5,790)	(511)	(2,569)	(820)	(12,654)	
Other expenses (1)	(352)	(7)	(775)	(2,619)	(338)	(121)	(4,212)	
PRE-TAX INCOME FROM PRODUCING ACTIVITIES (2)	615	(18)	1,382	1,066	(1,545)	1,278	2,778	
Income tax	(776)	(2)	(853)	(469)	387	(482)	(2,195)	
RESULTS OF OIL AND GAS PRODUCING ACTIVITIES (2)	(161)	(20)	529	597	(1,158)	796	583	
2018								
Revenues Non-Group sales	2,199	-	1,899	2,331	1,109	1,384	8,922	
Revenues Group sales	6,686	86	10,702	6,760	1,730	222	26,186	
TOTAL REVENUES	8,885	86	12,601	9,091	2,839	1,606	35,108	
Production costs	(1,546)	(14)	(1,208)	(617)	(864)	(147)	(4,396)	
Exploration expenses	(297)	(1)	(144)	(45)	(218)	(93)	(798)	
Depreciation, depletion and amortization and valuation allowances	(2,464)	(33)	(4,400)	(1,227)	(1,356)	(1,066)	(10,546)	
Other expenses (1)	(395)	(12)	(993)	(5,561)	(423)	(141)	(7,525)	
PRE-TAX INCOME FROM PRODUCING ACTIVITIES®	4,183	26	5,856	1,641	(22)	159	11,843	
Income tax	(2,356)	(16)	(2,440)	(868)	88	(25)	(5,617)	
RESULTS OF OIL AND GAS PRODUCING ACTIVITIES®	1,827	10	3,416	773	66	134	6,226	

(1) Included production taxes and accretion expense as provided by IAS 37 (\$526 million in 2014, \$497 million in 2015, \$507 million in 2016, \$525 million in 2017 and \$515 million in 2018). (2) Including adjustment items applicable to ASC 932 perimeter, amounting to a net charge of \$3,712 million before tax and \$3,305 million after tax, essentially related to asset impairments. (3) Including adjustment items applicable to ASC 932 perimeter, amounting to a net charge of \$1,238 million before tax and \$703 million after tax, essentially related to asset impairments.

(in million dollars) **Equity affiliates** Group's share of results of oil and gas producing activities Europe & Central Asia (excl. Russia) Middle East & North Africa Asia Pacific Russia Africa Americas Total (excluding North Africa) 2014 410 1,838 2,158 (21)(69)2015 285 699 32 1,016 2016 398 380 102 880 2017 483 72 547 62 1,164 2018 Revenues Non-Group sales 1,915 122 3,429 346 5,812 Revenues Group sales 45 32 941 1,018 **TOTAL REVENUES** 1,960 4,370 346 6,830 154 (587)Production costs (139)(399)(49)(14)Exploration expenses (14)Depreciation, depletion and amortization and valuation allowances (196)(253)(68)(517)(239)(32)(2,548)(185)(3,004)Other expenses PRE-TAX INCOME FROM PRODUCING ACTIVITIES 1,372 122 2,708 1,170 44 (228)(424)(655)Income tax (3)**RESULTS OF OIL AND GAS** PRODUCING ACTIVITIES 1,144 122 746 41 2,053

#### **COST INCURRED**

(in million dollars)

The following tables set forth the costs incurred in the Group's oil and gas property acquisition, exploration and development activities, including both capitalized and expensed amounts.

Consolidated subsidiaries

9

3

861

1,026

They do not include costs incurred related to oil and gas transportation and LNG liquefaction and transportation activities.

(IFI FFIIIIIOFI GOIIars)						Consolidated	subsidiaries
	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total
2014							
Proved property acquisition	80	-	17	(1)	-	9	105
Unproved property acquisition	82	-	69	7	544	1	703
Exploration costs	500	9	882	403	375	451	2,620
Development costs (1)	5,151	116	8,037	567	3,468	3,024	20,363
TOTAL COST INCURRED	5,813	125	9,005	976	4,387	3,485	23,791
2015							
Proved property acquisition	57	-	59	1,039	-	10	1,165
Unproved property acquisition	-	4	26	1,205	199	4	1,438
Exploration costs	618	3	287	263	515	261	1,947
Development costs (1)	4,735	97	7,582	600	3,143	2,381	18,538
TOTAL COST INCURRED	5,410	104	7,954	3,107	3,857	2,656	23,088
2016							
Proved property acquisition	102	1	31	10	415	-	559
Unproved property acquisition	5	-	19	1	289	15	329
Exploration costs	594	3	145	93	387	166	1,388
Development costs (1)	3,041	30	5,977	729	2,032	898	12,707
TOTAL COST INCURRED	3,742	34	6,172	833	3,123	1,079	14,983
2017							
Proved property acquisition	47	-	1	1	14	-	63
Unproved property acquisition	13	-	56	5	153	507	734
Exploration costs	415	2	170	61	388	141	1,177
Development costs (1)	1,445	20	3,544	948	1,957	1,073	8,987
TOTAL COST INCURRED	1,919	22	3,771	1,014	2,512	1,721	10,959
2018(2)							
Proved property acquisition	2,899	-	210	473	1,417	-	4,999
Unproved property acquisition	3,173	-	245	2,337	2,137	1	7,893
Exploration costs	379	1	196	34	406	156	1,172
Development costs (1)	1,642	23	3,252	1,378	1,649	1,346	9,290
TOTAL COST INCURRED	8,093	24	3,903	4,222	5,609	1,503	23,354
(in million dollars)						Equi	ty affiliates
Group's share of costs of property acquisition exploration and development	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total
2014	-	970	-	500	195	-	1,665
2015	-	637	-	406	83	-	1,126
2016	-	243	-	544	61	-	848
2017	-	219	-	629	88	-	936
2018							
Proved property acquisition	-	153	-	-	-	-	153

9

204

366

3

67

590

593

Unproved property acquisition

Exploration costs

Development costs (1)

Total cost incurred

<sup>(1)</sup> Including asset retirement costs capitalized during the year and any gains or losses recognized upon settlement of asset retirement obligation during the year. (2) Including costs incurred relating to acquisitions of Mærsk Oil, Iara and Lapa concessions and Marathon Oil Libya Ltd.

# CAPITALIZED COST RELATED TO OIL AND GAS PRODUCING ACTIVITIES

Capitalized costs represent the amount of capitalized proved and unproved property costs, including support equipment and facilities, along with the related accumulated depreciation, depletion and amortization.

The following tables do not include capitalized costs related to oil and gas transportation and LNG liquefaction and transportation activities.

(in million dollars)						Consolidated	
	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Tota
As of December 31, 2014							
Proved properties	56,698	1,066	66,173	11,219	17,774	20,368	173,298
Unproved properties	1,148	-	4,790	821	8,309	1,210	16,278
Total capitalized costs	57,846	1,066	70,963	12,040	26,083	21,578	189,576
Accumulated depreciation, depletion and amortization	(28,946)	(496)	(32,725)	(8,017)	(10,657)	(10,807)	(91,648)
NET CAPITALIZED COSTS	28,900	570	38,238	4,023	15,426	10,771	97,928
As of December 31, 2015							
Proved properties	55,050	1,163	73,842	12,816	19,630	22,886	185,387
Unproved properties	1,018	4	4,362	2,058	8,915	997	17,354
Total capitalized costs	56,068	1,167	78,204	14,874	28,545	23,883	202,741
Accumulated depreciation, depletion and amortization	(28,341)	(699)	(39,259)	(9,283)	(11,488)	(13,647)	(102,717)
NET CAPITALIZED COSTS	27,727	468	38,945	5,591	17,057	10,236	100,024
As of December 31, 2016							
Proved properties	54,611	600	78,638	11,275	23,392	23,622	192,138
Unproved properties	1,000	4	4,357	1,657	8,611	1,037	16,666
Total capitalized costs	55,611	604	82,995	12,932	32,003	24,659	208,804
Accumulated depreciation, depletion and amortization	(29,227)	(385)	(42,988)	(7,973)	(12,764)	(14,735)	(108,072)
NET CAPITALIZED COSTS	26,384	219	40,007	4,959	19,239	9,924	100,732
As of December 31, 2017							
Proved properties	58,624	619	79,793	12,544	25,354	24,626	201,560
Unproved properties	1,085	4	4,289	1,331	8,265	1,630	16,604
Total capitalized costs	59,709	623	84,082	13,874	33,619	26,256	218,163
Accumulated depreciation, depletion and amortization	(34,370)	(421)	(46,725)	(8,450)	(14,345)	(15,550)	(119,861)
NET CAPITALIZED COSTS	25,339	202	37,357	5,424	19,274	10,706	98,303
As of December 31, 2018							
Proved properties	58,981	641	82,077	15,684	28,744	26,122	212,249
Unproved properties	2,873	4	4,631	2,802	8,969	1,708	20,987
Total capitalized costs	61,854	645	86,708	18,486	37,713	27,830	233,236
Accumulated depreciation, depletion and amortization	(35,036)	(454)	(50,029)	(10,012)	(14,398)	(16,682)	(126,611)
NET CAPITALIZED COSTS	26,818	191	36,679	8,474	23,315	11,148	106,625

(in million dollars) **Equity affiliates** Middle East & North Africa Europe & Central Asia (excl. Russia) Africa (excluding North Africa) Asia Pacific Group's share of net capitalized costs Russia Americas Total As of December 31, 2014 4,607 6,860 1,152 1,101 As of December 31, 2015 4,120 1,131 1,097 6,348 1,094 As of December 31, 2016 4,987 7,260 1,179 As of December 31, 2017 7,401 5,074 1,243 1,084 As of December 31, 2018 Proved properties 11,474 6,268 3,463 1,743 Unproved properties 132 132 Total capitalized costs 6,400 3,463 11,606 1,743 Accumulated depreciation, depletion and amortization (1,461) (1,856)(660)(3,977) **NET CAPITALIZED COSTS** 4,939 1,607 1,083 7,629

#### STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS (EXCLUDING TRANSPORTATION)

The standardized measure of discounted future net cash flows relating to proved oil and gas reserve quantities was developed as follows:

- estimates of proved reserves and the corresponding production profiles are based on current technical and economic conditions;
- 2. the estimated future cash flows are determined based on prices used in estimating the Group's proved oil and gas reserves;
- 3. the future cash flows incorporate estimated production costs (including production taxes), future development costs and asset retirement costs. All cost estimates are based on year-end technical and economic conditions;
- future income taxes are computed by applying the year-end statutory tax rate to future net cash flows after consideration of permanent differences and future income tax credits; and

future net cash flows are discounted at a standard discount rate of 10 percent.

These principles applied are those required by ASC 932 and do not reflect the expectations of real revenues from these reserves, nor their present value; hence, they do not constitute criteria for investment decisions.

An estimate of the fair value of reserves should also take into account, among other things, the recovery of reserves not presently classified as proved, anticipated future changes in prices and costs and a discount factor more representative of the time value of money and the risks inherent in reserve estimates.

(in million dollars)						Consolidated	d subsidiaries
	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Tota
As of December 31, 2014							
Future cash inflows	129,535	2,294	168,785	33,404	87,965	44,599	466,582
Future production costs	(30,633)	(1,255)	(47,514)	(8,522)	(38,776)	(9,789)	(136,489)
Future development costs	(32,110)	(780)	(34,965)	(4,253)	(16,728)	(8,595)	(97,431)
Future income taxes	(21,287)	(172)	(50,633)	(11,310)	(5,891)	(7,552)	(96,845)
FUTURE NET CASH FLOWS, AFTER INCOME TAXES	45,505	87	35,673	9,319	26,570	18,663	135,817
Discount at 10%	(26,240)	(5)	(13,955)	(4,244)	(19,489)	(11,110)	(75,043)
STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS	19,265	82	21,718	5,075	7,081	7,553	60,774
As of December 31, 2015							
Future cash inflows	69,411	1,045	75,060	57,478	40,866	26,904	270,764
Future production costs	(20,263)	(512)	(27,455)	(46,510)	(24,103)	(8,355)	(127,198)
Future development costs	(20,418)	(495)	(24,843)	(5,099)	(11,104)	(6,289)	(68,248)
Future income taxes	(7,516)	(28)	(12,050)	(1,839)	(1,105)	(3,046)	(25,584)
FUTURE NET CASH FLOWS, AFTER INCOME TAXES	21,214	10	10,712	4,030	4,554	9,214	49,734
Discount at 10%	(10,784)	18	(3,450)	(2,194)	(4,014)	(5,299)	(25,723)
STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS	10,430	28	7,262	1,836	540	3,915	24,011
As of December 31, 2016							
Future cash inflows	46,212	365	51,677	52,891	21,520	19,209	191,874
Future production costs	(15,428)	(179)	(19,519)	(39,108)	(14,267)	(7,495)	(95,996)
Future development costs	(15,334)	(219)	(19,300)	(4,995)	(5,487)	(4,805)	(50,140)
Future income taxes	(2,599)	(1)	(7,480)	(2,517)	(989)	(955)	(14,541)
FUTURE NET CASH FLOWS, AFTER INCOME TAXES	12,851	(34)	5,378	6,271	777	5,954	31,197
Discount at 10%	(5,172)	8	(64)	(2,986)	(815)	(2,666)	(11,695)
STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS	7,679	(26)	5,314	3,285	(38)	3,288	19,502
	<u> </u>		<u> </u>	<u> </u>		· ·	

(in million dollars) Consolidated subsidiaries

(in million dollars)						Consolidated sul			
	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total		
As of December 31, 2017									
Future cash inflows	58,133	420	63,319	67,180	37,203	20,616	246,871		
Future production costs	(16,644)	(221)	(18,554)	(50,240)	(19,372)	(5,780)	(110,811)		
Future development costs	(13,302)	(115)	(15,319)	(5,648)	(6,337)	(4,044)	(44,765)		
Future income taxes	(9,385)	(36)	(11,403)	(4,450)	(921)	(1,721)	(27,916)		
FUTURE NET CASH FLOWS, AFTER INCOME TAXES	18,802	47	18,043	6,843	10,572	9,070	63,377		
Discount at 10%	(8,106)	(3)	(4,977)	(3,065)	(6,562)	(3,567)	(26,280)		
STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS	10,696	44	13,066	3,778	4,010	5,503	37,097		
As of December 31, 2018									
Future cash inflows	90,506	508	79,258	121,614	41,224	19,936	353,046		
Future production costs	(21,813)	(226)	(19,236)	(95,749)	(21,282)	(4,570)	(162,876)		
Future development costs	(17,735)	(135)	(13,861)	(6,656)	(6,584)	(3,093)	(48,064)		
Future income taxes	(22,486)	(63)	(16,357)	(5,965)	(2,322)	(2,809)	(50,002)		
FUTURE NET CASH FLOWS, AFTER INCOME TAXES	28,472	84	29,804	13,244	11,036	9,464	92,104		
Discount at 10%	(11,811)	(16)	(8,277)	(5,469)	(5,479)	(3,247)	(34,299)		
STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS	16,661	68	21,527	7,775	5,557	6,217	57,805		
Minority interests in future net cash flows as of	,			.,					
December 21, 2014			1 100				1 100		
December 31, 2014  December 31, 2015	-		1,103	-	-	-	1,103		
			253				253		
December 31, 2016  December 31, 2017			862		-	-	862		
					-	-			
DECEMBER 31, 2018			1,440			-	1,440		
(in million dollars)						Eq	uity affiliates		
Group's share of equity affiliates' future net cash flows as of	Europe & Central Asia (excl. Russia)	Russia	Africa (excluding North Africa)	Middle East & North Africa	Americas	Asia Pacific	Total		
December 31, 2014	-	5,413	361	11,591	1,728	-	19,093		
December 31, 2015	-	2,024	(103)	6,952	1,628	-	10,501		
December 31, 2016	-	5,061	(183)	3,330	1,709	-	9,917		
December 31, 2017	-	7,708	135	5,437	1,662	-	14,942		
December 31, 2018									
Future cash inflows	-	40,376	1,368	48,144	6,969	-	96,857		
Future production costs	-	(11,136)	(47)	(21,248)	(3,372)	-	(35,803)		
Future development costs	-	(1,118)	(28)	(2,731)	(326)	-	(4,203)		
Future income taxes	-	(4,825)	-	(11,631)	(1,233)	-	(17,689)		
FUTURE NET CASH FLOWS, AFTER INCOME TAXES	-	23,297	1,293	12,534	2,038	-	39,162		
Discount at 10%	-	(12,454)	(658)	(6,279)	(1,019)	-	(20,410)		
STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS	-	10,843	635	6,255	1,019	-	18,752		

# CHANGES IN THE STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS

Consolidated subsidiaries (in million dollars)	2018	2017	2016	2015	2014
Discounted future net cash flows as of January 1	37,097	19,502	24,011	60,774	63,274
Sales and transfers, net of production costs	(23,700)	(16,822)	(12,015)	(14,209)	(26,647)
Net change in sales and transfer prices and in production costs and other expenses	28,420	26,699	(21,189)	(88,615)	(16,703)
Extensions, discoveries and improved recovery	8,412	3,244	156	933	1,912
Changes in estimated future development costs	(1,071)	(324)	400	4,412	(5,407)
Previously estimated development costs incurred during the year	6,636	8,952	13,967	19,694	21,484
Revisions of previous quantity estimates	4,588	2,427	5,347	(4,800)	(1,505)
Accretion of discount	3,710	1,950	2,401	6,077	6,327
Net change in income taxes	(11,538)	(8,155)	6,304	42,252	20,116
Purchases of reserves in place	7,876	98	364	-	26
Sales of reserves in place	(2,625)	(474)	(244)	(2,507)	(2,103)
END OF YEAR	57,805	37,097	19,502	24,011	60,774
Equity affiliates (in million dollars)	2018	2017	2016	2015	2014
Discounted future net cash flows as of January 1	14,942	9,917	10,501	19,093	15,419
Sales and transfers, net of production costs	(3,248)	(2,151)	(1,745)	(1,860)	(3,639)
Net change in sales and transfer prices and in production costs and other expenses	7,322	7,075	(3,840)	(14,821)	(1,546)
Extensions, discoveries and improved recovery	76	57	1,204	-	4,444
Changes in estimated future development costs	(255)	(1,171)	83	1,572	190
Previously estimated development costs incurred during the year	789	789	971	1,272	1,330
Revisions of previous quantity estimates	1,030	783	214	315	19
Accretion of discount	1,494	992	1,050	1,909	1,542
Net change in income taxes	(3,691)	(1,420)	(340)	2,901	834
Purchases of reserves in place	388	71	1,929	186	543
Sales of reserves in place	(95)	-	(110)	(66)	(43)
END OF YEAR	18,752	14,942	9,917	10,501	19,093

#### OIL AND GAS ACREAGE

As of December 31,			2018		2017		2016
(in thousands of acres)		Undeveloped acreage <sup>(1)</sup>	Developed acreage	Undeveloped acreage <sup>(1)</sup>	Developed acreage	Undeveloped acreage <sup>(1)</sup>	Developed acreage
Europe & Central Asia	Gross	19,649	923	17,885	730	18,416	719
	Net	7,450	221	6,567	165	6,989	154
Russia	Gross	3,733	619	3,758	604	3,584	503
	Net	685	127	691	121	666	93
Africa (excluding North Africa)	Gross	77,537	718	73,608	829	79,517	806
	Net	55,174	198	53,518	204	46,071	200
Middle East & North Africa	Gross	31,406	3,037	32,977	2,879	37,148	2,606
	Net	6,068	427	5,902	445	9,991	371
Americas	Gross	24,595	1,102	20,487	1,075	24,569	992
	Net	13,355	509	11,985	527	13,155	468
Asia Pacific	Gross	42,332	668	52,477	885	44,242	738
	Net	24,566	204	34,556	321	27,373	276
TOTAL	GROSS	199,252	7,067	201,192	7,002	207,476	6,364
TOTAL	NET (2)	107,298	1,686	113,219	1,783	104,245	1,562
As of December 31,					2015		2014
(in thousands of acres)			_	Undeveloped acreage <sup>(1)</sup>	Developed acreage	Undeveloped acreage <sup>(1)</sup>	Developed acreage
Europe & Central Asia	Gross			23,346	764	24,369	747
	Net			9,581	158	11,123	152
Russia	Gross			3,659	520	3,419	
	Net					,	1,370
Africa (excluding North Africa)				728	96	1,333	1,370
	Gross			728 82,757	96	1,333	
							215
Middle East & North Africa	Gross			82,757	817	90,974	215
Middle East & North Africa	Gross Net			82,757 45,852	817	90,974 50,990	215 810 211
Middle East & North Africa  Americas	Gross Net Gross			82,757 45,852 38,582	817 207 2,686	90,974 50,990 65,787	215 810 211 1,710
	Gross Net Gross Net			82,757 45,852 38,582 10,545	817 207 2,686 366	90,974 50,990 65,787 38,481	215 810 211 1,710 268
	Gross Net Gross Net Gross			82,757 45,852 38,582 10,545 23,881	817 207 2,686 366 984	90,974 50,990 65,787 38,481 25,081	215 810 211 1,710 268 962
Americas	Gross Net Gross Net Gross Net			82,757 45,852 38,582 10,545 23,881 9,186	817 207 2,686 366 984 304	90,974 50,990 65,787 38,481 25,081 11,375	215 810 211 1,710 268 962 299
Americas	Gross Net Gross Net Gross Net Gross Net Gross			82,757 45,852 38,582 10,545 23,881 9,186 38,834	817 207 2,686 366 984 304 672	90,974 50,990 65,787 38,481 25,081 11,375 36,307	215 810 211 1,710 268 962 299 651
Americas  Asia Pacific	Gross Net Gross Net Gross Net Gross Net Gross Net			82,757 45,852 38,582 10,545 23,881 9,186 38,834 23,285	817 207 2,686 366 984 304 672 251	90,974 50,990 65,787 38,481 25,081 11,375 36,307 21,004	215 810 211 1,710 268 962 299 651 244

<sup>(1)</sup> Undeveloped acreage includes leases and concessions.
(2) Net acreage equals the sum of the Group's equity stakes in gross acreage.

# NUMBER OF PRODUCTIVE WELLS

As of December 31,			2018		2017		2016
(number of wells)		Gross productive wells	Net productive wells <sup>(1)</sup>	Gross productive wells	Net productive wells <sup>(1)</sup>	Gross productive wells	Net productive wells <sup>(1)</sup>
Europe & Central Asia	Oil	767	261	436	114	415	106
	Gas	314	98	244	90	259	87
Russia	Oil	337	65	297	55	232	39
	Gas	627	113	574	100	489	80
Africa (excluding North Africa)	Oil	1,533	429	1,590	442	2,091	561
	Gas	75	14	75	15	96	19
Middle East & North Africa	Oil	11,189	711	10,197	628	9,385	609
	Gas	190	40	168	41	161	44
Americas	Oil	1,066	352	1,044	346	954	322
	Gas	3,528	2,052	3,422	2,005	3,585	2,230
Asia Pacific	Oil	8	7	131	60	124	55
	Gas	2,289	743	3,053	1,108	2,802	976
TOTAL	OIL	14,900	1,825	13,695	1,645	13,201	1,692
	GAS	7,023	3,060	7,536	3,359	7,392	3,436
As of December 31,					2015		2014
(number of wells)			_	Gross productive wells	Net productive wells <sup>(1)</sup>	Gross productive wells	Net productive wells <sup>(1)</sup>
Europe & Central Asia	Oil			407	108	391	136
	Gas			289	88	279	149
Russia	Oil			207	42	137	31
	Gas			516	80	410	67
Africa (excluding North Africa)	Oil			2,165	601	1,928	596
	Gas			98	22	76	21
Middle East & North Africa	Oil			7,992	534	5,909	378
	Gas			159	44	189	48
Americas	Oil			1,092	349	961	295
	Gas			3,903	795	3,817	782
	Gas						
Asia Pacific	Oil			119	53	119	22
Asia Pacific				119 2,363	53 814	119 2,063	22 665
	Oil						
Asia Pacific  TOTAL	Oil Gas			2,363	814	2,063	665

<sup>(1)</sup> Net wells equal the sum of the Group's equity stakes in gross wells.

#### NUMBER OF NET PRODUCTIVE AND DRY WELLS DRILLED

As of December 31,			2018			2017			2016
(number of wells)	Net productive wells drilled <sup>(1)(2)</sup>	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>	Net productive wells drilled <sup>(1)(2)</sup>	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>	Net productive wells drilled(1)(2)	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>
Exploratory									
Europe & Central Asia	0.9	0.8	1.7	0.1	1.8	1.9	1.1	1	2.1
Russia	-	-	-	-	-	-	-	-	-
Africa (excluding North Africa)	0.1	1.0	1.1	0.2	0.5	0.8	0.7	_	0.7
Middle East & North Africa	0.5	_	0.5	0.6	0.5	1.1	0.8	_	0.8
Americas	0.5	1.6	2.1	1.3	0.5	1.7	2.1	0.8	2.9
Asia Pacific	0.8	-	0.8	1.2	0.7	1.9	1.6	_	1.6
SUBTOTAL	2.8	3.4	6.2	3.4	4.0	7.4	6.3	1.8	8.1
Development									
Europe & Central Asia	10.1	-	10.1	8.8	-	8.8	13.6	0.5	14.1
Russia	13.4	-	13.4	21.5	-	21.5	18.7	-	18.7
Africa (excluding North Africa)	13.0	0.1	13.1	14.4	_	14.4	14.6	-	14.6
Middle East & North Africa	68.8	_	68.8	82	_	82	49.3	1.1	50.4
Americas	38.8	0.3	39.1	29.2	0.5	29.7		35.4	-35.4
Asia Pacific	116.3	_	116.3	132.4	-	132.4	151.0	-	151.0
SUBTOTAL	260.4	0.4	260.8	288.3	0.5	288.8	282.6	1.6	284.2
TOTAL	263.2	3.8	267.0	291.7	4.5	296.2	288.9	3.4	292.3
As of December 31, (number of wells)						2015			2014
(namber of wells)				Net productive wells drilled <sup>(1)(2)</sup>	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>	Net productive wells drilled <sup>(1)(2)</sup>	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>
Exploratory									
Europe & Central Asia				1.0	4.6	5.6	1.4	0.2	1.6
Russia				-	-	_	-	0.3	0.3
Africa (excluding North Afri	ica)			0.2	2.1	2.3	1.7	2.3	4.0
Middle East & North Africa	l			0.3	0.5	0.8	0.6	1.3	1.9
Americas				1.4	0.6	2.0	2.1	0.3	2.4
Asia Pacific				2.0	0.9	2.9	1.2	1.1	2.3
SUBTOTAL				4.9	8.7	13.6	7.0	5.5	12.5
Development									
Europe & Central Asia				15.7	0.4	16.1	9.0	-	9.0
Russia				22.9	-	22.9	28.8	0.8	29.6
Africa (excluding North Afri	ica)			21.4	-	21.4	24.1	1.0	25.1
Middle East & North Africa	l			36.6	0.6	37.2	36.6	0.2	36.8
Americas				60.6	0.1	60.7	128.1	0.2	128.3
Asia Pacific				86.9	-	86.9	106.0	0.5	106.5
SUBTOTAL				244.1	1.1	245.2	332.6	2.7	335.3

249.0

9.8

258.8

339.6

347.8

8.2

TOTAL

<sup>(1)</sup> Net wells equal the sum of the Company's fractional interest in gross wells.
(2) Includes certain exploratory wells that were abandoned but which would have been capable of producing oil in sufficient quantities to justify completion.
(3) For information: service wells and stratigraphic wells are not reported in this table.

# WELLS IN THE PROCESS OF BEING DRILLED (INCLUDING WELLS TEMPORARILY SUSPENDED)

As of December 31,		2018		2016		2015
(number of wells)	Gross	Net (1)	Gross	Net (1)	Gross	
Net (1)						
Exploratory						
Europe & Central Asia	-	-	6	1.9	4	0.9
Russia	-	-	-		-	_
Africa (excluding North Africa)	2	0.5	19	4.7	18	4.6
Middle East & North Africa	1	0.4	2	0	2	0.8
Americas	3	2.0	8	2.8	10	3.5
Asia Pacific	-	-	5	1.9	5	1.3
SUBTOTAL	6	2.9	40	11.3	39	11.1
Other wells (2)						
Europe & Central Asia	138	71.4	16	5.2	45	11.8
Russia	26	3.9	61	15.2	111	27.9
Africa (excluding North Africa)	65	13.7	67	13.6	72	21.3
Middle East & North Africa	180	26.2	200	27.5	174	25.2
Americas	50	21.3	44	18.5	46	28.0
	==0	137.7	809	201.5	421	116.7
Asia Pacific	579	101.1				
	1,038	274.2	1,197	281.5	869	230.9
Asia Pacific			1,197 1,237	281.5 292.8	869 908	230.9
Asia Pacific  SUBTOTAL  TOTAL	1,038	274.2		292.8		242.0
Asia Pacific SUBTOTAL	1,038	274.2	1,237	292.8	908	242.0
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)	1,038	274.2		292.8		242.0
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory	1,038	274.2	1,237 Gross	292.8 2015 Net (1)	908 Gross	242.0 2014 Net (1)
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia	1,038	274.2	1,237	292.8	908	242.0 2014 Net (1)
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia	1,038	274.2	1,237  Gross  9 -	292.8  2015 Net (1)  2.5	908 Gross	242.0 2014 Net <sup>(1)</sup>
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)	1,038	274.2	1,237 Gross 9 - 24	292.8  2015 Net (1)  2.5  6.6	908 Gross 11 - 28	242.0 2014 Net <sup>(1)</sup> 3.2 - 7.3
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa	1,038	274.2	1,237  Gross  9  - 24 9	292.8  2015 Net (1)  2.5  6.6  3.2	908  Gross  11  - 28 17	242.0 2014 Net <sup>(1)</sup> 3.2 - 7.3 6.5
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas	1,038	274.2	1,237  Gross  9  - 24  9 14	292.8  2015  Net (1)  2.5  6.6  3.2  4.6	908  Gross  11  - 28  17  12	242.0 2014 Net <sup>(1)</sup> 3.2 - 7.3 6.5 4.0
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa	1,038	274.2	1,237  Gross  9  - 24 9	292.8  2015 Net (1)  2.5  6.6  3.2	908  Gross  11  - 28 17	242.0 2014 Net <sup>(1)</sup> 3.2 - 7.3 6.5
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas	1,038	274.2	1,237  Gross  9  - 24  9 14	292.8  2015  Net (1)  2.5  6.6  3.2  4.6	908  Gross  11  - 28  17  12	242.0 2014 Net <sup>(1)</sup> 3.2 - 7.3 6.5 4.0
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas  Asia Pacific	1,038	274.2	1,237  Gross  9  - 24  9 14  7	292.8  2015  Net (1)  2.5  6.6  3.2  4.6  2.5	908  Gross  11  - 28 17 12 7	242.0  2014  Net <sup>(1)</sup> 3.2  - 7.3  6.5  4.0  2.3
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas  Asia Pacific  SUBTOTAL	1,038	274.2	1,237  Gross  9  - 24  9 14  7	292.8  2015  Net (1)  2.5  6.6  3.2  4.6  2.5	908  Gross  11  - 28 17 12 7	242.0  2014  Net <sup>(1)</sup> 3.2  - 7.3  6.5  4.0  2.3
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas  Asia Pacific  SUBTOTAL  Other wells(2)	1,038	274.2	1,237  Gross  9	292.8  2015  Net (1)  2.5  6.6  3.2  4.6  2.5  19.4	908  Gross  11  - 28  17  12  7  75	242.0  2014  Net <sup>®</sup> 3.2  -  7.3  6.5  4.0  2.3  23.3
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas  Asia Pacific  SUBTOTAL  Other wells (2)  Europe & Central Asia	1,038	274.2	1,237  Gross  9  - 24  9 14  7  63	292.8  2015  Net (1)  2.5  6.6  3.2  4.6  2.5  19.4	908  Gross  11  - 28 17 12 7 75	242.0  2014  Net (1)  3.2  -  7.3  6.5  4.0  2.3  23.3
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas  Asia Pacific  SUBTOTAL  Other wells (2)  Europe & Central Asia  Russia	1,038	274.2	1,237  Gross  9  - 24  9 14  7  63  59 113	292.8  2015 Net (1)  2.5 6.6 3.2 4.6 2.5 19.4	908  Gross  11  - 28 17 12 7 75  55 203	242.0  2014  Net (1)  3.2  -  7.3  6.5  4.0  2.3  23.3  17.1  32.5  12.2
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas  Asia Pacific  SUBTOTAL  Other wells <sup>(2)</sup> Europe & Central Asia  Russia  Africa (excluding North Africa)	1,038	274.2	1,237  Gross  9  - 24  9 14  7  63  59 113 56	292.8  2015  Net (1)  2.5  6.6  3.2  4.6  2.5  19.4  17.2  17.4  14.9	908  Gross  11  - 28 17 12 7 75  55 203 40	242.0  2014  Net <sup>(1)</sup> 3.2  -  7.3  6.5  4.0  2.3  23.3  17.1  32.5  12.2  14.4
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas  Asia Pacific  SUBTOTAL  Other wells(2)  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa	1,038	274.2	1,237  Gross  9  - 24  9 14  7  63  59 113  56 158	292.8  2015  Net (1)  2.5  6.6  3.2  4.6  2.5  19.4  17.2  17.4  14.9  20.5	908  Gross  11  - 28 17 12 7 75  55 203 40 135	242.0  2014  Net <sup>(1)</sup> 3.2  -  7.3  6.5  4.0  2.3  23.3
Asia Pacific  SUBTOTAL  TOTAL  As of December 31, (number of wells)  Exploratory  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa  Americas  Asia Pacific  SUBTOTAL  Other wells (2)  Europe & Central Asia  Russia  Africa (excluding North Africa)  Middle East & North Africa	1,038	274.2	1,237  Gross  9  - 24  9 14  7  63  59 113  56 158 63	292.8  2015  Net (1)  2.5  6.6  3.2  4.6  2.5  19.4  17.2  17.4  14.9  20.5  22.4	908  Gross  11  - 28  17  12  7  75  55  203  40  135  370	242.0  2014  Net <sup>(1)</sup> 3.2  7.3  6.5  4.0  2.3  23.3  17.1  32.5  12.2  14.4  159.3

 <sup>(1)</sup> Net wells equal the sum of the Group's equity stakes in gross wells. From 2013, includes wells for which surface facilities permitting production have not yet been constructed. Such wells are also reported in the table "Number of net productive and dry wells drilled", for the year in which they were drilled.
 (2) Other wells are development wells, service wells, stratigraphic wells and extension wells.

#### **INTERESTS IN PIPELINES**

The table below sets forth interests of the Group's entities (1) in the main oil and gas pipelines.

As of December 31, 2018 Pipeline(s)	Origin	Destination	% interest	Operator	Liquids	Gas
EUROPE AND CENTRAL ASIA						
Azerbaijan						
BTC	Baku (Azerbaijan)	Ceyhan (Turkey, Mediterranean)	5.00		Χ	
Norway						
Frostpipe (inhibited)	Lille-Frigg, Froy	Oseberg	36.25		X	
Heimdal to Brae Condensate Line	Heimdal	Brae	16.76		X	
Kvitebjorn Pipeline	Kvitebjorn	Mongstad	5.00		X	
Norpipe Oil	Ekofisk Treatment center	Teesside (United Kingdom)	45.22		X	
Oseberg Transport System	Oseberg, Brage and Veslefrikk	Sture	12.98		X	
Troll Oil Pipeline I and II	Troll B and C	Vestprosess (Mongstad refinery)	3.71		Χ	
Vestprosess	Kollsnes (Area E)	Vestprosess (Mongstad refinery)	5.00		Χ	
Netherlands						
Nogat Pipeline	F3-FB	Den Helder	5.00			X
WGT K13-Den Helder	K13A	Den Helder	4.66			Χ
WGT K13-Extension	Markham	K13 (via K4/K5)	23.00			Χ
United Kingdom						
Alwyn Liquid Export Line	Alwyn North	Cormorant	100.00	X	Χ	
Bruce Liquid Export Line	Bruce	Forties (Unity)	1.00		Χ	
Graben Area Export Line (GAEL)						
Northern Spur	ETAP	Forties (Unity)	9.58		X	
Graben Area Export Line (GAEL)	Floir Fundille	ETAD	00.00		V	
Southern Spur	Elgin-Franklin	ETAP	32.09		X	
Ninian Pipeline System	Ninian	Sullom Voe	16.36		X	
Shearwater Elgin Area Line (SEAL)	Elgin-Franklin, Shearwater	Bacton	25.73			X
SEAL to Interconnector Link (SILK)	Bacton	Interconnector	54.66	X		Χ
AFRICA (EXCL. NORTH AFRICA)						
Gabon						
Mandji Pipes	Mandji fields	Cap Lopez Terminal	100.00(2)	X	X	
Nigeria						
O.U.R	Obite	Rumuji	40.00	Χ		Χ
NOPL	Rumuji	Owaza	40.00	Χ		Χ
MIDDLE EAST AND NORTH AFRIC	`A					
<b>Qatar</b> Dolphin	North Field (Qatar)	Taweelah-Fujairah-Al Ain				
Dopini	(Gatal)	(United Arab Emirates)	24.50			Χ
AMERICAS						
Argentina	Navente (TON)	Described and Share				
TGM	Neuquén (TGN) / Porto alegre (Brazil)	Paso de Los Libres (Brazil border)	32.68			Χ
Brazil	Torto alegre (Brazil)	(Diazii border)	02.00			
TBG	Bolivia-Brazil border	Porto Alegre via São Paulo	9.67			Χ
TSB	Argentina-Brazil border	1 orto / llogro via dao r adio	0.07			
105	(TGM)/ Porto Alegre	Uruguyana (Brazil) Canoas	25.00			X
ASIA-PACIFIC						
Australia						
GLNG	Fairview, Roma,					
	Scotia, Arcadia	GLNG (Curtis Island)	27.50			X
Myanmar						
Yadana	Yadana field	Ban-I Tong (Thai border)	31.24	Х		Х

<sup>(1)</sup> Excluding equity affiliates, except for the Yadana and Dolphin pipelines.
(2) 100% interest held by Total Gabon. The Group holds an interest of 58.28% in Total Gabon.

# EUROPE AND CENTRAL ASIA ACREAGE In 2018, TOTAL's production in Europe and Central Asia was $909\,\mathrm{kboe/d}$ Representing 33% of the Group's overall production

#### **PRODUCTION**

	2018	2017	2016	2015	2014
Liquids production (kb/d)	334	265	249	215	201
Gas production (Mcf/d)	3,099	2,674	2,737	2,413	2,224
TOTAL (kboe/d)	909	761	757	664	613

#### **MAJOR START-UPS**

Start-up	Projects	Туре	Capacity (kboe/d)	Share	Op. Country
2017	Kashagan	Oil	370	16.8%	Kazakhstan
	Edradour Glenlivet	Gas/Cond	35	60%	x UK
	Yamal LNG-Train 1	LNG	150	20%(1)	Russia
2018	Yamal LNG-Trains 2 & 3	LNG	300	20%(1)	Russia
2019-2020	Culzean	HPHT Gas/Cond	100	49.99%	x UK
	Tempa Rossa	Oil	55	50%	x Italy
	Johan Sverdrup	Oil	440	8.44%	Norway

<sup>(1)</sup> Direct stake only.

#### TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2018 (1)

**Europe and Central Asia** (Group share in %)

Denmark (2018)	<b>Operated:</b> Danish Underground Consortium (DUC) zone (31.20%), comprising the Dan/Halfdan, Gorm and Tyra fields, and all their satellites.
Kazakhstan (1992)	Operated: Dunga (60.00%)
	Non-operated: Kashagan (16.81%)
<b>Norway</b> (1965)	Operated: Atla (40.00%), Skirne (40.00%)
	Non-operated: Åsgard (7.68%), Ekofisk (39.90%), Eldfisk (39.90%), Embla (39.90%), Flyndre (6.26%), Gimle (4.90%), Heimdal (16.76%), Islay (5.51%) <sup>(2)</sup> , Kristin (6.00%), Kvitebjørn (5.00%), Mikkel (7.65%), Oseberg (14.70%), Oseberg East (14.70%), Oseberg South (14.70%), Snøhvit (18.40%), Troll (3.69%), Tune (10.00%), Tyrihans (23.15%)
Netherlands (1964)	<b>Operated:</b> F6a oil (65.68%), J3a (30.00%), K1a (40.10%), K3b (56.16%), K4a (50.00%), K4b/K5a (36.31%), K5b (50.00%), K6 (56.16%), L1a (60.00%), L1d (60.00%), L1e (55.66%), L1f (55.66%), L4a (55.66%)
	Non-operated: E16a (16.92%), E17a/E17b (14.10%), J3b/J6 (25.00%), K9ab-A (22.46%), Q16a (6.49%)
United Kingdom (1962)	<b>Operated:</b> Alwyn North (100.00%), Dunbar (100.00%), Ellon (100.00%), Forvie North (100.00%), Grant (100.00%), Jura (100.00%), Nuggets (100.00%), Elgin-Franklin (46.17%), West Franklin (46.17%), Glenelg (58.73%), Islay (94.49%) <sup>12</sup> , Laggan Tormore (60.00%), Edradour and Glenlivet (60.00%), Dumbarton, Balloch and Lochranza (100.00%), Gryphon (86.50%), Maclure (38.19%), South Gryphon (89.88%), Tullich (100.00%), Flyndre (65.94%)
	Non-operated: Bruce (1.00%), Markham unitized field (7.35%), Golden Eagle, Peregrine and Solitaire (31.56%), Scott (5.16%), Telford (2.36%), Harding (30.00%)
<b>Russia</b> (1991)	Non-operated: Kharyaga (20.00%), Termokarstovoye (49.00%) (3), Yamal LNG (20.02%) (4), several fields through the participation in PAO Novatek (19.40%)

<sup>(1)</sup> The Group's interest in the local entity is approximately 100%.
(2) The field of Islay extends partially in Norway. Total E&P UK holds a 94.49% stake and Total E&P Norge 5.51%.
(3) TOTAL's interest in the joint venture ZAO Terneftegas with PAO Novatek (51.00%).
(4) TOTAL's interest in the joint venture OAO Yamal LNG with PAO Novatek (50.10%), CNPC (20.00%) and Silk Road Fund (9.90%).

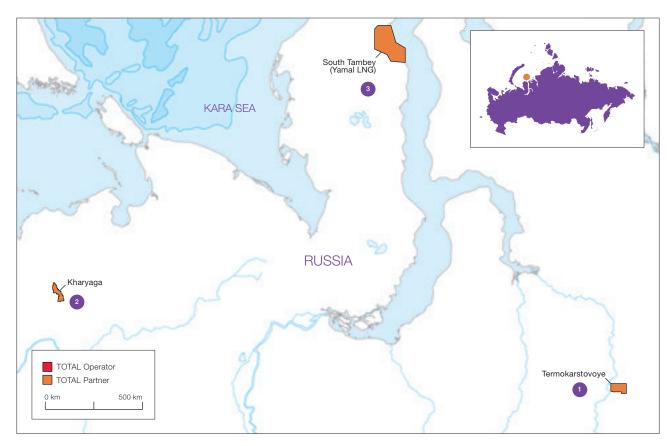
#### **RUSSIA**

In Russia, where the largest percentage of TOTAL's proved reserves are located (21% as of December 31, 2018), the Group's production was 389 kboe/d in 2018, compared to 318 kboe/d in 2017 and 335 kboe/d in 2016. This production comes from TOTAL's stake in PAO Novatek (1), as well as from the Termokarstovoye (2) and Kharyaga 2 fields (20%) and, since the end of 2017, the Yamal LNG project 3.

TOTAL has a 20% interest in the Yamal LNG project. In 2013, OAO Yamal LNG <sup>[3]</sup> launched this project aimed at developing the gas and condensate reserves of the onshore South Tambey field, located on the Yamal Peninsula, and at building a three-train gas liquefaction plant with a total capacity of 16.5 Mt/y. In November 2017, the Yamal LNG plant started production and shipped its first cargo aboard the "Christophe de Margerie" icebreaking LNG carrier. The second liquefaction train of

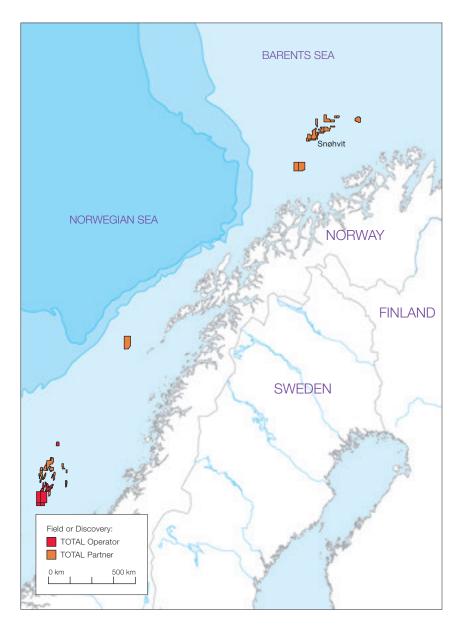
the Yamal plant, with a capacity of 5.5 Mt/y, produced its first shipment of LNG in August 2018 and in November 2018 the third train started production, more than a year earlier than originally planned. A smaller (0.9 Mt/y), fourth liquefaction train which uses PAO Novatek proprietary technology is under construction.

In May 2018, TOTAL signed an agreement with Novatek to acquire a 10% direct stake in its new Arctic LNG 2 project, with the





- (1) A Russian company listed on the Moscow and London stock exchanges and in which the Group held an interest of 19.4% as of December 31, 2018.
  (2) The development and production license of Termokarstovoye onshore gas and condensates field is held by ZAO Terneftegas, a joint- venture between Novatek and TOTAL (49%).
- (3) OAO Yamal LNG is held by PAO Novatek, Total E&P Yamal (20.02%), China National Oil & Gas Exploration and Development (CNODC), a subsidiary of China National Petroleum Corporation (CNPC), and Silk Road Fund.



option to increase this to 15% under certain conditions. Located on the Gydan Peninsula, opposite Yamal, Arctic LNG 2 will have a production capacity of 19.8 Mt/y and will monetise the giant Utrenneye onshore gas and condensate field. The project will use new technology, with the installation of three gravity-based structures in Ob Bay that will host three liquefaction trains of 6.6 Mt/y capacity each. It should benefit from synergies with the Yamal LNG project. The agreement also gives TOTAL the option to acquire a stake of between 10% and 15% in all future Novatek LNG projects on the Yamal and Gydan peninsulas.

In September 2018, TOTAL increased its direct stake in Novatek from 18.9% to 19.4%, which is the maximum allowed in the initial 2011 agreement.

#### **NORWAY**

In Norway, the Group's production was 211 kboe/d in 2018, compared to 239 kboe/d in 2017 and 235 kboe/d in 2016. This comes from numerous fields, notably Ekofisk (39.9%), Snøhvit (18.4%) and Troll (3.69%). TOTAL has equity stakes in 66 production licenses on the Norwegian continental shelf, 14 of which it operates. The Group also holds an 18.4% stake in the gas liquefaction plant of Snøhvit (capacity of 4.2 Mt/y), located in the Barents Sea, which is supplied with gas from the Snøhvit and Albatross fields.

As part of the continual improvement of its portfolio, the Group has made a number of recent acquisitions and sales:

 the acquisition of an 8.44% interest in the Johan Sverdrup field, as a result of the Mærsk Oil deal in March 2018;

- the acquisition of a 12.35% interest of the Teesside terminal on Ekofisk in June 2018, increasing TOTAL's interest from 32.87% to 45.22%;
- the finalization of the disposal of its interest in Polarled and Nyhamna in the Norwegian Sea zone in October 2018;
- the disposal of 51% and operatorship of the Martin Linge field, and of a 40% interest of the Garantiana discovery in March 2018;
- the finalization of the disposal of an operated interest in the Trell (40%), Trine (64%), Rind (62.13%) and Alve Nord (100%) discoveries in the Heimdal and Haltenbanken areas, in November 2018;
- the disposal of a 7.7% interest in the Visund field in January 2018 and of a 57% interest in the Victoria discovery in January 2019; and
- the disposal of 7.65% interest in the Mikkel field in the Haltenbanken area, approved by the authority in December 2018, and closed in 2019.

#### UNITED KINGDOM

In the United Kingdom, the Group's production in 2018 was 179 kboe/d, compared with 142 kboe/d in 2017 and 158 kboe/d in 2016. This increase was driven in particular by the assets held in the Quad 9 and 15 areas of the eastern North Sea and Quad 30 in the Central Graben, following the acquisition of Mærsk Oil in March 2018.

In the Alwyn area (2) (100%), 45% of production comes from the Alwyn and Dunbar fields. The rest of the production comes from satellite tiebacks.

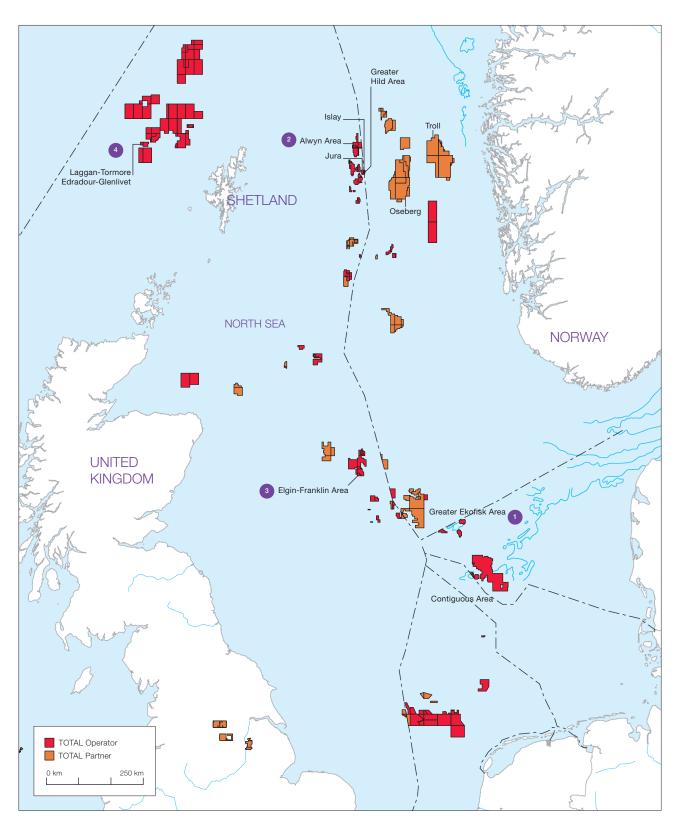
In the Central Graben, TOTAL holds stakes (46.17%, operator) in the Elgin, Franklin 3 and West Franklin fields and (58.73%, operator) in the Glenelg field. The Elgin redevelopment project included the drilling of five wells and was completed in 2018.

In the Quad 30 area, the Group holds a stake in the Flyndre field (65.94%).

The Culzean field (49.99%, operator) is under development and is expected to come into production in 2019.

TOTAL announced a discovery on the Glengorm prospect (25%), close to existing infrastructure operated by TOTAL, in January 2019.

In the West of Shetlands, TOTAL hold stakes (60%, operator) in the producing fields Laggan, Tormore 4, Edradour and Glenlivet. In September 2018, the Group announced the discovery of gas in the Glendronach prospect, which is now under appraisal. The total capacity of the Shetland gas treatment plant is 90 kboe/d.



In the Quad 9 area of the eastern North Sea, the Group holds stakes and the role of operator in the Gryphon (86.5%), Maclure (38.19%), South Gryphon (89.88%) and Tullich (100%) fields. In the Quad 15 area,

the Group holds a 100% stake in the Dumbarton, Balloch, and Lochranza fields.

In 2018, TOTAL maintained its interests in the PEDL 273, 305 and 316 shale gas exploration and production licenses (20%),

after sales of interests in various licenses and leases in 2017.

In November 2018, the Group disposed of 42.25% interests in the Bruce field retaining 1% and its entire interest in Keith field (25%).

#### **DENMARK**

In Denmark, TOTAL has a 31.2% stake in the assets operated by the Danish Underground Consortium (DUC), following the finalization of the Mærsk Oil acquisition in March 2018. In September 2018, TOTAL also signed an agreement to acquire the entire capital of Chevron Denmark Inc. This acquisition, which was closed on April 1st, 2019, will increase the Group's interest in DUC to 43.2%. In 2018, the Group's production was 42 kboe/d. 100%-operated production comes from two main DUC assets: the Dan/Halfdan and Gorm/Tyra fields. The Tyra field facilities are the main gas treatment hub in Denmark. The Tyra field is being redeveloped due to subsidence problems, and is expected to restart in 2022.

#### **NETHERLANDS**

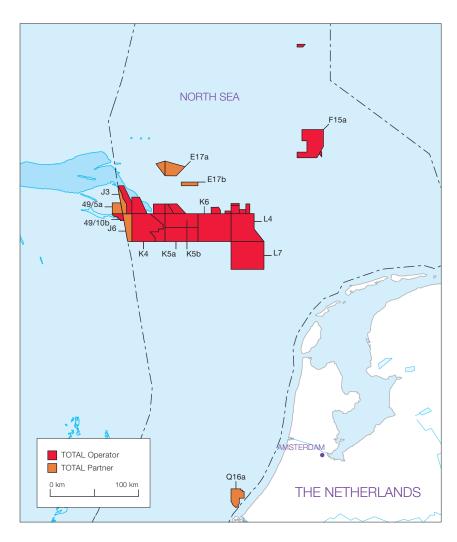
In the Netherlands, the Group's production was 18 kboe/d in 2018 compared to 20 kboe/d in 2017 and 25 kboe/d in 2016. The decrease is due to natural field decline. In 2018, TOTAL holds interests in 22 offshore production licenses, including 18 that it operates. In 2017, production on platforms L7 and F15 stopped and the platforms will be dismantled.

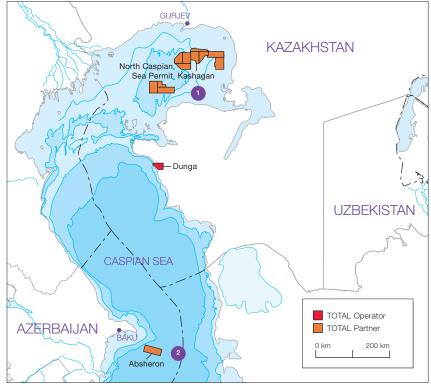
#### **KAZAKHSTAN**

In Kazakhstan, the Group's production was 70 kboe/d in 2018, compared with 42 kboe/d in 2017 and 4 kboe/d in 2016. This is mainly from the Kashagan 1 field operated by the North Caspian Operating Company (NCOC) in the North Caspian license (16.81%). The production of the first phase of the Kashagan field and of the corresponding plant started in 2016, and the ramp-up of the production is underway in order to reach the planned capacity of 370 kb/d. Following the finalization of the acquisition of Mærsk Oil in March 2018, the Group holds an interest in the Dunga field (60%, operator).

#### **AZERBAIJAN**

In Azerbaijan, TOTAL signed an agreement in 2016 establishing the contractual and commercial conditions for a first phase of production of the Absheron 2 gas and condensate field (50%), which is located in the Caspian Sea and was discovered by TOTAL in 2011. The production capacity of this high pressure field is expected to be 35 kboe/d and the gas produced will supply Azerbaijan's domestic market. Drilling operations started in February 2018 and the main facilities construction contracts were awarded in July and October 2018. The role of operator was transferred to the Joint TOTAL and SOCAR Company (JOCAP) in August 2018.





#### **ITALY**

In Italy, TOTAL holds stakes in the Tempa Rossa field (50%, operator) located on the Gorgoglione 10 concession (Basilicate region), as well as three exploration licenses. Construction works and commissioning activities are finalized and the start of production is expected in 2019 subject to the Basilicata region authority's authorization.

#### **BULGARIA**

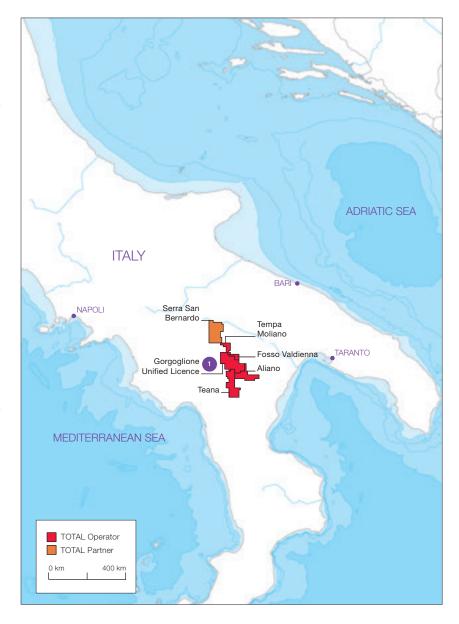
In Bulgaria, where TOTAL has been present since 2012, the Group drilled the Polshkov deep offshore exploration well in 2016 on the 14,220 km² Han Asparuh Block (40%, operator), 100 km offshore in the Black Sea, which revealed the presence of oil in this area for the first time.

#### **GREECE**

In Greece, TOTAL (50%, operator) and its partners have held the exploration license for the offshore Block 2 in the Ionian Sea since March 2018. Geological and seismic analyses have been completed and TOTAL will decide soon whether to continue work on this license. Elsewhere, TOTAL (40%, operator) and its partners were awarded two offshore exploration blocks south-west of Crete in 2019.

#### REST OF THE EUROPE AND CENTRAL ASIA AREA

TOTAL also holds an interest (33.35%) in an exploration license without activity in Tajikistan. In October 2018, the Group signed a cooperation agreement in Uzbekistan with the state-owned company UzbekNefteGas to evaluate the exploration potential of six blocks in the north-east of the country.





# AFRICA ACREAGE (EXCL. NORTH AFRICA)



In 2018, TOTAL's production in Africa, excl. North Africa was 670 kboe/d

Representing 24% of the Group's overall production

### **PRODUCTION**

	2018	2017	2016	2015	2014
Liquids production (kb/d)	513	502	509	521	490
Gas production (Mcf/d)	786	759	621	581	614
TOTAL (kboe/d)	670	654	634	639	610

#### **MAJOR START-UPS**

Start-up	Projects	Туре	Capacity (kboe/d)	Share	Op. Country
2017	Moho Nord	Deep off.	100	54%	x Congo Rep.
2018	Kaombo North	Deep off.	115	30%	x Angola
	Egina	Deep off.	200	24%	x Nigeria
2019-2020	Kaombo South	Deep off.	115	30%	x Angola
	Zinia 2	Deep off.	40	40%	x Angola

# TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2018 (1)

Africa (excl. North Africa) (Group share in %)

Africa (exci. North Africa)	areap share in 76)
<b>Angola</b> (1953)	Operated: Girassol, Dalia, Pazflor, CLOV (Block 17) (40.00%), Kaombo (Block 32) (30.00%)
	<b>Non-operated:</b> Cabinda Block 0 (10.00%), Kuito, BBLT, Tombua-Landana (Block 14) (20.00%) (2), Lianzi (Block 14K) (10.00%) (2), Angola LNG (13.60%)
<b>Gabon</b> (1928)	Operated: Anguille Marine (100.00%), Anguille Nord Est (100.00%), Baliste (100.00%), Baudroie Marine (100.00%), Baudroie Nord Marine (100.00%), Grand Anguille Marine (100.00%), Lopez Nord (100.00%), Mérou Sardine Sud (100.00%), N'Tchengue (100.00%), Port Gentil Océan (100.00%), Torpille (100.00%), Torpille Nord Est (100.00%)
	Non-operated: Barbier (65.28%), Girelle (65.28%), Gonelle (65.28%), Grondin (65.28%), Hylia Marine (37.50%), Mandaros (65.28%), Pageau (65.28%)
Nigeria (1962)	<b>Operated:</b> OML 58 (40.00%), OML 99 Amenam-Kpono (30.40%), OML 100 (40.00%), OML 102 (40.00%), OML 130 (24.00%)
	Non-operated: Shell Petroleum Development Company (SPDC 10.00%), OML 118 – Bonga (12.50%), OML 138 (20.00%), Nigeria LNG (15.00%)
The Republic of the Congo (1968)	<b>Operated:</b> Kombi-Likalala-Libondo (65.00%), Moho Bilondo (53.50%), Moho Nord (53.50%), Nkossa (53.50%), Sendji (55.25%), Yanga (55.25%)
	Non-operated: Lianzi (26.75%), Loango (42.50%), Zatchi (29.75%)

<sup>(1)</sup> The Group's interest in the local entity is approximately 100% in all cases except for Total Gabon (58.28%) and Total E&P Congo (85.00%). (2) Stake in the company Angola Block 14 BV (TOTAL 50.01%).

#### **NIGERIA**

In Nigeria, the Group's production was 284 kboe/d in 2018 compared to 267 kboe/d in 2017 and 243 kboe/d in 2016. The increase in production was driven by additional gas supply to Nigeria LNG Ltd (NLNG) and from the development of Ofon phase 2 (OML 102). TOTAL operates five of the 33 oil mining licenses (OML) in which it has interests and one prospecting license (OPI)

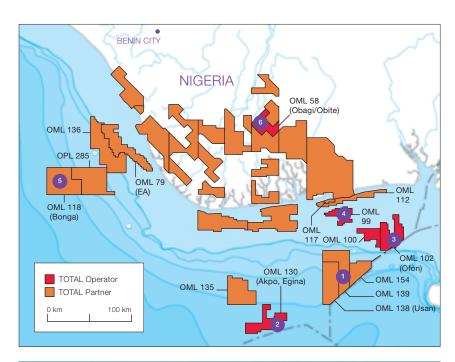
TOTAL has offshore operations, including production of 183 kboe/d, notably on the following leases:

- OML 139 1 (18%): feasibility studies for the Owowo development are underway.
   The discovery is near the OML 138 license (20%), where the Usan field is in production;
- OML 130 2 (24%, operator): production from the Egina field started in December 2018. At plateau, Egina is expected to produce 200 kboe/d. The development plan for the neighboring Preowei field was filed with partners and authorities in 2018;
- OML 102 3 (40%, operator): the drilling of 23 additional wells on Ofon (phase 2) was completed in 2018;
- OML 99 4 (40%, operator): engineering studies for the development of the lkike field have been completed and the tender process for the construction is in progress; and
- OML 118: 6 (12.5%) the tender phase of the Bonga South West Aparo project (10% unitized) was launched in February 2019.

Onshore production was 102 kboe/d in 2018, notably from:

- OML 58 6 (40%, operator): in joint venture with the Nigerian National Petroleum Corporation (NNPC), supplying gas to NLNG and to the domestic Nigerian market since 2016; and
- 17 onshore production licenses of the SPDC joint venture (10%): 2018 production was 58 kboe/d of which 54 kboe/d was onshore. TOTAL has obtained an extension of 16 licences for a 20-year period. The sale process for OML 25 is underway.

TOTAL is also developing LNG activities via a 15% stake in NLNG, which owns a liquefaction plant with a 22 Mt/y total capacity. The tender process for the engineering works for the construction of about 7 Mt/y of additional capacity started in mid-2018.

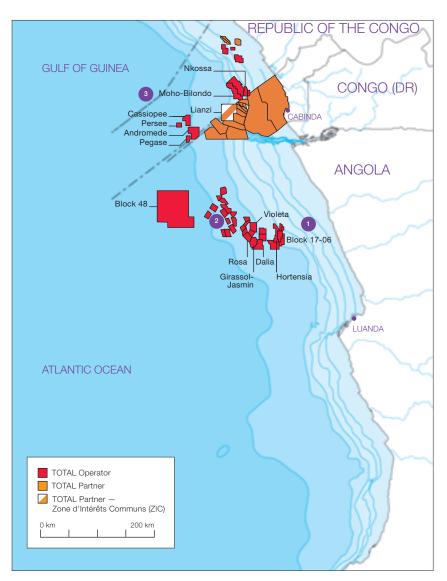




#### **ANGOLA**

In Angola, where TOTAL is the leading oil operator in the country<sup>(1)</sup>, the Group's production was 211 kboe/d in 2018 compared to 229 kboe/d in 2017 and 243 kboe/d in 2016, from Blocks 17, 14, 0 and 32:

- Deep offshore Block 17 (40%, operator), TOTAL's main asset in Angola, is composed of four major producing hubs: Girassol, Dalia, Pazflor and CLOV. In 2018, TOTAL and its partners launched three brownfield projects: Zinia Phase 2, Clov Phase 2 and Dalia Phase 3. These are satellite developments of the Pazflor, CLOV and Dalia FPSOs respectively, and are expected to start up production in 2020 and 2021;
- On the ultra-deep offshore Block 32 (30%, operator), production from the Kaombo field commenced in July 2018 with the start-up of the Kaombo Norte FPSO (capacity of 115 kb/d). The second FPSO, Kaombo Sul, started up in April 2019, taking capacity to 230 kb/d. The discoveries in the central and northern parts of the Block (outside Kaombo) offer additional potential and are currently being assessed;
- On Block 14 (20%)<sup>(2)</sup>, production comes from the Tombua-Landana and Kuito fields as well as the BBLT project, comprising the Benguela, Belize, Lobito and Tomboco fields;
- Block 14K (36.75%) is the offshore unitization area between Angola's Block 14 and the Republic of the Congo's Haute Mer license. TOTAL's interest in the Lianzi field is held at 10% through Angola Block 14 BV and 26.75% through Total E&P Congo;
- On Block 0 (10%), the second phase of the Mafumeira field development started production in 2017;
- On Block 48 (50%, operator), after obtaining a licence in 2018, TOTAL will begin the first phase of a two-year exploration program with the drilling of one exploration well; and





<sup>(2)</sup> Stake held by the company Angola Block 14 BV (TOTAL 50.01%).

TOTAL is also developing its LNG activities through the Angola LNG project (13.6%), which includes a gas liquefaction plant with a total capacity of 5.2 Mt/y near Soyo, supplied by gas associated with production from Blocks 0, 14, 15, 17, 18 and 32. LNG production resumed in 2016.

#### REPUBLIC OF THE CONGO

In the Republic of the Congo, the Group's production, through Total E&P Congo (3(1)), was 136 kboe/d in 2018 compared to 104 kboe/d in 2017 and 90 kboe/d in 2016.

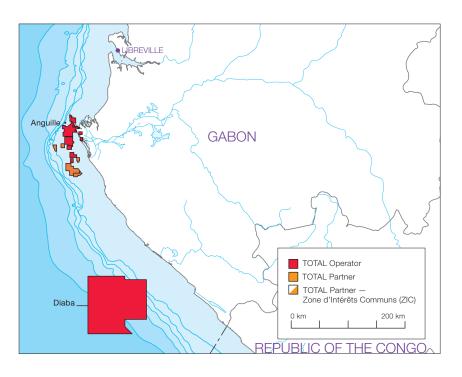
- Two major assets in production on the Moho Bilondo license are the Moho Bilondo field (53.5%, operator), where Phase 1b has been producing since 2015, and the Moho Nord field, which reached its production plateau at the end of 2017. The Moho Nord field has been producing above its capacity of 100 kboe/d since the start of 2018 due to the strong productivity of the wells.
- Block 14K (36.75%) is the offshore unitization area between Angola's Block 14 and the Republic of the Congo's Haute Mer license. TOTAL's interest in the Lianzi field is held at 10% through Angola Block 14 BV and 26.75% through Total E&P Congo.
- Total E&P Congo is operator of Djéno (63%), the sole oil terminal in the country.
- At the end of 2016, Total E&P Congo returned its interests in the Tchibouela, Tchendo, Tchibeli and Litanzi fields (65%) to the Republic of the Congo, as the licenses had expired.

# DEMOCRATIC REPUBLIC OF CONGO

After the seismic delineation works, TOTAL notified in January 2019 the authorities its withdrawal from Block III.

#### **GABON**

In Gabon, the Group's production was 39 kboe/d in 2018 compared to 54 kboe/d in 2017 and 58 kboe/d in 2016. The Group's activities are exclusively carried out by Total Gabon (2), which wholly owns and operates the Anguille and Torpille sector offshore fields, the Mandji Island sector onshore fields and the Cap Lopez oil terminal. In November 2018, Total Gabon launched a drilling campaign on Torpille, as part of the first phase of the redevelopment of the field. In September 2018, TOTAL finalized the sale of a residual interest of 32.9% in the Rabi-Kounga onshore field.



#### **UGANDA**

In Uganda, TOTAL is present in the Lake Albert project, a major project for the Group, via a stake in licenses EA-1, EA-1A, EA-2 and EA-3 (Kingfisher). TOTAL is the operator of licenses EA-1 and EA-1A. In January 2017, TOTAL signed an agreement to acquire 21.57% of the 33.33% interest held by Tullow in the licenses. TOTAL will take over operatorship from Tullow of the northern portion of license EA- 2, enabling significant synergies in the development of the northern part of the project (known as Tilenga). China National Offshore Oil Corporation (CNOOC) has exercised its pre-emption right on 50% of the interest acquired. The agreement remains subject to approval by the Ugandan authorities. Following the finalization of the transaction,

TOTAL is expected to own a 44.1% stake in the Lake Albert project. The State of Uganda retains the right to take a stake of 15% in the four licences when the final investment decision is made. The exercise of this right would reduce TOTAL's interest to 37.5%.

The tender process for the front end engineering and design (FEED) work for the upstream part of the project was launched in 2018 and the construction contract for surface installations is expected to be awarded in 2019. Similarly, drilling work was the subject of competitive bidding in 2018 and award of the contracts is expected in 2019. The pipeline engineering works were finalized at the end of 2017, and the calls for tender for the construction of the facilities are in progress.



<sup>(1)</sup> Total E&P Congo is owned by TOTAL (85%) and Qatar Petroleum (15%).

<sup>(2)</sup> Total Gabon is a company under Gabonese law, the shares of which are listed on Euronext Paris and owned by TOTAL (58.28%), the Republic of Gabon (25%) and the public (16.72%).

### **MAURITANIA**

In Mauritania, TOTAL strengthened its exploration position through the signature of four new deep offshore licenses: Blocks C7 and C18 in 2017 and Blocks C15 and C31 in 2018. TOTAL has held Block C9 since 2012.

## **SENEGAL**

In Senegal, TOTAL signed two agreements to explore the country's deep offshore potential in 2017 through the acquisition of the Block Rufisque Block and a technical evaluation contract for the ultra-deep offshore.

### **KENYA**

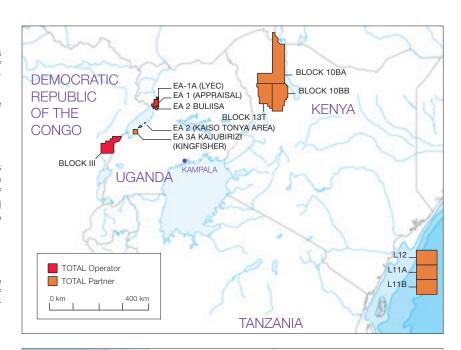
In Kenya, TOTAL holds 45% of the offshore licenses L11A, L11B and L12 and 25% of the onshore licenses 10BA, 10BB and 13T where oil discoveries have been made.

### **SOUTH AFRICA**

In South Africa, TOTAL stepped up its exploration efforts in the country with the drilling of an exploration well in December 2018 on the offshore11B/12B exploration license (45%, operated). In February 2019, TOTAL announced a gas condensate discovery on the Brulpadda prospect.

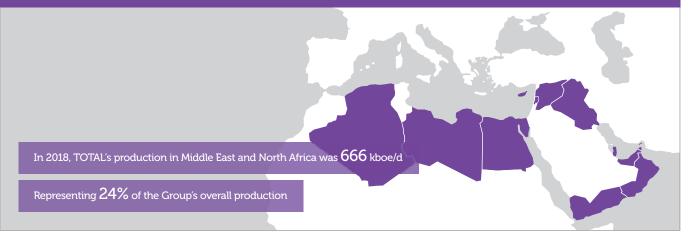
## **REST OF THE ZONE OF AFRICA**

TOTAL also holds interests in exploration licenses in Côte d'Ivoire and in Namibia. In Guinea, TOTAL and the Office National des Pétroles de Guinée (ONAP) signed a study agreement in 2017 for deep and very deep offshore zones.





## MIDDLE EAST AND NORTH AFRICA ACREAGE



## **PRODUCTION**

	2018	2017	2016	2015	2014
Liquids production (kb/d)	520	419	373	372	224
Gas production (Mcf/d)	805	771	795	874	1,163
TOTAL (kboe/d)	666	559	517	531	438

## **MAJOR START-UPS**

Start-up	Projects	Туре	Capacity (kboe/d)	Share	Op. Country
2018	Timimoun	Tight gas	30	37.75%	Algeria
	Halfaya 3	Oil	200	22.50%	Iraq

## TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2018 (1)

Middle East and North Africa (Group share in %)

Non-operated: TFT II (26.40%), Timimoun (37.75%), 404a & 208 (12.25%)
Operated: Abu Al Bukhoosh (100.00%)
Non-operated: ADNOC Onshore (10.00%), ADNOC Offshore: Umm Shaif/Nasr (20.00%), Lower Zakum (5.00%), ADNOC Gas Processing (15.00%), ADNOC LNG (5.00%)
Non-operated: Halfaya (22.5%) (2), Sarsang (18.00%)
<b>Non-operated:</b> zones 15, 16 & 32 (75.00%) <sup>(3)</sup> , zones 129 & 130 (30.00%) <sup>(3)</sup> , zones 130 & 131 (24.00%) <sup>(3)</sup> , zones 70 & 87 (75.00%) <sup>(3)</sup> , Waha (16.33%)
Non-operated: various onshore fields (Block 6) (4.00%) <sup>(4)</sup> , Mukhaizna field (Block 53) (2.00%) <sup>(5)</sup>
Operated: Al Khalij (40.00%)
Non-operated: North Field-Block NF Dolphin (24.50%), North Field-Qatargas 1 Upstream (20.00%), North Field-Qatargas 1 Downstream (10.00%), North Field-Qatargas 2 Train 5 (16.70%), Al Shaheen (30.00%)

<sup>(1)</sup> The Group's interest in the local entity is approximately 100% in all cases except certain entities in Abu Dhabi and Oman (see notes (2) through (5) below).

(2) TOTAL's interest in the joint venture.

(3) TOTAL's stake in the foreign consortium.

(4) TOTAL's indirect interest (4.00%) in the concession, via its 10.00% interest in Private Oil Holdings Oman Ltd. TOTAL also has a direct interest (5.54%) in the Oman LNG facility (trains 1 and 2), and an indirect participation (2.04%) through OLNG in Qalhat LNG (train 3).

(5) TOTAL's direct interest in Block 53.

## **UNITED ARAB EMIRATES**

In the United Arab Emirates, the Group's production was 288 kboe/d in 2018 compared to 290 kboe/d in 2017 and 291 kboe/d in 2016.

In 2015, the Group renewed its 10% interest in the Abu Dhabi Company for Onshore Petroleum Operations Ltd concession (ADCO, renamed ADNOC Onshore in 2017) 1 for 40 years. This concession covers the 15 main onshore fields of Abu Dhabi.

Since March 2018 the Group holds a 20% interest in the Umm Shaif/Nasr offshore concession and a 5% stake in the Lower Zakum offshore concession, for a period of 40 years operated by ADNOC offshore 20, which follows the previous Abu Dhabi Marines Areas Ltd (ADMA) offshore concession. At the same time, TOTAL extended its concession in the offshore Abu Al Bukhoosh field for three more years and increased its operated stake to 100% from 75%.

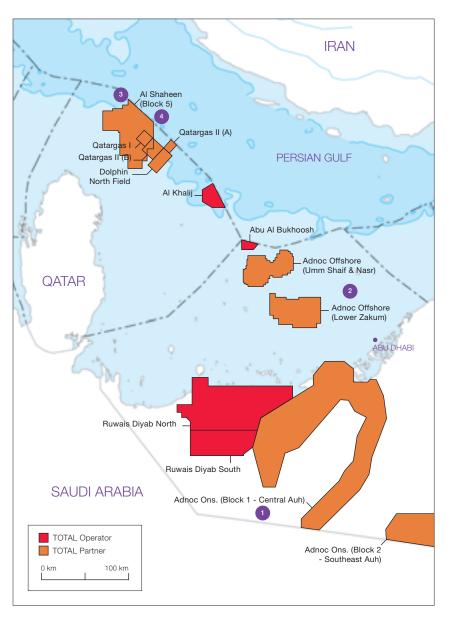
In November 2018, TOTAL and the state-owned Abu Dhabi National Oil Company (ADNOC) signed a concession agreement to launch an exploration program for unconventional gas in the Diyab prospection zone.

TOTAL also holds a 15% stake in Abu Dhabi Gas Industries (GASCO, renamed ADNOC Gas Processing in 2017), which produces NGL (natural gas liquids) and condensates from the associated gas produced by ADNOC Onshore. In addition, TOTAL holds 5% of the Abu Dhabi Gas Liquefaction Company (ADGAS, renamed ADNOC LNG in 2017), which processes the associated gas produced by ADNOC Offshore in order to produce LNG, NGL and condensates, and 5% of National Gas Shipping Company (NGSCO), which owns eight LNG tankers and exports the LNG produced by ADNOC LNG

TOTAL holds a 24.5% stake in Dolphin Energy Ltd. that sells gas from Qatar to the United Arab Emirates. Operations have not been affected by the evolution of diplomatic relations between the two countries.

## QATAR

In Qatar, the Group's production was 211 kboe/d in 2018 compared to 170 kboe/d in 2017 and 134 kboe/d in 2016. Since 2017 TOTAL has held a 30% stake in the 25-year Al Shaheen oil field concession 3 located 80 km offshore to the north of Ras Laffan. The field is operated by



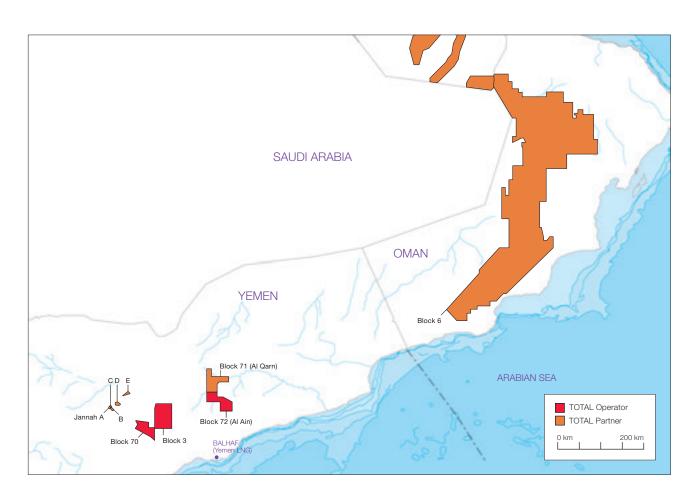
the North Oil Company, a joint venture between TOTAL (30%) and Qatar Petroleum (70%). TOTAL also holds a stake in the Al Khalij offshore field (40%, operator).

In addition, the Group participates in the production, processing and exporting of gas from the North Field through its stakes in the Qatargas 1 and Qatargas 2 LNG plants:

 Qatargas 1: TOTAL holds a 20% interest in the North Field-Qatargas 1 Upstream Block 4 and a 10% interest in the LNG plant, where there are three trains with a total capacity of 10 Mt/y; and  — Qatargas 2: the Group holds a 16.7% stake in train 5, which has an LNG production capacity of 8 Mt/y.

TOTAL offtakes part of the LNG produced under the 2006 contracts that provide for the purchase of 5.2 Mt/y of LNG by the Group.

TOTAL holds a 24.5% stake in Dolphin Energy Ltd. which sells gas from the Dolphin Block in Qatar to the United Arab Emirates and Oman.





## OMAN

In Oman, the Group's production was 38 kboe/d in 2018 compared to 37 kboe/d in 2017 and 2016. TOTAL participates in the production of oil principally in Block 6 (4%)(1). In December 2018, TOTAL signed a sale agreement for its interest in Block 53 (2%); finalization is expected in 2019. The Group also produces LNG through its investments in the Oman LNG (5.54%)/Qalhat LNG (2.04%)(2) liquefaction complex, with an overall capacity of 10.5 Mt/y. In May 2018, TOTAL signed an MoU with the Oman government to develop onshore natural gas resources, on Block 6 in the Greater Barik area.

United Arab Emirates Qatar Oman Libya Algeria Iraq Yemen Iran Syria Lebanon

### LIBYA

In Libya, the Group's production was 63 kboe/d in 2018 compared to 31 kboe/d in 2017 and 14 kboe/d in 2016. This production comes from the Al Jurf fields located on offshore areas 15, 16 and 32 (75%(1)) and from the El Sharara fields located on onshore areas 129-130 (30%(1)) and 130-131 (24%(1)). Production was shut-down in July and December 2018 for security reasons. The Mabruk fields, located on onshore areas 70 and 87 (75%(1)) have been shut-down since the end of 2014.

In March 2018, TOTAL acquired Marathon Oil Libya Limited, which holds a 16.33% stake in the Waha Concessions.

#### **ALGERIA**

In Algeria, the Group's production was 47 kboe/d in 2018, compared to 15 kboe/d in 2017 and 23 kboe/d in 2016. Production in 2016 and 2017 came exclusively from the fields in the TFT zone (Tin Fouyé Tabankort, 35%), while production in 2018 also included the Timimoun field (37.75%) and fields in the Berkine Basin (404a and 208, 12.25%).

Production from the Timimoun gas field **1** started in March 2018. The acquisition of Mærsk Oil in March 2018 saw the addition of interests in 404a and 208 Blocks oil assets in the Berkine Basin.

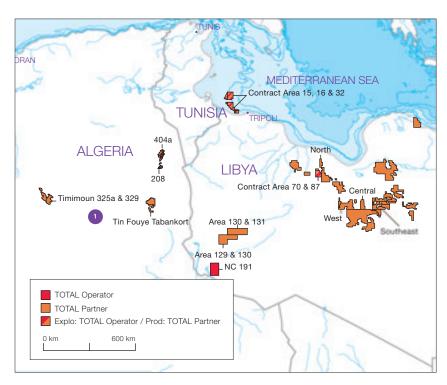
Under the terms of the Global Agreement signed in 2017, two new concession contracts and the corresponding gas sales agreements were signed for TFT II (26.4%) in June 2018, and for TFT SUD (49%) in October 2018.

In December 2018, TOTAL was awarded two authorizations to conduct exploration works on two offshore prospective areas, with operatorship for one of them.

## **IRAQ**

In Iraq, the Group's production was 19 kboe/d in 2018 compared to 16 kboe/d in 2017 and 18 kboe/d in 2016. TOTAL holds a 22.5% stake in the risked service contract for the Halfaya field, located in Missan province. In 2017, the decision to develop Phase 3 of the project to increase production to 400 kb/d was taken and the new facilities started up at the end of 2018.

Following the finalization of the acquisition of Mærsk Oil in March 2018, TOTAL holds an 18% interest in the Sarsang field in Iraqi Kurdistan.



#### YEMEN

In Yemen, there has been no Group production since 2016. In April 2015, due to security conditions in the vicinity of Balhaf, Yemen LNG, in which the Group holds a stake of 39.62%, declared force majeure and stopped commercial production and export of LNG. The plant is in a preservation mode.

TOTAL holds various stakes in four onshore exploration licenses, for which force majeure has been declared. In addition, TOTAL signed an agreement to sell its interest in Block 5 (Marib Basin, Jannah license, 15%) in 2018. This agreement remains subject to the authorities' approval.

## **IRAN**

In Iran, following the withdrawal of the United States from the Joint Comprehensive Plan of Action on May 8, 2018, TOTAL finalized its withdrawal from the SP11 South Pars gas project on October 29, 2018 before the re-imposition of US secondary sanctions on the oil industry as of November 5, 2018. TOTAL was the operator and had a 50.1% interest alongside the Chinese state-owned company CNPC (30%) and Petropars (19.9%) a wholly-owned subsidiary of National Iranian Oil Company (NIOC). Total ceased all operational activities in Iran before November 4, 2018.

## SYRIA

In Syria, TOTAL has had no production and no activity since December 2011, but the Group has a 100% stake in the Deir Ez Zor license, which is operated by the joint venture company DEZPC, in which TOTAL and the state-owned company SPC each have a 50% share. Additionally, TOTAL is holder of the Tabiyeh contract which came into effect in 2009.

## LEBANON

In Lebanon, TOTAL entered into exploration Blocks 4 and 9 (40%, operator) located offshore Lebanon in February 2018.

## REST OF THE ZONE OF THE MIDDLE EAST AND NORTH AFRICA

TOTAL also holds interests in exploration licenses in Cyprus and Egypt.

<sup>(1)</sup> TOTAL holds an indirect 4% stake in Petroleum Development Oman LLC, operator of Block 6, via its 10% stake in Private Oil Holdings Oman Ltd.

<sup>(2)</sup> TOTAL's indirect stake via Oman LNG's stake in Qalhat LNG.

## **AMERICAS ACREAGE**



In 2018, TOTAL's production in Americas was  $389\,\mathrm{kboe/d}$ 

Representing 14% of the Group's overall production

## **PRODUCTION**

	2018	2017	2016	2015	2014
Liquids production (kb/d)	183	132	109	95	89
Gas production (Mcf/d)	1,161	1,212	944	896	884
TOTAL (kboe/d)	389	348	279	255	247

## **MAJOR START-UPS**

Start-up	Projects	Туре	Capacity (kboe/d)	Share	Op. Country
2017	Libra Pioneiro	Deep off.	50	20%	Brazil
2018	Fort Hills	Oil Sands	180	26.05%	Canada
	Vaca Muerta	Shale gas	100	41%	x Argentina
2019-2020	lara 1	Deep off.	150	22.5%	Brazil
	lara 2	Deep off.	150	22.5%	Brazil

## TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2018 (1)

Americas	(Group	share	in	%)
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Argentina (1978)	Operated: Aguada Pichana Este – Mulichinco (27.27%), Aguada Pichana Este – Vaca Muerta (41.00%), Aguada San Roque (24.71%), Rincon La Ceniza (45.00%), Aries (37.50%), Cañadon Alfa Complex (37.50%), Carina (37.50%), Hidra (37.50%), Kaus (37.50%), Vega Pleyade (37.50%)
	Non-operated: Aguada Pichana Oeste (25%), Aguada de Castro (25%), Sierra Chata (2.51%)
<b>Bolivia</b> (1995)	Operated: Incahuasi (50.00%)
	Non-operated: San Alberto (15.00%), San Antonio (15.00%), Itaú (41.00%)
Brazil (1999)	<b>Operated:</b> Lapa (35.00%) <sup>(2)</sup>
	Non-operated: Libra (20.00%), lara (22.50%)
Canada (1999)	Non-operated: Surmont (50.00%), Fort Hills (24.58%)
Colombia (2006)	Non-operated: Niscota (71.43%)
United States (1957)	Operated: several assets in the Barnett Shale area (90.92% in average)
	Non-operated: several assets in the Utica Shale area (25.00%)(3), Chinook (33.33%), Tahiti (17.00%), Jack (25.00%)
Venezuela (1980)	Non-operated: PetroCedeño (30.32%), Yucal Placer (69.50%)

The Group's interest in the local entity is approximately 100%.
 TOTAL signed in December 2018 an agreement to acquire an additional 10% stake in the Lapa project in Brésil. The transaction, which remains subject to the approval of the Brazilian authorities, increases TOTAL's interest in this asset from 35% to 45%
 TOTAL's interest in the joint-venture with Chesapeake.

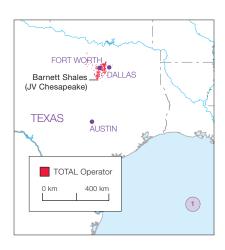


### **UNITED STATES**

In the United States, the Group's production was 119 kboe/d in 2018 compared to 123 kboe/d in 2017 and 86 kboe/d in 2016.

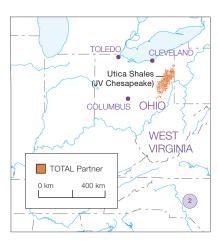
In the Gulf of Mexico, TOTAL holds interests in the Tahiti (17%) and Chinook (33.33%) deep offshore fields, and, following the acquisition of Mærsk Oil in March 2018, in the Jack (25%) field. The Tahiti Vertical Expansion (TVEX) project, launched in 2016, started production in June 2018, enabling the Tahiti field to maintain a level of production of about 100 kboe/d. Since the end of 2014, the Jack field has been sending its production to a semi-submersible platform shared with the Saint-Malo and Julia fields.

In January 2018, TOTAL acquired 12.5% of the Anchor discovery when it took over Samson Offshore Anchor LLC. As part of the process to wind up Cobalt International



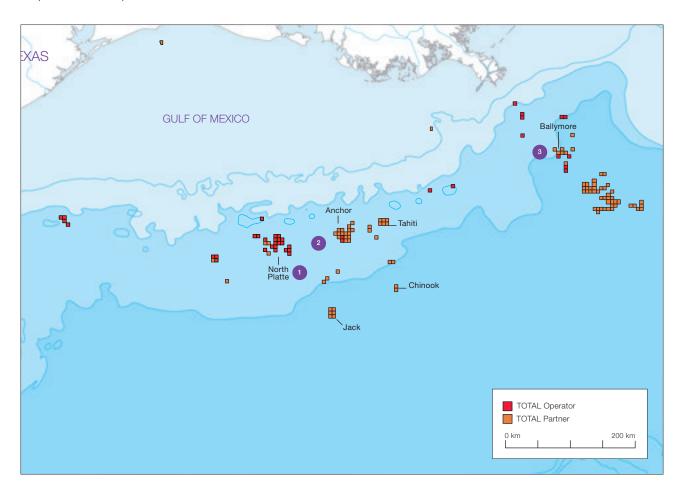
Energy in April 2018, TOTAL increased its stake in the North Platte 1 and Anchor 2 deep offshore discoveries by 20%. TOTAL now holds 60% of North Platte, which it now operates, and 32.5% of Anchor. FEED development activities on Anchor commenced in 2018.

The Group has launched the appraisal program of the Ballymore discovery 3, announced in January 2018, in which it holds a 40% interest.



In its Barnett shale gas assets (90.92%), TOTAL stabilized operated production in 2017 and 2018 through a programme of works.

TOTAL also has an interest of 25% in a Chesapeake-operated asset that produces shale gas in the Utica Basin, mainly in Ohio. TOTAL has not taken part in any drilling during the last three years.



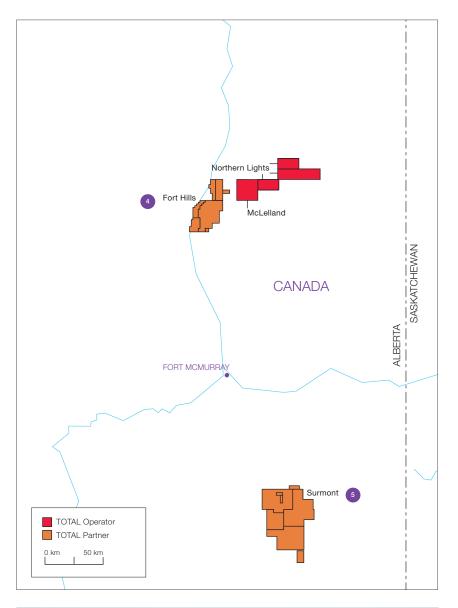


## **CANADA**

In Canada, the Group's production increased to 95 kboe/d in 2018 compared to 59 kboe/d in 2017 and 34 kboe/d in 2016. This increase was due to:

- start-up in January 2018 and the rapid ramp-up of production from the Fort Hills oil sands mining project 4. In the fourth quarter of 2018, the project reached levels close to its plateau of 180 kboe/d. Following disposals in 2015 and 2017, TOTAL's interest is now 24.58%; and
- strong operational performance of the Surmont SAGD<sup>(1)</sup> oil sands project <sup>(3)</sup>, in which TOTAL holds a 50% stake.

In September 2018, TOTAL sold its 38.25% stake in the Joslyn project, which was put on hold in 2014.





## **ARGENTINA**

In Argentina, TOTAL operated approximately 30%<sup>(1)</sup> of the country's gas production in 2018, at 79 kboe/d in 2018, compared to 76 kboe/d in 2017 and 78 kboe/d in 2016.

In Tierra del Fuego, on the CMA-1 concession, TOTAL operates the Ara and Cañadon Alfa Complex onshore fields and the Hidra, Carina and Aries offshore fields (37.5%). In 2016, TOTAL started production on the Vega Pleyade offshore gas and condensates field (37.5%, operator), which has a production capacity of 350 Mcf/d.

In the Neuquén onshore Basin, the Group holds interests in ten licenses, of which it operates six, including Aguada Pichana Este and San Roque. Three shale gas and oil pilot projects are underway: the first on the Aguada Pichana Block, where gas production started mid-2015; the second on the Rincón la Ceniza Block, located on the gas and condensate portion of Vaca Muerta (45%, operator), where production started in 2016; and the third on the Aguada San Roque Block (24.71%, operator), began oil production in 2017.

Following good results from the Aguada Pichana pilot project and a reduction in drilling costs, the first phase of development of the giant Vaca Muerta shale play was launched in 2017 in the eastern part of the block. For this large project, the partners signed an agreement to split the block in two:

- the Aguada Pichana Este Block, where TOTAL is operator with 27.27% of the conventional (Mulichinco) and 41% of the unconventional (Vaca Muerta) resource. A second development phase was launched on the Aguada Pichana Este-Vaca Muerta Block in July 2018, which should allow production to reach 500 Mcf/d, corresponding to the capacity of the existing plant;
- the Aguada Pichana Oeste Block, of which TOTAL now has a 25% non-operated stake. The pilot commenced production in 2017.

The wells of the first pilot on San Roque have been in production since July 2018 and the drilling of a second series of wells started in July 2018.

The initial results of the pilot development on the Rincón la Ceniza Block are encouraging at this stage. The delineation well drilled in 2016 on the La Escalonada Block in order to test the oil portion of the formation demonstrated good productivity.









### **BOLIVIA**

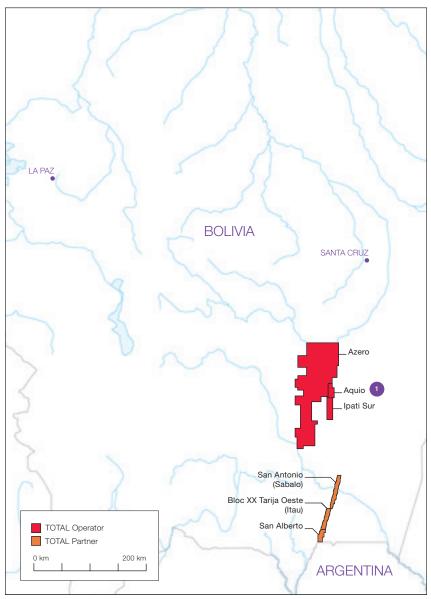
In Bolivia, the Group's production was 42 kboe/d in 2018 compared to 46 kboe/d in 2017 and 34 kboe/d in 2016. TOTAL is present on six licenses and five of them have fields in production: San Alberto (15%), San Antonio (15%), Block Tarija Oeste (41%), and Aquio and Ipati (50%, operator), where the Incahuasi gas field started production in August 2016.

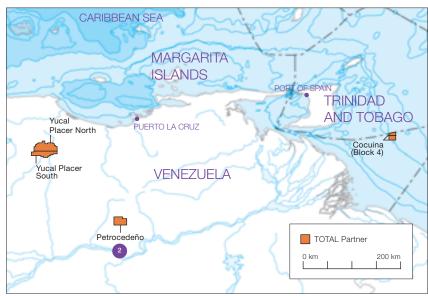
On the Aquio 1 and Ipati Blocks, covering the Incahuasi field, the ICS-3 well was brought online in 2017 and an increase of the plant's capacity to 390 Mcf/d was approved in June 2018.

An exploration well is expected to be drilled on the Azero exploration license (50%) in 2019.

## **VENEZUELA**

In Venezuela, the Group's production was 34 kboe/d in 2018 compared to 44 kboe/d in 2017 and 47 kboe/d in 2016 from the Group's interests in PetroCedeño (30.32%) and Yucal Placer (69.5%). The development of the extra heavy oil field of PetroCedeño continues (26 wells were drilled in 2018, compared to 49 in 2017 and 39 in 2016), as well as the debottlenecking project for the water separation and treatment facilities.







### **BRAZIL**

In Brazil, the Group's production totaled 19 kboe/d in 2018, which was its first full year of production in the country. Production comes from the Libra (20%) field 1, where the producing zone was renamed Mero in 2017, and the Lapa (35%, operator) 2 and lara (22.5%) 3 fields.

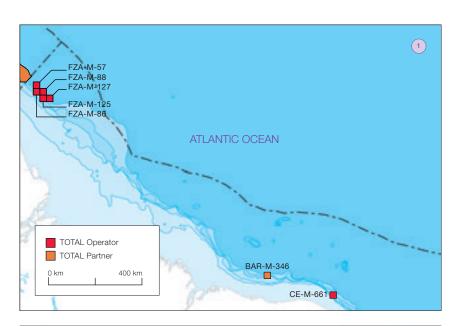
The Mero field is located in the Santos Basin in very deep waters (2,000 m), approximately 170 km off the coast of Rio de Janeiro. Fifteen wells had been drilled as of year-end 2018, with production commencing in 2017 via the FPSO Pioneiro de Libra (50 kb/d capacity), which is designed to carry out the long-term production tests necessary to optimize future development phases. The first development phase (17 wells connected to an FPSO with a capacity of 150 kb/d) also began in 2017.

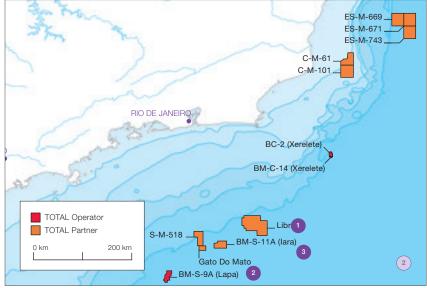
In 2017, TOTAL and Petrobras signed definitive contracts in relation to a package of assets in Brazil contemplated by their strategic alliance agreed in 2016. As part of this strategic alliance, in January 2018, TOTAL acquired a 22.5% interest in the lara concession located in Block BM- S- 11A, which is currently under development, as well as a 35% interest and the operatorship in the Lapa field concession area, located in Block BM- S- 9A, which started up in 2016. TOTAL's stake in Lapa is expected to increase to 45% following approval by Brazilian authorities of the acquisition of an additional 10% interest.

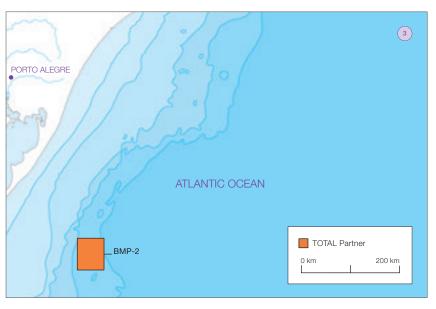
On lara, the declaration of the commerciality of two developments has been made, one for the development of the Berbigao and Sururu-West fields, and the other for the development of the Atapu field. On the Sururu field, a six-month production test has been completed and an appraisal well has revealed the largest oil column in the pre-salt in Brazil (530m).

The acquisition of Mærsk Oil in March 2018 brought new assets into TOTAL's portfolio in Brazil: Wahoo (28.6%) and Itaipu (40%) respectively on the C-M-101 (BMC-30) and C-M-061 (BMC-32) Blocks in the Campos Basin

In addition, the Group holds 17 exploration licenses located in the Barreirinhas, Ceará, Espirito Santo, Foz do Amazonas and







Pelotas basins.

### **COLOMBIA**

In Colombia, TOTAL started production on the Niscota field (71.4%) in 2017 and commerciality of the development was declared in November 2018. The Group's production totaled 1 kboe/d in 2018.

#### **MEXICO**

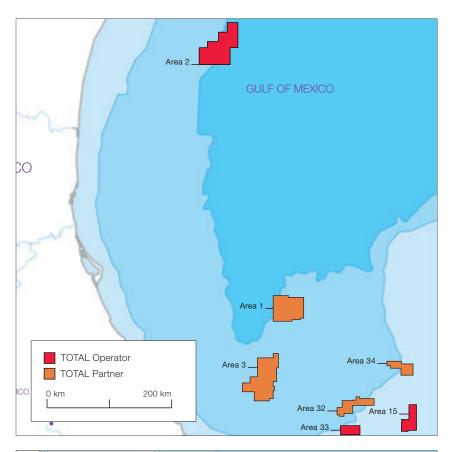
In Mexico, TOTAL was awarded exploration licenses in 2016 on three blocks in offshore Mexico, following the country's first competitive deep water bid round. Located in the Perdido Basin, Block 2 (50%, operator) covers an area of 2,977 km² at depths of between 2,300 and 3,600 meters. TOTAL also holds stakes in Blocks 1 (33.33%) and 3 (33.33%), located in the Salina Basin, and in Block 15 (60%, operator). In March 2018, TOTAL obtained three exploration blocks in the shallow waters of the Campeche Basin: Block 32 (50%), Block 33 (50%, operator) and Block 34 (42.5%).

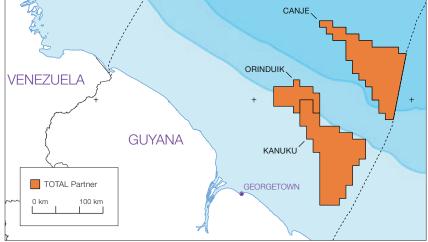
## **GUYANA**

In Guyana in 2018, TOTAL finalized the acquisition of a 35% stake in the Canje Block, 25% of the Kanuku Block and 25% of the Orinduik Block, as part of the exploration of the prolific offshore Guyana Basin. The acquisition of these interests has been approved by the authorities.

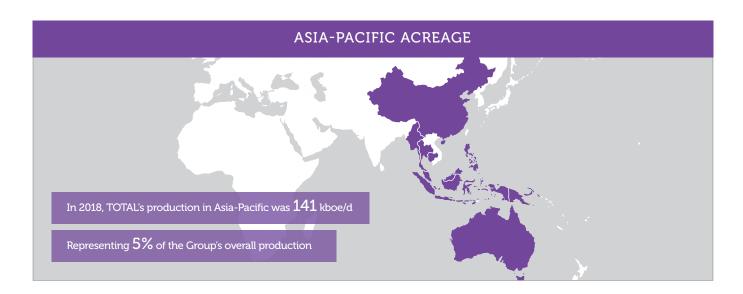
## **REST OF THE AMERICAS ZONE**

At the end of 2018, TOTAL disposed of its interests in the Aruba exploration license. The Group holds an interest in the Guyane Maritime license in French Guiana (100%, operator) where the GMES-6 exploration well was plugged and abandoned after a negative result.









## **PRODUCTION**

	2018	2017	2016	2015	2014
Liquids production (kb/d)	16	28	31	34	30
Gas production (Mcf/d)	748	1,247	1,350	1,290	1,178
TOTAL (kboe/d)	141	244	265	258	238

## **MAJOR START-UPS**

Start-up	Projects	Туре	Capacity (kboe/d)	Share	Op. Country
2017	Badamyar	Gas	35	31.24%	x Myanmar
2018	Ichthys-Trains 1&2	LNG	340	30%	Australia

## TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2018 (1)

Asia-Pacific (Group share in %)

Australia (2005)	Non-operated: several assets in UJV GLNG (27.50%) <sup>(2)</sup> , Ichthys (26.00%) <sup>(3)</sup>
<b>Brunei</b> (1986)	Operated: Maharaja Lela Jamalulalam (37.50%)
	Non-operated: Block CA 1- Unit (4.64%)
China (2006)	Non-operated: South Sulige (49.00%)
Indonesia (1968)	Non-operated: Block Sebuku (15.00%)
Myanmar (1992)	Operated: Blocks M5/M6 (Yadana, Sein, Badamyar) (31.24%)
Thailand (1990)	Non-operated: Bongkot (33.33%)

The Group's interest in the local entity is approximately 100%.
 TOTAL's interest in the unincorporated joint-venture.
 TOTAL disposed in December 2018 of a 4% interest in the lothtys project in Australia, thus reducing its interest in the asset from 30% to 26%.

## **THAILAND**

In Thailand, the Group's production was 52 kboe/d in 2018 compared to 58 kboe/d in 2017 and 60 kboe/d in 2016. This production comes from the Bongkot offshore gas and condensate field (33.33%). The Thai state-owned company PTT purchases all of the natural gas and condensate production. New platforms were installed in 2018 to maintain the production plateau.

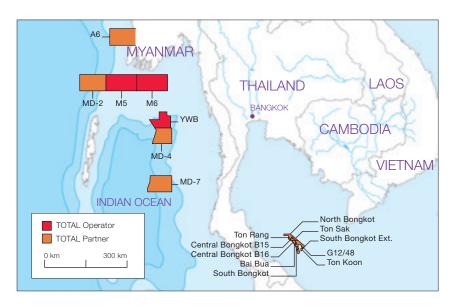


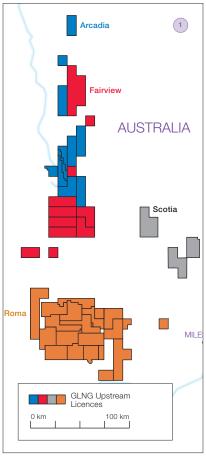
## **AUSTRALIA**

In Australia, the Group's production was 34 kboe/d in 2018 compared to 19 kboe/d in 2017 and 16 kboe/d in 2016. This comes from Gladstone LNG (GLNG) (27.5%) and the Ichthys LNG project, where offshore production began in July 2018 and the first export of LNG occurred in October 2018.

The Ichthys LNG project involves the development of a gas and condensate field located in the Browse Basin. This development includes a platform for the production, processing and export of gas, an FPSO for processing and exporting the condensate, an 889 km gas pipeline and an onshore liquefaction plant in Darwin. When running at full capacity, the two trains of the gas liquefaction plant will supply 8.9 Mt/y of LNG, 100,000 barrels of condensates per day and 1.65 Mt/y of LPG. The LNG has already been sold under long-term contracts, mainly in Asia. In December 2018, TOTAL disposed of a 4% interest in Ichthys, reducing its interest from 30% to 26%.

GLNG is an integrated production, transportation and liquefaction project from the Fairview, Roma, Scotia and Arcadia fields with a capacity of 7.8 Mt/y located on Curtis Island, Queensland. The plant's two trains are in production.

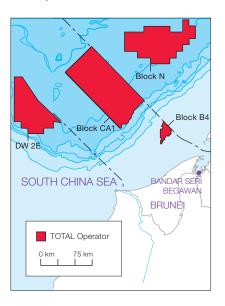






### **BRUNEI**

In Brunei, the Group's production was 19 kboe/d in 2018 compared to 21 kboe/d in 2017 and 18 kboe/d in 2016. This comes from the Maharaja Lela Jamalulalam condensate gas field on Block B (37.5%, operator) and from the unitized Gumusut-Kakap field. The signing of the unitization agreements in July 2018 gives TOTAL 4.64% of the Gumusut-Kakap field, which started in 2012 and produced 155 kboe/d of oil in 2018. The gas from the Maharaja Lela Jamalulalam field is delivered to the Brunei LNG liquefaction plant. TOTAL's CA1 deep offshore exploration Block (86.9%, operator) license was extended for two years in October 2018.



### **MYANMAR**

In Myanmar, the Group's production was 17 kboe/d in 2018 compared to 19 kboe/d in 2017 and 21 kboe/d in 2016.

The Yadana field (31.24%, operator), located on the offshore Blocks M5 and M6, primarily produces gas for delivery to PTT for use in Thai power plants. The Yadana field also supplies the domestic market via an offshore pipeline built and operated by MOGE, a Myanmar state-owned company. In 2017, TOTAL started production from the Badamyar field, a satellite of Yadana, which is expected to extend production from the field at 8 Bcf/y beyond 2020.

In 2015, the Group entered exploration license A6 (40%) located in the deep offshore area west of Myanmar where a gas discovery has been made. A delineation well drilled in 2018 was also encouraging, and the results are currently being assessed.

In 2015, TOTAL signed a production sharing contract for the deep offshore YWB Block (100%, operator). The 2016 2D seismic survey was followed by a 3D seismic survey in 2018.



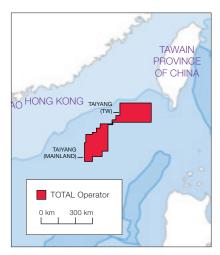


## CHINA

In China, the Group's production was 16 kboe/d in 2018 compared to 15 kboe/d in 2017 and 10 kboe/d in 2016. This production comes from the South Sulige Block (49%) in the Ordos Basin of Inner Mongolia, where the drilling of tight gas development wells is ongoing.

In 2017, TOTAL signed a production sharing contract on the Taiyang exploration Block (49%, operator), located in both Chinese and Taiwanese waters in the China Sea. A 2D seismic survey was carried out in 2018.





Indonesia

### **INDONESIA**

ASIA-PACIFIC

ACREAGE

In Indonesia, Group production was just 3 kboe/d in 2018, compared with 112 kboe/d in 2017 and 140 kboe/d in 2016, following the expiry of the Mahakam license and the transfer of the corresponding activities to Pertamina on January 1, 2018. The Group still holds an interest in the Sebuku license (15%), where production from the Ruby gas field is routed by pipeline for processing and separation at the Senipah terminal.

## PAPUA NEW GUINEA

In Papua New Guinea, the Group owns a stake in Block PRL-15 (40.1%, operator since 2015). The State of Papua New Guinea retains the right to take a stake in the license when the final investment decision is made at a level of 22.5% and, under these circumstances, TOTAL's stake would be reduced to 31.1%. Block PRL-15 includes two discoveries, Elk and Antelope. The delineation program of these discoveries was completed in 2017 and the results of the wells drilled confirmed the resource levels of the fields. Development studies continued in 2018.

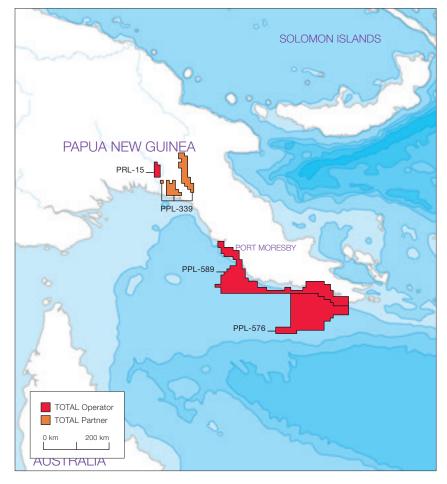
TOTAL holds interests in the PPL339 (35%), PPL589 (100%) and PPL576 (100%) exploration licenses. Interpretation of the seismic survey performed in late 2016 on PPL576 revealed some promising prospects.

In November 2018, TOTAL and its partners signed a Memorandum of Understanding with the Independent State of Papua New Guinea defining the key terms of the gas agreement for the Papua LNG Project. On April 9th, 2019, the proposed gas agreement was signed.

## **REST OF THE ASIA-PACIFIC**

TOTAL also holds interests in exploration licenses in Malaysia and the Philippines. In Cambodia, TOTAL is working to implement an agreement entered into in 2009 with the Cambodian government for the exploration of Block 3 located in an area of the Gulf of Thailand disputed by the governments of Cambodia and Thailand. This agreement remains subject to the establishment by both countries of an appropriate contractual framework. In Sri Lanka, in 2016 TOTAL signed an agreement to proceed with surveys on the offshore JS-5 and JS-6 Blocks off the east coast.





# GAS, RENEWABLES & POWER



<sup>(1)</sup> DACF = debt adjusted cash flow, is defined as cash flow from operating activities before changes in working capital at replacement cost, without financial charges.

 <sup>(2)</sup> Group's equity stake, excluding the Normandy refinery co-generation which is part of Refining & Chemicals.
 (3) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.



## FINANCIAL HIGHLIGHTS

(in million dollars)	2018	2017	2016	2015
Adjusted net operating income (1)	756	485	439	567
Investments (2)	3,539	797	1,221	588
Organic investments (3)	511	353	270	397
Divestments	931	73	166	418
Cash flow from operations (4)	(670)	1,055	589	(360)
Cash flow from operations before working capital changes w/o financial charges (DACF) (5)	513	294	176	5

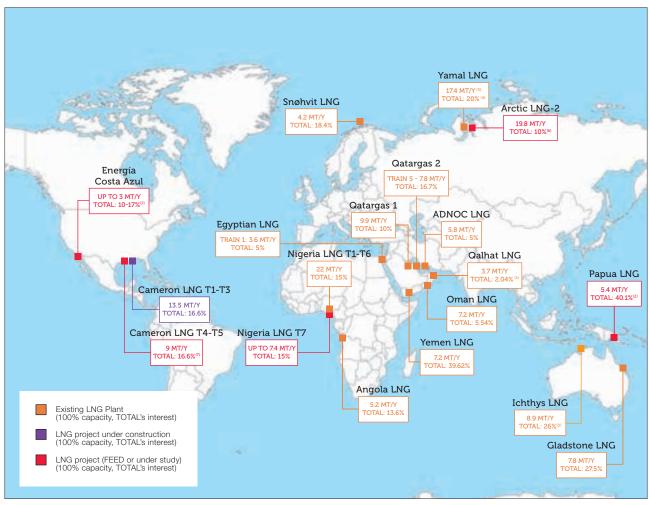
## INSTALLED POWER GENERATION CAPACITIES AS OF 31/12/2018

	Status	Gross capacity (GWc)	Net capacity (GWc)	Energy source
Taweelah A1 (Abu Dhabi)	In operation	1.6	0.3	Gas
CCGT Bayet/Marcinelle/Pont-sur-Sambre/Toul	In operation	1.6	1.6	Gas
Total Eren	In operation	0.7	0.1	Mainly solar and wind
Total Quadran	In operation	0.7	0.5	Mainly solar and wind
Other renewables incl. TOTAL Solar	In operation	0.4	0.2	Mainly solar
Normandie refinery co-generation <sup>(1)</sup>	In operation	0.3	0.3	Gas

<sup>(1)</sup> Part of Refining & Chemicals.

 <sup>(1)</sup> Adjusted results are defined as income at replacement cost, adjusted for special items, and excluding the impact of fair value changes.
 (2) Including acquisitions and increases in non current-loans.
 (3) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.
 (4) Excluding financial charges.
 (5) DACF = debt adjusted cash flow. Cash flow from operating activities before changes in working capital at replacement cost, without financial charges.

### LNG LIQUEFACTION POSITIONS AS OF DECEMBER 31, 2018



- (1) TOTAL has an indirect stake via Oman LNG's stake in Qalhat LNG.
  (2) The State of Papua New Guinea retains the right to enter the license (when the final investment decision is made) at a maximum level of 22.5%. In this case, TOTAL's stake would be reduced to 31.1%.
  (3) Train 4 is under construction and will be in operation in 2020.

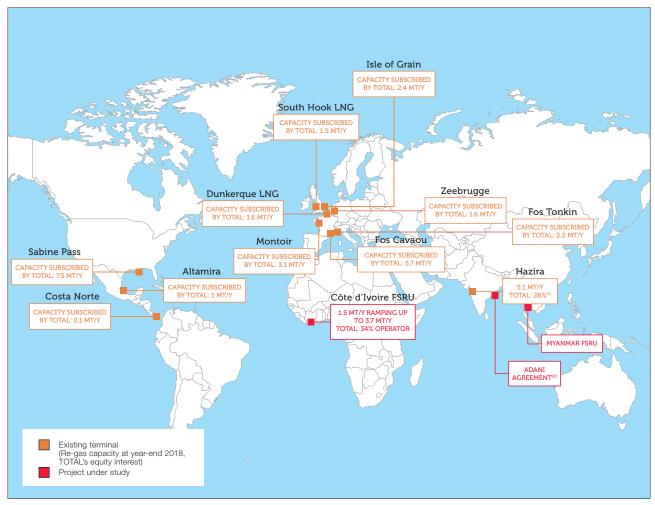
- (4) Direct stake in the project.
  (5) TOTAL disposed in December 2018 of a 4% interest in the Ichthys project in Australia thus reducing its interest in the asset from 30% to 26%.
- (6) TOTAL signed in May 2018 an agreement with Novatek to acquire a 10% interest (could increase to 15% under certain conditions) in Arctic LNG-2. The definitive agreement was signed in March 2019. (7) TOTAL signed a MoU covering the continuing development of Cameron LNG and Energia Costa Azul.

## LIQUEFIED NATURAL GAS (LNG) SALES FROM EQUITY PRODUCTION (1)

(kt/y)	2018	2017	2016	2015	2014
Nigeria (NLNG)	2,950	3,049	2,783	3,068	3,105
Indonesia (Bontang) (2)	0	2,584	3,125	2,990	2,901
Gladstone LNG	1,345	1,495	1,274	103	-
Qatar (Qatargas II)	1,324	1,262	1,313	1,237	1,277
Qatar (Qatargas I)	909	915	887	932	937
Norway (Snøhvit)	851	714	849	731	658
Angola LNG	551	489	91	-	44
Oman (3)	456	368	371	336	344
Abu Dhabi (ADNOC LNG)	270	281	294	289	290
Yamal LNG (4)	2,212	41	-	-	-
Yemen LNG	0	0	0	529	2,590
Egyptian LNG	31	-	-	-	-
Ichthys LNG	171	-	-	-	-
TOTAL	11,071	11,198	10,987	10,216	12,146

- (1) Group share, excluding trading.
- (2) 2017 data restated to reflect volume estimates for Bontang LNG based on the 2016 SEC coefficient (3) Includes both Oman LNG & Qalhat LNG.
- (4) Including Total's equity in Novatek

## RE-GASIFICATION TERMINALS AS OF DECEMBER 31, 2018



- (1) TOTAL disposed in January 2019 of its 26% interest in Hazira.
  (2) In October 2018, Total and Adani Group signed an agreement to jointly develop various regasification LNG terminals, including Dhmara LNG, on the East coast of India.



## GAS & POWER ACTIVITIES IN EUROPE AS OF DECEMBER 31, 2018





## GAS & POWER ACTIVITIES IN NORTH AND SOUTH AMERICA AS OF DECEMBER 31, 2018



## PIPELINE GAS SALES (1)

(Mcf/d)	2018	2017	2016	2015	2014
France	-	-	-	-	9
Denmark	85	-	-	-	-
United Kingdom	524	528	537	370	313
Norway	433	472	491	469	465
The Netherlands	93	107	134	149	155
Africa	14	8	(1)	13	63
Azerbaijan	-	-	-	-	147
Kazakhstan	59	43	3	-	-
Brunei	71	87	78	62	65
Algeria	42	-	-	-	-
Qatar	166	175	181	173	155
Syria	-	-	-	-	-
China	89	80	54	59	63
Indonesia (2)	12	76	116	119	94
Myanmar	128	147	162	150	131
Thailand	251	285	296	301	286
United States	468	515	304	306	286
Argentina	383	368	374	341	351
Colombia	-	-	-	-	
Bolivia	199	212	156	130	136
Venezuela	67	76	82	93	87
Australia	165	109	85	25	21
Trinidad & Tobago	-	-	-	-	-
TOTAL	3,249	3,288	3,052	2,760	2,827

<sup>(1)</sup> Consolidated entities. (2) Domestic sales.







## Low-carbon electricity

As part of its ambition to become the responsible energy major, TOTAL accelerated its strategy to integrate along the gas-electricity chain in Europe and to develop low-carbon electricity by acquiring Direct Énergie and two combined-cycle natural gas power plants in France from KKR-Energas. Consequently, TOTAL has the capacity to produce 2.7 GW of low-carbon electricity from gas and renewables (in Group share) worldwide.

## Electricity production from natural gas

The construction of a portfolio of combined-cycle gas power plants in Europe is part of the strategy to integrate the gas and electricity value chain, from production to marketing, and supports the sources of production of intermittent renewable electricity. Furthermore, the flexible production of these power plants enables the Group to optimize its customers' electricity supply costs.

## Electricity production from renewables

As part of its development in low- carbon electricity, TOTAL relies on its Quadran and Total Solar subsidiaries and its shareholdings in SunPower and Total Eren.

## SunPower

TOTAL has a majority interest in SunPower (55.66% as of December 31, 2018), an American company listed on NASDAQ and based in California. SunPower markets its panels worldwide for applications ranging from residential and commercial roof tiles to solar power plants.

SunPower has focused its activities on two segments: on the one hand, the design, production and international sale of very high-efficiency solar cells and panels, and, on the other hand, the sale of photovoltaic systems, that increasingly include storage. In the American market, SunPower is one of the leading players on the residential, industrial and commercial markets, and is driving the development of smart energy offerings (a combination of photovoltaic solar power, storage and other services).

### Quadran

In 2018, TOTAL maintained its policy of investing in low-carbon businesses with the acquisition of Direct Énergie, which owns Quadran. This company enables the Group to speed up its development in solar and wind power, biogas and in hydroelectricity in France.

This acquisition adds 0.7 GW gross installed capacity (in 100%). At the end of 2018, Quadran operates a portfolio of 213 onshore wind, solar, hydroelectric and biogas assets in France, and develops a series of renewable electricity projects that have reached different stages of maturity.

## Total Eren

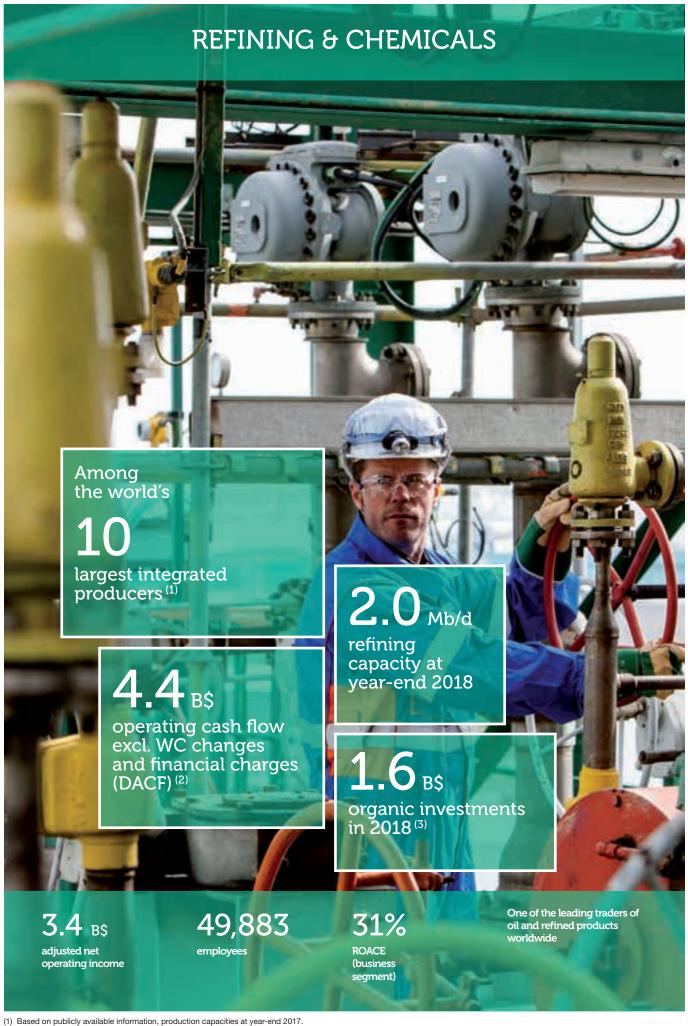
In December 2017, TOTAL acquired a 23% interest in Eren Renewable Energy, which has since been renamed Total Eren. TOTAL will be able to take control of Total Eren after a period of five years. Through its partnerships with local developers, Total Eren today manages numerous energy projects in countries and regions where renewable energies represent an economically viable response to a growing demand for energy, such as Asia, Africa and Latin America.

Total Eren has a diversified set of assets in renewable energies (wind, solar and hydraulic), representing a gross installed capacity of about 1.3 GW (in 100%) in operation or under construction around the world.

## Total Solar

Total Solar, which is 100% owned by the Group, contributes to the development of activities in solar power, with a focus on two market segments:

- decentralized photovoltaic systems aimed at industrial or commercial customers (B2B) entering into private PPAs (power purchase agreements); and
- ground- mounted solar power plants in targeted geographical areas: Europe, the Middle East, Japan and South Africa.



<sup>(2)</sup> DACF = debt adjusted cash flow, is defined as cash flow from operating activities before changes in working capital at replacement cost, without financial charges.

(3) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.



## FINANCIAL HIGHLIGHTS (1)

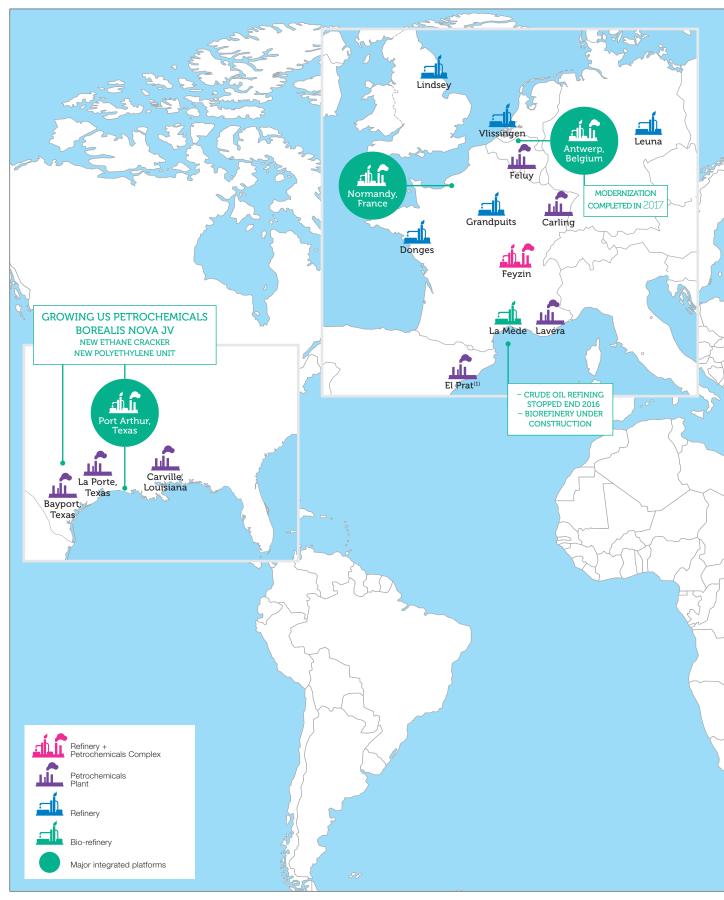
(in million dollars)	2018	2017	2016	2015	2014
Adjusted net operating income (2)	3,379	3,790	4,195	4,839	2,489
Investments (3)	1,781	1,734	1,861	1,875	2,022
Organic investments (4)	1,604	1,625	1,642	850	1,944
Divestments	919	2,820	88	3,494	192
Cash flow from operations (5)	4,308	7,411	4,584	6,435	6,302
Cash flow from operations before working capital changes w/o financial charges (DACF) <sup>(6)</sup>	4,388	4,728	4,873	5,788	4,033

 <sup>(1) 2014</sup> data are not restated to reflect the new organization with four business segments therefore the data shown for 2013 and 2014 do not include Biofuel businesses.
 (2) Adjusted results are defined as income at replacement cost, adjusted for special items, and excluding the impact of fair value changes.
 (3) Including acquisitions and increases in non current-loans.
 (4) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.
 (5) Excluding financial charges.
 (6) DACF = debt adjusted cash flow. Cash flow from operating activities before changes in working capital at replacement cost, without financial charges.

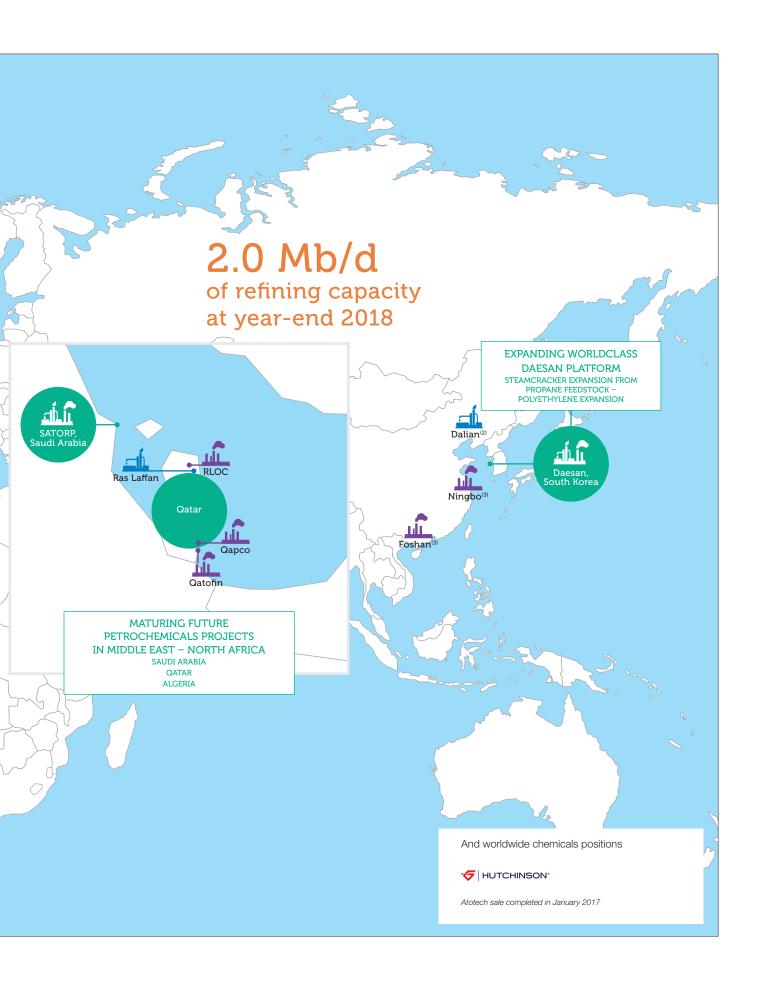
## OPERATIONAL HIGHLIGHTS (1) (3)

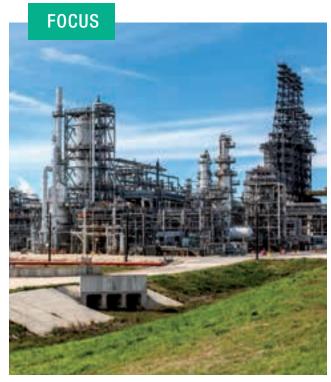
(in kb/d)	2018	2017	2016	2015	2014
Distillation capacity Group share at year-end (2)	2,021	2,021	2,011	2,247	2,187
Refinery throughput	1,852	1,827	1,965	2,023	1,775

<sup>(1)</sup> Includes share of TotalErg (sold in 2018), as well as refineries in Africa and the French Antilles (sold in 2015) that are reported in the Marketing & Services segment.
(2) Capacity data based on crude distillation unit stream-day capacities under normal operating conditions, less the average of shutdown for regular repair and maintenance activities.
(3) Condensates throughputs of BTP and HTC are included in refining throughputs and capacities as from 2015.



- (1) TOTAL announced in April 2019 its project to close its polystyrene production site located at El Prat.
  (2) TOTAL holds a 22.4% stake in WEPEC, a company that operates a refinery located in Dalian. The sale of this stake to one of the Chinese partners of the JV is in the process of being finalized.
  (3) TOTAL sold in the first quarter 2019 its polystyrene activity in China, which included two plants in Foshan and Ningbo.









## Sustainable contribution from Refining & Chemicals

In a context of rising worldwide demand for oil and petrochemicals driven by non-OECD countries and the entry of new capacities into the market, the strategy of R&C involves:

- Improving competitiveness of refining and petrochemicals activities by making optimal use of industrial means of production and concentrating investments on large integrated platforms;
- Developing petrochemicals in the United States and the Middle East by exploiting the proximity of cost-effective oil and gas resources in order to supply growing markets, in particular Asia; and
- Innovating in low carbon activities by developing biofuels, biopolymers and plastics recycling solutions as well as materials contributing to the energy efficiency of the Group's customers, in particular in the automotive market.

## Expanding high return petrochemicals

TOTAL focuses on projects building on advantaged gas feedstock and maximizing synergies on large integrated platforms:

- In the US, Total started the construction of a new 1 Mt/y ethane steam cracker in Port Arthur and launched the expansion of Polyethylene capacity to 1 Mt/y scheduled to start up in 2021;
- In South Korea, a project was announced to increase Polypropylene capacity by 60% to 1.1 Mt/y and simultaneously increase ethylene capacity by 10% to 1.5 Mt/y by 2020. These projects complement the ongoing investment notably to expand polyethylene production by 50% to 1.1 Mt/y by 2019;
- In Saudi Arabia, engineering studies are ongoing for a project with Saudi Aramco which will include a mixed-load steam cracker with a capacity of 1.5 Mt/y and polyethylene units;
- In Algeria, engineering studies are ongoing for a project with Sonatrach to build a propane dehydrogenation plant and polypropylene production unit with a capacity of 550 kt/y.

## Developing new avenues for the production of fuels and polymers

TOTAL is exploring new ways to monetize carbon resources, conventional or otherwise (natural gas, biomass, waste). These projects are part of the Group's commitment to building a diversified energy mix generating lower CO<sub>2</sub> emissions.

Regarding biomass development, the scope of these developments is broad since they entail defining access to the resource (nature, sustainability, location, supply method, transport), the nature of the molecules and target markets (fuels, petrochemicals, specialty chemicals) and the most appropriate, efficient and environmentally friendly conversion processes.

### Biomass to fuels

- Building the first and largest French bio-refinery In La Mède to meet the growing demand for biofuel, operations are expected to start in second quarter 2019 with a view to reaching a production of almost 500 kt/y of biofuel mainly high quality biodiesel;
- Ongoing gasification test program in Dunkirk for the conversion of biomass into fungible, sulfur-free fuels launched in 2017.

### Biomass to polymers

The joint venture created with Corbion started, in December 2018, production of PLA (polylactic acid polymer) from the 75 kt/y capacity plant located in Thailand.

## Plastics recycling and circular economy

TOTAL is committed to developing recycling and end of life solutions for plastics:

- In February 2019, TOTAL acquired French company Synova, a leader in manufacturing high-performance recycled polypropylene for the automotive sector:
- Founding member of the Alliance to End Plastic Waste, created in January 2019 to eliminate plastic waste in the environment, especially in the oceans.

## REFINERY CAPACITY (GROUP SHARE)

As of December 31, 2018					Major up	grading pla	nt capacity a	t 100% <sup>(1)</sup>				
(kb/d)	Total Distillation Capacity	Group Interest	Group Capacity	Cat Crack	Cat Reform	Hydro- Cracking	Resid. Hydro- Treat	Dist. Hydro- Treat	Alky	Isom	Vis	Coker
France												
Normandy, Gonfreville	253	100%	253	-	37	64	-	220	-	-	22	-
Provence, La Mède	-	100%	-	-	-	-	-	-	-	-	-	-
Donges	219	100%	219	51	23	-	-	126	7	-	26	-
Feyzin	109	100%	109	29	11	-	-	72	5	-	15	-
Grandpuits	101	100%	101	31	14	-	-	77	4	-	13	-
TOTAL FRANCE	682		682	110	85	64	0	495	16	0	76	0
Rest of Europe												
United Kingdom, Immingham/Lindsey	109	100%	109	50	16	-	-	102	7	-	20	_
Netherlands, Vlissingen	148	55%	81	-	26	74	-	65	-	-	-	-
Belgium, Antwerp	338	100%	338	95	56	51	50	253	9	-	-	-
Germany, Leuna	227	100%	227	59	25	-	-	238	10	-	25	-
TOTAL REST OF EURO	PE 822		755	204	124	124	50	659	26	0	45	0
United States												
Texas, Port Arthur (Refinery)	178	100%	178	75	38	-	-	241	6	8	-	54
Texas, Port Arthur (Condensate Splitter) (3)	60	40%	24	-	-	-	-	-	-	-	-	-
TOTAL UNITED STATE	S 238		202	75	38	0	0	241	6	8	0	54
Africa												
Cameroon, Limbe	42	20%	8	-	8	-	-	27	-	-	-	-
Côte d'Ivoire, Abidjan	76	20%	15	-	14	17	-	33	-	-	-	-
Senegal, Dakar	24	7%	2	-	3	-	-	5	-	-	-	-
South Africa, Sasolburg	110	18%	20	25	18	13	15	44	5	-	-	-
TOTAL AFRICA	252		45	25	43	30	15	109	5	0	0	0
Asia & Middle East												
China, Dalian	219	22%	49	55	15	29	41	119	-	-	-	-
Korea, Daesan <sup>(4)</sup>	186	50%	93	-	-	-	-	-	-	-	-	-
Qatar, Ras Laffan	300	10%	30	-	-	-	-	308	-	-	-	-
Saudi Arabia Jubail	438	38%	165	36	72	124	-	304	13	-	-	113
TOTAL ASIA	1,143		337	91	87	153	41	731	13	0	0	113
WORLDWIDE CRUDE DISTILLATION	3,138		2,021	505	377	371	106	2,235	66	8	121	167

<sup>(1)</sup> Cat Crack: Catalytic Cracking; Cat Reform: Catalytic Reforming; Resid Hydrotreat: Residual Hydrotreating; Dist Hydrotreat: Distillate Hydrotreating; Alky: Alkylation; Isom: C5 / C6 Isomerization; Vis: Visbreaker.

## DISTILLATION CAPACITY (GROUP SHARE) (1)

Capacity, throughput and production data include equity share of refineries in which the Group holds a direct or indirect interest:

As of December 31, (kb/d)	2018	2017	2016	2015	2014
France	682	682	682	829	829
Rest of Europe	755	772	772	870	907
United States and French West Indies (2)	202	202	202	198	178
Asia & Middle East (3)	337	320	303	288	209
Africa	45	45	52	62	64
TOTAL	2,021	2,021	2,011	2,247	2,187

<sup>(1)</sup> Capacity at the end of the year. Includes share of CEPSA until July 31, 2011, and share of TotalErg. Results for refineries in Africa, French Antilles and Italy are reported in the Marketing &

<sup>(2)</sup> Sales of all TotalErg's assets begining of January 2018 including Trecate assets.
(3) Condensates Splitter held by the joint venture BTP (40% TOTAL, 60% BASF and TOTAL operator) and included in the refining capacities from 31th December 2015.
(4) Condensates Splitter held by the joint venture HTC (50% TOTAL, 50% Hanwha and HTC operator) and included in the refining capacities from 31th December 2015.

Services segment.

(2) Including from December 31, 2015, TOTAL share in BTP Condensate Splitter (40%) in United States.

<sup>(3)</sup> Including TOTAL share (50%) in HTC Condensate Splitter in Korea from December 31, 2015.

## REFINERY THROUGHPUT (GROUP SHARE) (1)

Capacity, throughput and production data include equity share of refineries in which the Group holds a direct or indirect interest:

(kb/d)	2018	2017	2016	2015	2014
France	610	624	669	674	639
Rest of Europe	755	767	802	849	794
United States and French West Indies (2)	198	163	193	218	188
Asia & Middle East (3)	251	243	249	230	105
Africa	38	31	53	54	49
TOTAL	1,852	1,827	1,965	2,023	1,775

<sup>(1)</sup> Results for refineries in Africa, French Antilles and Italy are reported in the Marketing & Services segment.

## UTILIZATION RATE (BASED ON CRUDE AND OTHER FEEDSTOCKS) (1) (2)

(%)	2018	2017	2016	2015	2014
France	89	91	81	81	77
Rest of Europe (3)	98	99	92	94	88
Americas (4)	98	81	97	111	106
Asia & Middle East <sup>(5)</sup>	78	80	86	80	50
Africa	84	66	85	84	77
AVERAGE	92	91	87	88	81

## UTILIZATION RATE (BASED ON CRUDE ONLY) (1) (2)

(%)	2018	2017	2016	2015	2014
AVERAGE	88	88	85	86	77

## PRODUCTION LEVELS (GROUP SHARE) (1)

The table below sets forth by product category TOTAL's net share of refined quantities produced at the Group's refineries (1)(2).

(kb/d)	2018	2017	2016	2015	2014
LPG	56	62	60	61	51
Motor gasoline	291	283	324	346	344
Avgas, jet fuel and kerosene	210	196	182	190	148
Diesel fuel and heating oils	732	726	795	825	787
Fuel oils	99	115	140	131	134
Lubricants	17	16	12	17	20
Bitumen	36	32	34	31	29
Other products	352	328	324	330	229
TOTAL	1,793	1,758	1,871	1,931	1,742

<sup>(2)</sup> Including from 2015 TOTAL share in BTP Condensate Splitter (40%) in United States. 2015 datas have been restated. (3) Including TOTAL share (50%) in HTC Condensate Splitter in Korea from 2015. 2015 datas have been restated.

Including equity share of refineries in which the Group has a stake.
 (Crude + crackers' feedstock)/distillation capacity at the beginning of the year (2014: SATORP refinery's capacity considered as from January 1).
 Including capacity of Total Erg as of 31/12/2017. Total Erg was sold in 2018.
 Including from 2015 TOTAL share in BTP Condensate Splitter (40%) in United States. 2015 datas have been restated.
 Including TOTAL share (50%) in HTC Condensate Splitter in Korea from 2015. 2015 datas have been restated.

<sup>(1)</sup> Including equity share of refineries in which the Group has a stake.
(2) Crude/distillation capacity at the beginning of the year (2014: SATORP refinery's capacity considered as from January 1).

<sup>(1)</sup> For refineries not 100% owned by TOTAL the production shown is TOTAL's equity share of the site's overall production.
(2) Condensates productions of BTP and HTC are included in refining production as from 2015 and 2015 datas have been restated.

## MAIN PETROCHEMICALS PRODUCT GROUPS AND THEIR MAJOR APPLICATIONS

## Main product groups Major applications

Base Petrochemicals	
Olefins	
Ethylene	Production of polyethylene, vinyl chloride monomer, styrene, functional polymers and copolymers, ethylene oxide, glycols and vinyl acetate monomer.
Propylene	Production of polypropylene, acrylic acid, oxo-alcohols, propylene oxide, glycols, cumene and acrylonitrile.
Butadiene	Production of rubber, polybutadiene, elastomers, latex and ABS.
Aromatics	
Benzene	Production of styrene, cyclohexane, chlorobenzenes, cumene, aniline, alkylbenzenes and maleic anhydride
Styrene	Production of polystyrene, expanded polystyrene, ABS, emulsions, resins, latex and rubbers.
Toluene	Production of chemical intermediates and solvents.
Xylenes	Production of phthalic anhydride, terephthalic acid (PTA) and solvents.
Polymers	
Polyethylene	Flexible and rigid packaging, cables, pipes and tubes, molded bottles, fuel tanks artificial grass and caps and closures.
Polypropylene	Flexible and rigid packaging, containers, automotive parts, household and sanitary goods, fibers, medical, pipes and caps and closures.
Polystyrene	Food packaging, refrigeration appliances, insulation boards and television sets.

## MAIN PRODUCTION CAPACITIES AT YEAR-END (1)

				2018	2017	2016	2015	2014
(in thousands of tons)	Europe	North America	Asia and Middle East <sup>(2)</sup>	World	World	World	World	World
Olefins (3)	4,296	1,555	1,579	7,430	7,379	7,468	7,433	7,791
Aromatics (4)	2,874	1,512	2,581	6,967	6,909	6,844	6,783	6,773
Polyethylene	1,120	223	792	2,135	2,357	2,338	2,338	2,338
Polypropylene	1,350	1,200	400	2,950	2,950	2,950	2,950	2,950
Polystyrene	637	700	408	1,745	1,745	1,745	1,745	1,805
Others (5)	-	-	100	100	63	63	63	63
TOTAL	10,277	5,190	5,860	21,327	21,401	21,407	21,312	21,720

## SALES BY GEOGRAPHIC AREA - CHEMICALS (1)

(%)	2018	2017	2016	2015	2014
France	10%	10%	12%	13%	15%
Rest of Europe	39%	37%	41%	41%	39%
North America	30%	31%	30%	34%	33%
Rest of world	21%	22%	16%	12%	13%
TOTAL	100%	100%	100%	100%	100%

<sup>(1)</sup> Excluding inter-segment sales and sales by equity affiliates and including fertilizers sales.

<sup>(1)</sup> Excluding inter-segment sales.
(2) Including interests in Qatar, 50% of Hanwha Total Petrochemicals Co. Ltd and 37.5% of SATORP in Saudi Arabia.
(3) Ethylene + Propylene + Butadiene.
(4) Including monomer styrene.
(5) Mainly Monoethylene Glycol (MEG) and Cyclohexane.

## MAIN SPECIALTY CHEMICALS PRODUCT GROUPS AND THEIR MAJOR APPLICATIONS

### Main product groups Major applications

Elastomer processing	Elastomer parts for the automotive, transportation and aerospace industries: transmission systems, antivibration systems, fluid transfer parts, body sealings, precision sealing (Hutchinson).
Electroplating	General metal finishing, electronics materials and semiconductors, green technologies chemistry and systems (Atotech) <sup>(1)</sup> .

<sup>(1)</sup> Atotech sale completed in January 2017.

## SALES BY ACTIVITY - SPECIALITY CHEMICALS PRODUCTS

(in million dollars)	2018	2017	2016	2015	2014
Hutchinson	4,904	4,645	4,471	4,256	4,599
Bostik <sup>(1)</sup>	-	-	-	155	2,043
Atotech (2)	-	81	1,102	1,093	1,261

<sup>(1)</sup> Bostik sale to Arkema completed on February 2, 2015.

## SALES BY GEOGRAPHIC AREA- SPECIALITY CHEMICALS PRODUCTS (1) (2) (3)

(%)	2018	2017	2016	2015	2014
France	19%	18%	15%	14%	14%
Rest of Europe	41%	40%	35%	35%	35%
North America	26%	26%	25%	26%	24%
Rest of world	14%	16%	25%	25%	27%
TOTAL	100%	100%	100%	100%	100%

<sup>(1)</sup> Excluding inter-segment sales.

## SALES BY ACTIVITY- SPECIALITY CHEMICALS PRODUCTS (1)

(%)	2018	2017	2016	2015	2014
Elastomer processing	100%	98%	80%	77%	58%
Resins (2)	-	-	-	-	-
Adhesives (3)	-	-	-	3%	26%
Electroplating (4)	-	2%	20%	20%	16%
TOTAL	100%	100%	100%	100%	100%

<sup>(1)</sup> Excluding inter-segment sales.

<sup>(2)</sup> Atotech sale completed on January, 31 2017.

<sup>(1)</sup> Excluding inter-segment selections and Sartomer photocure resins businesses were divested in July 2011. The structural and hydrocarbon resins business lines were kept and have been incorporated into the Petrochemicals division as of January 1, 2012.

<sup>(3)</sup> Atotech sale completed on January, 31 2017.

<sup>(2)</sup> The Cray Valley coating resins and Sartomer photocure resins businesses were divested in July 2011. The structural and hydrocarbon resins business lines were kept and have been incorporated into the Petrochemicals division as of January 1, 2012.

<sup>(3)</sup> Bostik sale to Arkema completed on February 2, 2015.
(4) Atotech sale completed on January, 31 2017.

# MARKETING & SERVICES SÜDTANGENTE major in retail outside North America (1) B\$ operating cash flow excl. WC changes and financial charges (DACF) (3) distributor of inland lubricants (2) olekelmann) organic investments (4) 1.7 B\$ 24,630 14,311 1,793 kb/d of refined products sales (6) employees operating income service-stations (5)

- Source IHS, number of service stations for TOTAL, BP, Chevron, Exxon and Shell. (2) Source IHS.
   DACF = debt adjusted cash flow, is defined as cash flow from operating activities before changes in working capital at replacement cost, without financial charges.
   Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.
   Total, Total Access, Elf, Elan and AS24, including service stations owned by third parties. (6) Excludes Trading and bulk Refining sales.



(1) Electro-mobility, natural gas vehicle (NGV), hydrogen, LNG bunker.

## FINANCIAL HIGHLIGHTS (1)

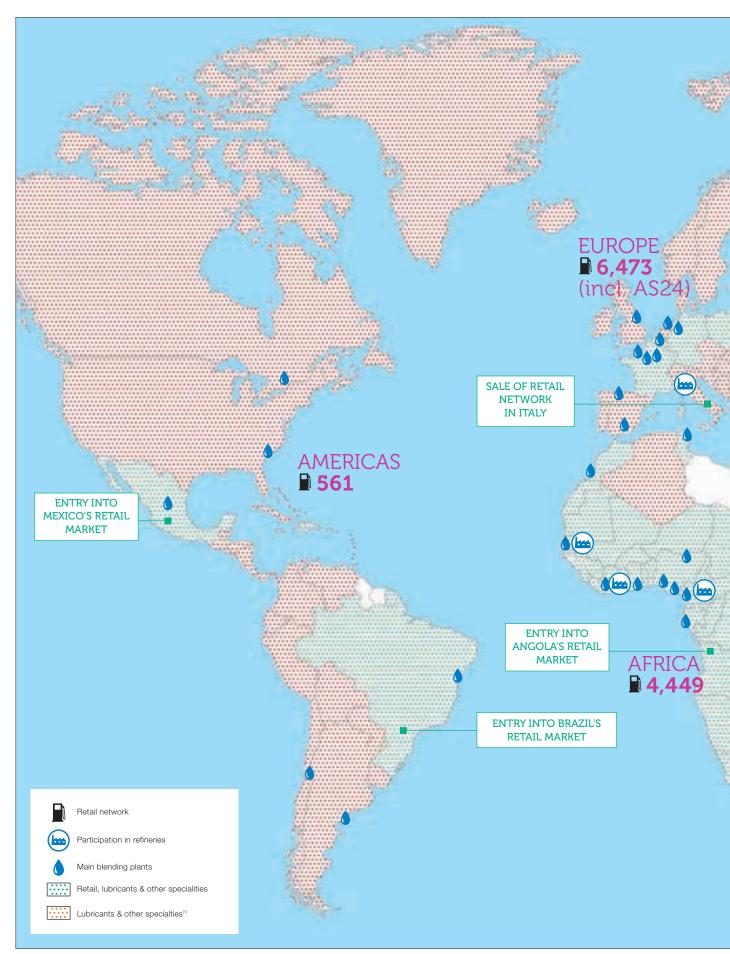
(in million dollars)	2018	2017	2016	2015	2014
Adjusted net operating income (2)	1,652	1,676	1,559	1,591	1,254
Gross investments (3)	1,458	1,457	1,245	1,267	1,818
Organic investments (4)	1,010	1,019	1,003	1,130	1,424
Divestments	428	413	424	767	163
Cash flow from operations (5)	2,759	2,221	1,833	2,440	2,721
Cash flow from operations before working capital changes w/o financial charges (DACF) <sup>(6)</sup>	2,156	2,242	1,966	2,058	2,171

 <sup>(1) 2014</sup> data are not restated to reflect the new organization with four business segments therefore the data shown for 2014 include New Energies and Biofuels businesses.
 (2) Adjusted results are defined as income at replacement cost, adjusted for special items, and excluding the impact of fair value changes.
 (3) Including acquisitions and increases in non current-loans.
 (4) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.
 (5) Excluding financial charges.
 (6) DACF = debt adjusted cash flow. Cash flow from operating activities before changes in working capital at replacement cost, without financial charges.

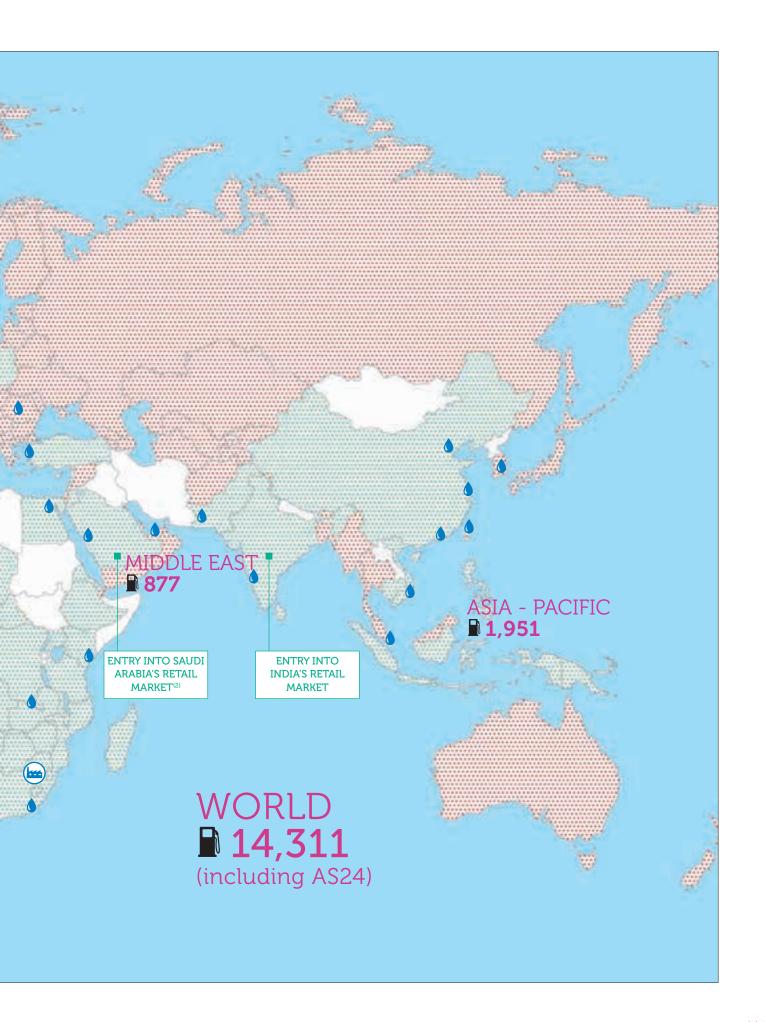
## **OPERATIONAL HIGHLIGHTS**

(in kb/d)	2018	2017	2016	2015	2014
REFINED PRODUCT SALES EXCLUDING TRADING AND BULK SALES	1,801	1,779	1,793	1,818	1,769
Trading sales (1)	1,777	1,659	1,690	1,538	1,385
Bulk sales	575	581	700	649	615
REFINED PRODUCT SALES INCLUDING TRADING AND BULK SALES	4,153	4,019	4,183	4,005	3,769

<sup>(1)</sup> Results of Trading and bulk sales are reported in the Refining & Chemicals segment.



<sup>(1)</sup> Lubricants - LPG - jet fuel - special fluids - bitumen - heavy fuels - marine fuels - additives and special fuels. (2) Announced in February 2019.





# Entering new territories to capture growth in promising markets

### Retail

M&S has a large footprint in retail with over 14,000 service-stations across more than 60 countries and has the second largest IOC position in retail outside North America. In Africa, Total is the market leader with over 17% market share. Its network is also one of the largest in Western Europe, with an average market share of 16% in key markets (France, Germany, Belgium, Netherlands, Luxembourg).

M&S relies on 4 major levers to increase its profitability:

## **Expanding network**

- Entered the fuel distribution market in Brazil with the acquisition of 280 stations.
- Partnered with the national company Saudi Aramco to develop network and retail services in Saudi Arabia.
- Opened its 1<sup>st</sup> station in Angola in partnership with the national company Sonangol.
- Joined forces with Adani Group, an Indian conglomerate, to build a network of 1,500 service stations over 10 years.
- Opened 90 TOTAL-branded stations in Mexico.

## Capturing market growth

- Expansion of AS24, the TOTAL network dedicated to heavy duty vehicles, in Eastern Europe with a global service offer to logistics companies
- Use of New Energies for transportation: target of 1,000 electric charging points in 300 stations on major routes in Europe; deployment of hydrogen stations in Germany and NGV stations in key European markets.
- Acquisition of a 25% stake in Clean Energy Fuels Corps., a leading supplier of natural gas fuel in North America.
- Offering more efficient EV charging solutions to its individual and professional customers with the acquisition of G2Mobility in France.
- Expanding TOTAL's fleet management services with the acquisition of the French connected vehicle service provider Waykonect.

## Improving performance, expanding premium fuels

 TOTAL EXCELLIUM, TOTAL's premium fuel, now available in 45 countries and targeting an increase to more than 50 by 2021.

## Maximizing non-fuel revenues

 Deploying TOTAL's eWallet mobile payment solution: available in Germany and being launched in Belgium.

- Launched a new service to geolocalize the trailers of TOTAL's customers on the European freight transport market, through new IoT<sup>(1)</sup> applications for logistics.
- Deploying TOTAL WASH car wash business in new territories.

#### Lubricants

Despite a growth slow-down in global lubricants demand, Total's range of recognized quality-lubricants and its customer-centric approach enable M&S to pursue sales growth over the past decade and rank 4th wordlwide (2). The growth of lubricants business is driven by:

#### Capturing market growth

- 1<sup>st</sup> oil company to launch ranges of fluids for hybrid and electric vehicles: TOTAL QUARTZ EV Fluids and TOTAL RUBIA EV Fluids.
- Acquired a lubricant blending plant and associated activities in Tanzania to grow in East Africa.
- Consolidation of M&S positions in Italy with the purchase of Erg shares in the lubricants business previously operated by TotalErg.

### Improving performance, strengthening supply chain

- Producing in customer proximity: new blending site opened in Russia and another plant under construction in Algeria.
- Leveraging the network of 11 blending sites in Asia and Middle East, particularly in Singapore, Tianjin and Dubai, to expand activities in these fast-growing markets.

## Building on premium sales

 Strong cooperation with OEMs: ongoing partnerships including PSA Group, Kia, Mazda, Aston Martin and Renault.

## Increasing marketing footprint

- Partnered with major actors in online commerce in order to grow its sales and develop new services in Asia.
- Opened 1<sup>st</sup> Speedy service centers in Spain.

## **Business-to-Business**

M&S develops and delivers bespoke, innovative solutions to its business customers with an eco-friendly approach:

## Improving the performance of supply chain

 Developing logistics for LNG bunkering in major maritime hubs: Amsterdam-Rotterdam-Antwerp, Singapore and Oman.
 Partnered with Pavilion Energy for the long-term chartering of a new-generation bunker vessel that the partner will bring into service in 2020.

## Constantly innovating in products and services

- Launched the digital platform Optimizer dedicated to the optimization of onsite energy consumption for agricultural, construction and mining sites through the use of data collected from sensors installed on their facilities and equipment.
- Supplying lubricants to one of the leading mining industry service provider on more than 20 mining sites mostly in Australia, Indonesia, Mongolia and Chile.
- Signed a Preferred Supplier Agreement with a Chinese partner that is a world major company in construction and public works, in order to extend their partnership, currently focused on Africa, to a worldwide scale.
- Providing through TOTAL Marine Fuel Global Solutions a diversified range of marine fuels and associated services, including low-sulfur marine fuels and LNG bunker, to help its customers meet the new emission standards for marine fuels that will come into effect in 2020.

## Improving the performance of sales teams

Launched major training program for its entire salesforce.

## Operational excellence through processes

Deploying a single CRM to optimize team work.

(1) Internet of Things. (2) Based on IHS data.

## PETROLEUM PRODUCT SALES (EXCLUDING TRADING AND BULK SALES)

By geographic area (kb/d)	2018	2017	2016	2015	2014
Europe					
France	517	519	541	541	547
United Kingdom	25	26	27	27	26
Benelux	209	205	216	214	214
Germany	198	184	192	192	195
Italy	4	77	79	81	76
Spain	1	1	1	1	1
Rest of Europe	47	37	37	36	41
TOTAL EUROPE	1,001	1,049	1,093	1,092	1,100
Africa					
Northern Africa	122	121	119	118	108
Western Africa	71	82	88	85	82
Eastern Africa	102	95	84	89	72
Southern Africa	112	93	87	87	73
Central Africa	27	31	31	31	30
Other <sup>(1)</sup>	9	9	10	13	15
TOTAL AFRICA	443	431	419	423	380
Americas					
United States	68	33	27	28	29
Caribbean Islands	40	41	42	35	42
Latin America	9	7	7	7	7
TOTAL AMERICAS	117	81	76	70	78
Middle East					
Jordan, Lebanon, Turkey and others	41	45	55	85	77
TOTAL MIDDLE EAST	41	45	55	85	77
Asia-Pacific					
East Asia	175	149	125	124	107
Pacific	5	8	10	9	12
Indian Ocean islands	19	16	15	15	15
TOTAL ASIA-PACIFIC	199	173	150	148	134
TOTAL WORLDWIDE	1,801	1,779	1,793	1,818	1,769

 $<sup>\</sup>hbox{(1) Represents supply to African non consolidated group companies and third parties.} \\$ 

(in kb/d)	2018	2017	2016	2015	2014
LPG	58	57	53	70	86
Motor gasoline	340	340	339	341	314
Avgas and jet fue	268	243	273	234	226
Diesel fuel and heating oils	873	985	977	1,018	995
Fuel oils	137	32	37	42	39
Lubricants	39	39	38	39	37
Solvents	14	14	13	14	15
Bitumen	48	44	45	45	40
Other products	24	25	18	15	17
TOTAL	1,801	1,779	1,793	1,818	1,769

## SERVICE-STATIONS

As of December 31,	2018	2017	2016	2015	2014
Europe					
France	3,490	3,548	3,593	3,667	3,727
Benelux	916	910	925	928	922
Germany	1,187	1,194	1,188	1,178	1,157
Italy	0	2,519	2,585	2,608	2,749
Eastern Europe (Poland)	32	23	18	10	2
AS24 Stations	848	819	801	763	740
TOTAL EUROPE	6,473	9,013	9,110	9,154	9,297
Africa					
Northern Africa	709	703	687	673	653
Western Africa	1,697	1,649	1,572	1,509	1,502
Eastern Africa	1,005	1,005	901	882	866
Southern Africa	603	590	585	592	587
Central Africa	435	430	422	402	383
TOTAL AFRICA	4,449	4,377	4,167	4,058	3,991
Americas					
Caribbean Islands	561	555	585	464	452
TOTAL AMERICAS	561	555	585	464	452
Middle East					
Jordan, Lebanon, Turkey	877	821	809	816	796
TOTAL MIDDLE EAST	877	821	809	816	796
Asia-Pacific					
East Asia	1,684	1,598	1,530	1,276	734
Pacific	101	101	100	96	91
Indian Ocean islands	166	165	160	159	208
TOTAL ASIA-PACIFIC	1,951	1,864	1,790	1,531	1,033
TOTAL EXCLUDING AS24	13,463	15,811	15,210	15,257	14,829
TOTAL WORLDWIDE	14,311	16,630	16,461	16,023	15,569

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